

SECTION 1 CITATIONS TO STATE REGISTER

## **CITATIONS FOR STATE REGISTER**

### 2019 North of Falcon Rulemaking – Recreational Fishing Rules

- CR-101 – filed as WSR 19-03-137 on January 22, 2019  
Invitation to discuss rules on this subject
- CR-102 – filed as WSR 19-11-130 on May 22, 2019  
Notice and opportunity to comment on this current rule-making proposal

## SECTION 2 STATEWIDE REC DOCKET



# PREPROPOSAL STATEMENT OF INQUIRY

**CR-101 (October 2017)**  
**(Implements RCW 34.05.310)**  
Do **NOT** use for expedited rule making

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER  
STATE OF WASHINGTON  
FILED

DATE: January 22, 2019

TIME: 10:20 AM

WSR 19-03-137

**Agency:** Washington State Department of Fish and Wildlife (WDFW)

**Subject of possible rule making:** The department is considering amending current recreational fishing rules resulting from stakeholder recommendations made during North of Falcon meetings and to incorporate changes in the rules brought about from the department's Freshwater Recreational Rule Simplification Project

**Statutes authorizing the agency to adopt rules on this subject:** RCWs 77.04.012, 77.04.012, 77.04.020, 77.04.055, 77.12.045, and 77.12.047.

**Reasons why rules on this subject may be needed and what they might accomplish:** The recreational fishing rules based on North of Falcon recommendations change from year to year to reflect resource availability and to achieve conservation goals. Amendments to recreational fishing rules are needed to implement the agreed-upon changes. In addition, the rules need to be amended to incorporate recent rule changes brought about from the Freshwater Recreational Rule Simplification Project.

**Identify other federal and state agencies that regulate this subject and the process coordinating the rule with these agencies:** There are several other agencies involved in this rule making in association with the Pacific Fisheries Management Council season-setting process including the National Oceanic and Atmospheric Agency (NOAA) Fisheries division (National Marine Fisheries Service). These agencies, as well as WDFW, all provide input and/or take part in the PFMC/North of Falcon season setting meeting.

**Process for developing new rule (check all that apply):**

- Negotiated rule making
- Pilot rule making
- Agency study
- Other (describe)

**Interested parties can participate in the decision to adopt the new rule and formulation of the proposed rule before publication by contacting:**

Name: Scott Bird	(If necessary) Name:
Address: PO Box 43200, Olympia, WA 98501-3200	Address:
Phone: 360-902-2403	Phone:
Fax: 360-902-2155	Fax:
TTY:	TTY:
Email: Rules.Coordinator@dfw.wa.gov	Email:
Web site:	Web site:
Other:	Other:

Additional comments:

**Date:** January 22, 2019

**Name:** Scott Bird

**Title:** Rules Coordinator

**Signature:**



# PROPOSED RULE MAKING

## CR-102 (October 2017) (Implements RCW 34.05.320) Do NOT use for expedited rule making

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER  
STATE OF WASHINGTON  
FILED

DATE: May 22, 2019

TIME: 10:25 AM

WSR 19-11-130

**Agency:** Washington State Department of Fish and Wildlife (WDFW)

**Original Notice**

**Supplemental Notice to WSR** \_\_\_\_\_

**Continuance of WSR** \_\_\_\_\_

**Preproposal Statement of Inquiry was filed as WSR 19-03-137 filed January 22, 2019 ; or**

**Expedited Rule Making--Proposed notice was filed as WSR** \_\_\_\_\_; **or**

**Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or**

**Proposal is exempt under RCW** \_\_\_\_\_.

**Title of rule and other identifying information:** (describe subject) The department is considering amendments to current recreational fishing rules resulting from stakeholder recommendations made during North of Falcon meetings and to incorporate changes in the rules brought about from the department's Freshwater Recreational Rule Simplification Project  
220-312-020 – Freshwater exceptions to statewide rules – Coast  
220-312-030 – Freshwater exceptions to statewide rules – Southwest  
220-312-040 – Freshwater exceptions to statewide rules – Puget Sound  
220-312-050 – Freshwater exceptions to statewide rules – Eastside  
220-312-060 – Freshwater exceptions to statewide rules – Columbia River  
220-313-060 – Puget Sound salmon – Saltwater seasons and daily limits  
220-313-070 – Coastal salmon – Saltwater seasons and daily limits

**Hearing location(s):**

Date:	Time:	Location: (be specific)	Comment:
June 25, 2019	9:00 a.m.	Natural Resources Building Room 682 1111 Washington Street SE Olympia, WA 98501	Puget Sound Marine and Freshwater
June 25, 2019	1:00 p.m.	Region 5 Office Room 102A 5525 S 11 <sup>th</sup> Street Ridgefield, WA 98642	Columbia River
June 26, 2019	9:00 a.m.	Region 6 Office Large Conference Room 48 Devonshire Road Montesano, WA 98563	Coastal Marine
June 26, 2019	11:00 a.m.	Region 6 Office Large Conference Room 48 Devonshire Road Montesano, WA 98563	Coastal Freshwater

**Date of intended adoption:** June 26, 2019 (Note: This is **NOT** the effective date)

**Submit written comments to:**

Name: Scott Bird, WDFW Rules Coordinator

Address: PO Box 43152 Olympia, WA 98501

Email: Rules.Coordinator@dfw.wa.gov

Fax: 360-902-2155

Other:

By (date) June 24, 2019

**Assistance for persons with disabilities:**Contact Delores Noyes

Phone: 360-902-2349

Fax:

TTY: 360-902-2207

Email: Delores.Noyes@dfw.wa.gov

Other:

By (date) June 24, 2019

**Purpose of the proposal and its anticipated effects, including any changes in existing rules:** Recreational salmon fishing rules for Puget Sound, Coast and Columbia River Freshwater and Puget Sound and Coast Saltwater based on North of Falcon recommendations change from year to year to reflect resource availability and to achieve conservation goals. Amendments to recreational salmon fishing rules are needed to implement the agreed-upon changes.

**Reasons supporting proposal:** To protect fish species listed as endangered while supporting recreational fishing opportunity and to make changes to salmon seasons and harvest amounts pursuant to agreements and recommendations made at the North of Falcon meetings. Technical changes are needed to ensure accuracy, clarity, and uniformity in the code

**Statutory authority for adoption:** RCW 77.32.470 ,77.04.012, 77.04.013, 77.04.055, and 77.12.047

**Statute being implemented:** RCW 77.32.470 ,77.04.012, 77.04.013, 77.04.055, and 77.12.047

**Is rule necessary because of a:**

Federal Law?

 Yes  No

Federal Court Decision?

 Yes  No

State Court Decision?

 Yes  No

If yes, CITATION:

**Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters:****Name of proponent:** (person or organization) Washington State Department of Fishing and Wildlife Private Public Governmental**Name of agency personnel responsible for:**

	Name	Office Location	Phone
Drafting:	Kelly Henderson	1111 Washington Street, Olympia, WA 98501	360-902-2684
Implementation:	Ron Warren	1111 Washington Street, Olympia, WA 98501	360-902-2799
Enforcement:	Chief Steve Bear	1111 Washington Street, Olympia, WA 98501	360-902-2373

**Is a school district fiscal impact statement required under RCW 28A.305.135?** Yes  No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:

Address:

Phone:

Fax:

TTY:

Email:

Other:

**Is a cost-benefit analysis required under RCW 34.05.328?**

Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name:

Address:

Phone:

Fax:

TTY:

Email:

Other:

No: Please explain: The proposed rule does not affect hydraulics

**Regulatory Fairness Act Cost Considerations for a Small Business Economic Impact Statement:**

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.061 because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by RCW 34.05.313 before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of RCW 15.65.570(2) because it was adopted by a referendum.

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(3). Check all that apply:

RCW 34.05.310 (4)(b)  
(Internal government operations)

RCW 34.05.310 (4)(e)  
(Dictated by statute)

RCW 34.05.310 (4)(c)  
(Incorporation by reference)

RCW 34.05.310 (4)(f)  
(Set or adjust fees)

RCW 34.05.310 (4)(d)  
(Correct or clarify language)

RCW 34.05.310 (4)(g)  
((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit)

This rule proposal, or portions of the proposal, is exempt under RCW \_\_\_\_\_.

Explanation of exemptions, if necessary:

**COMPLETE THIS SECTION ONLY IF NO EXEMPTION APPLIES**

If the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

No Briefly summarize the agency's analysis showing how costs were calculated. \_\_\_\_\_

Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses, and a small business economic impact statement is required. Insert statement here:

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

Name:

Address:

Phone:

Fax:

TTY:

Email:

Other:

**Date:** May 22, 2019

**Name:** Scott Bird

**Title:** Rules Coordinator

**Signature:**



**WAC 220-312-020 Freshwater exceptions to statewide rules—Coast.**

- (1) **Aberdeen Lake (Grays Harbor County):** Open the fourth Saturday in April through October 31.
- (2) **Bear Creek (Clallam County) (Bogachiel River tributary):**
  - (a) It is unlawful to use anything other than one barbless hook.
  - (b) It is unlawful to use bait.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release wild rainbow trout.
- (3) **Bear Creek (Clallam County) (Sol Duc River tributary):**
  - (a) It is unlawful to use anything other than one barbless hook.
  - (b) It is unlawful to use bait.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (4) **Bear River (Pacific County):**
  - (a) Open the Saturday before Memorial Day through March 31.
  - (b) From August 16 through November 30: Night closure.
  - (c) From the mouth (Highway 101 Bridge) to Lime Quarry Road (approximately 2 river miles):
    - (i) From August 16 through November 30:
    - (ii) Barbless hooks required.
    - (iii) Anti-snagging rule.
    - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (v) Salmon:
      - (A) Open September 1 through January 31.
      - (B) Daily limit 6 fish; only ((4 may be)) 2 adults ((of which only one may be a wild adult coho)) may be retained.
      - (C) Release wild Chinook.
  - (d) From the Lime Quarry Road upstream to the Longview Fiber Bridge:
    - (i) Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (5) **Beaver Creek (Clallam County) (Sol Duc River tributary):**
  - (a) From the mouth upstream to Beaver Falls:
  - (b) It is unlawful to use anything other than one barbless hook.
  - (c) It is unlawful to use bait.
  - (d) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (6) **Beaver Lake (Clallam County):** Selective gear rules.
- (7) **Big River (Clallam County), outside of Olympic National Park:**
  - (a) Open the Saturday before Memorial Day through October 15, and January 1 through the last day of February.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (8) **Big River tributaries (Clallam County), outside of Olympic National Park:** Open the Saturday before Memorial Day through October 15.
- (9) **Black River (Grays Harbor/Thurston counties):** From the mouth to the bridge on 128th Ave. S.W.:
  - (a) Anti-snagging rule.

- (b) Night closure.
- (c) Barbless hooks required.
- (d) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (e) Salmon: Open October 1 through ~~((November 30))~~ December 31.
- (i) Daily limit 6, of which 2 may be adults.
- (ii) Release ~~((adult))~~ Chinook ~~((and wild adult coho))~~.
- (10) **Bogachiel Hatchery Pond, South (Clallam County)**: Open the fourth Saturday in April through October 31.
- (11) **Bogachiel River (Clallam County)**:
  - (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (b) It is unlawful to use anything other than one barbless hook.
  - (c) From the mouth to Highway 101 Bridge:
    - (i) Open the Saturday before Memorial Day through April 30.
    - (ii) It is unlawful to use bait the Saturday before Memorial Day through August 31 and February 16 through April 30.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Release wild rainbow trout.
      - (B) Cutthroat trout: Minimum length 14 inches.
      - (C) November 1 through last day in February: Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
    - (iv) Salmon:
      - (A) From July 1 through August 31:
        - (I) Daily limit 6; no more than 2 adults may be retained.
        - (II) Release wild adult Chinook and wild adult coho.
      - (B) From September 1 through November 30: Daily limit 3; no more than ~~((one))~~ 1 adult may be retained.
    - (d) From Highway 101 Bridge to Olympic National Park boundary:
      - (i) Open the Saturday before Memorial Day through April 30.
      - (ii) It is unlawful to use bait.
      - (iii) Game fish: Statewide minimum length/daily limit, except:
        - (A) Release wild rainbow trout.
        - (B) Cutthroat trout: Minimum length 14 inches.
  - (12) **Calawah River (Clallam County)**:
    - (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
    - (b) It is unlawful to use anything other than one barbless hook.
    - (c) From the mouth to the Highway 101 Bridge:
      - (i) Open the Saturday before Memorial Day through April 30.
      - (ii) It is unlawful to use bait the Saturday before Memorial Day through August 31 and February 16 through April 30.
      - (iii) Game fish: Statewide minimum length/daily limit, except:
        - (A) Release wild rainbow trout.
        - (B) Cutthroat trout: Minimum length 14 inches.
        - (C) From November 1 through the last day in February: Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
      - (iv) Salmon:
        - (A) Open July 1 through August 31:
          - (I) Daily limit 6; only 2 adults may be retained.
          - (II) Release wild adult Chinook and wild adult coho.
        - (B) Open September 1 through November 30: ~~((+I))~~ Daily limit 3; only ~~((one))~~ 1 adult may be retained.
          - ~~((+II) Release wild adult coho.)~~
      - (d) From the Highway 101 Bridge to the forks:
        - (i) Open the Saturday before Memorial Day through April 30.
        - (ii) It is unlawful to use bait.

- (iii) Game fish: Statewide minimum length/daily limit, except:
  - (A) Release wild rainbow trout.
  - (B) Cutthroat trout: Minimum length 14 inches.
- (13) Calawah River, North Fork (Clallam County):**
  - (a) It is unlawful to use anything other than one barbless hook.
  - (b) It is unlawful to use bait.
  - (c) Game fish: Statewide minimum length/daily limit, except:
    - (i) Release wild rainbow trout.
    - (ii) Cutthroat trout: Minimum length 14 inches.
- (14) Calawah River, South Fork (Clallam County):**
  - (a) From the mouth to the Olympic National Park boundary:
  - (b) Open the Saturday before Memorial Day through the last day in February.
    - (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
    - (d) It is unlawful to use anything other than one barbless hook.
    - (e) It is unlawful to use bait.
    - (f) Game fish: Statewide minimum length/daily limit, except:
      - (i) Release wild rainbow trout.
      - (ii) Cutthroat trout: Minimum length 14 inches.
- (15) Canyon River (Grays River County):** Closed waters.
- (16) Cases Pond (Pacific County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (17) Cedar Creek (Jefferson County), outside Olympic National Park:**
  - (a) Open the Saturday before Memorial Day through the last day in February.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (18) Chehalis River (Grays Harbor County), including all channels, sloughs, and interconnected waterways:**
  - (a) From the mouth (Highway 101 Bridge in Aberdeen) to Highway 107 Bridge including all channels, sloughs, and interconnected waterways:
    - (i) From August 1 through November 30: Single-point barbless hooks are required.
    - (ii) Anglers may fish with two poles, provided they possess a valid two-pole endorsement.
    - (iii) Open the Saturday before Memorial Day through April 15:
    - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (v) Salmon:
      - (A) From August 1 through September 15:
        - (I) Daily limit 6.
        - (II) Release adult salmon.
      - (B) From (~~October 1~~) September 16 through (~~November 30~~) December 31:
        - (I) Daily limit 6; only ((one)) 2 adult may be retained.
        - (II) Release ((adult)) Chinook.
        - (~~(C) From May 1 through June 30: Limit one Chinook.~~)
  - (b) From the Highway 107 Bridge upstream to the South Elma Bridge (Wakefield Road).
    - (i) From August 1 through November 30: Single-point barbless hooks are required.

(ii) Anglers may fish with two poles from the mouth to the South Elma Bridge (Wakefield Road), provided they possess a valid two-pole endorsement.

(iii) Open the Saturday before Memorial Day through April 15.

(iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(v) Salmon:

(A) From August 1 through September 15:

(I) Daily limit 6.

(II) Release adult salmon.

(B) From ~~((October 1))~~ September 16 through ~~((November 30))~~ December 31:

(I) Daily limit 6; only 2 adults may be retained.

(II) Release ~~((adult))~~ Chinook ~~((and wild adult coho.~~

~~(C) From May 1 through June 30: Limit one Chinook))~~.

(c) From South Elma Bridge (Wakefield Road) to the confluence with Black River:

(i) All species: Single-point barbless hooks are required August 1 through November 30.

(ii) Open the Saturday before Memorial Day through April 15.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: ~~((A))~~ From ~~((October 1))~~ September 16 through ~~((November 30))~~ December 31:

~~((I))~~ (A) Daily limit 6; only 2 adults may be retained.

~~((II))~~ (B) Release ~~((adult))~~ Chinook ~~((and wild adult coho.~~

~~(B) From May 1 through June 30: Limit one Chinook))~~.

(d) From the confluence of Black River to the Highway 6 Bridge near the town of Adna:

(i) All species August 16 through November 30: Single-point barbless hooks are required.

(ii) Open the Saturday before Memorial Day through April 15.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: ~~((A))~~ From October 1 through ~~((November 30))~~ December 31:

~~((I))~~ (A) Daily limit 6; only 2 adults may be retained.

~~((II))~~ (B) Release ~~((adult))~~ Chinook ~~((and wild adult coho.~~

~~(B) From May 1 through June 30: Limit one Chinook))~~.

(e) From Highway 6 Bridge near the town of Adna to the high bridge on Weyerhaeuser 1000 line (approximately 400 yards downstream from Roger Creek (south of Pe Ell):

(i) All species August 16 through November 30: Single-point barbless hooks are required.

(ii) Open the Saturday before Memorial Day through April 15.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon:

(A) From October 1 through ~~((November 30))~~ December 31:

(B) Daily limit 6; only 2 adults may be retained.

(C) Release ~~((adult))~~ Chinook ~~((and wild adult coho))~~.

(f) From high bridge on Weyerhaeuser 1000 line (approximately 400 yards downstream from Roger Creek, south of Pe Ell, including all forks) upstream:

(i) Open the Saturday before Memorial Day through April 15.

(ii) Selective gear rules.

- (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (19) **Chehalis River, South Fork (Lewis County)**: From the mouth to County Highway Bridge near Boistfort School:
- (a) Open the Saturday before Memorial Day through April 15.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (20) **Chimacum Creek (Jefferson County)**:
- (a) From the mouth to Ness's Corner Road:
    - (i) Open the Saturday before Memorial Day through August 31.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (b) From Ness's Corner Road upstream:
    - (i) Open the Saturday before Memorial Day through October 31.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (21) **Clallam River (Clallam County)**:
- (a) Open the Saturday before Memorial Day through October 31:
    - (i) Selective gear rules.
    - (ii) Release all fish.
  - (b) Open from November 1 through January 31:
    - (i) Game fish: Statewide minimum length/daily limit, except:
    - (ii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (22) **Clearwater River (Jefferson County)**:
- (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (b) It is unlawful to use anything other than one barbless hook.
  - (c) From the mouth to Snahapish River:
    - (i) Open the Saturday before Memorial Day through September 30 and December 1 through April 15.
    - (ii) Bait is allowed September 1 through February 15.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Release wild rainbow trout.
      - (B) Cutthroat trout: Minimum length 14 inches.
    - (iv) Salmon: Open September 1 through ~~((September))~~ November 30: ~~((A))~~ Daily limit 3; only ((one)) 1 adult may be retained((+ (B) Release wild coho)).
  - (d) From the Snahapish River upstream:
    - (i) Open the Saturday before Memorial Day through September 30.
    - (ii) It is unlawful to use bait.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Release wild rainbow trout.
      - (B) Cutthroat trout: Minimum length 14 inches.
- (23) **Cloquallum Creek (Grays Harbor County)**: From the mouth to the outlet at Stump Lake:
- (a) Open the Saturday before Memorial Day through the last day in February.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (24) **Copalis River (Grays Harbor County)**:
- (a) From the mouth to Carlisle Bridge:
    - (i) From the Saturday before Memorial Day through last day in February.

(ii) It is permissible to retain hatchery steelhead with a dorsal fin height of less than 2 1/8 inches or with an adipose or ventral fin clip.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: From ~~((October))~~ September 1 through ~~((November 30))~~ December 31.

(A) Daily limit 6; ~~((only one))~~ 2 adult salmon may be retained.

(B) Release ~~((adult))~~ Chinook.

(b) From Carlisle Bridge upstream:

(i) Open the Saturday before Memorial Day through the last day in February.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(25) **Crim Creek (Lewis County) (Chehalis River tributary):** Closed waters.

(26) **Deep Creek (Clallam County) (tributary to the straits):**

(a) Open December 1 through January 31.

(b) Selective gear rules.

(c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(27) **Dickey River (Clallam County):**

(a) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(b) It is unlawful to use anything other than one barbless hook.

(c) From Olympic National Park boundary upstream to the confluence of the East and West forks:

(i) Open the Saturday before Memorial Day through April 30.

(ii) It is unlawful to use bait the Saturday before Memorial Day through August 31 and February 16 through April 30.

(iii) Game fish: Statewide minimum length/daily limit, except:

(A) Release wild rainbow trout.

(B) Cutthroat trout: Minimum length 14 inches.

(iv) Salmon: Open July 1 through November 30:

(A) July 1 through August 31:

(I) Daily limit 6; only 2 adults may be retained.

(II) Release wild adult Chinook and wild adult coho.

(B) September 1 through November 30: ~~((+I))~~ Daily limit 3; only ~~((one))~~ 1 adult may be retained.

~~((+II) Release wild adult coho.)~~

(d) From the confluence of the East and West forks upstream (for both forks):

(i) Open the Saturday before Memorial Day through April 30.

(ii) It is unlawful to use bait.

(iii) Game fish: Statewide minimum length/daily limit, except:

(A) Release wild rainbow trout.

(B) Cutthroat trout: Minimum length 14 inches.

(28) **Duck Lake (Grays Harbor County):**

(a) Game fish: Statewide minimum length/daily limit, except: Crappie: No limit and no minimum length.

(b) Grass carp: No limit for anglers and bow and arrow fishing.

(29) **Dungeness River (Clallam County):** From the mouth to the forks at Dungeness Forks Campground:

(a) Open October 16 through January 31.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(c) Salmon:

- (i) Open October 16 through November 30.
- (ii) Daily limit 4 coho only.
- (iii) Release wild coho.
- (30) **East Twin River (Clallam County):**
  - (a) Selective gear rules.
  - (b) Release all fish.
- (31) **Elk Creek (Lewis County) (Chehalis River tributary):** Open the Saturday before Memorial Day through September 30 and January 1 through March 31.
- (32) **Elk Lake (Clallam County):**
  - (a) Open the Saturday before Memorial Day through October 15.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Release kokanee.
- (33) **Elk River (Grays Harbor County):**
  - (a) From the mouth (Highway 105 Bridge) to the confluence of the middle branch:
    - (i) Open the Saturday before Memorial Day through the last day in February.
    - (ii) From August 16 through November 30: Single-point barbless hooks are required.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (iv) Salmon: Open October 1 through (~~November 30~~) December 31.
      - (A) Daily limit 6, of which 2 may be adults.
      - (B) Release (~~adult~~) Chinook (~~and wild adult coho~~).
  - (b) From confluence of the middle branch upstream:
    - (i) Open the Saturday before Memorial Day through the last day in February.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (34) **Elwha River and all tributaries (Clallam County):** Closed waters.
- (35) **Failor Lake (Grays Harbor County):** Open the fourth Saturday in April through September 15.
- (36) **Fork Creek (Pacific County) (Willapa River tributary):**
  - (a) From Forks Creek Hatchery rack upstream 500 feet at fishing boundary sign:
    - (i) Open only for anglers with lower extremity disabilities who must permanently use a medically prescribed assistive device every time for mobility as defined in WAC 220-413-150 and possess a designated harvester companion card.
    - (ii) Night closure.
    - (iii) From October 1 through November 30:
      - (A) Single-point barbless hooks required.
      - (B) Stationary gear restriction.
    - (iv) Open the Saturday before Memorial Day through July 15 and October 1 through March 31.
    - (v) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (vi) Salmon open: From October 1 through January 31:
      - (A) Daily limit 6; only (~~3~~) 2 adults may be retained (~~and only one may be a wild adult coho~~).
      - (B) Release wild Chinook.
  - (b) From the fishing boundary sign 500 feet above Forks Creek Hatchery rack upstream to the source:

- (i) Selective gear rules.
- (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

**(37) Goodman Creek (Jefferson County), outside Olympic National Park:**

- (a) Open the Saturday before Memorial Day through the last day in February.
- (b) Selective gear rules.
- (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

**(38) Gray Wolf River (Clallam County):**

- (a) From the confluence with the Dungeness to the bridge at river mile 1.0: Closed waters.

- (b) From the bridge at river mile 1.0, upstream:

- (i) Selective gear rules.
- (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(39) Hoh River (Jefferson County):**

- (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.

- (b) It is unlawful to use anything other than one barbless hook.

- (c) From the Olympic National Park boundary upstream to the DNR Oxbow Campground Boat Launch:

- (i) It is unlawful to use bait from (~~July~~) June 1 through September 15 and February 16 through April 15.

- (ii) Open (~~July~~) June 1 through August 31 and September 16 through April 15:

- (iii) Game fish: Statewide minimum length/daily limit, except:

- (A) Release wild rainbow trout.

- (B) Cutthroat trout: Minimum length 14 inches.

- (C) From November 1 through February 15: Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

- (iv) Salmon:

- (A) Open June 1 through June 30: Daily limit 1 hatchery Chinook.

- (B) Open September 16 through November 30: Daily limit 6; only 2 adults may be retained of which only (~~one~~) 1 may be a Chinook.

- (d) From the DNR Oxbow Campground Boat Launch to Morgans Crossing Boat Launch:

- (i) Open June 1 through April 15.

- (ii) It is unlawful to use bait the Saturday before Memorial Day through October 15 and December 1 through April 15.

- (iii) Game fish: Statewide minimum length/daily limit, except:

- (A) Release wild rainbow trout.

- (B) Cutthroat trout: Minimum length 14 inches.

- (iv) Salmon: Open October 16 through November 30: Daily limit 6; only 2 adults may be retained, of which only (~~one~~) 1 may be a Chinook.

- (e) From Morgan's Crossing Boat Launch upstream to the Olympic National Park boundary below mouth of South Fork Hoh River:

- (i) Open June 1 through April 15.

- (ii) It is unlawful to use bait.

- (iii) It is unlawful to fish from a floating device.

- (iv) Game fish: Statewide minimum length/daily limit, except:

- (A) Release wild rainbow trout.

- (B) Cutthroat trout: Minimum length 14 inches.

- (40) **Hoh River, South Fork (Jefferson County), outside the Olympic National Park boundary:**

- (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (b) Open July 1 through August 31 and September 16 through April 15.
- (c) It is unlawful to use anything other than one barbless hook.
- (d) It is unlawful to use bait.
- (e) Game fish: Statewide minimum length/daily limit, except:
  - (i) Release wild rainbow trout.
  - (ii) Cutthroat trout: Minimum length 14 inches.
- (41) Hoko River (Clallam County):**
  - (a) From the mouth to the upper Hoko Bridge:
    - (i) From the hatchery ladder downstream 100 feet: Closed waters.
    - (ii) Open the Saturday before Memorial Day through March 15.
    - (iii) From September 1 through October 31: Open to fly fishing only.
  - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (b) From the upper Hoko Bridge to Ellis Creek Bridge (river mile 18.5):
    - (i) Open the Saturday before Memorial Day through March 31 to fly fishing only.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (42) Hoquiam River, including West Fork (Grays Harbor County):**
  - (a) From the mouth (Highway 101 Bridge on Simpson) to Dekay Road Bridge (West Fork):
    - (i) August 16 through November 30: Single-point barbless hooks required.
    - (ii) Open the Saturday before Memorial Day through the last day of February:
    - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (iv) Salmon: Open October 1 through (~~November 30~~) December 31.
      - (A) Daily limit 6, of which 2 may be adults.
      - (B) Release (~~adult~~) Chinook (~~(and wild adult coho)~~).
  - (b) From Dekay Road Bridge upstream:
    - (i) Open the Saturday before Memorial Day through the last day of February.
      - (ii) Selective gear rules.
      - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (43) Hoquiam River, East Fork (Grays Harbor County):**
  - (a) From the mouth to the confluence of Berryman Creek:
    - (i) August 16 through November 30: Single-point barbless hooks are required.
    - (ii) Open the Saturday before Memorial Day through the last day of February.
      - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
      - (iv) Salmon: Open October 1 through (~~November 30~~) December 31.
        - (A) Daily limit 6, of which 2 may be adults.
        - (B) Release (~~adult~~) Chinook (~~(and wild adult coho)~~).
    - (b) From the confluence of Berryman Creek upstream:
      - (i) Open the Saturday before Memorial Day through the last day of February.
        - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iii) Selective gear rules.

(44) **Humptulips River (Grays Harbor County):**

(a) From the mouth (Jessie Slough) to the Highway 101 Bridge, including all channels, sloughs, and interconnected waterways:

(i) From August 16 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(ii) Open the Saturday before Memorial Day through March 31.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon:

(A) From September 1 through September 30:

(I) Daily limit 6; only 2 adults may be retained ((of which only one may be a wild Chinook)).

(II) Release wild Chinook and wild coho.

(B) From October 1 through November 30:

(I) Daily limit 6; only ((2)) 1 adult((s)) may be retained.

(II) Release wild ((adult)) Chinook and wild coho.

(C) From December 1 through December 31:

(I) Daily limit 6; only 1 adult may be retained.

(II) Release Chinook and wild coho.

(b) From the Highway 101 Bridge to the confluence of the East and West forks:

(i) From December 1 through March 31: It is unlawful to fish from a floating device equipped with an internal combustion motor.

(ii) From August 16 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(iii) From March 1 through March 31: Selective gear rule.

(iv) Game fish:

(A) Open the Saturday before Memorial Day through ((March 31.

~~(iv) Game fish))~~ the last day in February: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(B) Open March 1 through March 31: Release all fish, except: Anglers may retain up to 2 hatchery steelhead.

(v) Salmon:

(A) From September 1 through September 30:

(I) Daily limit 6; only 2 adults may be retained ((of which only one may be a wild Chinook)).

(II) Release wild Chinook and wild coho.

(B) From October 1 through November 30:

(I) Daily limit 6; only ((2)) 1 adult((s)) may be retained.

(II) Release wild ((adult)) Chinook and wild coho.

(C) From December 1 through December 31:

(I) Daily limit 6; only 1 adult may be retained.

(II) Release Chinook and wild coho.

(45) **Humptulips River, East Fork (Grays Harbor County):** From August 16 through October 31:

(a) Anti-snagging rule.

(b) Night closure.

(46) **Humptulips River, West Fork (Grays Harbor County):** From the mouth to Donkey Creek:

(a) From August 16 through November 30:

(i) Anti-snagging rule.

(ii) Night closure.

- (b) (~~Open the Saturday before Memorial Day through March 31.~~)  
From March 1 through March 31: Selective gear rule.
- (c) Game fish:
- (i) Open the Saturday before Memorial Day through the last day in February: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (ii) Open March 1 through March 31: Release all fish, except: Anglers may retain up to 2 hatchery steelhead.
- (47) **Joe Creek (Grays Harbor County):** From the mouth to Ocean Beach Road Bridge:
- (a) August 16 through November 30: Single-point barbless hooks are required.
- (b) Open the Saturday before Memorial Day through December 31.
- (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (d) Salmon: Open (~~October~~) September 1 through (~~November 30~~) December 31:
- (i) Daily limit 6; (~~only one~~) 2 adult salmon may be retained.
- (ii) Release (~~adult~~) Chinook.
- (48) **Johns River (Grays Harbor County):** From the mouth (Highway 105 Bridge) to Ballon Creek:
- (a) August 16 through November 30: Single-point barbless hooks are required.
- (b) Open the Saturday before Memorial Day through the last day in February.
- (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (d) Salmon: Open October 1 through (~~November 30~~) December 31.
- (i) Daily limit 6, of which 2 may be adults.
- (ii) Release (~~adult~~) Chinook (~~(and wild adult coho)~~).
- (49) **Kalaloch Creek (Jefferson County), outside Olympic National Park:**
- (a) Open the Saturday before Memorial Day through the last day in February:
- (b) Selective gear rules.
- (c) Game fish: State wide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (50) **Lena Lake, Lower (Jefferson County):** The inlet stream from the mouth upstream to the footbridge (about 100 feet): Closed waters.
- (51) **Lincoln Pond (Clallam County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (52) **Little Hoko River (Clallam County):**
- (a) Selective gear rules.
- (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (53) **Loomis Lake (Pacific County):** Open the fourth Saturday in April through October 31.
- (54) **Lyre River (Clallam County):**
- (a) From the mouth to falls near river mile 3:
- (i) Open the Saturday before Memorial Day through January 31.
- (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (b) From the falls to the Olympic National Park boundary:
- (i) Selective gear rules.
- (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(55) **Matheny Creek (Jefferson County) (Queets River tributary), outside the Olympic National Park:**

- (a) Open the Saturday before Memorial Day through September 30.
- (b) It is unlawful to use bait.
- (c) It is unlawful to use anything other than one barbless hook.
- (d) Game fish: Statewide minimum length/daily limit, except:
  - (i) Release wild rainbow trout.
  - (ii) Cutthroat trout: Minimum length 14 inches.

(56) **McDonald Creek (Clallam County):**

- (a) Selective gear rules.
- (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(57) **Moclips River (Grays Harbor County):**

- (a) From the mouth to the Quinault Indian Reservation boundary.
- (b) Open the Saturday before Memorial Day through the last day in February.
- (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (d) It is permissible to retain steelhead with a dorsal fin height of less than 2 1/8 inches or with an adipose or ventral fin clip.

(e) Salmon: Open (~~(October)~~) September 1 through (~~(November 30)~~) December 31.

- (i) Daily limit 6, of which (~~(one)~~) 2 may be an adult salmon.
- (ii) Release (~~(adult)~~) Chinook.

(58) **Morse Creek (Clallam County):** From the mouth to Port Angeles Dam:

- (a) Open from December 1 through January 31.
- (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(59) **Mosquito Creek (Jefferson County):** From outside Olympic National Park upstream to the Goodman 3000 Mainline Bridge:

- (a) Open the Saturday before Memorial Day through the last day in February.
- (b) Selective gear rules.
- (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(60) **Naselle River (Pacific/Wahkiakum counties):**

- (a) From the Highway 101 Bridge to the South Fork:
  - (i) From August 1 through November 15:
    - (A) Night closure.
    - (B) Anti-snagging rule.
    - (C) Barbless hooks are required.
  - (ii) Anglers may fish with two poles August 1 through January 31, provided they possess a valid two-pole endorsement.
  - (iii) Open the Saturday before Memorial Day through April 15.
  - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (v) Salmon: Open August 1 through January 31:
  - (A) Daily limit 6; only ((4)) 2 adults may be retained(~~(, of which only one may be a wild adult coho)~~).
  - (B) Release wild Chinook.

(b) From the confluence of the South Fork upstream to the Highway 4 Bridge:

- (i) From February 1 through April 15: Selective gear rules.
- (ii) From August 1 through November 15:
  - (A) Night closure.

- (B) Anti-snagging rule.
- (C) Barbless hooks are required.
- (D) Stationary gear restriction.
- (iii) Open the Saturday before Memorial Day through April 15.
- (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (v) Salmon: ~~((A))~~ Open August 1 through ~~((September 30))~~ January 31.
  - ~~((I))~~ (A) Daily limit 6; only 2 adults may be retained~~((, of which only one may be a wild adult coho))~~.
  - ~~((II))~~ (B) Release wild Chinook.
  - ~~((B) Open October 1 through January 31.~~
  - ~~(I) Limit 6; only 4 adults may be retained, of which only one may be a wild adult coho.~~
  - ~~(II) Release wild Chinook.)~~
- (c) From the Highway 4 Bridge to 300 feet below the upstream entrance of the Naselle Hatchery attraction channel:
  - (i) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (ii) From February 1 through April 15: Selective gear rules.
  - (iii) From August 16 through October 15: Bait or lure must be suspended below a float.
  - (iv) From August 16 through November 15:
    - (A) Night closure.
    - (B) Anti-snagging rule.
    - (C) Barbless hooks are required.
    - (D) Stationary gear restrictions.
  - (v) Open the Saturday before Memorial Day through July 31 and August 16 through April 15.
  - (vi) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (vii) Salmon: ~~((A))~~ Open August 16 through ~~((September 30))~~ January 31.
    - ~~((I))~~ (A) Daily limit 6; only 2 adults may be retained~~((, of which only one may be a wild adult coho))~~.
    - ~~((II))~~ (B) Release wild Chinook.
    - ~~((B) Open October 1 through January 31.~~
    - ~~(I) Limit 6; only 4 adults may be retained, of which only one may be a wild adult coho.~~
    - ~~(II) Release wild Chinook.~~
    - ~~(viii))~~ (d) From 300 feet below the upstream entrance of the Naselle Hatchery attraction channel ~~((downstream 300 feet))~~ to the upstream entrance of the Naselle Hatchery attraction channel: Closed waters.
    - ~~((d))~~ (e) From the upstream entrance of the Naselle Hatchery attraction channel to the ~~((Crown Mainline (Salme) Bridge:~~
      - ~~(i) From the falls in Sec. 6, T10N, R8W (Wahkiakum Co.) downstream 400 feet: Closed waters.~~
      - ~~(ii) Downstream of the full spanning concrete diversion structure at the Naselle Hatchery: Closed waters August 1 through October 15.~~
      - ~~(iii))~~ full spanning concrete diversion structure at the Naselle Hatchery:
        - (i) It is unlawful to fish from a floating device equipped with an internal combustion motor.
        - (ii) August 1 through October 15: Closed waters.
        - (iii) From October 16 through November 15:
          - (A) Night closure.

(B) Anti-snagging rule.  
(C) Barbless hooks are required.  
(D) Stationary gear rules.  
(iv) From February 1 through April 15: Selective gear rules.  
(v) Open the Saturday before Memorial Day through April 15.  
(vi) Game fish: Statewide minimum length/daily limit, except:  
Cutthroat trout and wild rainbow trout: Minimum length 14 inches.  
(vii) Salmon: Open October 16 through January 31.  
(A) Daily limit 6; only 2 adults may be retained.  
(B) Release wild Chinook.  
(f) From the full spanning concrete diversion structure at the Naselle Hatchery to 400 feet downstream of the falls in Sec. 6 T10N R8W:  
(i) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
(ii) From August 1 through November 15:  
(A) Night closure.  
(B) Anti-snagging rule.  
(C) Barbless hooks are required.  
(D) Stationary gear rules.  
(iii) Open the Saturday before Memorial Day through April 15.  
(iv) Game fish: Statewide minimum length/daily limit, except:  
Cutthroat trout and wild rainbow trout: Minimum length 14 inches.  
(v) Salmon: Open October 16 through January 31.  
(A) Daily limit 6; only 2 adults may be retained.  
(B) Release wild Chinook.  
(g) From 400 feet downstream of the falls in Sec. 6, T10N, R8W to the falls in (Wahkiakum County): Closed waters.  
(h) From the falls in Sec. 6, T10N, R8W to the Crown Mainline (Salme) Bridge:  
(i) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
~~((iv))~~ (ii) From August 1 through November 15:  
(A) Night closure.  
(B) Anti-snagging rule.  
(C) Barbless hooks are required.  
(D) Stationary gear rules.  
~~((v))~~ (iii) Open the Saturday before Memorial Day through April 15.  
~~((vi))~~ (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.  
~~((vii))~~ (v) Salmon: Open October 16 through January 31.  
(A) Daily limit 6; only ((4)) 2 adults may be retained(~~(, of which one may be a wild adult coho)~~).  
(B) Release wild Chinook.  
~~((e))~~ (i) From the Crown Mainline (Salme) Bridge to the mouth of the North Fork:  
(i) From February 1 through April 15; selective gear rules.  
(ii) Open the Saturday before Memorial Day through April 15.  
(iii) Game fish: Statewide minimum length/daily limit, except:  
Cutthroat trout and wild rainbow trout: Minimum length 14 inches.  
(iv) From August 16 through November 30:  
(A) Night closure.  
(B) Anti-snagging rule.  
~~((f))~~ (j) Upstream from the mouth of the North Fork.  
(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(61) **Naselle River, South (Pacific County):**

(a) From the mouth to Bean Creek: Open the Saturday before Memorial Day through the last day in February.

(b) From the Saturday before Memorial Day through August 15: Selective gear rules.

(c) From August 16 through November 30: Anti-snagging rule and night closure.

(d) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(62) **Nemah River, Middle (Pacific County):**

(a) From the mouth upstream to the department of natural resources decommissioned bridge on the Middle Nemah A-Line Road:

(i) Open the Saturday before Memorial Day through March 31.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iii) From August 1 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(iv) Salmon:

(A) Open September 1 through January 31.

(B) Daily limit 6; no more than ((4)) 2 adults may be retained(~~(7 of which one may be a wild adult coho)~~).

(C) Release wild Chinook.

(b) From the department of natural resources decommissioned bridge on the Middle Nemah A-Line Road upstream:

(i) Open the Saturday before Memorial Day through March 31:

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) From August 16 through November 30: (~~(A) Anti-snagging rule-~~

~~(B)~~) Night closure.

(63) **Nemah River, North (Pacific County):**

(a) From Highway 101 Bridge upstream to the bridge on Nemah Valley Road:

(i) Open the Saturday before Memorial Day through March 31.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iii) From August 1 through November 30:

(A) Night closure.

(B) Stationary gear restriction.

(C) Single-point barbless hooks are required.

(iv) Salmon: Open August 1 through January 31.

(A) Daily limit 6; only ((4)) 2 adults may be retained(~~(7 of which one may be a wild adult coho)~~).

(B) Release wild Chinook.

(b) From the bridge on Nemah Valley Road upstream to approximately 1.66 miles to the Hancock property line:

(i) Open the Saturday before Memorial Day through July 31 and November 16 through March 31.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iii) From August 16 through November 30:

(A) Anti-snagging rule.

(B) Night closure.

- (iv) From December 1 through March 31: Selective gear rules.
- (c) From the Hancock property line upstream to the temporary weir (approximately 210 feet above the Nemah Hatchery Bridge):
  - (i) Open only for salmon for anglers that possess a senior's license from August 1 through September 15:
    - (A) Salmon: Daily limit 6; only 2 adults may be retained.
    - (B) Release wild Chinook.
  - (ii) Open the Saturday before Memorial Day through July 31 and November 16 through March 31.
  - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (iv) From August 16 through November 30:
    - (A) Anti-snagging rule.
    - (B) Night closure.
  - (v) From December 1 through March 31: Selective gear rules.
    - ~~((A) Limit 6; only 4 adults may be retained, of which only one may be a wild coho.~~
    - ~~(B) Release wild Chinook.)~~
- (d) From the temporary weir (approximately 210 feet above the Nemah Hatchery Bridge) upstream to the Nemah Hatchery Dam: Closed waters.
- (e) From the Nemah Hatchery Dam upstream to N-700 Road (46° 28.58N, 123° 48.54W):
  - (i) Open the Saturday before Memorial Day through March 31.
  - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (iii) From August 16 through November 30:
    - (A) Night closure.
    - (B) Anti-snagging rule.
  - (iv) From December 1 through March 31: Selective gear rules.
  - (v) Salmon: Open October 1 through January 31:
    - (A) Daily limit 6; only ((4)) 2 adults may be retained~~((, of which one may be a wild adult coho))~~.
    - (B) Release wild Chinook.
- (f) From the N-700 Road (46° 28.58N, 123° 48.54W) to Cruiser Creek:
  - (i) Open the Saturday before Memorial Day through March 31.
  - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (iii) From August 16 through November 30:
    - (A) Night closure.
    - (B) Anti-snagging rule.
  - (iv) From December 1 through March 31: Selective gear rules.
  - (64) **Nemah River, South (Pacific County):**
    - (a) From September 1 through November 30:
      - (i) Night closure.
      - (ii) Single-point barbless hooks are required.
    - (b) Open the Saturday before Memorial Day through March 31:
    - (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (d) Salmon: Open September 1 through January 31.
      - (i) Daily limit 6; only ((4)) 2 adults may be retained~~((, of which one may be a wild adult coho))~~.
      - (ii) Release wild Chinook.
  - (65) **Newaukum River, including South Fork (Lewis County):**
    - (a) From the mouth to Leonard Road near Onalaska:
      - (i) Open the Saturday before Memorial Day through March 31:

- (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (iii) From August 16 through November 30:
  - (A) Night closure.
  - (B) Single-point barbless hooks are required.
- (iv) Salmon: Open October 16 through (~~November 30~~) December 31:
  - (A) Daily limit 6; only 2 adults may be retained.
  - (B) Release (~~adult~~) Chinook (~~(and wild adult coho)~~).
- (b) From Leonard Road near Onalaska to Highway 508 Bridge near Kearny Creek:
  - (i) Open the Saturday before Memorial Day through March 31:
  - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (iii) From August 16 through November 30:
    - (A) Night closure.
    - (B) Single-point barbless hooks are required.
- (66) Newaukum River, Middle Fork (Lewis County), from the mouth to Tauscher Road Bridge:**
  - (a) Open the Saturday before Memorial Day through March 31.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (67) Newaukum River, North Fork (Lewis County), from the mouth to 400 feet below the Chehalis city water intake:**
  - (a) Open the Saturday before Memorial Day through March 31.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (68) Niawiakum River (Pacific County):** From Highway 101 Bridge to the South Bend/Palix Road Bridge:
  - (a) From August 16 through November 30:
    - (i) Night closure.
    - (ii) Single-point barbless hooks are required.
  - (b) Open the Saturday before Memorial Day through November 30.
- (69) North River (Grays Harbor/Pacific counties):**
  - (a) From the Highway 105 Bridge to Fall River:
    - (i) From August 16 through November 30:
      - (A) Night closure.
      - (B) Single-point barbless hooks are required.
      - (C) Anti-snagging rule.
    - (ii) Open the Saturday before Memorial Day through the last day in February.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (iv) Salmon: Open October 1 through January 31.
      - (A) Daily limit 6; only ((4)) 2 adults may be retained(~~(, of which only one may be a wild adult coho)~~).
      - (B) Release wild Chinook.
  - (b) From Fall River upstream to Raimie Creek:
    - (i) Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (70) Ozette Lake tributaries and their tributaries except Big River (Clallam County):** Outside of Olympic National Park. Open the Saturday before Memorial Day through October 15.
- (71) Palix River, including all forks (Pacific County):**
  - (a) From the Highway 101 Bridge to the mouth of the Middle Fork:
    - (i) From August 16 through November 30:
      - (A) Night closure.

- (B) Single-point barbless hooks are required.
- (ii) Open the Saturday before Memorial Day through March 31.
- (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (b) From the confluence with the Middle Fork upstream and all forks, including South Fork Palix and Canon rivers:
  - (i) From August 16 through October 15:
    - (A) Anti-snagging rule.
    - (B) Night closure.
  - (ii) From the Saturday before Memorial Day through August 15, and from December 16 through March 31: Selective gear rules.
  - (iii) Open the Saturday before Memorial Day through October 15, and from December 16 through March 31.
  - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (72) **Peabody Creek (Clallam County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (73) **Pleasant Lake (Clallam County):**
  - (a) Game fish: Statewide minimum length/daily limit, except:
  - (b) Kokanee: Daily limit 5; minimum length 8 inches, maximum length 18 inches.
- (74) **Pysht River (Clallam County):**
  - (a) Open the Saturday before Memorial Day through January 31.
  - (b) Selective gear rules.
  - (c) From the Saturday before Memorial Day through October 31.
  - (i) Game fish: Statewide minimum length/daily limit, except:
    - (ii) Release cutthroat trout and wild rainbow trout.
  - (d) From November 1 through January 31:
    - (i) Game fish: Statewide minimum length/daily limit, except:
      - (ii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (75) **Quigg Lake (Grays Harbor County):**
  - (a) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (b) Salmon:
    - (i) Open October 1 through January 31.
    - (ii) Daily limit 6 hatchery coho salmon; only 4 may be adult hatchery coho.
- (76) **Quillayute River (Clallam County), outside of Olympic National Park:**
  - (a) Open year-round, except closed Mondays and Tuesdays in September and October 1. Closed Mondays in October and October 29.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) It is unlawful to use anything other than one barbless hook.
  - (i) Game fish: Statewide minimum length/daily limit, except:
    - (A) Release wild rainbow trout.
    - (B) Cutthroat trout: Minimum length 14 inches.
  - (ii) From November 1 through the last day in February: Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - (d) Salmon:
    - (i) From February 1 through August 31:
      - (A) Daily limit 6; only 2 adults may be retained (~~(, of which only one may be a sockeye)~~).
      - (B) Release sockeye, wild adult Chinook and wild adult coho.
    - (ii) From September 1 through (~~(November 30)~~) September 15:

(A) Daily limit 6; only ((2)) 3 adults may be retained, of which only ((one)) 1 may be a wild Chinook ((and only one may be a sock-eye)).

(B) Release sockeye and wild adult coho.

(iii) From September 16 through November 30:

(A) Daily limit 6; only 3 adults may be retained, of which only 1 may be a wild salmon.

(B) Release sockeye.

(77) **Quinault River (Grays Harbor County):** From the mouth at the upper end of Quinault Lake upstream to the Olympic National Park boundary:

(a) Open the Saturday before Memorial Day through April 15.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) It is unlawful to use anything other than one barbless hook.

(d) It is unlawful to use bait the Saturday before Memorial Day through September 30 and February 16 through April 15.

(e) Game fish: Statewide minimum length/daily limit, except:

(i) Release wild rainbow trout.

(ii) Cutthroat trout: Minimum length 14 inches.

(f) It is permissible to retain steelhead with a dorsal fin height of less than 2 1/8 inches or with an adipose or ventral fin clip.

(g) Salmon:

(i) Open July 1 through September 30: Daily limit 6 jack salmon only.

(ii) Open October 1 through November 30:

(A) Daily limit 6; only 2 adults may be retained.

(B) Release sockeye and chum.

(78) **Rocky Brook (Jefferson County) (Dosewallips River tributary):** From the mouth upstream: Closed waters.

(79) **Salmon Creek (Pacific County) (tributary of Naselle River):**

(a) Open the Saturday before Memorial Day through the last day in February.

(b) Selective gear rules.

(c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(80) **Salmon River (Jefferson County), outside Olympic National Park and the Quinault Indian Reservation:**

(a) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(b) It is unlawful to use anything other than one barbless hook.

(c) It is unlawful to use bait the Saturday before Memorial Day through August 31.

(d) Open the Saturday before Memorial Day through September 30 and December 1 through the last day in February.

(e) Game fish: Statewide minimum length/daily limit, except:

(i) Release wild rainbow trout.

(ii) Cutthroat trout: Minimum length 14 inches.

(iii) From Saturday before Memorial Day through September 30: It is permissible to retain steelhead with a dorsal fin height of less than 2 1/8 inches or with an adipose or ventral fin clip.

(iv) From December 1 through the last day in February: Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(f) Salmon: Open September 1 through ~~(September)~~ November 30:

(i) Daily limit 6; only 2 may be adults and only ((one)) 1 of the adults may be a Chinook.

- (ii) Release wild coho.
- (81) **Salt Creek (Clallam County)**: From the mouth to the bridge on Highway 112:
  - (a) Selective gear rules.
  - (b) From the Saturday before Memorial Day through January 31:
    - (i) Game fish: Statewide minimum length/daily limit, except:
    - (ii) Release cutthroat trout and wild rainbow trout.
- (82) **Satsop River and East Fork (Grays Harbor County)**:
  - (a) From the mouth to the bridge at Schafer State Park:
    - (i) From August 16 through November 30:
      - (A) Night closure.
      - (B) Single-point barbless hooks are required.
    - (ii) Open the Saturday before Memorial Day through March 31:
      - (A) Game fish: Statewide minimum length/daily limit, except:
      - (B) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (iii) Salmon: Open October 1 through (~~November 30~~) December 31:
    - (A) Daily limit 6; only 2 adults may be retained.
    - (B) Release (~~adult~~) Chinook (~~and wild adult coho~~).
  - (b) From the bridge at Schafer State Park upstream to 400 feet below Bingham Creek Hatchery barrier dam:
    - (i) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (ii) From August 16 through October 31:
      - (A) Night closure.
      - (B) Single-point barbless hooks are required.
    - (c) From 400 feet downstream of the Bingham Creek Hatchery barrier dam upstream to the dam:
      - (i) Open within posted markers to anglers with disabilities who permanently use a wheelchair and possess a designated harvester companion card.
      - (ii) Night closure.
    - (iii) From August 16 through November 30: Single-point barbless hooks are required.
    - (iv) Open the Saturday before Memorial Day through March 31:
      - (A) Game fish: Statewide minimum length/daily limit, except:
      - (B) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (v) Salmon: Open October 1 through (~~November 30~~) December 31:
      - (A) Daily limit 6; only 2 adults may be retained.
      - (B) Release (~~adult~~) Chinook (~~and wild adult coho~~).
- (83) **Satsop River, Middle Fork (Turnow Branch) (Grays Harbor County)**:
  - (a) From August 16 through November 30:
    - (i) Anti-snagging rule.
    - (ii) Night closure.
  - (b) Open the Saturday before Memorial Day through the last day in February:
    - (i) Game fish: Statewide minimum length/daily limit, except:
    - (ii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (84) **Satsop River, West Fork (Grays Harbor County)**:
  - (a) From August 16 through November 30:
    - (i) Anti-snagging rule.
    - (ii) Night closure.
  - (b) Open the Saturday before Memorial Day through the last day in February:

(i) Game fish: Statewide minimum length/daily limit, except:  
(ii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(85) **Sekiu River (Clallam County)**: From mouth to forks:

(a) Open the Saturday before Memorial Day through January 31.

(b) Selective gear rules.

(c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(86) **Siebert Creek (Clallam County)**:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(87) **Sitkum River (Clallam County) (Calawah River tributary)**:

(a) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(b) It is unlawful to use anything other than one barbless hook.

(c) It is unlawful to use bait.

(d) Game fish: Statewide minimum length/daily limit, except:

(i) Release wild rainbow trout.

(ii) Cutthroat trout: Minimum length 14 inches.

(88) **Skookumchuck River (Thurston County)**: From the mouth to 100 feet below the outlet of the TransAlta/WDFW steelhead rearing pond located at the base of the Skookumchuck Dam:

(a) From August 16 through November 30:

(i) Night closure.

(ii) Single-point barbless hooks are required.

(b) Open the Saturday before Memorial Day through April 30:

(i) Game fish: Statewide minimum length/daily limit, except:

(ii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(c) Salmon: Open October 16 through (~~November 30~~) December 31:

(i) Daily limit 6; only 2 adults may be retained.

(ii) Release (~~adult~~) Chinook (~~and wild adult coho~~).

(89) **Smith Creek (near North River) (Pacific County)**:

(a) From the mouth to the Highway 101 Bridge:

(i) From August 16 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(ii) Open the Saturday before Memorial Day through the last day in February.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: Open October 1 through December 31:

(A) Daily limit 6; only ((3)) 2 adults may be retained(~~(, of which one may be a wild adult coho)~~).

(B) Release wild Chinook.

(b) From the Highway 101 Bridge upstream:

(i) Selective gear rules.

(ii) Open the Saturday before Memorial Day through the last day in February.

(iii) Game fish: Statewide minimum length/daily limit, except:

(iv) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(90) **Snahapish River (Jefferson County) (Clearwater River tributary)**:

(a) Open the Saturday before Memorial Day through September 30.

- (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (c) It is unlawful to use anything other than one barbless hook.
- (d) It is unlawful to use bait.
- (e) Game fish: Statewide minimum length/daily limit, except:
  - (i) Release wild rainbow trout.
  - (ii) Cutthroat trout: Minimum length 14 inches.
- (91) **Snow Creek and all tributaries (Jefferson County):** Closed waters.
  - (92) **Sol Duc River (Clallam County):**
    - (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
    - (b) It is unlawful to use anything other than one barbless hook.
    - (c) From the mouth to the concrete pump station at the Sol Duc Hatchery:
      - (i) It is unlawful to use bait July 16 through August 31 and February 16 through April 30.
      - (ii) Game fish: Open year-round: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
      - (iii) Salmon:
        - (A) From February 1 through August 31:
          - (I) Daily limit 6; only 2 adults may be retained (~~(, of which only one may be a sockeye)~~).
          - (II) Release sockeye, wild adult Chinook and wild adult coho.
        - (B) From September 1 through (~~(November 30)~~) September 15:
          - (I) Daily limit 6; only 3 adults may be retained, of which only (one) 1 may be a wild Chinook (~~(and only one may be a sockeye)~~).
          - (II) Release sockeye and wild adult coho.
        - (C) From September 15 through November 30:
          - (I) Daily limit 6; only 3 adults may be retained, of which only 1 may be wild salmon.
          - (II) Release sockeye.
    - (d) From the concrete pump station at Sol Duc Hatchery to the Highway 101 Bridge upstream of Klahowya Campground:
      - (i) Open the Saturday before Memorial Day through April 30.
      - (ii) It is unlawful to use bait.
      - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (e) From the Highway 101 Bridge upstream of Klahowya Campground to the Olympic National Park boundary:
      - (i) It is unlawful to use bait.
      - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (93) **Sol Duc River tributaries unless otherwise listed (Clallam County):**
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (94) **Solleks River (Jefferson County) (Clearwater River tributary):**
  - (a) Open the Saturday before Memorial Day through September 30.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) It is unlawful to use anything other than one barbless hook.
  - (d) It is unlawful to use bait.
  - (e) Game fish: Statewide minimum length/daily limit, except:
    - (i) Release wild rainbow trout.

- (ii) Cutthroat trout: Minimum length 14 inches.
- (95) **Sooes River (Tsoo-Yess River) (Clallam County), outside of Makah Indian Reservation:** Open the Saturday before Memorial Day through the last day in February.
- (96) **South Bend Mill Pond (Pacific County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (97) **Stevens Creek (Grays Harbor County):** From the mouth to the Highway 101 Bridge:
  - (a) From the WDFW hatchery outlet downstream to the cable crossing: Closed waters.
  - (b) Open the Saturday before Memorial Day through September 30 and December 1 through the last day in February.
  - (c) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (98) **Sutherland Lake (Clallam County):**
  - (a) Open the fourth Saturday in April through October 31.
  - (b) Game fish: Statewide minimum length/daily limit, except: Kokanee: Daily limit 5; minimum length 8 inches and maximum length 18 inches.
- (99) **Thrash Creek (Pacific/Lewis County):** Closed waters.
- (100) **Thunder Creek (Clallam County) (Tributary to East Fork Dickey River):**
  - (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (b) It is unlawful to use anything other than one barbless hook.
  - (c) It is unlawful to use bait.
  - (d) Game fish: Statewide minimum length/daily limit, except:
    - (i) Release wild rainbow trout.
    - (ii) Cutthroat trout: Minimum length 14 inches.
  - (e) From mouth to D2400 Road: Open the Saturday before Memorial Day through April 30.
  - (f) From D2400 Road upstream: Open the Saturday before Memorial Day through October 31.
- (101) **Valley Creek (Clallam County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (102) **Vance Creek/Elma Ponds (Grays Harbor County), Pond One (Bowers Lake) and Pond Two (Lake Ines):** Pond One/Bowers Lake is open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (103) **Van Winkle Creek (Grays Harbor County):**
  - (a) From August 16 through November 30:
    - (i) Night closure.
    - (ii) Anti-snagging rule.
  - (b) From the mouth to 400 feet below the outlet of Lake Aberdeen Hatchery:
    - (i) Open the Saturday before Memorial Day through January 31.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (iii) Salmon: Open October 1 through (~~November 30~~) December 31:
      - (A) Daily limit 6; only 2 adults may be retained.
      - (B) Release (~~adult~~) Chinook (~~and wild adult coho~~).
- (104) **West Twin River (Clallam County):**
  - (a) Selective gear rules.
  - (b) Release all fish.
- (105) **Willapa River (Pacific County):**

(a) From the mouth (city of South Bend boat launch) to the ~~((Highway 6 Bridge approximately 2 miles below the mouth of Trap))~~ WDFW access site at the mouth of Ward/Wilson creeks:

(i) From August 1 through November 30:

~~(A) ((It is unlawful to fish from a floating device from the second bridge on Camp One Road upstream to the mouth of Mill Creek (approximately 0.5 miles)).~~

~~(B))~~ Night closure.

~~((C))~~ (B) Single-point barbless hooks are required.

~~((D) Stationary gear restriction applies, except from the mouth of the Willapa River to the WDFW access site at the mouth of Ward/Wilson creeks.~~

~~(ii) From the City of South Bend boat launch upstream to the second bridge on Camp One Road:))~~ (ii) August 1 through January 31: Anglers may fish with two poles, provided they possess a valid two-pole endorsement.

(iii) Open December 1 through January 31.

(iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(v) Salmon: Open August 1 through January 31:

(A) Daily limit 6; only 2 adults may be retained.

(B) Release wild Chinook.

(b) From the WDFW access site at the mouth of Ward/Wilson creeks to the second bridge on Camp One Road:

(i) From August 1 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(C) Stationary gear restriction.

(ii) August 1 through January 31: Anglers may fish with two poles ((August 1 through January 31)), provided they possess a valid two-pole endorsement.

(iii) Open the Saturday before Memorial Day through March 31.

(iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(v) Salmon: Open August 1 through January 31:

(A) Daily limit 6; only ((4)) 2 adults may be retained((, of which one may be a wild adult coho)).

(B) Release wild Chinook.

((b)) (c) From the second bridge on Camp One Road upstream to the mouth of Mill Creek (approximately 0.5 miles):

(i) From August 1 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(C) Stationary gear restriction.

(D) It is unlawful to fish from a floating device.

(ii) Open the Saturday before Memorial Day through March 31.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: Open August 1 through January 31:

(A) Daily limit 6; only 2 adults may be retained.

(B) Release wild Chinook.

(d) From the mouth of Mill Creek to the Highway 6 bridge (approximately 2 miles below the mouth of Trap Creek):

(i) From August 1 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(C) Stationary gear restriction.

(ii) Open the Saturday before Memorial Day through March 31.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: Open August 1 through January 31:

(A) Daily limit 6; only 2 adults may be retained.

(B) Release wild Chinook.

(e) From Highway 6 Bridge (approximately 2 miles below the mouth of Trap Creek) to Fork Creek:

(i) From August 16 through November 30:

(A) Night closure.

(B) Single-point barbless hooks are required.

(C) Stationary gear restriction.

(ii) Open the Saturday before Memorial Day through March 31:

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: Open August 16 through ((~~September 15~~) January 31:

(A) Daily limit 6; only 2 adults may be retained((~~, of which one may be a wild adult coho~~)).

(B) Release wild Chinook.

~~((v) Salmon: Open September 16 through January 31:~~

~~(A) Limit 6; only 4 adults may be retained, of which one may be a wild adult coho.~~

~~(B) Release wild Chinook.~~

~~(e-))~~ (f) From Fork Creek upstream to the Highway 6 Bridge near the town of Lebam:

(i) From August 16 through October 31:

(A) Night closure.

(B) Single-point barbless hooks are required.

(C) Stationary gear restriction.

(ii) Open the Saturday before Memorial Day through March 31:

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: Open October 1 through January 31:

(A) Daily limit 6; only ((4)) 2 adults may be retained((~~, of which only one may be a wild adult coho~~)).

(B) Release wild Chinook.

~~((d-))~~ (g) From the Highway 6 Bridge near the town of Lebam upstream:

(i) From August 16 through October 31:

(A) Night closure.

(B) Single-point barbless hooks are required.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

**(106) Willapa River, South Fork (Pacific County):**

(a) From the mouth to the bridge on Pehl Road:

(i) From the falls/fish ladder downstream 400 feet in Section 6, Township 13 North, and Range 8 West: Closed waters.

(ii) From the Saturday before Memorial Day through July 31: Selective gear rules.

(iii) From August 1 through November 30:

(A) Night closure.

(B) Anti-snagging rule.

(C) Barbless hooks are required.

(b) Open the Saturday before Memorial Day through the last day in February:

(i) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

- (ii) Salmon: Open August 1 through January 31:
  - (A) Daily limit 6; only ((3)) 2 adults may be retained~~((, of which one may be a wild adult coho))~~.
  - (B) Release wild Chinook.
  - (c) From Pehl Road upstream:
    - (i) Open the Saturday before Memorial Day through the last day in February.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (107) **Wishkah River (Grays Harbor County):**
  - (a) From August 16 through November 30: Single-point barbless hooks are required.
  - (b) From the mouth to 200 feet below the weir at the Wishkah Rearing Ponds:
    - (i) Open the Saturday before Memorial Day through the last day in February.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (iii) Salmon: Open October 1 through ~~((November 30))~~ December 31:
      - (A) Daily limit 6; only 2 adults may be retained.
      - (B) Release ~~((adult))~~ Chinook ~~((and wild adult coho))~~.
    - (iv) From 150 feet upstream to 150 feet downstream of the Wishkah adult attraction channel/outfall structure (within the posted fishing boundary): Open only to anglers with disabilities who permanently use a wheelchair and have a designated harvester companion card.
- (108) **Wynoochee River (Grays Harbor County):**
  - (a) From the mouth to the WDFW White Bridge Access Site:
    - (i) From August 16 through November 30: Single-point barbless hooks are required.
    - (ii) Open the Saturday before Memorial Day through March 31:
    - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (iv) Salmon: Open October 1 through ~~((November 30))~~ December 31.
      - (A) Daily limit 6; only 2 adults may be retained.
      - (B) Release ~~((adult))~~ Chinook ~~((and wild adult coho))~~.
    - (b) From the WDFW White Bridge Access Site to the 7400 line bridge:
      - (i) From August 16 through November 30: Single-point barbless hooks are required.
      - (ii) From September 16 through November 30: It is unlawful to use bait.
      - (iii) Open the Saturday before Memorial Day through March 31:
      - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (c) From the 7400 line bridge to 400 feet below Wynoochee Dam ~~((, including the confluence of the reservoir upstream to Wynoochee Falls))~~:
      - (i) From 400 feet downstream of Wynoochee Dam to the dam and from the barrier dam near Grisdale to the dam: Closed waters.
      - (ii) Open the Saturday before Memorial Day through March 31:
      - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
      - (iv) Selective gear rules.
    - (d) From the confluence of the Wynoochee Reservoir upstream to Wynoochee Falls:
      - (i) Open the Saturday before Memorial Day through March 31:

(ii) Game fish: Statewide minimum length/daily limit, except:  
Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(109) **Wynoochee Reservoir (Grays Harbor County):**

(a) Open the fourth Saturday in April through October 31.

(b) Game fish: Statewide minimum length/daily limit, except:  
Trout: Daily limit 2; minimum length 14 inches.

**WAC 220-313-070 Coastal salmon—Saltwater seasons and daily limits.** (1) It is unlawful to take, fish for, or possess salmon taken by angling for personal use except from the following coastal areas, during the following seasons, in the quantities and the sizes provided for in WAC 220-313-010, and for the species designated in this section. An area is open when a daily limit is provided:

(2) **Catch Record Card Area 1:**

(a) May 1 through June (~~(23)~~) 21: Closed.

(b) June (~~(24)~~) 22 through September (~~(4)~~) 30:

(i) Daily limit of 2 salmon; no more than one may be a Chinook.

(ii) Release wild coho.

(c) (~~(September 5)~~) October 1 through April 30: Closed.

(d) Closed in the Columbia River Mouth Control Zone 1 during all open periods. See WAC 220-313-020.

(3) **Catch Record Card Area 2:**

(a) May 1 through June (~~(30)~~) 21: Closed.

(b) (~~(July 1)~~) June 22 through September (~~(4)~~) 30:

(i) Daily limit of 2 salmon; no more than one may be a Chinook.

(ii) Release wild coho.

(iii) Beginning August (~~(14)~~) 12, the Grays Harbor Control Zone is closed. Grays Harbor Control Zone - The area defined by a line drawn from the Westport Lighthouse (46°53.18'N latitude, 124°07.01'W longitude) to Buoy #2 (46°52.42'N latitude, 124°12.42'W longitude) to Buoy #3 (46°55.00'N latitude, 124°14.48'W longitude) to the Grays Harbor north jetty (46°55.36'N latitude, 124°10.51'W longitude).

(c) (~~(September 5)~~) October 1 through April 30 - Closed.

(4) **Willapa Bay (Catch Record Card Area 2-1):**

(a) May 1 through June (~~(30)~~) 21: Closed.

(b) (~~(July 1)~~) June 22 through July 31: Open concurrent with Area 2 when Area 2 is open for salmon angling. Area 2 rules apply.

(c) August 1 through January 31:

(i) Daily limit of 6 salmon; no more than (~~(3)~~) 2 may be adult salmon (~~(of which only one may be a coho)~~).

(ii) Release wild Chinook.

(iii) Beginning August 1, the Willapa Bay Control Zone is (~~(closed)~~) open. The Willapa Bay Control Zone area is defined as waters east of a line drawn from Leadbetter Point (46°39.20'N, 124°3.516'W) due west to 46°39.20'N, 124°5.3'W then due north to the westerly most landfall on Cape Shoalwater (46°44.66'N, 124°5.3'W) and west from a line drawn from Leadbetter Point (46°39.20'N, 124°3.516'W) through green marker 11 to landfall.

(iv) Anglers in possession of a valid two-pole endorsement may use up to two lines while fishing.

(v) Waters north of a line from Toke Point channel marker 3 easterly through Willapa Harbor channel marker 13 (green) then, northeasterly to the power transmission pole located at 46°43.19'N, 123°50.83'W are closed August 1 through September 30.

(d) February 1 through April 30: Closed.

(5) **Grays Harbor (Catch Record Card Area 2-2 east of the Buoy 13 line):**

(a) Humptulips North Bay Fishery is defined as northerly of a line running from the south end of the eastern jetty at Ocean Shores

Marina, then to a fishing boundary marker on Sand Island (46°57.52'N, 124°03.36'W) then to the Tripod Station located at 46°59.12'N, 124°00.72'W on Brackenridge Bluff.

(b) East Grays Harbor Fishery is defined as easterly of a projected line from the mouth of Johns River (Highway 105 bridge) to the Tripod Station on Brackenridge Bluff (46°59.12'N, 124°00.72'W) through channel marker 27 (green).

(c) May 1 through July 31: Closed.

(d) August 1 through September 15:

(i) Daily limit of ((2)) 1 salmon.

(ii) Release wild Chinook and wild coho.

(iii) Waters south of a line running from the south end of the eastern jetty at Ocean Shores Marina to the fishing boundary marker on Sand Island (46°57.52'N, 124°03.36'W) to the Tripod Station on Brackenridge Bluff (46°59.12'N, 124°00.72'W) are closed.

(e) ((~~October 1~~)) September 16 through November 30:

(i) Daily limit of ((1)) 2 salmon.

(ii) Release Chinook.

(iii) Waters west of a line running from the Tripod Station on Brackenridge Bluff (46°59.12'N, 124°00.72'W) through channel marker 27 (green) to the mouth of Johns River (Highway 105 Bridge) are closed.

(f) December 1 through April 30: Closed.

(g) Notwithstanding the provisions of this subsection, the Westport Boat Basin and Ocean Shores Boat Basin are open only August 16 through January 31:

(i) Daily limit of 6 salmon; no more than 4 may be adult salmon.

(ii) Release Chinook.

(iii) Night closure and anti-snagging rule in effect.

(6) **Grays Harbor (Catch Record Card Area 2-2 west of the Buoy 13 line):**

(a) May 1 through June 30: Closed.

(b) July 1 through August 13: Open concurrent with Area 2 when Area 2 is open for salmon angling. Area 2 rules apply.

(c) August 14 through April 30: Closed.

(7) **Catch Record Card Area 3:**

(a) May 1 through June ((23)) 21: Closed.

(b) June ((24)) 22 through ((~~September 4~~)) October 13:

(i) Daily limit of 2 salmon.

(ii) Release wild coho.

(c) ((~~September 5~~)) October 14 through April 30: Closed.

(8) **Catch Record Card Area 4:**

(a) May 1 through June ((23)) 21: Closed.

(b) June ((24)) 22 through September ((4)) 30:

(i) Daily limit of 2 salmon.

(ii) Release wild coho.

(iii) Waters east of a true north-south line through Sail Rock are closed through July 31.

(iv) Waters east of the Bonilla-Tatoosh line closed to Chinook retention beginning August 1.

(v) Release chum salmon beginning August 1.

(c) ((~~September 5~~)) October 1 through April 30: Closed.

(9) A violation of this section is an infraction, punishable under RCW 77.15.160, unless the person has harvested salmon. If the person has harvested salmon, the violation is punishable under RCW 77.15.380, Unlawful recreational fishing in the second degree—Penalty, unless the salmon are taken in the amounts or manner to constitute

a violation of RCW 77.15.370, Unlawful recreational fishing in the first degree—Penalty.

**WAC 220-313-060 Puget Sound salmon—Saltwater seasons and daily limits.** (1) It is unlawful to fish for or possess salmon taken by angling for personal use except from the following Puget Sound areas and during the seasons, in the quantities, and for the species designated in this section, and in the sizes as defined in WAC 220-313-010. An area is open when a daily limit is provided. Puget Sound waters west of the mouth of the Sekiu River are managed concurrent with ocean waters under WAC 220-313-070.

(2) **Catch Record Card Area 5:**

(a) May 1 through June 30: Closed.

(b) July 1 through August 15:

(i) Daily limit of 2 salmon.

(ii) Release chum, wild Chinook and wild coho.

~~((iii) 2 Additional sockeye salmon may be retained as part of the daily limit.))~~

(c) August 16 through September 30 ~~((--))~~ ;

(i) Daily limit of 2 salmon.

(ii) Release chum, Chinook and wild coho.

~~((iii) 2 Additional sockeye salmon may be retained as part of the daily limit.))~~

(d) October 1 through February ~~((15))~~ 29: Closed.

(e) ~~((February 16))~~ March 1 through April 30:

(i) Daily limit of 2 salmon.

(ii) Release wild coho and wild Chinook.

(3) **Catch Record Card Area 6:**

(a) May 1 through June 30: Closed.

(b) July ~~((3))~~ 1 through August 15:

(i) Daily limit of 2 salmon.

(ii) Release chum, wild Chinook and wild coho.

~~((iii) ((2 Additional sockeye salmon may be retained as part of the daily limit.))~~

~~((iv))~~) Release all Chinook east of a true north-south line through the Number 2 Buoy immediately east of Ediz Hook.

(c) Waters of Port Angeles Harbor west of a line from the tip of Ediz Hook to the ITT Rayonier Dock are closed July 1 through August 15.

(d) August 16 through September 30:

(i) Daily limit of 2 salmon.

(ii) Release chum, Chinook and wild coho.

~~((iii) 2 Additional sockeye salmon may be retained as part of the daily limit.))~~

(e) October 1 through ~~((January 31))~~ February 29: Closed except in Dungeness Bay as described in this section.

(f) ~~((February))~~ March 1 through April 15:

(i) Daily limit of ~~((1))~~ 2 salmon.

(ii) Release wild coho and wild Chinook.

(g) April 16 through April 30: Closed.

(h) Waters of Dungeness Bay inside a line from Dungeness Spit Lighthouse to the Number 2 Red Buoy, and then to the Port Williams Boat Ramp are closed except: October 1 through October 31: Daily limit of 2 hatchery coho only.

(4) **Catch Record Card Area 7:**

(a) May 1 through June 30: Closed.

(b) July 1 through July 31:

(i) Daily limit of 2 salmon.

(ii) Release chum and wild Chinook.

(iii) ~~((2 Additional sockeye salmon may be retained as part of the daily limit.~~

~~(iv))~~ Closed to salmon fishing in the Southern Rosario Strait and Eastern Strait of Juan de Fuca closure area described in WAC 220-313-020(7).

(c) August 1 through ~~((September 3:~~

~~(i) Daily limit of 2 salmon; no more than one may be a Chinook salmon.~~

~~(ii) Release chum.~~

~~(iii) 2 Additional sockeye salmon may be retained as part of the daily limit.~~

~~(iv) Closed to salmon fishing in the Southern Rosario Strait and Eastern Strait of Juan de Fuca closure area described in WAC 220-313-020(7))~~ August 31: Closed.

(d) September ~~((4))~~ 1 through September 30:

(i) Daily limit of 2 salmon.

(ii) Release chum and Chinook.

~~((iii))~~ (e) October 1 through ~~((December))~~ January 31: Closed.

~~((e))~~ (f) Closed to salmon fishing in Samish Bay area described in WAC 220-313-020(7).

~~((f) January))~~ (g) February 1 through April 15:

(i) Daily limit of 1 salmon.

(ii) Release coho and wild Chinook.

~~((g))~~ (h) Waters of Bellingham Bay described in WAC 220-313-020(1):

(i) ~~((Closed))~~ March 1 through April 30 and July 1 through August 15: Closed.

(ii) August 16 through September 30: Daily limit of 4 salmon; no more than 2 may be Chinook salmon.

(iii) October 1 through ~~((February 28))~~ January 31 and June 1 through June 30: Same rules as Area 7.

~~((h) Waters east of a line from Gooseberry Point to Sandy Point: Closed September 8 through September 30.))~~

(5) **Catch Record Card Area 8-1:**

(a) May 1 through July 31: Closed.

(b) August 1 ~~((through September 30))~~ through October 31:

(i) Daily limit 2 salmon.

(ii) Release Chinook.

(c) ~~((October 1 through November 30))~~ November 1 through January 31: Closed.

(d) ~~((December))~~ February 1 through April 30:

(i) Daily limit of ~~((2))~~ 1 salmon.

(ii) Release coho and wild Chinook.

(6) **Catch Record Card Area 8-2:**

(a) May 1 through ~~((July 31))~~ August 15 are closed, except waters described in this subsection.

(i) Waters west of Tulalip Bay and within 2,000 feet of shore from the pilings at Old Bower's Resort to a fishing boundary marker approximately 1.4 miles northwest of Hermosa Point are open only from Friday through 11:59 a.m. the following Monday of each week, June 1 through September ~~((3))~~ 2: Daily limit of 2 salmon.

(ii) Waters west of Tulalip Bay and within 2,000 feet of shore from the pilings at Old Bower's Resort to a fishing boundary marker

approximately 1.4 miles northwest of Hermosa Point are open only from Saturday through Sunday of each week, September ~~((8))~~ 7 through September ~~((30))~~ 29: Daily limit of 2 salmon.

(b) August ~~((1))~~ 16 through September ~~((23))~~ 15:

(i) Waters south and west of a line from Mukilteo ferry docks to the Clinton ferry docks:

(A) Daily limit of 2 salmon.

~~((ii))~~ (B) Release Chinook and wild coho.

(ii) Waters north and east of a line from the Mukilteo ferry docks to the Clinton ferry docks: Closed.

(c) September ~~((24))~~ 16 through ~~((November 30))~~ January 31: Closed.

(d) ~~((December))~~ February 1 through April 30:

(i) Daily limit of ~~((2))~~ 1 salmon.

(ii) Release coho and wild Chinook.

(7) **Catch Record Card Area 9:**

(a) May 1 through July ~~((15))~~ 24: Closed.

(b) July ~~((16))~~ 25 through ~~((August 15, except waters in this subsection))~~ July 28:

(i) Daily limit of 2 salmon; no more than one may be a Chinook salmon.

(ii) Release chum, wild coho and wild Chinook.

(iii) ~~((Closed))~~ Waters south of a line from Foulweather Bluff to Olele Point ((July 16 through August 15)): Closed.

(c) July 29 through August 15:

~~((A))~~ (i) Daily limit of 2 salmon.

~~((B))~~ (ii) Release Chinook, chum and wild coho.

~~((e))~~ (d) August 16 through September 30:

(i) Daily limit of 2 salmon.

(ii) Release Chinook, chum and wild coho.

~~((d))~~ (e) October 1 through ~~((December))~~ January 31: Closed.

~~((e-January))~~ (f) February 1 through April 15:

(i) Daily limit of 1 salmon.

(ii) Release wild coho and wild Chinook.

~~((f))~~ (g) April 16 through April 30: Closed.

~~((g))~~ (h) Edmonds Fishing Pier:

(i) Open year-round.

(ii) Daily limit of 2 salmon; no more than one may be a Chinook salmon.

(iii) ~~((Release chum from))~~ August 1 through September 30: Release chum.

(8) **Catch Record Card Area 10:**

(a) May 1 through May 31: Closed.

(b) June 1 through July ~~((15))~~ 24:

(i) Daily limit of 2 salmon.

(ii) Release Chinook and chum.

(c) July ~~((16))~~ 25 through August 31:

(i) Daily limit of 2 salmon; no more than one may be a Chinook salmon.

(ii) Release chum and wild Chinook.

(d) September 1 through November 15:

(i) Daily limit of 2 salmon.

(ii) Release Chinook.

(iii) ~~((Release chum))~~ September 1 through September 15: Release chum.

(e) Waters of Shilshole Bay southeast of a line from Meadow Point to West Point: Closed July 1 through August ~~((15))~~ 31.

(f) Waters of Elliott Bay east of a line from West Point to Alki Point (~~(: Closed July 1 through August 31, except: In years ending in odd numbers: Those waters north of a line from Jack Block Park through the north tip of Harbor Island to shore northeast of the North Waterway (47°35.47'N, 122°20.58'W), open August 15 through August 31 from Friday through Sunday of each week only.)~~) up to the mouth of the Duwamish River as defined: Open August 2 through 12:00 p.m. August 5:

(i) Daily limit of 2.

(ii) Release (~~Chinook,~~) chum (~~(and wild coho)~~).

(g) Waters of Sinclair Inlet and Port Orchard south of the Manette Bridge in Bremerton, south of a line true west from Battle Point, and west of a line drawn true south from Point White:

(i) July 1 through September 30 (~~(-)~~):

(ii) Daily limit of 3 salmon.

(iii) Release wild Chinook (~~(and wild coho)~~).

(iv) (~~(Release chum from)~~) August 1 through September 15: Release chum.

(h) November 16 through December 31: Closed.

(i) January 1 through March 31:

(ii) Daily limit of (~~(2)~~) 1 salmon.

(iii) Release wild Chinook.

(i) Waters of Agate Pass west of a line from Point Monroe to Indianola and east of a line from Point Bolin to Battle Point: Fly fishing only, lead core lines prohibited, and catch and release from January 1 through January 31.

(j) April 1 through April 30: Closed.

(k) Elliott Bay Fishing Pier at Terminal 86, Seacrest Pier, Waterman Pier, Bremerton Boardwalk, and Illahee State Park Pier, open year-round:

(i) Daily limit of 2 salmon; no more than one may be a Chinook salmon.

(ii) (~~(Release chum from)~~) August 1 through September 15: Release chum.

(l) Duwamish Waterway downstream from an east-west line projected through southernmost tip of Harbor Island to a line extending from Jack Block Park through the northernmost tip of Harbor Island extending to shore northeast of the North Waterway (47°35.47'N, 122°20.58'W), from July 1 through October 31 night closure, anti-snagging rule, and only fish hooked inside the mouth may be retained.

(m) Free-flowing freshwaters are closed downstream of the mouth at Gorst Creek, from July 1 through September 30.

(9) **Catch Record Card Area 11:**

(a) May 1 through (~~May 31~~) June 30: Closed.

(b) (~~(June)~~) July 1 through September 30:

(i) Daily limit of 2 salmon of which one may be a hatchery Chinook.

(ii) Release wild Chinook.

(iii) Fishing for salmon from a vessel prohibited Thursdays and Fridays.

(c) October 1 through December 31: Closed.

(d) January 1 through April 30:

(i) Daily limit 2 salmon.

(ii) Release wild Chinook.

(iii) Waters of Commencement Bay east of a line from the Cliff House Restaurant to the Sperry Ocean Dock are closed June 1 through July 31 and April 1 through April 30.

~~((d))~~ (e) Dash Point Dock, Les Davis Pier, Des Moines Pier, Redondo Pier, and Point Defiance Boathouse Dock, open year-round: Daily limit of 2 salmon; no more than one may be a Chinook salmon.

(10) **Catch Record Card Area 12:**

(a) May 1 through June 30: Closed.

(b) July 1 through September 30, in waters south of Ayock Point except waters listed in this subsection:

(i) Daily limit of 4 salmon.

(ii) Release chum and wild Chinook.

(iii) Waters within a 2,000-foot arc seaward of yellow buoys at the mouth of Finch Creek at Hoodsport Salmon Hatchery:

(A) Daily limit of 4 salmon.

(B) Release chum and wild Chinook.

(C) It is unlawful to fish for or possess salmon taken from these waters from one hour after sunset to one hour before sunrise.

(D) It is unlawful to fish from any Hoodsport Salmon Hatchery structure except persons with disabilities who permanently use a wheelchair and who have a designated harvester card under WAC 220-220-240 may fish from the ADA-access site at the Hoodsport Salmon Hatchery, as long as persons follow all applicable department rules.

~~((September))~~ August 1 through September 30, in waters north of Ayock Point:

(i) Daily limit of 4 salmon.

(ii) Release chum and Chinook.

(iii) August 1 through August 15: Hooks measuring 1/2 inch or less from point to shank.

(iv) September 16 through September 30: Waters north of a line true east from Broad Spit: Closed (~~((September 16 through September 30))~~).

~~((From August 1 through August 31: North of a true east line from the mouth of Turner Creek to the Toandos Peninsula and south of a line true east of Broad Spit:~~

~~(i) Daily limit 4.~~

~~(ii) Coho only.~~

~~((e))~~ October 1 through December 31:

(i) Waters north of a line true east from Broad Spit - Closed.

(ii) All other waters except waters listed in this subsection:

(A) Daily limit of 4 salmon; no more than 2 may be Chinook salmon.

(B) Release wild Chinook. (~~((Release chum))~~)

(C) October 1 through October 15: Release chum.

(iii) Waters within a 2,000-foot arc seaward of yellow buoys at the mouth of Finch Creek at Hoodsport Salmon Hatchery:

(A) Daily limit of 4 salmon.

(B) Release wild Chinook. (~~((Release chum))~~)

(C) October 1 through October 15: Release chum.

~~((C))~~ (D) It is unlawful to fish for or possess salmon taken from these waters from one hour after sunset to one hour before sunrise.

~~((D))~~ (E) It is unlawful to fish from any Hoodsport Salmon Hatchery structure except persons with disabilities who permanently use a wheelchair and who have a designated harvester card under WAC 220-220-240 may fish from the ADA-access site at the Hoodsport Salmon Hatchery, as long as persons follow all applicable department rules.

~~((f))~~ (e) January 1 through April 30:

(i) Daily limit of 2 salmon.

(ii) Release wild Chinook.

~~((g))~~ (f) July 1 through September 30: Free-flowing freshwater is closed downstream of the mouth of the Dewatto, Dosewallips, Duckabush, and Hamma Hamma (~~(, and Skokomish)~~) rivers.

(11) **Catch Record Card Area 13:**

(a) May 1 through April 30:

(i) Daily limit of 2 salmon.

(ii) Release wild Chinook and wild coho.

(iii) July 1 through September 30: Chinook minimum length 20 inches.

(b) Waters at the mouth of Minter Creek within 1,000 feet of the outer oyster stakes are closed April 16 through September ~~((30))~~ 15.

(c) Waters of Budd Inlet south of the Fourth Avenue Bridge ~~((are))~~: Closed.

(i) Contiguous waters north of the Fourth Avenue Bridge and south of a line from the northwest corner of the Thriftway Market building and a point 100 yards north of the railroad bridge on the western shore are closed July 16 through October 31.

(ii) Waters north of the Thriftway Market-railroad bridge line and south of a line projected due west from the KGY radio tower: Night closure and anti-snagging rule from July 16 through October 31.

(d) Fox Island Public Fishing Pier, open year-round: Daily limit 2 salmon; no more than one may be a Chinook salmon.

(12) A violation of this section is an infraction, punishable under RCW 77.15.160, unless the person has harvested salmon. If the person has harvested salmon, the violation is punishable under RCW 77.15.380, Unlawful recreational fishing in the second degree—Penalty, unless the salmon are taken in the amounts or manner to constitute a violation of RCW 77.15.370, Unlawful recreational fishing in the first degree—Penalty.

**WAC 220-312-050 Freshwater exceptions to statewide rules—East-side.** (1) **Countywide freshwater exceptions to statewide rules:**

(a) Irrigation canals, wasteways, drains and the inlets and outlets of all lakes, ponds, and reservoirs in Grant and Adams counties (except Crab Creek, Rocky Ford Creek and Ponds, Columbia Basin Hatchery Creek, Bobcat Creek, Coyote Creek, Frenchman Hills Wasteway and Drains, Hays Creek, Red Rock Creek, Sand Hollow Creek, and Lake Lenore inlet and outlet) are open year-round, statewide lake rules apply to all species.

(b) In Adams, Douglas, Franklin, Grant, and Okanogan counties, except Zosel Dam (Okanogan River) and Enloe Dam (Similkameen River): It is permissible to fish up to the base of all dams.

(2) **Aeneas Lake (Okanogan County):**

(a) Open the fourth Saturday in April through October 31.

(b) Fly fishing only.

(c) It is unlawful to fish from a floating device equipped with a motor.

(d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(3) **Ahtanum Creek (Yakima County):** Selective gear rules.

(4) **Ahtanum Creek, North Fork (Yakima County):**

(a) From the Grey Rock Trailhead Bridge crossing upstream to Shellneck Creek: Closed waters.

(b) Selective gear rules.

(5) **Ahtanum Creek, Middle Fork (Yakima County):**

(a) From the A2000 Spur Road Bridge in NE 1/4 of Section 34 upstream to the A2800 Road Bridge at Tree Phones Campground: Closed waters.

(b) Selective gear rules.

(6) **Alta Lake (Okanogan County):** Open the fourth Saturday in April through October 31.

(7) **Amber Lake (Spokane County):**

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Open March 1 through November 30.

(d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(8) **American River (Yakima County):**

(a) Selective gear rules.

(b) From the Highway 410 Bridge at river mile 5.4 to the Mesatchee Creek Trail crossing at river mile 15.8: Closed waters from July 16 through September 15.

(9) **Amon Wasteway (Benton County):** Selective gear rules.

(10) **Andrews Creek (tributary to Chewuch River) (Okanogan County):** From the mouth to the falls approximately 0.5 miles upstream: Closed waters.

(11) **Asotin Creek, mainstem and forks (Asotin County):**

(a) Closed waters:

(i) South Fork from mouth upstream.

(ii) North Fork from USFS border upstream.

(b) Game fish: Statewide minimum length/daily limit, except: It is unlawful to fish for steelhead.

(c) Selective gear rules.

(12) **Aspen Lake (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(13) **Badger Lake (Spokane County)**: Open the fourth Saturday in April through September 30.

(14) **Banks Lake (Grant County)**:

(a) Chumming is permissible.

(b) Game fish: Statewide minimum length/daily limit, except:

(i) Crappie: Daily limit 10; minimum length 9 inches.

(ii) Yellow perch: Daily limit 25.

(15) **Bayley Lake (Stevens County)**:

(a) Inlet stream: Closed waters.

(b) Open the fourth Saturday in April through October 31.

(c) Fly fishing only.

(d) It is unlawful to fish from a floating device equipped with a motor.

(e) Release all fish.

(16) **Bear Creek (tributary to South Fork Tieton River) (Yakima County)**: From the mouth to the falls (approximately 0.75 mile): Closed waters.

(17) **Bear Lake (Spokane County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(18) **Beaver Creek (tributary to Methow River) (Okanogan County)**: Closed waters.

(19) **Beaver Lake (Big) (Okanogan County)**: Open the fourth Saturday in April through October 31.

(20) **Beaver Lake, (Little)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(21) **Beda Lake (Grant County)**:

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(22) **Beehive (Lake) Reservoir (Chelan County)**:

(a) Open the fourth Saturday in April through October 31.

(b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(23) **Beth Lake (Okanogan County)**: Open the fourth Saturday in April through October 31.

(24) **Big Four Lake (Columbia County)**:

(a) Fly fishing only.

(b) It is unlawful to fish from any floating device.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(25) **Big Meadow Lake (Pend Oreille County)**:

(a) Open the fourth Saturday in April through October 31.

(b) It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

(26) **Big Twin Lake (Okanogan County)**:

(a) Open the fourth Saturday in April through October 31.

(b) Selective gear rules.

- (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (27) **Blackbird Island Pond (Chelan County)**: Open July 1 through September 30 for juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (28) **Black Canyon Creek (tributary to Methow River) (Okanogan County)**: Closed waters.
- (29) **Black Lake (Chelan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (30) **Black Lake (Okanogan County)**: Selective gear rules.
- (31) **Black Lake (Stevens County)**: Open the fourth Saturday in April through October 31.
- (32) **Blue Lake (Columbia County)**: It is unlawful to fish from any floating device.
- (33) **Blue Lake (Grant County)**: Open the fourth Saturday in April through September 30.
- (34) **Blue Lake (near Sinlahekin) (Okanogan County)**:
- (a) Open the fourth Saturday in April through October 31.
- (b) Selective gear rules.
- (c) It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.
- (d) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (e) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (35) **Blue Lake (near Wannacut Lake) (Okanogan County)**:
- (a) Open the fourth Saturday in April through October 31.
- (b) Selective gear rules.
- (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1, minimum length 18 inches.
- (36) **Bobcat Creek and Ponds (Adams County)**: Open the fourth Saturday in April through September 30.
- (37) **Bonaparte Creek (Okanogan County)**: From the mouth to the falls approximately river mile 1.0: Closed waters.
- (38) **Bonaparte Lake (Okanogan County)**:
- (a) It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.
- (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (39) **Boulder Creek and tributaries (Okanogan County)**: From the mouth to the barrier falls at river mile 1.0: Closed waters.
- (40) **Box Canyon Creek and tributaries (Kittitas County)**: From mouth (Kachess Reservoir) upstream approximately 2 miles to the 20 foot high waterfall, including that portion of the creek that flows through the dry lake bed: Closed waters.
- (41) **Browns Lake (Pend Oreille County)**:
- (a) Open the fourth Saturday in April through October 31.
- (b) Fly fishing only.
- (c) It is unlawful to fish from a floating device equipped with a motor.
- (42) **Bumping Lake (Reservoir) (Yakima County)**: Chumming is permissible.

- (43) **Buckskin Creek and tributaries (Yakima County):** From the mouth to the west boundary of Suntides Golf Course: Closed waters.
- (44) **Bumping River (Yakima County):**  
 (a) It is permissible to fish up to the base of Bumping Dam.  
 (b) From the mouth to Bumping Reservoir; selective gear rules.
- (45) **Burke Lake (Grant County):** Open March 1 through September 30.
- (46) **Buttermilk Creek (tributary to Twisp River) (Okanogan County), including tributaries:**  
 (a) Open the Saturday before Memorial Day through August 15.  
 (b) Release all fish.  
 (c) Selective gear rules.
- (47) **Buzzard Lake (Okanogan County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Selective gear rules.  
 (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
 (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (48) **Caldwell Lake (Pend Oreille County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (49) **Caliche Lakes, Upper (Grant County):** Open March 1 through September 30.
- (50) **Calispell Creek (Calispell River) (Pend Oreille County):** From the mouth to Calispell Lake: Open year-round.
- (51) **Campbell Lake (Okanogan County):**  
 (a) Selective gear rules.  
 (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
 (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
- (52) **Carl's Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.
- (53) **Cascade Lake (Grant County):** Open March 1 through September 30.
- (54) **Cattail Lake (Grant County):** Open the fourth Saturday in April through September 30.
- (55) **Cedar Creek (tributary to Early Winters Creek) (Okanogan County):**  
 (a) From the mouth to Cedar Falls:  
 (i) Open the Saturday before Memorial Day through August 15.  
 (ii) Selective gear rules.  
 (iii) Release all fish.  
 (b) From Cedar Falls upstream including tributaries: Selective gear rules.
- (56) **Cedar Lake (Stevens County):** Open the fourth Saturday in April through October 31.
- (57) **Chain Lake (Pend Oreille County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release kokanee.
- (58) **Chapman Lake (Spokane County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Chumming is permissible.
- (59) **Chelan Hatchery Creek (Chelan County):** Closed waters.

- (60) **Chelan Lake (Chelan County):**  
 (a) Game fish: Statewide minimum length/daily limit, except: Release wild cutthroat trout.  
 (b) Salmon: Daily limit 1; minimum length 15 inches.  
 (c) No catch record card required.
- (61) **Chelan Lake tributaries (Chelan County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release wild cutthroat trout.
- (62) **Chelan River (Chelan County):** From the railroad bridge to the Chelan PUD safety barrier below the power house:  
 (a) July 1 through October 31: Anti-snagging rule and night closure.  
 (b) Game fish: Statewide minimum length/daily limit, except:  
 (i) Release trout.  
 (ii) Steelhead: Closed to fishing.  
 (c) ~~((Salmon:~~  
~~(i) Open July 1 through October 31.~~  
~~(ii) Barbless hooks required.~~  
~~(iii) Minimum length 12 inches; limit 4; no more than 2 adult hatchery Chinook may be retained.~~  
~~(iv) Release coho, sockeye, and wild adult Chinook.~~  
 (d)) From the Chelan PUD safety barrier below the power house upstream to Chelan Lake: Closed waters.
- (63) **Chewuch River (Okanogan County):**  
 (a) From the mouth to Eight Mile Creek:  
 (i) Open the Saturday before Memorial Day through August 15.  
 (ii) Selective gear rules.  
 (iii) Release all fish.  
 (b) From the mouth to Pasayten Wilderness boundary falls: Whitefish:  
 (i) Open December 1 through the last day in February for whitefish only.  
 (ii) Whitefish gear rules.
- (64) **Chiwaukum Creek (Chelan County):**  
 (a) From the mouth to Fool Hen Creek, including Fool Hen Creek and tributaries: Closed waters.  
 (b) From Fool Hen Creek upstream and tributaries: Selective gear rules.
- (65) **Chiwawa River (Chelan County):**  
 (a) From the mouth to Buck Creek and tributaries not including Buck Creek: Closed waters.  
 (b) From Buck Creek upstream and tributaries (including Buck Creek): Selective gear rules.
- (66) **Chopaka Lake (Okanogan County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Fly fishing only.  
 (c) It is unlawful to fish from a floating device equipped with a motor.  
 (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (67) **Chumstick Creek (Chelan County):** Closed waters.
- (68) **Clear Lake (Chelan County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

- (69) **Clear Lake (Spokane County):** Open the fourth Saturday in April through October 31.
- (70) **Cle Elum Lake (Reservoir) (Kittitas County):** Game fish: Statewide minimum length/daily limit, except: Kokanee: Daily limit 5; minimum length 9 inches and maximum length 15 inches.
- (71) **Cle Elum River (Kittitas County):**
- (a) From the mouth to Cle Elum Dam:
    - (i) Open year-round.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release rainbow trout and cutthroat trout.
    - (iv) It is permissible to fish up to the base of Cle Elum Dam.
    - (v) Whitefish:
      - (A) Open December 1 through last day in February for whitefish only.
      - (B) Whitefish gear rules.
    - (b) From above Cle Elum Lake to outlet of Hyas Lake: Selective gear rules.
- (72) **Cliff Lake (Grant County):** Open March 1 through September 30.
- (73) **Coffee Pot Lake (Lincoln County):**
- (a) Open March 1 through September 30.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 1; minimum length 18 inches.
    - (ii) Crappie: Daily limit 10; minimum length 9 inches.
- (74) **Columbia Basin Hatchery Creek (Grant County):**
- (a) Open April 1 through September 30 from the hatchery outflow to the confluence with Rocky Coulee Wasteway.
  - (b) Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (75) **Columbia Park Pond (Benton County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (76) **Conconully Lake (Okanogan County):** Open the fourth Saturday in April through October 31.
- (77) **Conconully Reservoir (Okanogan County):** Open the fourth Saturday in April through October 31.
- (78) **Conger Pond (Pend Oreille County):** Open the fourth Saturday in April through October 31.
- (79) **Conner Lake (Okanogan County):**
- (a) Open the fourth Saturday in April through October 31.
  - (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (80) **Cooper River (Kittitas County):** From the mouth to Cooper Lake: Selective gear rules.
- (81) **Coot Lake (Grant County):** Open the fourth Saturday in April through September 30.
- (82) **Corral Creek (Benton County):** Selective gear rules.
- (83) **Cougar Lake (Pasayten Wilderness) (Okanogan County):** Selective gear rules.
- (84) **Cougar Lake (near Winthrop) (Okanogan County):**
- (a) Selective gear rules.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

- (85) **Cowiche Creek (Yakima County):** Selective gear rules.
- (86) **Coyote Creek and Ponds (Adams County):** Open the fourth Saturday in April through September 30.
- (87) **Crab Creek (Adams/Grant/Lincoln counties):**
- (a) From the mouth to Morgan Lake Road: Open the Saturday before Memorial Day through September 30.
  - (b) From Morgan Lake Road to O'Sullivan Dam (including Marsh Unit I and II impoundments): Closed waters.
  - (c) From the confluence of the Moses Lake outlets to Sand Dunes Road including tributaries:
    - (i) Open year-round.
    - (ii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Crappie: Minimum length 9 inches.
      - (B) Crappie and bluegill: Combined limit of 25 fish.
      - (C) Yellow perch: Daily limit 25 fish.
  - (d) From the fountain buoy and shoreline markers of 150 feet down stream of the Alder Street fill to Grant County Road 7 NE:
    - (i) Open year-round.
    - (ii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Crappie: Daily limit 10; minimum length 9 inches.
      - (B) Bluegill: Daily limit 5; minimum length 8 inches.
      - (C) Yellow perch: Daily limit 25.
  - (e) From Grant County Road 7 NE upstream (including all tributaries, except Goose Creek in the city of Wilbur): Open year-round.
- (88) **Crawfish Lake (Okanogan County):**
- (a) Open the fourth Saturday in April through October 31.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (89) **Crescent Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.
- (90) **Crystal Lake (Grant County):** Open March 1 through September 30.
- (91) **Cub Creek (tributary to Chewuch River) (Okanogan County):** From mouth upstream to West Chewuch Road Bridge: Closed waters.
- (92) **Cup Lake (Grant County):** Open March 1 through September 30.
- (93) **Curl Lake (Columbia County):**
- (a) Open the Saturday before Memorial Day through October 31.
  - (b) It is unlawful to fish from any floating device.
- (94) **Davis Lake (Ferry County):** Open the fourth Saturday in April through October 31.
- (95) **Davis Lake (Okanogan County):**
- (a) Selective gear rules.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
- (96) **Dayton Pond (Columbia County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (97) **Deadman Lake (Adams County):** Open the fourth Saturday in April through September 30.
- (98) **Deep Creek (tributary to Bumping Lake) (Yakima County):** From the mouth to the waterfall approximately 0.33 mile above the second bridge crossing on USFS Road 1808 (approximately 3.7 miles from the junction of USFS Roads 1800 and 1808): Closed waters.

- (99) **Deep Lake (Grant County)**: Open the fourth Saturday in April through September 30.
- (100) **Deep Lake (Stevens County)**: Open the fourth Saturday in April through October 31.
- (101) **Deer Lake (Columbia County)**:  
 (a) Open March 1 through November 30.  
 (b) It is unlawful to fish from any floating device.
- (102) **Deer (Deer Springs) Lake (Lincoln County)**: Open the fourth Saturday in April through September 30.
- (103) **Deer Lake (Stevens County)**:  
 (a) Open March 1 through November 30.  
 (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (104) **Delaney Springs (Grant County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (105) **De Roux Creek (Kittitas County)**: From the mouth to the USFS trail 1392 (De Roux Creek Trail) stream crossing (approximately 1 river mile): Closed waters.
- (106) **Dog Creek (tributary to Chewuch) (Okanogan County)**: From mouth upstream to falls approximately 1.5 miles: Closed waters.
- (107) **Domerie Creek (Kittitas County)**: Selective gear rules.
- (108) **Downs Lake (Lincoln/Spokane counties)**:  
 (a) Open March 1 through September 30.  
 (b) Game fish: Statewide minimum length/daily limit, except: Crappie: Daily limit 10; minimum length 9 inches.
- (109) **Dry Falls Lake (Grant County)**:  
 (a) Open March 1 through November 30.  
 (b) Selective gear rules.  
 (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
 (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (110) **Dune Lake (Grant County)**:  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (111) **Dusty Lake (Grant County)**:  
 (a) Open March 1 through November 30.  
 (b) Selective gear rules.  
 (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
 (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (112) **Eagle Creek (tributary to Twisp River) (Okanogan County)**: From mouth upstream to the falls approximately 0.5 miles: Closed waters.
- (113) **Early Winters Creek (tributary to Methow River) (Okanogan County)**:  
 (a) From the mouth upstream to Forest Road 300: Closed waters.  
 (b) From Forest Road 300 upstream; including tributaries except Cedar Creek:  
 (i) Open the Saturday before Memorial Day through August 15.  
 (ii) Selective gear rules.  
 (iii) Release all fish.

(114) **Eightmile Creek (tributary to Chewuch River) (Okanogan County)**: From the mouth upstream to Forest Road 5130 Bridge: Closed waters.

(115) **Elbow Lake (Stevens County)**:

(a) Open the fourth Saturday in April through October 31.

(b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(116) **Ell Lake (Okanogan County)**:

(a) Open the fourth Saturday in April through October 31.

(b) Selective gear rules.

(c) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(117) **Eloika Lake (Spokane County)**: Game fish: Statewide minimum length/daily limit, except: Crappie: Daily limit 10; minimum length 9 inches.

(118) **Empire Lake (Ferry County)**:

(a) Open the fourth Saturday in April through October 31.

(b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(119) **Entiat River (Chelan County)**:

(a) From mouth (railroad bridge) to the boundary marker/markers located approximately 1,500 feet upstream of the upper Roaring Creek Road Bridge (immediately downstream of the Entiat National Fish Hatchery): (~~Open July 16 through September 30 for hatchery Chinook only.~~

~~(i) Selective gear rules.~~

~~(ii) Night closure.~~

~~(iii) Minimum length 12 inches; daily limit 6.~~

~~(iv) Release coho and sockeye.~~

~~(v) Steelhead: Closed to fishing.~~

~~(vi))~~

(i) Open December 1 through the last day in February for whitefish only.

~~((vii))~~ (ii) Whitefish gear rules.

(b) From the boundary marker/markers located approximately 1,500 feet upstream of the upper Roaring Creek Road Bridge (immediately downstream of the Entiat National Fish Hatchery) to Entiat Falls:

(i) Whitefish:

(ii) Open December 1 through the last day in February for whitefish only.

(iii) Whitefish gear rules.

(c) Entiat River and all tributaries above Entiat Falls: Selective gear rules.

(120) **Ephrata Lake (Grant County)**: Closed waters.

(121) **Esquatzel Coulee (Franklin County)**: Open year-round.

(122) **Esquatzel Coulee, West Branch (Franklin County)**: Open year-round.

(123) **Falls Creek (tributary to Chewuch River) (Okanogan County)**: From mouth upstream to the falls approximately .15 miles: Closed waters.

(124) **Fan Lake (Pend Oreille County)**:

(a) Open the fourth Saturday in April through September 30.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(125) **Ferry Lake (Ferry County)**: It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

- (126) **Fiorito Lakes (Kittitas County):** It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (127) **Fish Lake (Chelan County):** Game fish: Statewide minimum length/daily limit, except: Yellow perch: Daily limit 25.
- (128) **Fish Lake (Okanogan County):** Open the fourth Saturday in April through October 31.
- (129) **Fish Lake (Spokane County):**
- (a) Open the fourth Saturday in April through September 30.
- (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (c) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (130) **Fishhook Pond (Walla Walla County):** It is unlawful to fish from a floating device.
- (131) **Fishtrap Lake (Lincoln/Spokane counties):** Open the fourth Saturday in April through September 30.
- (132) **Forde Lake (Okanogan County):**
- (a) Open the fourth Saturday in April through October 31.
- (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (133) **Fourth of July Lake (Adams/Lincoln counties):**
- (a) Open the Friday after Thanksgiving through March 31.
- (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (134) **Frank's Pond (Chelan County):**
- (a) Open the fourth Saturday in April through October 31.
- (b) Open to juvenile anglers only.
- (135) **Frater Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.
- (136) **Frenchman Hills Wasteway and Drains (Grant County):** Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (137) **Gadwall Lake (Grant County):** Open the fourth Saturday in April through September 30.
- (138) **Garfield Juvenile Pond (Whitman County):** Open to juvenile anglers only.
- (139) **Goat Creek (tributary to Methow River) (Okanogan County):** Closed waters.
- (140) **Gold Creek, Gold Creek Pond and outlet channel (tributary to Keechelus Lake):** Including that portion of Gold Creek that flows through the dry Keechelus Reservoir lakebed: Closed waters.
- (141) **Gold Creek (tributary to Methow River) (Okanogan County):** Closed waters.
- (142) **Goose Creek (Lincoln County), within the city limits of Wilbur:** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (143) **Goose Lake, Lower (Grant County):** Game fish: Statewide minimum length/daily limit, except:
- (a) Crappie: Daily limit 10; minimum length 9 inches.
- (b) Bluegill: It is unlawful to retain more than 5 fish over 6 inches in length.
- (144) **Grande Ronde River (Asotin County):**
- (a) From the mouth to County Road Bridge, about 2.5 miles upstream:
- (i) Open year-round for game fish other than trout and steelhead.
- (ii) From August 1 through April 15: Selective gear rules.

(iii) Trout: Open from the Saturday before Memorial Day through October 31.

(iv) Steelhead:

(A) Open January 1 through April 15; daily limit 3 hatchery steelhead; minimum length 20 inches.

(B) August 1 through December 31; release steelhead.

(b) From the County Road Bridge upstream to the Oregon state line:

(i) Open year-round for game fish other than trout and steelhead.

(ii) From August 1 through April 15: Barbless hooks required.

(iii) Trout: Open from the Saturday before Memorial Day through October 31.

(iv) Steelhead: Open August 1 through April 15; daily limit 3 hatchery steelhead; minimum length 20 inches.

(c) All tributaries: Closed waters.

(145) **Green Lakes (Lower and Upper) (Okanogan County):**

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Eastern brook trout count as part of trout daily limit.

(146) **Grimes Lake (Douglas County):**

(a) Open June 1 through August 31.

(b) Selective gear rules.

(c) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(147) **Halfmoon Lake (Adams County):** Open the fourth Saturday in April through September 30.

(148) **Hampton Lakes (Lower and Upper) (Grant County):** Open the fourth Saturday in April through September 30.

(149) **H and H Reservoir Number One (Pascal's Pond) (Chelan County):** Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(150) **Harris Lake (Grant County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(151) **Hatch Lake (Stevens County):** Open the Friday after Thanksgiving through March 31.

(152) **Hays Creek and Ponds (Adams County):** Open the fourth Saturday in April through September 30.

(153) **Headgate Pond (Asotin County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(154) **Hen Lake (Grant County):** Open the fourth Saturday in April through September 30.

(155) **Hog Canyon Creek (Spokane County):** From the mouth to Scroggie Road: Closed waters.

(156) **Hog Canyon Lake (Spokane County):** Open the Friday after Thanksgiving through March 31.

(157) **Homestead Lake (Grant County):**

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

- (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (158) **Hourglass Lake (Grant County)**: Open the fourth Saturday in April through September 30.
- (159) **Hutchinson Lake (Adams County)**: Open the fourth Saturday in April through September 30.
- (160) **I-82 Ponds, 1 through 7 (Yakima County)**: It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (161) **Icicle River and tributaries (Creek) (Chelan County)**:
- (a) From the mouth upstream 800 feet to posted signs: Closed waters.
- (b) From posted signs 800 feet upstream of the mouth to 500 feet below Leavenworth National Fish Hatchery: Closed (~~to all species except:~~
- ~~(i) Open for hatchery Chinook salmon only.~~
- ~~(ii) Open May 15 to July 31.~~
- ~~(iii) Night closure.~~
- ~~(iv) It is unlawful to fish from a floating device equipped with an internal combustion motor.~~
- ~~(v) Daily limit 2 hatchery Chinook; minimum length 12 inches.~~
- ~~(vi) Mandatory retention of hatchery Chinook) waters.~~
- (c) From 500 feet below Leavenworth National Fish Hatchery to shoreline markers where Cyo Road would intersect the Icicle River at the Sleeping Lady Resort: Closed waters.
- (d) From shoreline markers where Cyo Road would intersect the Icicle River at the Sleeping Lady Resort to the Icicle Peshastin Irrigation District footbridge (approximately 750 feet upstream of the "Snow Lakes Trailhead" parking lot): (~~(i) Closed to all species except:~~
- ~~(A) Open for hatchery Chinook only.~~
- ~~(B) Open May 15 to July 31.~~
- ~~(C) Night closure.~~
- ~~(D) Daily limit 2; minimum length 12 inches.~~
- ~~(ii) It is unlawful to retain more than 2 hatchery Chinook))~~
- Closed waters.
- (e) From the Icicle Irrigation Peshastin District footbridge upstream, and tributaries: Selective gear rules.
- (162) **Indian Creek (Yakima County)**: From the mouth to the waterfall approximately six miles upstream including that portion that flows through the dry lake bed of Rimrock Reservoir: Closed waters.
- (163) **Ingalls Creek (Chelan County)**: From the mouth to Alpine Lakes Wilderness boundary and tributaries: Closed waters.
- (164) **Jameson Lake (Douglas County)**: Open the fourth Saturday in April through October 31.
- (165) **Jasmine Creek (Okanogan County)**:
- (a) Open year-round to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (b) Game fish: Statewide minimum length/daily limit, except: Steelhead: Closed to fishing.
- (166) **Jefferson Park Pond (Walla Walla County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (167) **Jolanda, Lake (Chelan County)**: Closed waters.
- (168) **Kachess Lake (Reservoir) (Kittitas County)**:

- (a) Game fish: Statewide minimum length/daily limit, except:  
Trout: Daily limit 2; minimum length 14 inches.
- (b) Chumming is permissible.
- (169) **Kachess River (Kittitas County):**
- (a) From Kachess Lake (Reservoir) upstream to the waterfall approximately 0.5 miles above Mineral Creek: Closed waters.
- (b) It is permissible to fish up to the base of Kachess Dam.
- (c) From the mouth to Kachess Dam: Selective gear rules.
- (170) **Keechelus Lake (Reservoir) (Kittitas County):**
- (a) Game fish: Statewide minimum length/daily limit, except:  
Trout: Daily limit 2; minimum length 14 inches.
- (b) Chumming is permissible.
- (171) **Kettle Creek (tributary to American River) (Yakima County):**  
Closed waters.
- (172) **Kettle River (Stevens County):** From Barstow Bridge upstream:
- (a) Selective gear rules, except for juvenile anglers, from the Canadian border upstream to Highway 21 Bridge at Curlew.
- (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (c) Game fish: Statewide minimum length/daily limit, except:  
Trout: Minimum length 14 inches.
- (d) Whitefish:
- (i) Open December 1 through the last day in February for whitefish only.
- (ii) Whitefish gear rules.
- (173) **Kings Lake and tributaries (Pend Oreille County):** Closed waters.
- (174) **Kiwanis Pond (Kittitas County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (175) **Lake Creek (Okanogan County):**
- (a) From the mouth to Black Lake: Closed waters.
- (b) From Black Lake to Three Prong Creek: Closed waters.
- (176) **Ledbetter Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.
- (177) **Ledking Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.
- (178) **Leech Lake (Yakima County):**
- (a) Fly fishing only.
- (b) It is unlawful to fish from a floating device equipped with a motor.
- (c) Game fish: Statewide minimum length/daily limit, except:  
Rainbow trout: Daily limit 1; minimum length 18 inches.
- (179) **Lemna Lake (Grant County):** Open the fourth Saturday in April through September 30.
- (180) **Lenice Lake (Grant County):**
- (a) Open March 1 through November 30.
- (b) Selective gear rules.
- (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (d) Game fish: Statewide minimum length/daily limit, except:  
Trout: Daily limit 1; minimum length 18 inches.
- (181) **Lenore Lake (Grant County):**
- (a) The waters within a 200 yard radius of the trash rack leading to the irrigation pumping station (on the south end of the lake) and

the area approximately 100 yards beyond the mouth of inlet stream to State Highway 17: Closed waters.

(b) Open March 1 through November 30.

(c) Selective gear rules.

(d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(182) **Libby Creek (tributary to Methow River) (Okanogan County):** Closed waters.

(183) **Liberty Lake (Spokane County):** Open March 1 through October 31.

(184) **Lilly Lake (Chelan County):**

(a) Open the fourth Saturday in April through October 31.

(b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(185) **Lions Park Pond (Walla Walla County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(186) **Little Bridge Creek (tributary of Twisp River) (Okanogan County):**

(a) Open the Saturday before Memorial Day through August 15.

(b) Release all fish.

(c) Selective gear rules.

(187) **Little Falls Reservoir (Spokane River) (Lincoln County):** From Little Falls Dam to Long Lake Dam: Landlocked salmon rules.

(188) **Little Lost Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.

(189) **Little Naches River including tributaries (Yakima County):** Selective gear rules.

(190) **Little Pend Oreille River and tributaries (Stevens County):** Selective gear rules.

(191) **Little Spokane River and tributaries (Spokane County):**

(a) From the inlet of Chain Lake upstream 0.25 mile to the railroad crossing culvert: Closed waters.

(b) From the SR 291 Bridge upstream:

(i) Open Saturday before Memorial Day through October 31.

(ii) Whitefish:

(A) Open December 1 through the last day in February for whitefish only.

(B) Whitefish gear rules.

(192) **Little Twin Lake (Okanogan County):**

(a) Open the fourth Saturday in April through October 31.

(b) Selective gear rules.

(c) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(d) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 1; minimum length 18 inches.

(ii) Eastern brook trout count as part of trout daily limit.

(193) **Little Twin Lake (Stevens County):** Open the fourth Saturday in April through October 31.

(194) **Little Wenatchee River (Chelan County):**

(a) From the mouth to USFS road 6700 Bridge and tributaries: Closed waters.

(b) From the USFS road 6700 Bridge upstream including tributaries: Selective gear rules.

(195) **Long Lake (Ferry County):**

(a) Open the fourth Saturday in April through October 31.

(b) Fly fishing only.

- (c) It is unlawful to use flies containing lead.
- (d) It is unlawful to fish from a floating device equipped with a motor.
- (196) **Long Lake (Okanogan County)**: Open the fourth Saturday in April through October 31.
- (197) **Long Lake (Lake Spokane) (Spokane County)**: From Long Lake Dam to Nine Mile Dam, including Little Spokane River from the mouth to the SR 291 Bridge: Landlocked salmon rules.
- (198) **Loon Lake (Stevens County)**: Open the fourth Saturday in April through October 31.
- (199) **Lost Lake (Kittitas County)**: Game fish: Statewide minimum length/daily limit, except: Rainbow trout: Daily limit 2; minimum length 14 inches.
- (200) **Lost Lake (Okanogan County)**:
  - (a) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (b) It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.
  - (c) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (201) **Lost River (tributary to Methow River) (Okanogan County)**:
  - (a) From the mouth to the mouth of Monument Creek: Closed waters.
  - (b) From the mouth of Monument Creek including tributaries upstream to Deception Creek:
    - (i) Open the Saturday before Memorial Day through August 15.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Trout: Minimum length 14 inches; daily limit 2.
      - (B) Dolly Varden/bull trout may be retained as part of trout daily limit.
- (202) **Lyman Lake (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (203) **Mad River (Chelan County)**:
  - (a) From the mouth to Windy Creek, including Windy Creek and tributaries except Tillicum Creek: Closed waters.
  - (b) From Windy Creek upstream and tributaries: Selective gear rules.
- (204) **Manastash Creek (Kittitas County)**: Selective gear rules.
- (205) **Marshall Lake (Pend Oreille County)**: Open the fourth Saturday in April through October 31.
- (206) **Martha Lake (Grant County)**: Open March 1 through September 30.
- (207) **Mary Ann Lake (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (208) **Mattoon Lake (Kittitas County)**: It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (209) **McCabe Pond (Kittitas County)**: It is unlawful to fish from any floating device equipped with a motor.
- (210) **McDowell Lake (Stevens County)**:
  - (a) Open the fourth Saturday in April through October 31.
  - (b) Fly fishing only.
  - (c) It is unlawful to fish from a floating device equipped with a motor.
  - (d) Release all fish.

(211) **McManaman Lake (Adams County)**: Open the fourth Saturday in April through September 30.

(212) **Medical Lake (Spokane County)**:

- (a) Open March 1 through November 30.
- (b) Selective gear rules.
- (c) It is unlawful to fish from a floating device equipped with a motor.
- (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(213) **Medical Lake, West (Spokane County)**: Open the fourth Saturday in April through September 30.

(214) **Mercer Creek (Kittitas County)**: Selective gear rules.

(215) **Merry Lake (Grant County)**:

- (a) Open March 1 through November 30.
- (b) Selective gear rules.
- (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(216) **Methow River (Okanogan County)**:

- (a) From mouth to County Road 1535 (Burma Road) Bridge: Closed waters.
- (b) Tributaries from mouth to County Road 1535 (Burma Road) Bridge except Black Canyon Creek: Release all fish, except: Eastern brook trout: No minimum length/daily limit.
- (c) From County Road 1535 (Burma Road) Bridge to Gold Creek:
  - (i) Open the Saturday before Memorial Day through September 15.
  - (ii) Selective gear rules.
  - (iii) Release all fish.
- (d) All tributaries from the County Road 1535 (Burma Road) to Gold Creek except Gold Creek:
  - (i) Selective gear rules.
  - (ii) Release all fish, except: Eastern brook trout: No minimum length/daily limit.
- (e) From Gold Creek to Foghorn Dam:
  - (i) Open the Saturday before Memorial Day through September 30.
  - (ii) Selective gear rules.
  - (iii) Release all fish.
  - (iv) Whitefish:
    - (A) Open December 1 through the last day in February for whitefish only.
    - (B) Whitefish gear rules.
- (f) Methow River tributaries from Gold Creek to Foghorn Dam; except Twisp River, Chewuch River, Libby Creek, and Beaver Creek: Release all fish, except: Eastern brook trout: No minimum length/daily limit.
- (g) From Foghorn Dam to Weeman Bridge including tributaries:
  - (i) Open the Saturday before Memorial Day through August 15:
    - (A) Release all fish.
    - (B) Selective gear rules.
  - (ii) Whitefish:
    - (A) Open December 1 through the last day in February for Whitefish only.
    - (B) Whitefish gear rules.
- (h) From Weeman Bridge to the falls above Brush Creek: Whitefish:
  - (i) Open December 1 through the last day in February for whitefish only.

(ii) Whitefish gear rules.

(i) Methow River tributaries from Weeman Bridge to the falls above Brush Creek; excluding Lost River, Goat Creek, Early Winters Creek, and Wolf Creek.

(i) Selective gear rules.

(ii) Release all fish.

**(217) Mill Creek (tributary to the Walla Walla River) (Walla Walla County):**

(a) From the mouth to Bennington Dam, including tributaries: Closed waters.

(b) From Bennington Dam upstream excluding tributaries: Selective gear rules.

(c) All tributaries upstream of Bennington Dam: Closed waters.

**(218) Mineral Creek (tributary to upper Kachess River) (Kittitas County):** From the mouth to the Wilderness Boundary: Closed waters.

**(219) Molson Lake (Okanogan County):** Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

**(220) Monument Creek (Okanogan County), including tributaries:** Selective gear rules.

**(221) Morgan Lake (Adams County):** Open the fourth Saturday in April through September 30.

**(222) Moses Lake (Grant County):** Game fish: Statewide minimum length/daily limit, except:

(a) Crappie: Daily limit 10; minimum length 9 inches.

(b) Bluegill: Daily limit 5; minimum length 8 inches.

(c) Yellow perch: Daily limit 25.

**(223) Mud Lake (Yakima County):**

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with a motor.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

**(224) Mudgett Lake (Stevens County):** Open the fourth Saturday in April through October 31.

**(225) Muskegon Lake (Pend Oreille County):**

(a) Open the fourth Saturday in April through October 31.

(b) Selective gear rules.

(c) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

**(226) Myron Lake (Yakima County):**

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

**(227) Mystic Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.

**(228) Naches River (Yakima/Kittitas counties):**

(a) From the mouth to Little Naches River:

(i) Selective gear rules.

(ii) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(iii) Game fish: Statewide minimum length/daily limit, except:

(A) Trout: Daily limit 2; minimum length 14 inches.

(B) Release trout from the confluence with Tieton River to the confluence of the Little Naches River and Bumping River (origin of Naches River).

(b) From the mouth to the Tieton River:

(i) Whitefish: December 1 through the last day in February for whitefish only.

(ii) Whitefish gear rules.

(229) **Naneum Creek and tributaries (Kittitas County):** Selective gear rules.

(230) **Naneum Pond (Kittitas County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(231) **Napeequa River (Chelan County):** From mouth to Twin Lakes Creek (including Twin Lakes Creek and all tributaries: Closed waters.

(232) **Nason Creek (Chelan County):**

(a) From the mouth to Gaynor Falls and tributaries except White-pine Creek: Closed waters.

(b) From Gaynor Falls (approximately 0.7 miles upstream of White-pine Creek) upstream and tributaries: Selective gear rules.

(233) **Nile Creek and tributaries (Yakima County):** Selective gear rules.

(234) **No Name Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.

(235) **North Creek (tributary to Twisp River) (Okanogan County):** From the mouth upstream to Twisp River Road Bridge: Closed waters.

(236) **North Elton Pond (Yakima County):**

(a) Open the Friday after Thanksgiving through March 31.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(237) **North Potholes Reserve Ponds (Grant County):** Open March 1 through the day before waterfowl season begins.

(238) **Nunnally Lake (Grant County):**

(a) The outlet stream of Nunnally Lake is closed waters.

(b) Open March 1 through November 30:

(c) Selective gear rules.

(d) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(e) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(239) **Oak Creek and tributaries (Yakima County):** Selective gear rules.

(240) **Okanogan River (Okanogan County):**

~~(a) ((Within the mainstem or tributaries open for game fish: It is unlawful to fish for salmon and steelhead using anything other than barbless hooks.~~

~~(b))~~ From the mouth to Highway 97 Bridge immediately upstream of the mouth:

(i) Open year-round.

(ii) July 1 through October 15: Anti-snagging rule and night closure.

(iii) Game fish: Statewide minimum length/daily limit, except:

(A) Release trout.

(B) Steelhead: Closed to fishing.

~~((iv) Salmon:~~

~~(A) Open July 1 through October 15.~~

~~(B) It is permissible to fish two poles from July 1 through August 31 so long as the angler possesses a two-pole endorsement.~~

- ~~(C) Daily limit 6; no more than 2 adult hatchery Chinook may be retained.~~
- ~~(D) Release coho, sockeye, and wild adult Chinook.~~
- ~~(e-)) (b) From Highway 97 Bridge immediately upstream of the mouth to the highway bridge at Malott:~~
  - (i) Open year-round.
  - (ii) July 1 through September 15: Anti-snagging rule and night closure.
  - (iii) Game fish: Statewide minimum length/daily limit, except:
    - (A) Release trout.
    - (B) Steelhead: Closed to fishing.
  - ~~((iv) Salmon:~~
    - ~~(A) Open July 1 through September 15.~~
    - ~~(B) Daily limit 6; no more than 2 adult hatchery Chinook may be retained.~~
  - ~~(C) Release coho, sockeye, and wild adult Chinook.~~
  - ~~(d-)) (c) From the highway bridge at Malott upstream:~~
    - (i) From Zosel Dam downstream to the first Highway 97 Bridge downstream of the dam: Closed waters.
    - (ii) Open the Saturday before Memorial Day through September 15.
    - (iii) July 1 through September 15: Anti-snagging rule and night closure.
    - (iv) Game fish: Statewide minimum length/daily limit, except:
      - (A) Release trout.
      - (B) Steelhead: Closed to fishing.
    - ~~((v) Salmon:~~
      - ~~(A) Open July 1 through September 15.~~
      - ~~(B) Limit 6; no more than 2 adult hatchery Chinook may be retained.~~
    - ~~(C) Release coho, sockeye, and wild adult Chinook.~~
    - ~~(e-)) (d) All Okanogan River tributaries, except Salmon Creek, Jasmine Creek, Bonaparte Creek, and the Similkameen River:~~
      - (i) Selective gear rules.
      - (ii) Game fish: Statewide minimum length/daily limit, except:
        - (A) Release trout.
        - (B) Steelhead: Closed to fishing.
      - (241) **Palouse River (Whitman County):** From the mouth to the base of Palouse Falls:
        - (a) Open year-round for game fish except trout and steelhead.
        - (b) Trout: Open the Saturday before Memorial Day through October 31.
        - (c) Steelhead:
          - (i) Open August 1 through April 15.
          - (ii) Daily limit 3 hatchery steelhead; minimum length 20 inches.
        - (d) It is permissible to fish with two poles so long as the angler possesses a valid two-pole endorsement, except for steelhead.
      - (242) **Palouse River (Whitman County) mainstem above Palouse Falls and tributaries (Washington waters only), except Rock Creek and Hog Canyon Creek:** Open year-round.
      - (243) **Pampa Pond (Whitman County):**
        - (a) Open March 1 through September 30.
        - (b) It is unlawful to fish from any floating device.
      - (244) **Park Lake (Grant County):** Open the fourth Saturday in April through September 30.
      - (245) **Parker Lake (Pend Oreille County):** Open the fourth Saturday in April through October 31.
      - (246) **Pataha Creek (Garfield County):**

(a) Within the city limits of Pomeroy: Open to juvenile anglers, senior angler, and anglers with a disability who possess a designated harvester companion card only.

(b) From the city limits of Pomeroy upstream: Selective gear rules.

(247) **Patterson Lake (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(248) **Pearrygin Lake (Okanogan County)**: Open the fourth Saturday in April through October 31.

(249) **Pend Oreille River (Pend Oreille County)**:

(a) Open year-round.

(b) Game fish: Statewide lake rules.

(c) All sloughs within the boundaries of the Kalispel Reservation, except Calispell Slough: Closed waters.

(250) **Perch Lake (Grant County)**: Open the fourth Saturday in April through September 30.

(251) **Peshastin Creek and all tributaries except Ingalls Creek (Chelan County)**: Closed waters.

(252) **Petit Lake (Pend Oreille County)**:

(a) Open the fourth Saturday in April through October 31.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(253) **Phalon Lake (Stevens County)**: Closed waters.

(254) **Phillips Lake (Stevens County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(255) **Pierre Lake (Stevens County)**: It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

(256) **Pillar Lake (Grant County)**: Open the fourth Saturday in April through September 30.

(257) **Ping Pond (Oasis Park Pond) (Grant County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(258) **Pit Lake (Douglas County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(259) **Poacher Lake (Grant County)**: Open the fourth Saturday before April through September 30.

(260) **Potholes Reservoir (Grant County)**: Game fish: Statewide minimum length/daily limit, except:

(a) Crappie: Minimum length 9 inches.

(b) Crappie and bluegill: Combined limit of 25 fish.

(c) Yellow perch: Daily limit 25 fish.

(261) **Potter's Pond (Stevens County)**: Open the fourth Saturday in April through October 31.

(262) **Powerline Lake (Franklin County)**: Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(263) **Quail Lake (Adams County)**:

(a) Fly fishing only.

(b) It is unlawful to fish from any floating device equipped with a motor.

(c) Release all fish.

(264) **Quarry Pond (Walla Walla County)**: It is unlawful to fish from any floating device.

30. (265) **Quincy Lake (Grant County)**: Open March 1 through September 30.
- (266) **Rainbow Lake (Columbia County)**:  
 (a) Open March 1 through November 30.  
 (b) It is unlawful to fish from any floating device.
- (267) **Rat Lake (Okanogan County)**:  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except:  
 Trout: Daily limit 2; minimum length 14 inches.
- (268) **Rattlesnake Creek and tributaries (Yakima County)**:  
 (a) Selective gear rules.  
 (b) Release all fish.
- (269) **Red Rock Creek (Grant County)**: Open the Saturday before Memorial Day through September 30.
- (270) **Reflection Pond (Okanogan County)**:  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Game fish: Statewide minimum length/daily limit, except:  
 Eastern brook trout count as part of trout daily limit.
- (271) **Renner Lake (Ferry County)**:  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Game fish: Statewide minimum length/daily limit, except:  
 Eastern brook trout count as part of trout daily limit.
- (272) **Rigley Lake (Stevens County)**:  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Selective gear rules.  
 (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.  
 (d) Game fish: Statewide minimum length/daily limit, except:  
 Trout: Daily limit 2, minimum length 14 inches.
- (273) **Rimrock Lake (Reservoir) (Yakima County)**: Chumming is permissible.
- (274) **Ringold Springs Hatchery Creek (Franklin County)**: Closed waters.
- (275) **Roaring Creek (Entiat River tributary) (Chelan County)**: Closed waters.
- (276) **Rock Creek (Adams/Whitman counties)**:  
 (a) From the mouth to the bridge on Jordan Knott Road at Revere:  
 (i) Selective gear rules.  
 (ii) Release all fish.  
 (b) From the bridge on Jordan Knott Road upstream: Open year-round.
- (277) **Rocky Ford Creek and Ponds (Grant County)**:  
 (a) Open to fly fishing and fishing from the bank only (no wading).  
 (b) Release all fish.
- (278) **Rocky Lake (Stevens County)**: Open the fourth Saturday in April through October 31.
- (279) **Roosevelt Lake (Grant/Ferry/Lincoln/Stevens counties)**: Columbia River from Grand Coulee Dam to U.S. Canadian border including Hawk Creek downstream of the falls at Hawk Creek Campground, Spokane River from 400 feet downstream of Little Falls Dam, Kettle River downstream of Barstow Bridge, and Colville River downstream of S.R. 25 Bridge.  
 (a) The following areas are closed waters:  
 (i) From the Little Dalles power line crossing upstream approximately one mile to the marked rock point from March 1 through the Friday before Memorial Day.

(ii) Northport power line crossing upstream to the most upstream point of Steamboat Rock, from March 1 through the Friday before Memorial Day.

(iii) The Kettle River upstream to Barstow Bridge from March 1 through the Friday before Memorial Day.

(b) From Grand Coulee Dam to the Little Dalles power line crossing:

(i) Game fish: Statewide minimum length/daily limit, except:

(A) Kokanee: Daily limit 6; no more than 2 with intact adipose fins.

(B) Trout (except kokanee): Daily limit 5; it is unlawful to retain trout with an intact adipose fin.

(C) Walleye: Daily limit 16 fish; no size restrictions.

(ii) Salmon: Landlocked salmon rules apply.

(c) From the Little Dalles power line crossing to the Canadian border:

(i) Game fish: Statewide minimum length/daily limit, except:

(A) Kokanee: Daily limit 6; no more than 2 with intact adipose fins.

(B) Trout (except kokanee): Daily limit 2; minimum size 18 inches.

(C) Walleye: Daily limit 16; no size restrictions.

(ii) Salmon: Landlocked salmon rules apply.

(280) **Round Lake (Okanogan County)**: Open the fourth Saturday in April through October 31.

(281) **Royal Lake (Adams County)**: Closed waters.

(282) **Royal Slough (including Marsh Unit IV impoundments) (Adams County)**: Closed waters.

(283) **Rufus Woods Lake (Douglas/Okanogan counties)**:

(a) From Grand Coulee Dam downstream to State Route 155 Bridge: Closed waters.

(b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(c) Sturgeon: Closed to fishing.

(284) **Sacheen Lake (Pend Oreille County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(285) **Saddle Mountain Lake (Grant County)**: Closed waters.

(286) **Sago Lake (Grant County)**: Open the fourth Saturday in April through September 30.

(287) **Salmon Creek (Okanogan County)**:

(a) From the mouth to Conconully Reservoir:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except:

(A) Release trout other than eastern brook trout.

(B) Steelhead: Closed to fishing.

(b) From Conconully Reservoir upstream including tributaries: Selective gear rules.

(288) **San Poil River (Ferry County)**:

(a) From the western shoreline at the mouth of the San Poil Arm (as marked by a regulatory buoy) directly eastward across the San Poil Arm to the eastern shoreline of the San Poil Arm (as marked by a regulatory buoy) upstream to the north shore of the outlet of French Johns Lake (Manila Creek) northeast across the San Poil Arm to the north shore of the outlet of Dick Creek:

(i) Game fish: Open year-round; statewide minimum length/daily limit, except:

- (A) Open June 1 through January 31 for kokanee, smallmouth bass, trout, and walleye:
- (I) Kokanee: Daily limit 2.
  - (II) Trout: Daily limit 5; it is unlawful to retain trout with an intact adipose fin.
  - (III) Walleye: Daily limit 16; no size restrictions.
  - (IV) Smallmouth bass: Daily limit 10; no minimum length; only 1 smallmouth bass over 14 inches may be retained.
- (B) Largemouth bass: Daily limit 5; no minimum length; only largemouth bass under 12 inches may be retained, except 1 over 17 inches may be retained.
- (ii) Salmon: Open year-round; landlocked salmon rules apply.
  - (iii) Carp: Open year-round.
- (b) From the north shore of the outlet of French Johns Lake (Manila Creek) northeast across the San Poil Arm to the north shore of the outlet of Dick Creek to approximately 5 miles upstream from the outlet of French Johns Lake, as marked by regulatory buoys:
- (i) Game fish: Open year-round; statewide minimum length/daily limit, except:
    - (A) Kokanee: Unlawful to fish for or retain.
    - (B) Trout: Unlawful to fish for or retain.
- (C) Open June 1 through January 31 for walleye and smallmouth bass:
- (I) Walleye: Daily limit 16; no size restrictions.
  - (II) Smallmouth bass: Daily limit 10; no minimum length; only 1 smallmouth bass over 14 inches may be retained.
  - (D) Largemouth bass: Daily limit 5; no minimum length; only largemouth bass under 12 inches may be retained, except 1 over 17 inches may be retained.
- (ii) Salmon: Open year-round; landlocked salmon rules apply.
  - (iii) Carp: Open year-round; unlawful to fish for carp with bow and arrow.
- (c) The waters from approximately 5 miles upstream from the outlet of French Johns Lake, as marked by regulatory buoys, to all waters north of the regulatory buoy line at or above 1,310 feet mean sea level elevation upstream to the northern reservation boundary are managed under the regulatory authority of the Colville Confederated Tribes.
- (289) **Sand Hollow Creek (Grant County) including tributaries:** From the mouth (State Route 243) upstream: Open the Saturday before Memorial Day through September 30.
- (290) **Sarg Hubbard Park Pond (Reflection Pond) (Yakima County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (291) **Schallow Pond (Okanogan County):** Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (292) **Sedge Lake (Grant County):**
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (293) **Shellneck Creek (Yakima County):** Closed waters.
- (294) **Sherman Creek (Ferry County) and tributaries:** From the hatchery boat dock to 400 feet upstream of hatchery water diversion dam: Closed waters.
- (295) **Shiner Lake (Adams County):** Open the fourth Saturday in April through September 30.

(296) **Shoveler Lake (Grant County)**: Open the fourth Saturday in April through September 30.

(297) **Silver Lake (Spokane County)**: Game fish: Statewide minimum length/daily limit, except: Crappie: Daily limit 10; minimum length 9 inches.

(298) **Silver Nail Lake (Okanogan County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(299) **Similkameen River (Okanogan County)**:

- (a) From Enloe Dam downstream 400 feet: Closed waters.
- (b) From the mouth to Enloe Dam:
  - (i) Open July 1 through September 15:
  - (ii) ~~((Barbless hooks required for salmon and steelhead.~~
  - ~~(iii))~~ Anti-snagging rule.
  - ~~((iv))~~ (iii) Night closure.
  - ~~((v))~~ (iv) Game fish: Statewide minimum length/daily limit, except:
- (A) Release trout.
- (B) Steelhead: Closed to fishing.
- ~~((vi) Salmon:~~
- ~~(A) Daily limit 6; no more than 2 adult hatchery Chinook may be retained.~~
- ~~(B) Release coho, sockeye, and wild adult Chinook.~~
- ~~(vii))~~ (v) Whitefish:
  - (A) Open December 1 through the last day in February for whitefish only.
  - (B) Whitefish gear rules.
  - (c) From Enloe Dam to the Canadian border, including tributaries, except Sinlahekin Creek:
    - (i) Open the Saturday before Memorial Day through October 31.
    - (ii) Whitefish:
      - (A) Open December 1 through the last day in February for whitefish only.
      - (B) Whitefish gear rules.

(300) **Sinlahekin Creek (Okanogan County)**: From Palmer Lake to Cecile Creek Bridge:

- (a) Open the Saturday before Memorial Day through August 31.
- (b) Selective gear rules.
- (c) Whitefish:
  - (i) Open December 1 through the last day in February for whitefish only.
  - (ii) Whitefish gear rules.

(301) **Skookum Lake, North (Pend Oreille County)**: Open the fourth Saturday in April through October 31.

(302) **Skookum Lake, South (Pend Oreille County)**:

- (a) Open the fourth Saturday in April through October 31.
- (b) It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

(303) **Snake River**:

- (a) Tributaries except Palouse River, Tucannon River, Asotin Creek, and Grande Ronde River: Closed waters.
- (b) Columbia River rules apply downstream of the Burbank-to-Pasco railroad bridge at Snake River mile 1.5.
- (c) Within 400 feet of the base of any dam: Closed waters.
- (d) Within a 400 foot radius around the fish ladder entrance at Lyons Ferry Hatchery: Closed waters.

- (e) Within a 200 foot radius upstream of the fish ladder exit above Lower Granite Dam: Closed waters.
- (f) Within an area 1,200 feet downstream from the base of the west lock gate at Little Goose Dam on the south bank of the Snake River and 100 feet out into the river from the south river bank: Closed waters.
- (g) Game fish: Open year-round; statewide minimum length/daily limit, except:
- (i) Trout: Open the Saturday before Memorial Day through October 31.
- (ii) Steelhead:
- (A) Open the Saturday before Memorial Day through July 31; daily limit 2, barbless hooks required.
- (B) Open August 1 through March 31; Daily limit 3 hatchery steelhead; barbless hooks required.
- (304) **Snipe Lake (Grant County)**: Open the fourth Saturday in April through September 30.
- (305) **Snipes Creek (Benton County)**: Selective gear rules.
- (306) **Spectacle Lake (Okanogan County)**: Open April 1 through September 30.
- (307) **Spokane River (Spokane County)**: From Nine Mile Dam upstream to the Idaho/Washington state line:
- (a) Selective gear rules.
- (b) Open the Saturday before Memorial Day through March 15:
- (c) Game fish: Release all fish, except: Hatchery rainbow trout: Daily limit 2.
- (308) **Sprague Lake (Adams/Lincoln counties)**:
- (a) The following waters are closed waters:
- (i) Cow Creek.
- (ii) The marsh at the southwest end of the lake from the lakeside edge of the reeds, including Cow Creek, to Danekas Road.
- (iii) The small bay at the southeast end of the lake.
- (b) All other waters southwest of the southwest tip of Harper Island: Closed from October 1 through April 30.
- (c) Game fish: Statewide minimum length/daily limit except:
- (i) Crappie: Minimum length 9 inches.
- (ii) Crappie and bluegill: Combined limit of 25 fish.
- (309) **Spring Creek (Benton County)**: Selective gear rules.
- (310) **Spring Hill Reservoir (Black Lake, Lower Wheeler Reservoir) (Chelan County)**:
- (a) Open the fourth Saturday in April through October 31.
- (b) Selective gear rules.
- (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1, minimum length 18 inches.
- (311) **Spring Lake (Columbia County)**: It is unlawful to fish from any floating device.
- (312) **Spring Lakes (Upper and Lower) (Grant County)**: Open March 1 through September 30.
- (313) **Springdale Pond (Lucky Duck Pond) (Stevens County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (314) **Spruce Creek (tributary to South Fork Tieton River) (Yakima County)**: Closed waters.
- (315) **Starvation Lake (Stevens County)**: Open the fourth Saturday in April through October 31.

(316) **Starzman Lakes (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(317) **Stehekin River (Chelan County)**: From the mouth (Powerline crossing) upstream and tributaries:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release wild cutthroat.

(318) **Stratford/Brook Lake (Grant County)**: Open March 1 through September 30.

(319) **Sugarloaf Lake (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(320) **Sullivan Creek and tributaries (Pend Oreille County)**:

(a) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout.

(b) Selective gear rules.

(321) **Sullivan Lake (Pend Oreille County)**: Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(322) **Summit Lake (Okanogan County)**: Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.

(323) **Summit Lake (Stevens County)**: Open the fourth Saturday in April through October 31.

(324) **Swan Lake (Ferry County)**: It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

(325) **Swauk Creek and tributaries (Kittitas County)**: Selective gear rules.

(326) **Taneum Creek and tributaries (Kittitas County)**: Selective gear rules.

(327) **Teal Lakes (North and South) (Grant/Adams counties)**: Open the fourth Saturday in April through September 30.

(328) **Teanaway River (Kittitas County), and tributaries except North Fork**: Selective gear rules.

(329) **Teanaway River, North Fork (Kittitas County)**:

(a) From the mouth to Beverly Creek and tributaries; including Beverly Creek:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release trout.

(b) From Beverly Creek to the impassable waterfall at the end of USFS Road 9737: Closed waters.

(330) **Tern Lake (Grant County)**:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(331) **Thirtymile Creek (tributary to Chewuch River) (Okanogan County)**: From mouth upstream to falls (approximately 700 feet): Closed waters.

(332) **Tieton River (Yakima County)**:

(a) It is permissible to fish up to the base of Tieton (Rimrock) Dam.

(b) Selective gear rules apply.

(333) **Tieton River, North Fork (Yakima County)**:

(a) The Clear Lake spillway channel: Closed waters.

(b) From the USFS Road 740 Bridge to Clear Lake Dam: Closed waters.

(c) The mainstem and tributaries including that portion of the river that flows through the dry lakebed of Rimrock Reservoir, upstream of Clear Lake:

(i) Open the Saturday before Memorial Day through August 15.

(ii) Selective gear rules.

(334) **Tieton River, South Fork (Yakima County)**: From the bridge on USFS Road 1200 to bridge on USFS road 1070: Closed waters.

(335) **Tillicum Creek (tributary to Mad River) (Chelan River)**:

(a) From mouth to the intersection of USFS 5800 and USFS 5808: Closed waters.

(b) From the intersection of USFS 5800 and USFS 5808 upstream (upstream 2.25 miles) including tributaries: Selective gear rules.

(336) **Touchet River and tributaries (Columbia/Walla Walla counties)**:

(a) From the mouth to the confluence of the North and South Forks:

(i) All tributaries: Closed waters.

(ii) Game fish: Open the Saturday before Memorial Day through April 15; statewide minimum length/daily limit, except:

(A) November 1 through April 15: Release all fish except steelhead.

(B) August 1 through April 15: Hatchery steelhead daily limit 3, barbless hooks required.

(b) From the confluence of the North and South Forks upstream including both forks, Robinson Fork, and Wolf Fork:

(i) All other tributaries: Closed waters.

(ii) Open the Saturday before Memorial Day through August 31.

(iii) Selective gear rules.

(337) **Trout Lake (Ferry County)**: Open the fourth Saturday in April through October 31.

(338) **Tucannon River (Columbia County)**:

(a) All tributaries are closed waters, except Pataha Creek.

(b) Mouth upstream to Tucannon Hatchery Road Bridge:

(c) Game fish: Open the Saturday before Memorial Day through April 15; statewide minimum length/daily limit, except:

(i) November 1 through April 15: Release all fish except steelhead.

(ii) August 1 through April 15: Hatchery steelhead daily limit 3, barbless hooks required.

(d) Tucannon Hatchery Bridge to 500 feet above intake for Rainbow Lake: Closed waters.

(e) 500 feet above intake for Rainbow Lake to Cow Camp Bridge:

(i) Open the Saturday before Memorial Day through August 31.

(ii) Selective gear rules.

(f) Cow Camp Bridge upstream: Closed waters.

(339) **Tucquala Lake (Kittitas County)**:

(a) Open the Saturday before Memorial Day through October 31.

(b) Statewide stream rules apply.

(340) **Twentymile Creek (tributary to Chewuch River) (Okanogan County)**: From the mouth upstream to falls (approximately 0.75 miles): Closed waters.

(341) **Twin Lakes, tributaries, and Twin Lakes Creek (outlet stream) to the confluence with the Napeequa River (Chelan County)**: Closed waters.

(342) **Twisp River (Okanogan County)**:

- (a) Mouth to War Creek:
  - (i) Open the Saturday before Memorial Day through August 15.
  - (ii) Selective gear rules.
  - (iii) Release all fish.
- (b) Twisp River tributaries from War Creek upstream except North Creek and North Fork Twisp River:
  - (i) Selective gear rules.
  - (ii) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (iii) Release all fish.
- (c) From War Creek upstream: Closed waters.
- (343) **Twisp River, North Fork (Okanogan County):** From mouth to falls including tributaries: Closed waters.
- (344) **Umtanum Creek (Kittitas County):** Selective gear rules.
- (345) **Union Creek (Yakima County):** From the mouth to the falls: Closed waters.
- (346) **Upper Wheeler Reservoir (Chelan County):**
  - (a) Open the fourth Saturday in April through October 31.
  - (b) Fly fishing only.
  - (c) It is unlawful to fish from a floating device equipped with a motor.
  - (d) Release all fish.
- (347) **Vic Meyers (Rainbow) Lake (Grant County):**
  - (a) Open the fourth Saturday in April through September 30.
  - (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (348) **Walla Walla River (Walla Walla County):** From mouth to Washington/Oregon stateline:
  - (a) All tributaries except Touchet River and Mill Creek: Closed waters.
  - (b) Game fish: Open year-round; statewide minimum length/daily limit, except for trout and steelhead:
    - (i) Trout: Open the Saturday before Memorial day through October 31; statewide minimum length/daily limit.
    - (ii) Steelhead:
      - (A) Open the Saturday before Memorial Day through July 31; daily limit 2 hatchery steelhead.
      - (B) Open August 1 through April 15; daily limit 3 hatchery steelhead, barbless hooks required.
- (349) **Wannacut Lake (Okanogan County):** Open the fourth Saturday in April through October 31.
- (350) **Wapato Lake (Chelan County):** Open the fourth Saturday in April through October 31.
- (351) **Ward Lake (Ferry County):**
  - (a) Open the fourth Saturday in April through October 31.
  - (b) Game fish: Statewide minimum length/daily limit, except: Eastern brook trout count as part of trout daily limit.
- (352) **Warden Lake (Grant County):** Open the fourth Saturday in April through September 30.
- (353) **Warden Lake, South (Grant County):** Open the fourth Saturday in April through September 30.
- (354) **Washburn Island Pond (Okanogan County):**
  - (a) Open April 1 through September 30.
  - (b) An internal combustion motor may be attached to a floating device, but cannot be used.
- (355) **Washburn Lake (Okanogan County):**
  - (a) Open the fourth Saturday in April through October 31.

- (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (c) Selective gear rules.
- (d) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (356) **Watson Lake (Columbia County):**
- (a) Open March 1 through November 30.
- (b) It is unlawful to fish from any floating device.
- (357) **Wenaha River tributaries:**
- (a) Open the Saturday before Memorial Day through August 31.
- (b) Selective gear rules.
- (358) **Wenas Creek (Yakima County):** From the mouth to Wenas Lake, including tributaries: Selective gear rules.
- (359) **Wenatchee Lake (Chelan County):**
- (a) Selective gear rules.
- (b) Game fish: Statewide minimum length/daily limit, except:
- (i) Release trout.
- (ii) Steelhead: Closed to fishing.
- (360) **Wenatchee River (Chelan County):**
- ~~(a) From the mouth to the Icicle Road Bridge: ((a) Closed waters, except:~~
- ~~(b) Salmon:~~
- ~~(i) Open August 1 through September 30.~~
- ~~(ii) Selective gear rules.~~
- ~~(iii) Night closure.~~
- ~~(iv) Daily limit 6; minimum length 12 inches it is unlawful to retain more than 2 adult hatchery Chinook.~~
- ~~(v) Release coho, sockeye, and wild adult Chinook salmon.~~
- ~~(c)) Closed waters.~~
- (b) From Icicle Road Bridge upstream to Lake Wenatchee: Closed waters.
- (361) **Whitepine Creek (Chelan County):** From the mouth to Whitepine Creek Falls (1 mile upstream of mouth) and tributaries: Closed waters.
- (362) **White River (Chelan County):** From the mouth to White River Falls and tributaries, except Napeequa River: Closed waters.
- (363) **Widgeon Lake (Grant County):** Open the fourth Saturday in April through September 30.
- (364) **Williams Lake (Spokane County):** Open the fourth Saturday in April through September 30.
- (365) **Williams Lake (Stevens County):** Open the Friday after Thanksgiving through March 31.
- (366) **Wilson Creek (Kittitas County):** From BNSF railroad bridge upstream: Selective gear rules.
- (367) **Winchester Wasteway (Grant County) (that portion within the Winchester Game Reserve):** Open March 1 through September 30.
- (368) **Wolf Creek (Methow River tributary) (Okanogan County):** Closed waters.
- (369) **Yakima River (Yakima County):**
- (a) Downstream of Highway 240 Bridge, Columbia River rules apply.
- (b) From the Highway 240 Bridge to the downstream side of the westbound I-82 Bridge: Open March 1 through October 31.
- (i) From 200 feet above to 200 feet below the USBR Chandler Powerhouse/Pumping Station: Closed waters September 1 through October 31.
- (ii) From March 1 through October 31; for all open species except sturgeon: It is permissible to fish with two poles so long as the angler possesses a valid two-pole endorsement.

(iii) Chumming is permissible.

(iv) Game fish: Statewide minimum size/daily limit, except: Release trout.

(v) Salmon:

(A) Open September 1 through October 31.

(B) Night closure.

(C) Barbless hooks required.

(D) Limit 6; it is unlawful to retain more than 1 adult.

(c) From the Grant Avenue bridge in Prosser downstream approximately 1.25 miles to the downstream side of the westbound I-82 Bridge: Open March 1 through October 31.

(i) From March 1 through October 31; for all open species except sturgeon: It is permissible to fish with two poles so long as the angler possesses a valid two-pole endorsement.

(ii) Chumming is permissible.

(iii) Fishing from a floating device is prohibited September 1 through October 31.

(iv) Game fish: Statewide minimum size/daily limit, except: Release trout.

(v) Salmon:

(A) Open September 1 through October 31.

(B) Night closure.

(C) Barbless hooks required.

(D) Limit 6; it is unlawful to retain more than ((2)) 1 adult((s)).

(d) From Prosser Dam to Highway 223 Bridge:

(i) Open March 1 through October 31.

(ii) Game fish: Statewide minimum size/daily limit, except: Release trout.

(e) From Grant Avenue Bridge to Prosser Dam: Closed waters.

(f) From Highway 223 Bridge to 3,500 feet below Roza Dam:

(i) From Yakima Avenue-Terrace Heights Bridge upstream 400 feet: Closed waters.

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Trout: Minimum length 14 inches.

(iv) Whitefish:

(A) Open December 1 through the last day in February for whitefish only.

(B) Whitefish gear rules.

(g) From 3,500 feet below Roza Dam to Roza Dam: Closed waters.

(h) From Roza Dam to 400 feet below Easton Dam; including the portion of Wilson Creek from the mouth upstream to the BNSF railroad bridge: Open year-round.

(i) It is permissible to fish from floating devices equipped with motors only from the U.S. Bureau of Reclamation restricted area signs at Roza Dam upstream to the boat launch ramp on the Roza Access Area (approximately 1.3 river miles).

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Release trout.

(iv) Whitefish:

(A) Open December 1 through the last day in February for whitefish only.

(B) Whitefish gear rules.

(i) From Easton Dam to the base of Keechelus Dam including Easton Lake:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release rainbow and cutthroat trout.

(370) **Yakima Sportsmen's Park Ponds (Yakima County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(371) **Yocum Lake (Pend Oreille County)**:

(a) Open the fourth Saturday in April through October 31.

(b) It is unlawful to use lead weights or lead jigs that measure 1.5 inches or less along the longest axis.

(c) It is unlawful to fish from a floating device equipped with an internal combustion motor.

**WAC 220-312-040 Freshwater exceptions to statewide rules—Puget Sound.** (1) Beaver ponds located within or adjacent to streams that drain into Puget Sound listed as open to trout and other game fish follow the same rules as the adjacent stream.

(2) **County-wide freshwater exceptions to statewide rules:**

(a) Beaver ponds in Kitsap County and Mason County on Tahuya Peninsula west of Belfair-Bremerton Highway (S.R. 3):

(i) Open the fourth Saturday in April through October 31.

(ii) Trout: No minimum length.

(b) Beaver ponds in Kitsap County and Mason County east of Belfair-Bremerton Highway (S.R. 3):

(i) Open the first Saturday in June through October 31.

(ii) Trout: No minimum length.

(3) **Aldrich Lake (Mason County):** Open the fourth Saturday in April through October 31.

(4) **Alexander Lake (Kitsap County):** Closed waters.

(5) **American Lake (Pierce County):**

(a) Chumming is permissible.

(b) Combined daily limit of trout and kokanee is 5, any length.

(6) **Anderson Creek (Kitsap County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(7) **Armstrong Lake (Snohomish County):** Open the fourth Saturday in April through October 31.

(8) **Bainbridge Island - All streams (Kitsap County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(9) **Baker Lake (Whatcom County):**

(a) Closed waters within a 200 foot radius around the pump discharge at the south end of the lake.

(b) Chumming is permissible.

(c) Open the fourth Saturday in April through October 31.

(d) Game fish: Statewide minimum length/daily limit, except: Kokanee: Minimum length 8 inches and maximum length 18 inches.

(e) Salmon: Open July ((7)) 6 through September ((7)) 16.

(i) Sockeye: Daily limit 3; minimum length 18 inches.

(ii) Each angler aboard a vessel may deploy salmon angling gear until the limit for all licensed and juvenile anglers aboard is reached.

(10) **Baker River (Skagit/Whatcom County):** From the mouth to the Lower Baker Dam: Closed waters.

(11) **Benson Lake (Mason County):** Open the fourth Saturday in April through October 31.

(12) **Big Beaver Creek (Whatcom County), from 1/4 mile upstream of the closed water markers on Ross Lake upstream, including tributary streams and beaver ponds:**

(a) Open July 1 through October 31.

(b) Selective gear rules.

(c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

- (13) **Big Beef Creek (Kitsap County):**
- (a) From Seabeck Highway Bridge to Lake Symington:
    - (i) Open the Saturday before Memorial Day through August 31.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (iv) It is unlawful to fish from a floating device equipped with an internal combustion motor.
    - (v) From August 1 through August 31: Closed waters within 100 feet of the Seabeck Highway N.W. Bridge.
  - (b) From Lake Symington upstream:
    - (i) Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (14) **Big Lake (Skagit County):** Landlocked salmon rules.
- (15) **Big Mission Creek (Mason County):**
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (16) **Big Quilcene River (Jefferson County):**
- (a) From the mouth to Rodgers Street: Open the Saturday before Memorial Day through August 15.
    - (i) Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (b) From Rodgers Street to the Highway 101 Bridge:
    - (i) From the Saturday before Memorial Day through August 15: Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (iii) It is unlawful to fish from a floating device equipped with an internal combustion motor.
    - (iv) From August 16 through October 31:
      - (A) Night closure.
      - (B) Anti-snagging rules.
    - (v) Salmon:
      - (A) Open August 16 through October 31.
      - (B) Daily limit 4 coho only; minimum length 12 inches.
  - (c) From the Highway 101 Bridge to the weir at Quilcene National Fish Hatchery: Closed waters.
  - (d) From the weir at Quilcene National Fish Hatchery to the upper boundary of Falls View campground:
    - (i) Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (17) **Big Soos Creek (King County):** From the mouth to the hatchery rack:
- (a) Open the Saturday before Memorial Day through August 31.
  - (b) Game fish: Statewide minimum length/daily limit, except:
    - ((i)) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - ((ii) Release all steelhead.)
- (18) **Black Lake (Thurston County):** Game fish: Statewide minimum length/daily limit, except:
- (a) Crappie: Daily limit 10; minimum length 9 inches.
  - (b) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

- (19) **Blackjack Creek (Kitsap County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (20) **Boise Creek (King County) (White River tributary):** From the mouth to the Highway 410 crossing: Closed waters.
- (21) **Bosworth Lake (Snohomish County):** Open the fourth Saturday in April through October 31.
- (22) **Boulder River (Snohomish County) (N.F. Stillaguamish River tributary):** From the mouth to Boulder Falls:  
 (a) Open (~~the Saturday before Memorial Day through July~~) September 16 through October 31.  
 (b) Selective gear rules.  
 (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (23) **Bradley Lake (Pierce County):** Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (24) **Buck Lake (Kitsap County):** Open the fourth Saturday in April through October 31.
- (25) **Burley Creek (Kitsap County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (26) **Cady Lake (Mason County):**  
 (a) Fly fishing only.  
 (b) Release all fish.  
 (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (27) **Cain Lake (Whatcom County):** Open the fourth Saturday in April through October 31.
- (28) **Calligan Lake (King County):** It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.
- (29) **Campbell Creek (Mason County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (30) **Campbell Lake (Skagit County):** Grass carp: No daily limit for anglers and bow and arrow fishing allowed.
- (31) **Canyon Creek (Snohomish County) (S.F. Stillaguamish River):**  
 (a) From the mouth to the forks (North Fork and South Fork).  
 (i) Open (~~the Saturday before Memorial Day~~) September 16 through January 31.  
 (ii) Selective gear rules.  
 (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.  
 (b) From the forks (North Fork and South Fork) upstream: Closed waters.
- (32) **Capitol Lake (Thurston County):** Closed waters.
- (33) **Carbon River (Pierce County):**  
 (a) From the mouth to Voight Creek:  
 (i) From September 1 through November 30:  
 (A) Night closure.  
 (B) Anti-snagging rules.  
 (ii) Open September 1 through November 30.

- (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (iv) Open December 1 through January 15:
  - (A) Selective gear rules.
  - (B) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (v) Salmon:
  - (A) Open September 1 through November 30.
  - (B) Daily limit 6 fish of which no more than 2 may be adults, minimum length 12 inches.
  - (C) Release wild coho, wild Chinook and chum.
- (b) From Voight Creek to the Highway 162 Bridge:
  - (i) Open from December 1 through January 15.
  - (ii) Selective gear rules.
  - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (34) **Carney Lake (Pierce County):**
  - (a) Open the fourth Saturday in April through October 31.
  - (b) Salmon: Landlocked salmon rules.
- (35) **Cascade Creek (San Juan County):**
  - (a) From the mouth to Mountain Lake.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (36) **Cascade Lake (San Juan County):** Open the fourth Saturday in April through October 31.
- (37) **Cascade River (Skagit County):**
  - (a) From the mouth to the Rockport-Cascade Road Bridge:
    - (i) Open June 1 through July 15 and September 16 through January 31:
      - (A) June 1 through July 15: Anti-snagging rules and night closure.
      - (B) Game fish: Statewide minimum length/daily limit, except:
        - (I) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
        - (II) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
    - (ii) Salmon:
      - (A) Open June 1 through July 15.
      - (B) Up to 4 hatchery Chinook may be retained; only 2 hatchery Chinook may be adults; minimum length 12 inches.
      - (C) Release all other salmon.
    - (iii) Open September 16 through November 30.
      - (A) Daily limit 4 coho may be retained; minimum length 12 inches. Release all other salmon.
      - (B) Game fish: Statewide length/daily limit, except:
        - (I) Cutthroat trout and wild rainbow: Minimum length 14 inches.
        - (II) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
  - (b) From the Rockport-Cascade Road Bridge upstream:
    - (i) Open June 1 through January 31.
    - (ii) Selective gear rules.
    - (iii) Release all fish except hatchery steelhead.
- (38) **Cavanaugh Lake (Skagit County):** Chumming is permissible.
- (39) **Cedar River (King County):**
  - (a) From the mouth to Landsburg Road:
    - (i) Open the Saturday before Memorial Day through August 31.

- (ii) Selective gear rules.
- (iii) Night closure.
- (iv) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (v) It is unlawful to fish from a floating device equipped with an internal combustion motor.
- (b) From Landsburg Bridge upstream to the falls: Closed waters.
- (40) **Chain Lake (Snohomish County):**
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
- (41) **Chambers Creek (Pierce County):**
  - (a) From the mouth (Burlington Northern Bridge) to the markers 400 feet below the Boise-Cascade Dam:
    - (i) Selective gear rules, except bait is permissible September 1 through October 15.
    - (ii) Open the Saturday before Memorial Day through November 15 for game fish and salmon.
    - (iii) Night closure.
    - (iv) ~~((Anti-snagging rules.~~
    - ~~(v))~~ Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - ~~((vi))~~ (v) Salmon:
      - (A) Limit 6 fish of which no more than 4 may be adult salmon; minimum length 12 inches.
      - (B) Release wild coho.
    - (b) From Boise-Cascade Dam to Steilacoom Lake:
      - (i) Selective gear rules.
      - (ii) Night closure.
      - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (42) **Chambers Lake (within Ft. Lewis Military Reservation) (Pierce County):**
  - (a) Selective gear rules.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (43) **Channel Creek (Whatcom County) (Baker River tributary):** Open the Saturday before Memorial Day through August 31.
- (44) **Chaplain Creek (Snohomish County) (Sultan River tributary):** Waters adjacent to the water filtration plant, from the inlet to the beaver pond (Grass Lake) below the water filtration plant gate to the waterfall approximately .4 miles upstream: Closed waters.
- (45) **Cherry Creek (King/Snohomish County) (tributary to the Snoqualmie River):** From the mouth to Cherry Creek Falls: Selective gear rules.
- (46) **Chico Creek (Kitsap County):**
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (47) **Church Creek (Mason County):** From the mouth to the bridge on U.S. Forest Service Road #2361: Closed waters.
- (48) **Clear Creek (Kitsap County):**
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

- (49) **Clear Lake (Pierce County):**  
 (a) Open the fourth Saturday in April through October 31.  
 (b) Chumming is permissible.
- (50) **Clear Lake (Thurston County):** Open the fourth Saturday in April through October 31.
- (51) **Clearwater River (Pierce County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (52) **Clover Creek (Pierce County):** From the mouth upstream to Steilacoom Lake: Closed waters.
- (53) **Cottage Lake (King County):** Open the fourth Saturday in April through October 31.
- (54) **Coulter Creek (Kitsap/Mason counties):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (55) **County Line Ponds (Skagit County):** Closed waters.
- (56) **Crabapple Lake (Snohomish County):** Open the fourth Saturday in April through October 31.
- (57) **Cranberry Creek (Mason County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (58) **Crescent Creek (Kitsap County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (59) **Crescent Lake (Pierce County):** Open the fourth Saturday in April through October 31.
- (60) **Crocker Lake (Jefferson County):** Closed to trout fishing.
- (61) **Cushman Lake (Mason County):** Game fish: Statewide minimum length/daily limit, except: Kokanee: Minimum length 8 inches and maximum length 18 inches.
- (62) **Dakota Creek (Whatcom County):** From the mouth to Giles Road Bridge.  
 (a) Open the Saturday before Memorial Day through December 31.  
 (b) Selective gear rules.  
 (c) Salmon:  
 (i) Open October 1 through December 31.  
 (ii) Daily limit 2 salmon; minimum length 12 inches.  
 (iii) Release wild Chinook (~~and wild coho~~).
- (63) **De Coursey Pond (Pierce County):** Open the fourth Saturday in April through October 31 to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (64) **Deer Creek (Mason County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (65) **Deer Creek (Snohomish/Skagit counties) (Tributary to the N.F. Stillaguamish) and all tributaries:** Closed waters.
- (66) **Deer Lake (Island County):** Open the fourth Saturday in April through October 31.
- (67) **Deer Lake (Mason County):** Open the fourth Saturday in April through October 31.

- (68) **Deschutes River (Thurston County):** From Old Highway 99 Bridge upstream:
- (a) Selective gear rules.
  - (b) Game fish:
    - (i) Open year-round.
    - (ii) Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (c) Salmon:
    - (i) Open (~~July 1 through October 15~~) year-round.
    - (ii) Limit 6; no more than 2 adult salmon may be retained.
    - (iii) Release coho.
- (69) **Devereaux Lake (Mason County):** Open the fourth Saturday in April through October 31.
- (70) **Dewatto River (Mason County):**
- (a) From the mouth to Dewatto-Holly Road Bridge:
    - (i) Open the Saturday before Memorial Day through August 15 and October 1 through October 31.
    - (ii) Selective gear rules.
    - (iii) October 1 through October 31: Night closure.
    - (iv) Game fish: Statewide minimum length/daily limit, except:
      - (A) Release cutthroat trout and wild rainbow trout.
      - (B) No steelhead retention.
  - (b) From Dewatto-Holly Road Bridge upstream:
    - (i) Selective gear rules.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (71) **Dogfish Creek (Kitsap County):**
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (72) **Don Lake (also known as "Clara Lake") (Mason County):** Open the fourth Saturday in April through October 31.
- (73) **Dosewallips River (Jefferson County):**
- (a) From the mouth to Highway 101 Bridge:
    - (i) Open the Saturday before Memorial Day through August 31.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (iv) Salmon:
      - (A) Open November 1 through December 15.
      - (B) Limit 2 chum only.
  - (b) From Highway 101 Bridge to Olympic National Park boundary about three-quarters of a mile downstream of the falls:
    - (i) Open the Saturday before Memorial Day through August 31.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (74) **Duckabush River (Jefferson County):**
- (a) From the mouth to Mason County PUD #1 overhead distribution line:
    - (i) Open the Saturday before Memorial Day through August 31.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (iv) Salmon:
      - (A) Open November 1 through December 15.
      - (B) Daily limit 2 chum only.

- (b) From Mason County PUD #1 overhead distribution line to the Olympic National Park boundary:
- (i) Open the Saturday before Memorial Day through August 31.
  - (ii) Selective gear rules.
  - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (75) **Echo Lake (Snohomish County)**: Open the fourth Saturday in April through October 31.
- (76) **Eglon Creek (Kitsap County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (77) **Elson Creek (Thurston County)**: Closed waters.
- (78) **Erie Lake (Skagit County)**: Open the fourth Saturday in April through October 31.
- (79) **Fazon Lake (Whatcom County)**: It is unlawful to fish from any floating device from the first Friday in October through January 27.
- (80) **Finch Creek (Mason County)**: Anglers with disabilities who permanently use a wheelchair and possess a designated harvester companion card may fish from the ADA accessible site at the Hoodspout Salmon Hatchery, so long as those anglers follow all applicable rules of the adjoining waters of Marine Area 12.
- (81) **Finney Creek (Skagit County)**: From the mouth up to the USFS 17 road bridge: Closed waters.
- (82) **Fisher Creek Slough (Skagit County)**: From the mouth to the I-5 Bridge: Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (83) **Fortson Mill Pond #2 (Snohomish County)**: Open the fourth Saturday in April through October 31 for juvenile anglers only.
- (84) **Fulton Creek (Mason County)**: From the mouth to falls at river mile 0.8:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (85) **Geneva Lake (King County)**: Open the fourth Saturday in April through October 31.
- (86) **Gibbs Lake (Jefferson County)**:
- (a) Selective gear rules.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (87) **Gissberg Pond, North (Snohomish County)**: Open for juvenile anglers only.
- (88) **Goldsborough Creek and tributaries (Mason County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (89) **Goodwin Lake (Snohomish County)**: Chumming is permissible.
- (90) **Goss Lake (Island County)**: Open the fourth Saturday in April through October 31.
- (91) **Gorst Creek (Kitsap County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (92) **Granite Lakes (near Marblemount) (Skagit County)**: Game fish: Statewide minimum length/daily limit, except: Release Grayling.

(93) **Grass Lake (Mason County)**: Open the fourth Saturday in April through October 31.

(94) **Green (Duwamish) River (King County)**:

(a) From an east-west line extending through the southernmost tip of Harbor Island to Tukwila International Boulevard/Old Highway 99:

(i) Open for game fish the Saturday before Memorial Day through July 31.

(ii) Game fish: Statewide minimum length/daily limit, except: ~~((A))~~ Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((B) Release steelhead.)~~

(iii) In years ending in odd numbers, open for game fish and salmon August 20 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Daily limit 6 salmon of which no more than 3 may be any combination of adult coho and adult chum.

(I) Release Chinook.

(II) Salmon minimum length 12 inches.

(III) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) In years ending in even numbers, open for game fish and salmon September 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Salmon: Daily limit 6 salmon of which no more than 3 adults may be retained. ~~((I))~~ Release Chinook.

~~((II) Salmon minimum length 12 inches.~~

~~(III))~~ (D) Game fish: Statewide minimum length/daily limit, except: ~~((aa))~~ Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((bb) Release steelhead.)~~

(b) From Tukwila International Boulevard/Old Highway 99 to the South 212th Street Bridge:

(i) Open for game fish the Saturday before Memorial Day through July 31.

(ii) Game fish: Statewide minimum length/daily limit, except: ~~((A))~~ Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((B) Release steelhead.)~~

(iii) In years ending in odd numbers: Open for salmon and game fish August 20 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Salmon: Daily limit 6 salmon of which no more than 3 may be any combination of adult coho and adult chum. Only 1 Chinook may be retained.

~~((iv) August 20 through August 31: Release Chinook.~~

~~(v) September 1 through December 31: Only one Chinook may be retained.~~

~~(A) Salmon minimum length 12 inches.~~

~~(B))~~ (D) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((vi))~~ (iv) In years ending in even numbers, open for game fish and salmon September 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Daily limit 6 salmon, up to 3 adults may be retained, of which one may be a Chinook.

~~((I) Salmon: Minimum length 12 inches.~~

~~(II)) (D) Game fish: Statewide minimum length/daily limit, except: ((aa)) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~((bb) Release steelhead.)~~

(c) From the South 212th Street Bridge to the ~~((Auburn-Black-Diamond-Road))~~ Highway 18 Eastbound Bridge:

(i) ~~((From 150 feet below the mouth of Big Soos Creek))~~ Open for game fish the Saturday before Memorial Day through August 15.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iii) In years ending in odd numbers, open for game fish and salmon September 16 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Salmon: Daily limit 6 salmon of which no more than 3 may be any combination of adult coho and adult chum. Release Chinook.

(D) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) In years ending in even numbers, open for game fish and salmon October 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Salmon: Daily limit 6 salmon of which no more than 3 adults may be retained. Release Chinook.

(D) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(d) From Highway 18 Eastbound Bridge to the Auburn-Black Diamond Road Bridge: Closed waters.

~~((ii) Open for game fish the Saturday before Memorial Day through August 15.~~

~~(iii) Game fish: Statewide minimum length/daily limit, except:~~

~~(A) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~(B) Release steelhead.~~

~~(iv) In years ending in odd numbers, open for game fish and salmon September 16 through December 31:~~

~~(A) Anti-snagging rules.~~

~~(B) Night closure.~~

~~(C) Daily limit 6 salmon of which no more than 3 may be any combination of adult coho and adult chum.~~

~~(I) Release Chinook.~~

~~(II) Salmon: Minimum length 12 inches.~~

~~(D) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~(v) In years ending in even numbers, open for game fish and salmon October 1 through December 31:~~

~~(A) Anti-snagging rules.~~

~~(B) Night closure.~~

~~(C) Daily limit 6 salmon of which no more than 3 adults may be retained.~~

~~(I) Release Chinook.~~

~~(II) Salmon: Minimum length 12 inches.~~

~~(D) Game fish: Statewide minimum length/daily limit, except:~~

~~(I) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~(II) Release steelhead.~~

~~(d))~~ (e) From the Auburn-Black Diamond Road Bridge to the mouth of Cristy Creek (at Flaming Geyser State Park):

(i) Closed waters within 150 feet of the mouth of Keta (Crisp) Creek.

(ii) Open for game fish the Saturday before Memorial Day through September 15.

(iii) Game fish: Statewide minimum length/daily limit, except: ~~((A))~~ Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((B) Release steelhead.)~~

(iv) Open for game fish and salmon November 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Daily limit 6 salmon of which no more than 3 may be any combination of adult coho and adult chum. ~~((I))~~ Release Chinook.

~~((II) Salmon: Minimum length 12 inches.)~~

(D) Game fish: Statewide minimum length/daily limit, except: ~~((I))~~ Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((II) Release steelhead.~~

~~(e))~~ (f) From the mouth of Cristy Creek (at Flaming Geyser State Park) to the water pipeline walk bridge (1/2 mile downstream of Tacoma Headworks Dam):

(i) ~~((Closed waters))~~ Within 150 feet of the Palmer Pond outlet rack: Closed waters.

(ii) Open for game fish the Saturday before Memorial Day through December 31.

(iii) Game fish: Statewide minimum length/daily limit, except: ~~((A))~~ Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((B) Release steelhead.)~~

(iv) Open for game fish and salmon November 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Daily limit 6 salmon of which no more than 3 may be any combination of adult coho and adult chum. ~~((I))~~ Release Chinook.

~~((II) Salmon: Minimum length 12 inches.)~~

(95) **Greenwater River (King County)**: From the mouth to Greenwater Lakes:

(a) Open December 1 through last day in February for whitefish only.

(b) Whitefish gear rules.

(96) **Grovers Creek (Kitsap County)**:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(97) **Hamma Hamma River (Mason County)**: From the mouth to 400 feet below the falls:

(a) Open the Saturday before Memorial Day through August 31.

(b) Selective gear rules.

(c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(98) **Hancock Lake (King County)**: It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

(99) **Harvey Creek (Snohomish County)**: Closed waters.

(100) **Haven Lake (Mason County)**: Open the fourth Saturday in April through October 31.

(101) **Heart Lake (near Anacortes) (Skagit County)**: Open the fourth Saturday in April through October 31.

(102) **Heins Lake (Kitsap County)**: Closed waters.

(103) **Hicks Lake (Thurston County)**: Open the fourth Saturday in April through October 31.

(104) **Horseshoe Lake (Jefferson County)**:

(a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(105) **Horseshoe Lake (Kitsap County)**: Open the fourth Saturday in April through October 31.

(106) **Howard Lake (Snohomish County)**: Open the fourth Saturday in April through October 31.

(107) **Howell Lake (Mason County)**: Open the fourth Saturday in April through October 31.

(108) **Hozomeen Lake (Whatcom County)**: It is unlawful to use lead weights or lead jigs that measure 1 1/2 inch or less along the longest axis.

(109) **Illahee Creek (Kitsap County)**:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(110) **Issaquah Creek (King County)**: Open the Saturday before Memorial Day through August 31.

(111) **Jackson Lake (Pierce County)**: Open the fourth Saturday in April through October 31.

(112) **Jennings Park Pond (Snohomish County)**: Open for juvenile anglers, senior anglers and anglers with a disability who possess a designated harvester companion card.

(113) **Jimmy-come-lately Creek (Clallam County)**: From the mouth to the confluence with East Fork. Open the Saturday before Memorial Day through August 31.

(114) **Johns Creek (Mason County)**:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(115) **Kendall Creek (Whatcom County) (N.F. Nooksack tributary)**: From the mouth through the hatchery to the hatchery boundary fence: Closed waters.

(116) **Kennedy Creek (Mason County)**:

(a) From the mouth to Highway 101 Bridge:

(i) Open the Saturday before Memorial Day through the last day in February.

(ii) October 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(iv) Salmon:

- (A) Open October 1 through November 30.
- (B) Daily limit 6; no more than 2 adults may be retained.
- (C) Release wild coho.
- (b) From Highway 101 Bridge upstream:
  - (i) Open the Saturday before Memorial Day through October 31.
  - (ii) Selective gear rules.
  - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (iv) October 1 through October 31: (~~(A) Anti-snagging rules.~~  
~~(B)~~) Night closure.
- (117) **Ki Lake (Snohomish County)**: Open the fourth Saturday in April through October 31.
- (118) **Kings Lake Bog (King County)**: Closed waters.
- (119) **Kitsap Creek (Kitsap County)**:
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (120) **Koeneman Lake (Fern Lake) (Kitsap County)**:
  - (a) Open the fourth Saturday in April through October 31.
  - (b) Selective gear rules.
  - (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (d) Release all fish.
- (121) **Langlois Lake (King County)**: Open the fourth Saturday in April through October 31.
- (122) **LeBar Creek (Mason County)**: From the mouth to the falls at river mile 1: Closed waters.
- (123) **Lilliwaup River (Mason County)**: From the mouth to 200 feet below the falls:
  - (a) Open the Saturday before Memorial Day through August 31.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (124) **Limerick Lake (Mason County)**: Open the fourth Saturday in April through October 31.
- (125) **Little Quilcene River (Jefferson County)**: From the mouth to the Little Quilcene River Bridge on Penny Creek Road:
  - (a) From the mouth to the Highway 101 Bridge: Open the Saturday before Memorial Day through August 31.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (126) **Little Scandia Creek (Kitsap County)**:
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (127) **Lone Lake (Island County)**:
  - (a) Selective gear rules.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 1; minimum length 18 inches.
    - (ii) Grass carp: No limit for anglers and bow and arrow fishing.
- (128) **Long's Pond (Thurston County)**: Open for juvenile anglers, senior anglers and anglers with a disability who possess a designated harvester companion card only.

- (129) **Maggie Lake (Mason County)**: Open the fourth Saturday in April through October 31.
- (130) **Malaney Creek (Mason County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (131) **Margaret Lake (King County)**: Open the fourth Saturday in April through October 31.
- (132) **Martha Lake (Alderwood Manor) (Snohomish County)**: Open the fourth Saturday in April through October 31.
- (133) **Martha Lake (Warm Beach) (Snohomish County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
- (134) **Mashel River (Pierce County)**: Closed waters.
- (135) **McAllister Creek (Thurston County)**:
- (a) Open the Saturday before Memorial Day through November 30.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (c) Salmon:
    - (i) Open July 1 through November 30.
    - (ii) Daily limit 6; of which no more than 2 may be adults.
    - (iii) Release ((~~coho~~)) chum, wild coho, and wild Chinook.
- (136) **McLane Creek (Thurston County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (c) Night closure.
- (137) **McMurray Lake (Skagit County)**: Open the fourth Saturday in April through October 31. Landlocked salmon rules.
- (138) **Melbourne Lake (Mason County)**: Open the fourth Saturday in April through October 31.
- (139) **Mill Creek (Mason County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
- (140) **Mill Pond (Auburn) (King County)**: Open for juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.
- (141) **Minter Creek (Pierce/Kitsap counties)**: From the mouth to the fishing boundary markers approximately 50 feet downstream of the hatchery rack:
- (a) Open for salmon ((~~October~~)) September 16 through December 15.
  - (b) Night closure.
  - (c) Anti-snagging rule.
  - (d) Daily limit 6; no more than 2 adult salmon may be retained. Release ((~~Chinook and~~)) wild coho.
- (142) **Mission Lake (Kitsap County)**: Open the fourth Saturday in April through October 31.
- (143) **Monte Cristo Lake (Snohomish County)**:
- (a) Open June 1 through August 31.
  - (b) Selective gear rules.
  - (c) Release all fish except hatchery steelhead.
- (144) **Mud Lake (Mason County)**: Open the fourth Saturday in April through October 31.
- (145) **Munn Lake (Thurston County)**:
- (a) Selective gear rules.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Release all fish.

**(146) Nisqually River (Pierce County):**

(a) From the mouth to Military Tank Crossing Bridge:

(i) Anti-snagging rules.

(ii) Night closure.

(iii) Barbless hooks are required.

(iv) Open July 1 through (~~September 30~~) November 15.

(v) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(vi) Salmon: Open July 1 through (~~October 1~~) November 15: Closed Sundays.

(A) Daily limit 6; no more than 2 adults may be retained.

(B) Release (~~coho~~) chum(~~er~~) and wild Chinook.

(b) From Military Tank Crossing Bridge to 400 feet below La Grande Powerhouse:

(i) Open the Saturday before Memorial Day through October 31.

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(147) Nisqually River tributaries downstream of Alder Dam not otherwise listed (Pierce County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(148) Nooksack River (Whatcom County):**

(a) From the Lummi Indian Reservation boundary to the yellow marker at the FFA High School barn at Deming:

(i) Open the Saturday before Memorial Day through January 31.

(ii) From the Saturday before Memorial Day through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon: (~~(A)~~) Open September 1 through December 31:

(~~(I)~~) (A) Daily limit 2, plus 2 additional hatchery coho.

(~~(II)~~) (B) Release wild Chinook and pink September 1 through September 30.

(~~(B)~~ In odd-numbered years, open July 16 through August 31:

(~~I~~) Daily limit 4 pink salmon.

(~~II~~) It is unlawful to use bait.

(~~III~~) It is unlawful to use anything other than single-point barbless hooks measuring 1/2 inch or less from point to shank.))

(b) From the yellow marker at the FFA High School barn in Deming to the confluence of the forks:

(i) Open from October 1 through January 31.

(ii) October 1 through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon:

(A) Open October 1 through December 31:

(B) Daily limit 2, plus anglers may retain 2 additional hatchery coho.

(C) Release pink salmon.

(149) **Nooksack River, North Fork (Whatcom County):**

(a) From the mouth to the Highway 9 bridge: Closed waters.

(b) From the Highway 9 bridge to Maple Creek:

(i) Open the Saturday before Memorial Day through February 15.

(ii) From the Saturday before Memorial Day through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) November 1 through February 15: It is unlawful to fish from a floating device equipped with a motor.

(iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(v) Salmon:

(A) Open October 1 through November 30.

(B) Daily limit 2 salmon, plus anglers may retain 2 additional hatchery coho.

(C) Release pink salmon.

(c) From Maple Creek to Nooksack Falls:

(i) Open the Saturday before Memorial Day through January 31.

(ii) Selective gear rules.

(iii) November 1 through January 31: It is unlawful to fish from a floating device equipped with a motor.

(iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(150) **Nooksack River, Middle Fork (Whatcom County):** From the mouth to the city of Bellingham diversion dam:

(a) November 1 through January 31: It is unlawful to use motors.

(b) Open the Saturday before Memorial Day through January 31.

(c) Selective gear rules.

(d) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(151) **Nooksack River, South Fork (Skagit/Whatcom counties):**

(a) From the mouth to Skookum Creek:

(i) Open October 1 through January 31.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iii) Only one single-point hook allowed.

(iv) From October 1 through November 30: Night closure.

(v) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(vi) Salmon open October 1 through December 31:

(A) Daily limit 2; plus anglers may retain 4 additional hatchery coho.

(B) Release chum and pink salmon.

(C) Release wild Chinook October 1 through October 15.

(b) From Skookum Creek upstream to Wanlick Creek: Closed waters.

(c) Upstream from and including Wanlick Creek, including all tributaries:

(i) Open the Saturday before Memorial Day through October 31 for fly fishing only.

(ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(152) **North Lake (King County):** Open the fourth Saturday in April through October 31.

(153) **Northern State Hospital Pond (Skagit County):** Open for juvenile anglers only.

(154) **Olalla Creek (Kitsap County):**

(a) Selective gear rules.

- (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (155) **Old Fishing Hole Pond (Kent, King County)**: Open to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card.
- (156) **Osborne Lake (Mason County)**: Open the fourth Saturday in April through October 31.
- (157) **Padden Lake (Whatcom County)**: Open the fourth Saturday in April through October 31.
- (158) **Panther Lake (Kitsap/Mason counties)**: Open the fourth Saturday in April through October 31.
- (159) **Pass Lake (Skagit County)**:
- (a) Fly fishing only.
  - (b) All motors prohibited.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release all ((fish)) trout.
- (160) **Perry Creek (Thurston County)**: From the mouth to the falls:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (161) **Phillips Lake (Mason County)**: Open the fourth Saturday in April through October 31.
- (162) **Pilchuck Creek (Snohomish County)**:
- (a) From the mouth to the ((Pilehuck Falls)) Highway 9 Bridge: ((-a)) (i) Open ((the Saturday before Memorial Day)) September 16 through January 31.
  - ((-b) From the Saturday before Memorial Day through November 30;) (ii) Selective gear rules.
  - ((-c)) (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (b) From the Highway 9 Bridge to Pilchuck Falls:
    - (i) Open the Saturday before Memorial Day through January 31.
    - (ii) From the Saturday before Memorial Day through November 30; selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (163) **Pilchuck River (Snohomish County)**:
- (a) From the mouth to 500 feet downstream from the Snohomish City diversion dam:
    - (i) Open from December 1 through January 31.
    - (ii) It is unlawful to fish from any floating device.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (b) From 500 feet downstream from the Snohomish City diversion dam upstream: Closed waters.
- (164) **Pine Lake (King County)**: Open the fourth Saturday in April through October 31.
- (165) **Pioneer Ponds (tributary to Stillaguamish River) (Snohomish County)**: Closed waters.
- (166) **Pipers Creek (King County) and tributaries**: Closed waters.
- (167) **Portage Creek (Snohomish County)**: Closed waters.
- (168) **Prices Lake (Mason County)**:
- (a) Selective gear rules.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (c) Release all fish.

(169) **Puyallup River (Pierce County):**

(a) From the 11th Street Bridge to (~~Carbon River~~) East Main Bridge:

~~(i) (Open for game fish August 15 through December 31.~~

~~(ii) Closed waters within 400 feet of the mouth of Clarks Creek.~~

~~(iii)) From August 15 through August 31 all waters closed Sundays.~~

~~((iv))~~ (ii) From September 1 through October 31 all waters closed Sundays, Mondays, and Tuesdays.

~~((v))~~ (iii) August 15 through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(C) Barbless hooks are required.

~~((vi))~~ (iv) Open for game fish August 15 through December 31.

(v) Game fish: statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

~~((vii))~~ (vi) Salmon:

(A) Open August 15 through December 31.

(B) Daily limit 6. No more than 2 adults may be retained.

(C) Release (~~wild coho~~) chum and wild Chinook.

(b) From East Main Bridge to Carbon River:

(i) From August 15 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(C) Barbless hooks are required.

(ii) Game fish:

(A) Open August 15 through December 31.

(B) Statewide minimum length/daily limit except: Release cutthroat trout and wild rainbow trout.

(iii) Salmon:

(A) Open August 15 through December 31.

(B) Daily limit 6. No more than 2 adults may be retained.

(C) Release chum and wild Chinook.

(c) From Carbon River upstream:

(i) Open the Saturday before Memorial Day through January 15.

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(170) **Raging River (King County):** From the mouth to the Highway 18 Bridge:

(a) Open the Saturday before Memorial Day through January 31.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(171) **Rapjohn Lake (Pierce County):** Open the fourth Saturday in April through October 31.

(172) **Rattlesnake Lake (King County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(173) **Ravensdale Lake (King County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(174) **Riley Lake (Snohomish County):** Open the fourth Saturday in April through October 31.

(175) **Robbins Lake (Mason County):** Open the fourth Saturday in April through October 31.

- (176) **Rocky Creek (Mason County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat and wild rainbow trout.
- (177) **Roesiger Lake (Snohomish County):** Game fish: statewide minimum length/daily limit, except: Crappie: Daily limit 10; minimum length 9 inches.
- (178) **Ross Lake (Reservoir) (Whatcom County):**  
 (a) Open July 1 through October 31.  
 (b) Selective gear rules.  
 (c) Game fish: Statewide minimum length/daily limit, except:  
 (i) Trout except eastern brook trout: Daily limit 1; minimum length 16 inches.  
 (ii) Eastern brook trout: Daily limit 5; no minimum size.
- (179) **Ross Lake tributary streams, and their tributaries, except Big Beaver Creek and Ruby Creek (Whatcom County):**  
 (a) From mouth to one mile upstream: Closed waters.  
 (b) From one mile above the mouths to the headwaters: Open July 1 through October 31.
- (180) **Ruby Creek (Whatcom County):** Closed waters.
- (181) **Ruby Creek tributaries (Whatcom County):** Open July 1 through October 31.
- (182) **Salmon Creek and all forks (Jefferson/Clallam counties):** Closed waters.
- (183) **Salmonberry Creek (Kitsap County):**  
 (a) Selective gear rules.  
 (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (184) **Samish Lake (Whatcom County):** Game fish: Statewide minimum length/daily limit, except: Cutthroat trout: Daily limit 2; minimum length 14 inches.
- (185) **Samish River (Skagit County):**  
 (a) From the mouth to the I-5 Bridge:  
 (i) Open the Saturday before Memorial Day through November 30.  
 (ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.  
 (iii) From August 1 through November 30:  
 (A) Night closure.  
 (B) It is unlawful to use anything other than one single-point hook.  
 (iv) From December 1 through December 31: Selective gear rules.  
 (v) Salmon:  
 (A) Open August 1 through (~~October 31~~) September 22.  
 (B) Daily limit 2; anglers may only retain fish hooked inside the mouth.  
 (C) Release pink and wild coho.  
 (b) From the I-5 Bridge to the Old Highway 99 Bridge:  
 (i) Closed waters from the Old Highway 99 Bridge to the WDFW salmon rack.  
 (ii) Open the Saturday before Memorial Day through August 30.  
 (iii) Selective gear rules.  
 (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.  
 (c) From the WDFW hatchery rack to Hickson Bridge:  
 (i) Open the Saturday before Memorial Day through November 30.  
 (ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

**(186) Sammamish Lake (King County):**

(a) Closed waters within 100 yards of the mouth of Issaquah Creek August 16 through November 30.

(b) Game fish: Statewide minimum length/daily limit, except: Release all kokanee.

(c) December 1 through June 30: Release all steelhead and rainbow trout over 20 inches in length.

(d) Landlocked salmon rules apply for December 1 through May 31. Hatchery coho only may be retained as part of the trout daily limit under the landlocked salmon rules, minimum length 12 inches.

(e) Open for salmon from October 1 through November 30.

(i) Salmon: Daily limit 4 coho only.

(ii) Release Chinook and sockeye.

**(187) Sammamish River (Slough) (King County):** From the 68th Avenue N.E. Bridge to Lake Sammamish:

(a) Open from January 1 through August 31.

(b) Selective gear rules.

(c) ~~((It is unlawful to fish from a floating device equipped with an internal combustion motor.~~

~~(d))~~ Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(188) Sandys Lake (Jefferson County):** Open the fourth Saturday in April through October 31.

**(189) Sauk River (Skagit/Snohomish counties):**

(a) Selective gear rules.

(b) Release all fish except hatchery steelhead.

(c) From the mouth to Darrington Bridge:

(i) Open June 1 through January 31.

(ii) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(d) From Darrington Bridge to the mouth of the White Chuck River: Open June 1 through January 31.

(e) From the Whitechuck River to the headwaters, including the North Fork from mouth to North Forks Falls and the South Fork from mouth to Elliot Creek: Open June 1 through October 31.

(f) In the South Fork upstream from Elliot Creek: Open June 1 through August 31.

**(190) Sawyer Lake (King County):** Chumming is permissible.

**(191) Schneider Creek (Thurston County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(192) Serene Lake (Snohomish County):** Open the fourth Saturday in April through October 31.

**(193) Shady Lake (King County):** Open the fourth Saturday in April through October 31.

**(194) Shannon, Lake (Skagit County):**

(a) Open the fourth Saturday in April through October 31.

(b) Chumming is permissible.

(c) Game fish: Statewide minimum length/daily limit, except: Kokanee: Minimum length 8 inches.

**(195) Shelton Creek (Mason County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(196) **Sherwood Creek (Mason County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(197) **Sherwood Creek Mill Pond (Mason County):** Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(198) **Shoe Lake (Mason County):** Open the fourth Saturday in April through October 31.

(199) **Silent Lake (Jefferson County):** Open the fourth Saturday in April through October 31.

(200) **Silver Lake (Pierce County):** Open the fourth Saturday in April through October 31.

(201) **Silver Lake (Whatcom County):** Open the fourth Saturday in April through October 31.

(202) **Sixteen Lake (Skagit County):** Open the fourth Saturday in April through October 31.

(203) **Skagit River (Skagit/Whatcom counties):**

~~(a) ((From the mouth to Highway 530 Bridge at Rockport: Game fish: Statewide minimum length/daily limit, except:~~

~~(i) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~(ii) Dolly Varden/Bull Trout: Minimum length of 20 inches as part of the trout limit.~~

~~(b)) From the mouth to the Memorial Highway Bridge (Highway 536 at Mt. Vernon):~~

~~(i) Open March 1 through January 31.~~

~~(ii) March 1 through August 31:~~

~~(A) Selective gear rule except anglers fishing for sturgeon must use bait.~~

~~(B) It is unlawful to use hooks other than those measuring 1/2 inch or less from point to shank, except anglers fishing for sturgeon may use single-point barbless hooks of any size.~~

~~(iii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~(iv) Dolly Varden/Bull Trout: Minimum length of 20 inches as part of the trout limit.~~

~~(v) Salmon:~~

~~(A) Open September 1 through December 31.~~

~~(B) Daily limit ((2)) 3 adult salmon, release Chinook, pink, and chum.~~

~~((e)) (b) From Memorial Highway Bridge (Highway 536 at Mt. Vernon) upstream to Gilligan Creek:~~

~~(i) Open June 1 through January 31.~~

~~(A) Night closure: June 1 through July 15.~~

~~(B) From June 1 through June 15 and July 16 through August 31.~~

~~(I) Selective gear rules except for sturgeon.~~

~~(II) It is unlawful to use hooks other than those measuring 1/2 inch or less from point to shank, except anglers fishing for sturgeon may use single-point barbless hooks of any size.~~

~~(ii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.~~

~~(iii) Dolly Varden/Bull Trout: Minimum length of 20 inches as part of the trout limit.~~

~~(iv) Salmon:~~

~~(A) Open June 16 through July 15.~~

~~(B) Daily limit 3 sockeye only.~~

- (I) Open September 1 through December 31.
- (II) Daily limit ((2)) 3 adult salmon, release Chinook, pink, and chum.
- ~~((d))~~ (c) From Gilligan Creek to The Dalles Bridge at Concrete:
- (i) Open June 1 through January 31.
- (ii) From June 1 through August 31:
- (A) Selective gear rules.
- (B) It is unlawful to use hooks other than those measuring 1/2 inch or less from point to shank.
- (C) Night closure.
- (iii) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (iv) Dolly Varden/Bull Trout: Minimum length of 20 inches as part of the trout limit.
- (v) Salmon:
- (A) Open September 1 through December 31.
- (B) Daily limit ((2)) 3 adult salmon, release Chinook, pink, and chum.
- ~~((e))~~ (d) From The Dalles Bridge at Concrete to the Highway 530 Bridge at Rockport:
- (i) Open June 1 through January 31.
- (ii) June 1 through August 31: Closed waters between a line projected across the thread of the river 200 feet above the east bank of the Baker River to a line projected across the thread of the river 200 feet below the west bank of the Baker River.
- (iii) June 1 through August 31:
- (A) Night closure.
- (B) Selective gear rules.
- (C) It is unlawful to use hooks other than those measuring 1/2 inch or less from point to shank.
- (iv) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (v) Dolly Varden/Bull Trout: Minimum length of 20 inches as part of the trout limit.
- (vi) Salmon:
- (A) Open September 1 through December 31.
- (B) Daily limit ((2)) 3 adult salmon, release Chinook, pink, and chum.
- ~~((f))~~ (e) From the Highway 530 Bridge at Rockport to the Cascade River Road (Marblemount Bridge):
- (i) Open June 1 through January 31:
- (A) June 1 through July 15; anti-snagging rules.
- (B) June 1 through July 15; night closure.
- (C) July 16 through August 31: Selective gear rules and it is unlawful to use hooks other than those measuring 1/2 inch or less from point to shank.
- (ii) Salmon:
- (A) Open June 1 through July 15.
- (B) Daily limit 4 hatchery Chinook only.
- (C) Only 2 adult hatchery Chinook may be retained as part of the limit.
- (D) Open September 1 through December 31.
- (E) Daily limit ((2)) 3 adult salmon, release Chinook, pink, and chum.
- ~~((g))~~ (f) From Cascade River Road to the Gorge Powerhouse:
- (i) Open June 1 through January 31.
- (ii) Selective gear rules.

(iii) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(iv) Release all fish except hatchery steelhead.

(204) **Skokomish River (Mason County):**

(a) From the mouth to the city of Tacoma PUD overhead distribution lines: Closed waters.

(b) From the city of Tacoma PUD overhead distribution lines to the Bonneville Transmission lines west of Highway 101: Closed waters.

(c) From the Bonneville Transmission lines west of Highway 101 to the forks:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release steelhead, cutthroat trout, and wild rainbow trout.

(205) **Skokomish River, North Fork (Mason County):**

(a) From the mouth to the lower dam:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release steelhead, cutthroat trout, and wild rainbow trout.

(b) Above Lake Cushman, from the mouth to Olympic National Park boundary:

(i) Open the Saturday before Memorial Day through August 31.

(ii) Selective gear rules.

(iii) Release all fish.

(206) **Skokomish River, South Fork (Mason County):**

(a) From the mouth to the mouth of LeBar Creek:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release steelhead, cutthroat trout, and wild rainbow trout.

(b) From LeBar Creek to Rule Creek: Closed waters.

(207) **Skookum Creek (Mason County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(208) **Skykomish River (Snohomish County):**

(a) Game fish: Statewide minimum length/daily limit, except:

(i) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(ii) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.

(b) From the mouth to the mouth of Wallace River:

(i) Open the Saturday before Memorial Day through January 31.

(ii) From August 1 through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) From November 1 through January 31: It is unlawful to fish from any floating device from the boat ramp below Lewis Street Bridge at Monroe downstream 2,500 feet.

(iv) Salmon:

(A) Open (~~(June 1)~~) the Saturday before Memorial Day through July 31: Daily limit 4 hatchery Chinook; no more than 2 of which may be adults.

(B) For years ending in odd numbers:

(I) Open (~~(August 16 through December 31 from the mouth to Lewis Street Bridge in Monroe.)~~) September 1 through September 30:

(II) (~~(Open September 1 through December 31 from the Lewis Street Bridge to Wallace River.~~

(-III)) Daily limit ((~~3 salmon; release Chinook and chum~~) 1 coho salmon only).

(C) For years ending in even numbers: Open September 16 through November 15: Daily limit 2, release Chinook and chum.

(c) From the mouth of the Wallace River to the forks:

(i) Open the Saturday before Memorial Day through February 15.

(ii) From August 1 through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) From the Saturday before Memorial Day through February 15: It is unlawful to fish from any floating device in the area 1,500 feet upstream and 1,000 feet downstream of the outlet at Reiter Ponds.

(iv) Salmon: For years ending in odd numbers:

(A) Open September 1 through ((~~December 31~~) September 30).

(B) Daily limit ((~~3~~) 1 coho salmon (~~release Chinook and chum~~)) only.

(v) Salmon: For years ending in even numbers:

(A) Open September 16 to November 15.

(B) Daily limit 2 salmon; release Chinook and chum.

(209) **Skykomish River, North Fork (Snohomish County):**

(a) From the mouth to 1,000 feet downstream of Bear Creek Falls:

(i) Open the Saturday before Memorial Day through January 31.

(ii) Selective gear rules.

(iii) Release all fish except hatchery steelhead.

(b) From 1000 feet downstream of Bear Creek Falls to Deer Falls and all tributaries: Closed waters.

(210) **Skykomish River, South Fork (King/Snohomish counties):**

(a) From the mouth to 600 feet downstream from the Sunset Falls fishway:

(i) Open the Saturday before Memorial Day through January 31.

(ii) From August 1 through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(b) From 600 feet downstream of Sunset Falls fishway to Sunset Falls: Closed waters.

(c) From Sunset Falls to the source:

(i) Open the Saturday before Memorial Day through the last day in February.

(ii) ((~~From the Saturday before Memorial Day through November 30~~)) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(d) All tributaries and their tributaries above Sunset Falls:

(i) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(ii) Selective gear rules.

(211) **Snohomish River (Snohomish County):**

(a) From the Burlington-Northern Railroad bridges to Highway 9 Bridge, including all channels, sloughs, and interconnected waterways, but excluding all tributaries:

(i) Sturgeon catch and release is permissible year-round.

(ii) August 1 through November 30:

(A) Anti-snagging rules; except anglers fishing for sturgeon may use single-point barbless hooks of any size.

(B) Night closure.

- (iii) Open the Saturday before Memorial Day through January 31.
- (iv) Game fish: Statewide minimum length/daily limit, except:
  - (A) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (B) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
- (v) Salmon, for years ending in odd numbers:
  - (A) Open (~~(August)~~) September 1 through (~~(December 31)~~) September 30.
  - (B) Daily limit (~~(3 salmon; release Chinook and chum)~~) 1 coho salmon only.
- (vi) Salmon, for years ending in even numbers:
  - (A) Open September 15 through November 15.
  - (B) Daily limit 2, release Chinook and chum.
  - (b) From the Highway 9 Bridge to the confluence of the Skykomish and Snoqualmie rivers and all channels:
    - (i) Open the Saturday before Memorial Day through January 31.
    - (ii) August 1 through November 30:
      - (A) Anti-snagging rules.
      - (B) Night closure.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
      - (B) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
- (iv) Salmon, for years ending in odd numbers:
  - (A) Open (~~(August 16)~~) September 1 through (~~(December 31)~~) September 30.
  - (B) (~~(Limit 3; release Chinook and chum.)~~) Daily limit 1 coho salmon only.
- (v) Salmon, for years ending in even numbers:
  - (A) Open September 15 through November 15.
  - (B) Daily limit 2, release Chinook and chum.
- (212) Snoqualmie River (King County):**
  - (a) From the mouth to Snoqualmie Falls:
    - (i) From the Saturday before Memorial Day through November 30: Selective gear rules.
    - (ii) From September 1 through November 30: Night closure.
    - (iii) From the mouth to the boat ramp at the Plum access: Open the Saturday before Memorial Day through January 31.
    - (iv) From the boat ramp at the Plum access to the falls: Open the Saturday before Memorial Day through February 15.
    - (v) From November 1 through February 15: It is unlawful to fish from any floating device in the waters from the boat ramp at the Plum access to the mouth of Tokul Creek (about 1/4 mile).
  - (vi) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (vii) Salmon, for years ending in odd numbers:
    - (A) Open September 1 through (~~(December 31)~~) September 30.
    - (B) Daily limit (~~(3 salmon; release Chinook and chum)~~) 1 coho salmon only.
  - (viii) Salmon, for years ending in even numbers:
    - (A) Open September 15 through November 15.
    - (B) Daily limit 2, release Chinook and chum.
    - (b) From Snoqualmie Falls upstream, including the North Fork, South Fork, all tributaries except Middle Fork and tributaries to the Middle Fork:

- (i) Selective gear rules.
  - (ii) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (iii) Open the Saturday before Memorial Day through October 31.
  - (iv) Open November 1 through the Friday before Memorial Day: Release all fish.
- (c) Middle Fork from the mouth to the source, including all tributaries:
- (i) Open year-round.
  - (ii) Selective gear rules.
  - (iii) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (iv) Release all fish.
- (213) **South Prairie Creek (Pierce County)**: From the mouth to the city of Buckley diversion dam: Closed waters.
- (214) **Spada Lake (Reservoir) (Snohomish County)**:
- (a) Open the fourth Saturday in April through October 31.
  - (b) Selective gear rules.
  - (c) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (d) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 5; maximum length 12 inches.
- (215) **Spada Lake (Reservoir) tributaries (Snohomish County)**: Closed waters.
- (216) **Spanaway Lake and Spanaway Lake outlet downstream to the dam (approximately 800 feet) (Pierce County)**: Open year-round.
- (217) **Squalicum Lake (Whatcom County)**:
- (a) Fly fishing only.
  - (b) All motors prohibited.
  - (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
- (218) **Squire Creek (Snohomish County) (N.F. Stillaguamish River tributary)**:
- (a) Open (~~the Saturday before Memorial Day through July~~) September 16 through October 31.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (219) **Steel Lake (King County)**: Open the fourth Saturday in April through October 31.
- (220) **Stetattle Creek (Whatcom County)**: From the mouth to Bucket Creek: Closed waters.
- (221) **Stevens, Lake (Snohomish County)**: Chumming is permissible.
- (222) **Stevens Lake (Stevens Lake) (Mason County)**: Open the fourth Saturday in April through October 31.
- (223) **Stickney Lake (Snohomish County)**: Open the fourth Saturday in April through October 31.
- (224) **Stillaguamish River (Snohomish County)**:
- (a) From the mouth to Marine Drive, including all sloughs:
    - (i) Open year-round.
    - (ii) Night closure.
    - (iii) From August 1 through November 30: Anti-snagging rules, except anglers fishing for sturgeon may use single-point barbless hooks of any size.
    - (iv) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (b) From Marine Drive to the forks:

- (i) From the barrier dam (downstream of I-5) downstream 200 feet: Closed waters.
- (ii) Open (~~(August 1)~~) September 16 through November 30.
  - (A) Selective gear rules.
  - (B) Night closure.
  - (C) Release all fish except hatchery steelhead.
- (iii) Open from December 1 through January 31. Game fish: State-wide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (iv) Salmon:
  - (A) Open September 16 through November 15.
  - (B) Daily limit 2 coho salmon only.
- (225) Stillaguamish River, North Fork (Snohomish County):**
  - (a) From the North Fork mouth to the mouth of French Creek:
    - (i) It is unlawful to fish from any floating device upstream of the Highway 530 Bridge at mile post 28.8 (Cicero Bridge).
    - (ii) It is unlawful to fish from any floating device equipped with a motor downstream from the Highway 530 Bridge.
    - (iii) Open the (~~(Saturday before Memorial Day through June 30 and October)~~) September 16 through November 30:
      - (A) Fly fishing only.
      - (B) From (~~(October)~~) September 16 through November 30; night closure.
    - (C) Release all fish except hatchery steelhead.
  - (iv) Open from December 1 through January 31. Game fish: State-wide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (b) From the mouth of French Creek to Swede Heaven Bridge:
      - (i) From (~~(October)~~) September 16 through November 30:
        - (A) Night closure.
        - (B) Anti-snagging rules.
      - (ii) Open (~~(the Saturday before Memorial Day through June 30 and October)~~) September 16 through November 30:
        - (A) Fly fishing only.
        - (B) Release all fish except hatchery steelhead.
      - (iii) Open from December 1 through February 15. Game fish: State-wide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
        - (c) From Swede Heaven Bridge to North Forks Falls approximately one mile upstream of Cascade Creek:
          - (i) Open (~~(from Saturday before Memorial Day through July 31 and October)~~) September 16 through November 30.
            - (ii) Selective gear rules.
            - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (226) Stillaguamish River, South Fork (Snohomish County):**
      - (a) From the mouth to 400 feet downstream of the outlet to Granite Falls fishway:
        - (i) Open (~~(the Saturday before Memorial Day)~~) September 16 through January 31.
        - (ii) From (~~(August 1)~~) September 16 through November 30:
          - (A) Anti-snagging rules.
          - (B) Night closure.
        - (iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
          - (b) From 400 feet below the Granite Falls Fishway to the Mountain Loop Highway Bridge above Granite Falls: Closed waters.

- (c) From the Mountain Loop Highway Bridge above Granite Falls upstream to the source:
- (i) Open Saturday before Memorial Day through November 30.
  - (ii) From August 1 through November 30:
    - (A) Anti-snagging rules.
    - (B) Night closure.
- (227) **Storm Lake (Snohomish County)**: Open the fourth Saturday in April through October 31.
- (228) **Suiattle River (Skagit/Snohomish County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Dolly Varden/Bull trout: Minimum length of 20 inches as part of trout limit.
- (229) **Sultan River (Snohomish County)**: From the mouth to a point 400 feet downstream from the diversion dam at river mile 9.7:
- (a) Open the Saturday before Memorial Day through January 31.
  - (b) Game fish: Statewide minimum length/daily limit, except:
    - (i) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
    - (ii) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
- (230) **Sultan River; North Fork (Snohomish County)**: Closed waters.
- (231) **Sultan River; South Fork (Snohomish County)**: Closed waters.
- (232) **Summit Lake (Thurston County)**: Open the fourth Saturday in April through October 31.
- (233) **Susan Lake (Thurston County)**:
- (a) Selective gear rules.
  - (b) Release all fish.
- (234) **Swan's Mill Pond (Stossel Creek) (King County)**: Open the Saturday before Memorial Day through October 31.
- (235) **Symington Lake (Kitsap County)**:
- (a) Open the fourth Saturday in April through October 31.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (236) **Tahuya River (Mason County)**:
- (a) From the mouth to the Belfair Tahuya Road Bridge:
    - (i) Open the Saturday before Memorial Day through August 15.
    - (ii) Selective gear rules.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (b) From the Belfair Tahuya Road Bridge upstream: Selective gear rules.
- (237) **Tanwax Lake (Pierce County)**: Game fish: Statewide minimum length/daily limit, except: Crappie: Daily limit 10; minimum length 9 inches.
- (238) **Tapps Lake (Reservoir) and Tapps Lake (Reservoir) intake canal (Pierce County), to within 400 feet of the screen at Dingle Basin**: Open year-round.
- (239) **Tarboo Creek (Jefferson County)**:
- (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
- (240) **Tarboo Lake (Jefferson County)**:
- (a) Open the fourth Saturday in April through October 31.
  - (b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(241) **Teal Lake (Jefferson County):**

(a) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(b) Selective gear rules.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.

(242) **Tenas Lake (Mason County):** Open the fourth Saturday in April through October 31.

(243) **Tennant Lake (Whatcom County):** It is unlawful to fish from any floating device from the first Friday in October through January 27.

(244) **Terrell, Lake (Whatcom County):** It is unlawful to fish from any floating device from the first Saturday after Labor Day through the following Friday and from October 1 through January 31, except fishing from a floating dock is permissible.

(245) **Thornton Creek (Whatcom County):** Game fish: Statewide minimum length/daily limit, except: Cutthroat trout: No daily limit; no minimum length.

(246) **Thornton Lake, lower (Whatcom County):** Game fish: Statewide minimum length/daily limit, except: Cutthroat trout: No daily limit; no minimum length.

(247) **Tiger Lake (Kitsap/Mason counties):** Open the fourth Saturday in April through October 31.

(248) **Toad Lake (Whatcom County):** Open the fourth Saturday in April through October 31.

(249) **Tokul Creek (King County) (Snoqualmie River tributary):**

(a) From the mouth to the Fish Hatchery Road Bridge:

(i) Open December 1 through February 15, except closed waters from 5:00 p.m. to 7:00 a.m.

(ii) Anti-snagging rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(b) From Fish Hatchery Road Bridge to the posted boundary marker located downstream of the diversion dam:

(i) Open January 15 through February 15, except closed waters from 5:00 p.m. to 7:00 a.m.

(ii) Anti-snagging rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(c) From the posted boundary marker downstream of the diversion dam to Tokul Road S.E.: Closed waters.

(250) **Tolt River (King County):**

(a) From the mouth to the USGS trolley cable near the confluence of the North and South Forks:

(i) Open the Saturday before Memorial Day through January 31.

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(b) ((On the North Fork,)) From the USGS trolley cable just below the confluence of the North Fork and South Forks to the forks: Closed waters.

(251) **Tolt River, North Fork (King County):**

(a) From the mouth upstream to the falls approximately 1/3 miles above the Northeast North Fork Road Bridge (Pipeline Bridge): Closed waters.

~~((c) On the North Fork))~~ (b) From the falls approximately 1/3 mile above the Northeast North Fork Road Bridge (Pipeline Bridge) upstream, including all tributaries:

(i) Selective gear rules.

(ii) Release all fish.

~~((d) On the South Fork,))~~ (252) **Tolt River, South Fork (King County)**: From the mouth upstream to the dam: Closed waters.

~~((251))~~ (253) **U Lake (Mason County)**: Open the fourth Saturday in April through October 31.

~~((252))~~ (254) **Uncle John Creek (Mason County)**:

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

~~((253))~~ (255) **Union River (Mason County)**:

(a) From the mouth to the lower bridge on Old Belfair Highway:

(i) Open the Saturday before Memorial Day through August 15.

(ii) Selective gear rules.

(iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(b) From the lower bridge on Old Belfair Highway upstream:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((254))~~ (256) **Vogler Lake (Skagit County)**:

(a) Fly fishing only.

(b) Release all fish.

~~((255))~~ (257) **Wagners Lake (Snohomish County)**: Open the fourth Saturday in April through October 31.

~~((256))~~ (258) **Walker Lake (King County)**: Open the fourth Saturday in April through October 31.

~~((257))~~ (259) **Wallace River (Snohomish County)**:

(a) From the mouth to 363rd Ave. S.E./Reece Rd:

(i) Open from the Saturday before Memorial Day through February 15.

(ii) From the Saturday before Memorial Day through November 30:

(A) Anti-snagging rules.

(B) Night closure.

(iii) From November 1 through February 15: It is unlawful to fish from any floating device.

(iv) Game fish: Statewide minimum length/daily limit, except:

(A) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(B) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.

(v) Salmon, in years ending in odd numbers:

(A) Open September 16 through ~~((November))~~ September 30.

(B) Daily limit ~~((3 salmon; release Chinook and chum))~~ 1 coho salmon only.

(vi) Salmon, in years ending in even numbers:

(A) Open September 16 through November 15.

(B) Daily limit 2 salmon; release Chinook and chum.

(b) From 363rd Avenue S.E./Reece Road to 200 feet ~~((upstream))~~ downstream of the water intake of the salmon hatchery:

(i) Open September 16 through February 15.

(ii) From September 16 through November 30:

(A) Anti-snagging rules.

(B) Night closure.

- (iii) November 1 through February 15: It is unlawful to fish from any floating device.
- (iv) Game fish: Statewide minimum length/daily limit, except:
  - (A) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
  - (B) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
- (v) Salmon, in years ending in odd numbers:
  - (A) Open September 16 through (~~November~~) September 30.
  - (B) (~~Limit 3 salmon plus 1 additional pink; release Chinook and chum.~~) Daily limit 1 coho salmon only.
- (vi) Salmon, in years ending in even numbers:
  - (A) Open September 16 through November 15.
  - (B) Daily limit 2 salmon, release Chinook and chum.
  - (c) From 200 feet downstream of the water intake to 200 feet upstream of the water intake: Closed waters when the hatchery weir is in operation.
  - (d) From 200 feet upstream of the water intake of the salmon hatchery to Wallace Falls:
    - (i) Open November 1 through January 31.
    - (ii) It is unlawful to fish from any floating device.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Cutthroat trout and wild rainbow trout: Minimum length 14 inches.
      - (B) Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.
- (~~(258)~~) **(260) Wapato Lake (Pierce County):** Open to juvenile anglers, senior anglers and anglers with a disability who possess a designated harvester companion card.
- (~~(259)~~) **(261) Washington Lake, including that portion of the Sammamish River from the 68th Avenue N.E. Bridge downstream and Mercer slough (King County):**
  - (a) Open year-round.
  - (b) Chumming is permissible.
  - (c) From July 1 through November 30: Game fish: Statewide minimum length/daily limit, except: Kokanee: Daily limit 5; minimum length 8 inches; maximum length 18 inches.
  - (d) December 1 through the last day in February:
    - (i) Game fish: Statewide minimum length/daily limit, except: Release steelhead and rainbow trout over 20 inches in length.
    - (ii) Kokanee: Daily limit 5; minimum length 8 inches; maximum length 18 inches.
  - (e) March 1 through June 30: Game fish: Statewide minimum length/daily limit, except:
    - (i) Kokanee: Daily limit 5; minimum length 8 inches; maximum length 18 inches.
    - (ii) Trout: Minimum length 12 inches.
    - (iii) Release steelhead and rainbow trout over 20 inches in length.
  - (f) Salmon:
    - (i) Open September 16 through October 31 north of Highway 520 Bridge and east of Montlake Bridge.
    - (ii) Daily limit 4 coho only.
- (~~(260)~~) **(262) Washington Lake, Ship Canal (King County) (waters east of a north-south line 400 feet west of the fish ladder at the Chittenden Locks and west of a north-south line at the eastern ends of the concrete abutments east of the Montlake Bridge):**

(a) East of the Fremont Bridge: Chumming is permissible.

(b) From the west boundary to a north-south line 400 feet east of the eastern end of the northern wing wall of Chittenden Locks: Closed waters.

(c) From 400 feet east of the eastern end of the northern wing wall of Chittenden Locks to the east boundary:

(i) From July 1 through November 30: Game fish: Statewide minimum length/daily limit, except: Kokanee: Daily limit 5; minimum length 8 inches; maximum length 18 inches.

(ii) December 1 through the last day in February:

(A) Game fish: Statewide minimum length/daily limit, except: Release steelhead and rainbow trout over 20 inches in length.

(B) Kokanee: Daily limit 5; minimum length 8 inches; maximum length 18 inches.

(iii) March 1 through June 30:

(A) Game fish: Statewide minimum length/daily limit, except: Kokanee: Daily limit 5; minimum length 8 inches; maximum length 18 inches.

(B) Trout: Minimum length 12 inches.

(C) Release steelhead and rainbow trout over 20 inches in length.

~~((261))~~ **(263) Whatcom Creek (Whatcom County):**

(a) From the mouth to the markers below the footbridge below Dupont Street in Bellingham:

(i) Open the Saturday before Memorial Day through December 31.

(ii) August 1 through December 31:

(A) Anti-snagging rules.

(B) Night closure.

(iii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(iv) Salmon:

(A) Open August 1 through December 31.

~~((A))~~ (B) Daily limit ~~((6; anglers may retain up to 2 adult salmon.~~

~~(B) Release wild coho))~~ 2.

(C) Anglers fishing lawfully within 50 yards of the Bellingham Technical College Hatchery Collection Tube and on the hatchery side of the creek that hook and land chum salmon may remove those chum salmon from the water and immediately place them unharmed into the Hatchery Collection Tube.

(b) From the markers below the footbridge below Dupont Street in Bellingham to the footbridge below Dupont Street: Closed waters.

(c) From the footbridge below Dupont Street in Bellingham to the stone bridge at Whatcom Falls Park:

(i) From August 1 through October 31:

(A) Anti-snagging rules.

(B) Night closure.

(ii) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

(d) From the stone bridge at Whatcom Falls Park upstream to Lake Whatcom: Open the fourth Saturday in April through October 31 for juvenile anglers only.

(e) Game fish: Statewide minimum length/daily limit, except: Trout: No minimum length.

~~((262))~~ **(264) Whatcom, Lake (Whatcom County):**

(a) The waters between the Electric Avenue Bridge and the outlet dam: Closed waters.

(b) Open the fourth Saturday in April through October 31.

(c) Game fish: Statewide minimum length/daily limit, except: Release all cutthroat trout.

~~((263))~~ (265) **Whatcom, Lake, tributaries (Whatcom County):**  
Closed waters.

~~((264))~~ (266) **White (Stuck) River (Pierce County):**

(a) From October 1 through October 31:

(i) Night closure.

(ii) Selective gear rules.

(b) Release all fish.

(c) Cascade Water Alliance canal, including the screen bypass channel above the screen at Dingle Basin: Closed waters.

(d) Whitefish: Open December 1 through the last day in February: Whitefish gear rules.

~~((265))~~ (267) **White Chuck River (Snohomish County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Dolly Varden/Bull trout: Minimum length of 20 inches as part of the trout limit.

~~((266))~~ (268) **Wildcat Creek (Kitsap County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((267))~~ (269) **Wildcat Lake (Kitsap County):** Open the fourth Saturday in April through October 31.

~~((268))~~ (270) **Wilderness Lake (King County):**

(a) Open the fourth Saturday in April through October 31.

(b) Landlocked salmon rules.

~~((269))~~ (271) **Wilkeson Creek (Pierce County) (South Prairie Creek tributary):** From the mouth to the confluence with Gale Creek: Closed waters.

~~((270))~~ (272) **Woodard Creek (Thurston County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((271))~~ (273) **Wood Lake (Mason County):** Open the fourth Saturday in April through October 31.

~~((272))~~ (274) **Woodland Creek (Thurston County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Cutthroat trout and wild rainbow trout: Minimum length 14 inches.

~~((273))~~ (275) **Wooten Lake (Mason County):** Open the fourth Saturday in April through October 31.

**WAC 220-312-030 Freshwater exceptions to statewide rules—Southwest.** (1) **Abernathy Creek and tributaries (Cowlitz County):**

(a) From 200 feet above Abernathy Falls to posted markers 500 feet downstream from the Abernathy Fish Technology Center: Closed waters.

(b) Open the Saturday before Memorial Day through August 31 and November 1 through March 15.

(c) Selective gear rules, except: Use of barbed hooks is allowed.

(d) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(e) Salmon:

(i) Open November 1 through December 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(2) **Beaver Creek (Wahkiakum County):** Closed waters.

(3) **Blue Creek (Lewis County), from the mouth to Spencer Road:**

(a) From posted sign above rearing pond outlet to Spencer Road: Closed waters.

(b) Anti-snagging rule.

(c) Night closure.

(d) ~~((Barbless hooks are required for salmon and steelhead.~~

~~(e)))~~ Open Saturday before Memorial Day through April 15.

~~((f)))~~ (e) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 5; minimum length 8 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

~~((g)))~~ (f) Salmon:

(i) Open August 1 through December 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(4) **Blue Lake (Cowlitz County):**

(a) Open the fourth Saturday in April through October 31.

(b) Selective gear rules.

(c) Release all fish.

(5) **Blue Lake Creek (Lewis County):** Selective gear rules.

(6) **Butter Creek (Lewis County):** Selective gear rules.

(7) **Canyon Creek (Clark County):** Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 5.

(8) **Carlisle Lake (Lewis County):**

(a) Open the fourth Saturday in April through October 31.

(b) Landlocked salmon rules.

(9) **Cedar Creek and tributaries (tributary of N.F. Lewis) (Clark County):**

(a) From the Grist Mill Bridge to 100 feet upstream of the falls: Closed waters.

(b) Selective gear rules, except: Use of barbed hooks is allowed.

(c) Open the Saturday before Memorial Day through August 31 and November 1 through March 15.

(d) Game fish: Statewide minimum length/daily limit, except:

- (i) Trout: Daily limit 2; minimum length 14 inches.
- (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (e) Salmon:
  - (i) Open November 1 through December 31.
  - (ii) Limit 6; up to 2 may be adults.
  - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (10) **Chinook River (Pacific County)**: From the Highway 101 Bridge upstream:
  - (a) Selective gear rules.
  - (b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (11) **Cispus River (Lewis County)**: From the mouth to the falls, not including the North Fork:
  - (a) Open year-round, except closed to all angling within posted "Closed Waters" signs around the adult fish release site.
  - (b) ~~((Barbless hooks are required for salmon and steelhead.~~
  - ~~(e-))~~ Game fish: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.
  - ~~((d))~~ (c) Salmon:
    - (i) Limit 6; up to 2 may be adults.
    - (ii) Only hatchery Chinook and hatchery coho may be retained.
- (12) **Cispus River, North Fork (Lewis County)**: Selective gear rules.
- (13) **Coal Creek (Cowlitz County)**:
  - (a) From the mouth to 400 feet below the falls:
    - (i) Open the Saturday before Memorial Day through August 31 and November 1 through March 15.
    - (ii) Selective gear rules, except: Use of barbed hooks is allowed.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Trout: Daily limit 2; minimum length 14 inches.
      - (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
    - (iv) Salmon:
      - (A) Open November 1 through December 31.
      - (B) Limit 6; up to 2 may be adults.
      - (C) Only hatchery Chinook and hatchery coho may be retained.
  - (b) From 400 feet below the falls to the falls: Closed waters.
- (14) **Coldwater Lake (Cowlitz County)**:
  - (a) The Coldwater Lake inlet and outlet streams: Closed waters.
  - (b) Selective gear rules.
  - (c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 1; minimum length 18 inches.
- (15) **Cougar Creek (tributary to Yale Reservoir) (Cowlitz County)**:
  - (a) Selective gear rules.
  - (b) Open the Saturday before Memorial Day through August 31.
- (16) **Coweeman River and tributaries (Cowlitz County)**:
  - (a) ~~((Barbless hooks are required for salmon and steelhead.~~
  - ~~(b-))~~ Open the Saturday before Memorial Day through August 31 and November 1 through March 15.
  - ~~((e))~~ (b) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - ~~((d))~~ (c) Salmon:

- (i) Open November 1 through December 31.
- (ii) Limit 6; up to 2 may be adults.
- (iii) Only hatchery Chinook and hatchery coho may be retained.

**(17) Cowlitz Falls Reservoir (Lake Scanewa) (Lewis County):**

(a) The upstream boundary of the reservoir in the Cowlitz arm is at the posted Lewis County PUD sign on Peters Road.

(b) The upstream boundary of the reservoir in the Cispus arm is at the posted markers at the Lewis County PUD kayak launch, approximately 1.5 miles upstream from the confluence of the Cowlitz and Cispus arm.

~~(c) ((Barbless hooks are required for salmon and steelhead.~~

~~(d))~~ Game fish: Statewide minimum length/daily limit, except:  
Trout:

- (i) Release wild rainbow and wild cutthroat trout.
- (ii) Daily limit 10; minimum length 8 inches.

~~((e))~~ (d) Salmon:

- (i) Daily limit 6; minimum length 12 inches.
- (ii) Up to 2 may be adults.
- (iii) Only hatchery Chinook and hatchery coho may be retained.

**(18) Cowlitz River (Lewis County):**

(a) From the boundary markers at the mouth to ~~((Mayfield Dam:~~

~~(i) From 400 feet or posted markers below Cowlitz Salmon Hatchery barrier dam to boundary markers near the Cowlitz Salmon Hatchery water intake approximately 1,700 feet upstream of the Cowlitz Salmon Hatchery barrier dam: Closed waters.~~

~~(ii) From 400 feet below the Mayfield powerhouse upstream to Mayfield Dam: Closed waters.~~

~~(iii))~~ Lexington Bridge:

(i) July 1 through October 31: Night closure for salmon and steelhead fishing.

(ii) Game fish:

(A) Trout:

(I) Open the Saturday before Memorial Day through March 31: Daily limit 5; minimum length 8 inches. Release wild rainbow and wild cutthroat trout.

(II) Open April 1 through the Friday before Memorial Day: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.

(B) Steelhead:

(I) Open July 1 through July 31: Daily limit 1 hatchery steelhead; minimum length 20 inches.

(II) Open August 1 through August 31: Catch and release.

(III) Open September 1 through October 31: Daily limit 1 hatchery steelhead; minimum length 20 inches.

(IV) Open November 1 through June 30: Daily limit 3 hatchery steelhead, minimum length 20 inches.

(C) Other game fish: Open year-round, statewide minimum size/daily limit.

(iii) Salmon:

(A) Open January 1 through July 31.

(I) Limit 6; up to 2 may be adults.

(II) Only hatchery Chinook and hatchery coho may be retained.

(B) Open August 1 through December 31.

(I) Limit 6; up to 4 may be adults.

(II) Only hatchery coho may be retained.

(b) From the Lexington Bridge to the mouth of Mill Creek:

(i) Within a 100 foot radius of the new Cowlitz Trout Hatchery outfall structure, except open to anglers with disabilities who permanently use a wheelchair and possess a designated harvester companion card within posted markers when adjacent waters are open: Closed waters.

~~((iv) Within a 100 foot radius of the Cowlitz Salmon Hatchery wheelchair ramp (within the posted fishing boundary) except for anglers with disabilities **and** who have a designated harvester companion card: Closed waters.~~

~~(v) Barbless hooks are required for salmon, steelhead, and cutthroat trout August 1 through May 31.~~

~~(vi)) (ii) Game fish:~~

~~(A) Trout:~~

~~(I) Open the Saturday before Memorial Day through March 31: Daily limit 5; minimum length 8 inches. Release wild rainbow and wild cutthroat trout.~~

~~(II) Open April 1 through the Friday before Memorial Day: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.~~

~~(B) Steelhead: Open year-round; daily limit 3 hatchery steelhead; minimum length 20 inches.~~

~~(C) Other game fish: Open year-round, statewide minimum size/daily limit.~~

~~(iii) Salmon:~~

~~(A) Open January 1 through July 31.~~

~~(I) Limit 6; up to 2 may be adults.~~

~~(II) Only hatchery Chinook and hatchery coho may be retained.~~

~~(B) Open August 1 through December 31.~~

~~(I) Limit 6; up to 4 may be adults.~~

~~(II) Only hatchery coho may be retained.~~

~~(c) From the mouth of Mill Creek to ((the Cowlitz Salmon Hatchery barrier dam:~~

~~(A)) 1,700 feet upstream of the Cowlitz Salmon Hatchery barrier dam:~~

~~(i) From 400 feet or posted markers below Cowlitz Salmon Hatchery barrier dam to boundary markers near the Cowlitz Salmon Hatchery water intake approximately 1,700 feet upstream of the Cowlitz Salmon Hatchery barrier dam: Closed waters.~~

~~(ii) Within a 100 foot radius of the Cowlitz Salmon Hatchery wheelchair ramp (within the posted fishing boundary) except for anglers with disabilities **and** who have a designated harvester companion card: Closed waters.~~

~~(iii) It is unlawful to fish from a floating device.~~

~~((B)) (iv) April 1 through November 30:~~

~~((I)) (A) Anti-snagging rule.~~

~~((II)) (B) Night closure.~~

~~((C)) (v) May 1 through June 15: It is unlawful to fish from the south side of the river.~~

~~((vii) Open year-round.~~

~~(viii) Game fish: Statewide minimum length/daily limit, except:~~

~~(A) Trout.~~

~~(I) Release wild rainbow and wild cutthroat trout.~~

~~(II) The Saturday before Memorial Day through March 31: Daily limit 5; minimum length 8 inches.~~

~~(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.~~

~~(ix) Salmon:~~

~~(A) Open January 1 through July 31.~~

~~(I) Limit 6; up to 2 may be adults.~~

~~(II) Only hatchery Chinook and hatchery coho may be retained.~~

~~(B) Open August 1 through December 31.~~

~~(I) Limit 6; up to 3 may be adults, of which 2 may be Chinook.~~

~~(II) Only hatchery Chinook and hatchery coho may be retained.~~

~~(b-)) (vi) Game fish:~~

~~(A) Trout:~~

~~(I) Open the Saturday before Memorial Day through March 31: Daily limit 5; minimum length 8 inches. Release wild rainbow and wild cutthroat trout.~~

~~(II) Open April 1 through the Friday before Memorial Day: State-wide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.~~

~~(B) Steelhead: Open year-round; daily limit 3 hatchery steelhead; minimum length 20 inches.~~

~~(C) Other game fish: Open year-round, statewide minimum size/daily limit.~~

~~(vii) Salmon:~~

~~(A) Open January 1 through July 31.~~

~~(I) Limit 6; up to 2 may be adults.~~

~~(II) Only hatchery Chinook and hatchery coho may be retained.~~

~~(B) Open August 1 through December 31.~~

~~(I) Limit 6; up to 4 may be adults.~~

~~(II) Only hatchery coho may be retained.~~

~~(d) From 1,700 feet upstream of the Cowlitz Salmon Hatchery barrier dam to Mayfield Dam.~~

~~(i) From 400 feet below the Mayfield powerhouse upstream to Mayfield Dam: Closed waters.~~

~~(ii) Game fish:~~

~~(A) Trout:~~

~~(I) Open the Saturday before Memorial Day through March 31: Daily limit 5; minimum length 8 inches. Release wild rainbow and wild cutthroat trout.~~

~~(II) Open April 1 through the Friday before Memorial Day: State-wide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.~~

~~(B) Steelhead: Open year-round; daily limit 3 hatchery steelhead; minimum length 20 inches.~~

~~(C) Other game fish: Open year-round, statewide minimum size/daily limit.~~

~~(iii) Salmon:~~

~~(A) Open January 1 through July 31.~~

~~(I) Limit 6; up to 2 may be adults.~~

~~(II) Only hatchery Chinook and hatchery coho may be retained.~~

~~(B) Open August 1 through December 31.~~

~~(I) Limit 6; up to 4 may be adults.~~

~~(II) Only hatchery coho may be retained.~~

~~(e) From the posted PUD sign on Peters Road to the Forest Road 1270 (old Jody's Bridge):~~

~~(i) ((Barbless hooks are required for salmon and steelhead.~~

~~(-ii-)) Closed to all angling within posted "Closed Waters" signs around the adult fish release site.~~

~~((-iii-)) (ii) September 1 through October 31: Anti-snagging rule and night closure.~~

~~((-iv-)) (iii) Open year-round.~~

((v)) (iv) Game fish: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.

((vi)) (v) Salmon:

(A) Open year-round.

(B) Limit 6; up to 2 may be adults.

(C) Only hatchery Chinook and hatchery coho may be retained.

((e)) (f) From Forest Road 1270 (old Jody's Bridge) upstream and tributaries.

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.

(19) **Deep River (Wahkiakum County):**

(a) Open year-round.

(b) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(c) Salmon:

(i) Limit 6; up to 2 may be adults.

(ii) Only hatchery Chinook and hatchery coho may be retained.

(20) **Delameter Creek (Cowlitz County):**

(a) From 400 feet below to 200 feet above the temporary weir while the weir is installed in the creek: Closed waters.

(b) Selective gear rules, except: Use of barbed hooks is allowed.

(c) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(d) Salmon:

(i) Open August 1 through October 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(21) **Drano Lake (Skamania County):** In the waters downstream of markers on point of land downstream and across from Little White Salmon National Fish Hatchery and upstream of the Highway 14 Bridge:

(a) ~~((Barbless hooks are required for salmon and steelhead January 1 through March 15 and July 1 through September 30.~~

~~(b))~~ Closed on Wednesdays beginning the second Wednesday in April through June 30.

((e)) (b) Closed from 6 p.m. Tuesdays through 6 p.m. Wednesdays during the month of October.

((d)) (c) March 16 through ~~((June 30))~~ October 31: Night closure.

((e)) (d) August 1 through December 31: Anti-snagging rule.

((f)) (e) May 1 through June 30 and October 1 through December 31:

(i) Each angler aboard a vessel may deploy salmon/steelhead angling gear until the salmon/steelhead limit for all anglers aboard has been achieved.

(ii) Two-pole fishing for salmon/steelhead is permissible so long as the angler possesses a two-pole endorsement.

((g)) (f) April 16 through June 30: The area west of a line projected from the easternmost pillar of the Highway 14 Bridge to a posted marker on the north shore is open only to bank fishing.

((h)) (g) Open year-round.

(i) Game fish: Statewide minimum length/daily limit, except:

(A) Bass: No limit and no size restriction.

- (B) Channel catfish: No limit.
  - (C) Walleye: No limit and no size restriction.
  - (D) Release trout.
  - (E) Steelhead: From January 1 through March 15; daily limit 2 hatchery steelhead; minimum length 20 inches.
    - (ii) Salmon and steelhead: Open March 16 through December 31:
      - (A) March 16 through (~~July 31~~) June 30: Daily limit 2 hatchery steelhead or 2 hatchery Chinook, or one of each. Release all other salmon.
      - (B) July 1 through July 31: Daily limit 2 hatchery Chinook or 1 hatchery Chinook and 1 hatchery steelhead. Release all other salmon.
      - (C) August 1 through (~~December 31~~) September 30: Daily limit 6; no more than (~~3 adult salmonids, of which no more than one hatchery steelhead may be retained~~) 1 adult salmon. Release all steelhead.
      - (D) October 1 through December 31: Daily limit 6; of which only one may be an adult salmon or hatchery steelhead.
- (22) Elochoman River (Wahkiakum County):**
- (a) (~~From 200 feet above the department of fish and wildlife temporary weir downstream to Foster (Risk) Road Bridge while the weir is installed in the river: Closed waters.~~)
    - (b) ~~September 1 through October 31: From 200 feet above the temporary weir upstream to the Elochoman Hatchery Bridge: Closed waters.~~
    - (c) ~~From the mouth to (~~West Fork~~) Foster (Risk) Road Bridge:
 
      - (i) (~~Open the Saturday before Memorial Day through March 15.~~)
      - (ii) August 1 through October 31:
        - (A) Anti-snagging rule(~~(7)~~).
        - (B) Night closure(~~(7 and)~~).
        - (C) Stationary gear restriction.
        - (~~(iii) Barbless hooks are required for salmon and steelhead August 1 through the Friday before Memorial Day.~~)
        - (iv) (ii) Open the Saturday before Memorial Day through March 15.
          - (iii) Game fish: Statewide minimum length/daily limit, except:
            - (A) Trout: Daily limit 2; minimum length 14 inches.
            - (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
          - (v) Salmon: Open the Saturday before Memorial Day through March 15.
            - (A) Daily limit 6; up to 2 may be adults.
            - (B) Only hatchery Chinook (~~and hatchery coho~~) may be retained.~~
  - (d) ~~From the mouth to the Elochoman Hatchery Bridge:~~ (v) Salmon and steelhead: (~~(i)~~) Open April 16 through the Friday before Memorial Day(~~(-~~)
    - (ii) ~~Minimum length 12 inches:~~ Daily limit 6; of which 3 may be adult hatchery Chinook or hatchery steelhead. Release wild Chinook.
      - (b) From Foster (Risk) Road Bridge upstream to 200 feet above the WDFW temporary weir:
        - (i) From Foster (Risk) Road Bridge to 200 feet above the WDFW temporary weir while the weir is installed in the river: Closed waters.
        - (ii) August 1 through October 31:
          - (A) Anti-snagging rule.
          - (B) Night closure.
          - (C) Stationary gear restriction.
        - (iii) Open the Saturday before Memorial Day through March 15.
        - (iv) Game fish: Statewide minimum length/daily limit, except:
          - (A) Trout: Daily limit 2; minimum length 14 inches.

(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(v) Salmon: Open the Saturday before Memorial Day through March 15.

(A) Daily limit 6; up to 2 may be adults.

(B) Only hatchery Chinook may be retained.

(vi) Salmon and steelhead: Open April 16 through the Friday before Memorial Day: Daily limit 6; of which 3 may be adult hatchery Chinook or hatchery steelhead. Release wild Chinook.

(c) From 200 feet above the WDFW temporary weir to the Elochoman Hatchery Bridge:

(i) September 1 through October 31: From 200 feet above the temporary weir upstream to the Elochoman Hatchery Bridge: Release all salmon.

(ii) August 1 through October 31:

(A) Anti-snagging rule.

(B) Night closure.

(C) Stationary gear restriction.

(iii) Open the Saturday before Memorial Day through March 15.

(iv) Game fish: Statewide minimum length/daily limit, except:

(A) Trout: Daily limit 2; minimum length 14 inches.

(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(v) Salmon: Open the Saturday before Memorial Day through March 15.

(A) Daily limit 6; up to 2 may be adults.

(B) Only hatchery Chinook may be retained.

(vi) Salmon and steelhead:

(A) Open April 16 through the Friday before Memorial Day.

(B) Daily limit 6; of which 3 may be adult hatchery Chinook or hatchery steelhead. Release wild Chinook.

(d) Elochoman Hatchery Bridge to West Fork:

(i) August 1 through October 31:

(A) Anti-snagging rule.

(B) Night closure.

(C) Stationary gear restriction.

(ii) Open the Saturday before Memorial Day through March 15.

(iii) Game fish: Statewide minimum length/daily limit, except:

(A) Trout: Daily limit 2; minimum length 14 inches.

(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(iv) Salmon: Open the Saturday before Memorial Day through March 15.

(A) Daily limit 6; up to 2 may be adults.

(B) Only hatchery Chinook may be retained.

(e) From West Fork upstream:

(i) Game fish: Statewide minimum length/daily limit, except: Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(ii) Salmon:

(A) Daily limit 6; up to 2 may be adults.

(B) Only hatchery Chinook ((and hatchery coho)) may be retained.

(23) **Franz Lake (Skamania County):** Closed waters.

(24) **Germany Creek (Cowlitz County) and all tributaries:**

(a) Open the Saturday before Memorial Day through August 31 and November 1 through March 15.

(b) Selective gear rules, except: Use of barbed hooks is allowed.

(c) Game fish: Statewide minimum length/daily limit, except:

- (i) Trout: Daily limit 2; minimum length 14 inches.
- (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (d) Salmon:
  - (i) Open November 1 through December 31.
  - (ii) Limit 6; up to 2 may be adults.
  - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (25) **Grays River (Wahkiakum County):** From the mouth to South Fork:
  - (a) ~~((Barbless hooks are required for salmon and steelhead.~~
  - ~~(b) Open the Saturday before Memorial Day through March 15, except closed from Highway 4 Bridge to mouth of South Fork from October 16 through November 30.~~
  - ~~(c) From 400 feet below to 200 feet above the temporary weir while the weir is installed in the river: Closed waters.~~
  - ~~(d-)) From mouth to Barr Road Bridge:~~
    - (i) August 1 through November 15:
      - (A) Anti-snagging rule((7)).
      - (B) Night closure ((and)).
      - (C) Stationary gear restriction((÷
    - ~~(i) From the mouth to the Highway 4 Bridge August 1 through November 15)).~~
      - (ii) January 1 through March 15: Selective gear rules.
      - (iii) Open Saturday before Memorial Day through March 15.
      - (iv) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (v) Salmon:
      - (A) Open Saturday before Memorial Day through July 31:
        - (I) Daily limit 6; up to 2 may be adults.
        - (II) Only hatchery Chinook may be retained.
      - (B) Open August 1 through December 31:
        - (I) Daily limit 6; up to 2 may be adults.
        - (II) Only hatchery Chinook may be retained.
        - (III) All Chinook must be adipose and/or ventral fin clipped to be retained.
    - (b) From Barr Road Bridge to Highway 4 Bridge:
      - (i) August 1 through November 15:
        - (A) Anti-snagging rule.
        - (B) Night closure.
        - (C) Stationary gear restriction.
      - (ii) January 1 through March 15: Selective gear rules.
      - (iii) Open Saturday before Memorial Day through March 15.
      - (iv) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
    - (v) Salmon:
      - (A) Open Saturday before Memorial Day through July 31:
        - (I) Daily limit 6; up to 2 may be adults.
        - (II) Only hatchery Chinook may be retained.
      - (B) Open August 1 through December 31:
        - (I) Daily limit 6; up to 2 may be adults.
        - (II) Only hatchery Chinook may be retained.
        - (III) All Chinook must be adipose and/or ventral fin clipped to be retained.
    - (c) From the Highway 4 Bridge to the mouth of South Fork ((August 1 through October 15-
    - ~~(e) Selective gear rules January 1 through March 15.~~

- ~~(f) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.~~
- ~~(g) Salmon:~~
- ~~(i) From the mouth to the Highway 4 Bridge: Open the Saturday before Memorial Day through December 31.~~
  - ~~(A) Limit 6; up to 2 may be adults.~~
  - ~~(B) Only hatchery Chinook or hatchery coho may be retained.~~
  - ~~(C) Effective August 1, all Chinook must be adipose and/or ventral fin clipped to be kept.~~
- ~~(ii) From the Highway 4 Bridge to the South Fork: Open the Saturday before Memorial Day through October 15 and December 1 through December 31.~~
  - ~~(A) Limit 6; up to 2 may be adults.~~
  - ~~(B) Only hatchery Chinook or hatchery coho may be retained.~~
  - ~~(C) Effective August 1, all Chinook must be adipose and/or ventral fin clipped to be kept.~~
- ~~(h)):~~
- (i) From 400 feet below to 200 feet above the temporary weir while the weir is installed in the river: Closed waters.
- (ii) August 1 through October 15:
  - (A) Anti-snagging rule.
  - (B) Night closure.
  - (C) Stationary gear restriction.
- (iii) January 1 through March 15: Selective gear rules.
- (iv) Open Saturday before Memorial Day through October 15 and December 1 through March 15.
- (v) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
- (vi) Salmon:
  - (A) Open Saturday before Memorial Day through July 31:
    - (I) Daily limit 6; up to 2 may be adults.
    - (II) Only hatchery Chinook may be retained.
  - (B) Open August 1 through October 15:
    - (I) Daily limit 6; up to 2 may be adults.
    - (II) Only hatchery Chinook may be retained.
    - (III) All Chinook must be adipose and/or ventral fin clipped to be retained.
  - (C) Open December 1 through December 31:
    - (I) Daily limit 6; up to 2 may be adults.
    - (II) Only hatchery Chinook may be retained.
    - (III) All Chinook must be adipose and/or ventral fin clipped to be retained.
- (d) From South Fork upstream:
  - (i) Selective gear rules, except: Use of barbed hooks is allowed.
  - (ii) Open the Saturday before Memorial Day through March 15.
  - (iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.
  - (iv) Salmon:
    - (A) Open the Saturday before Memorial Day through December 31.
    - (B) Daily limit 6; minimum length 12 inches. Up to 2 adults may be retained.
    - (C) Only hatchery Chinook ((and hatchery coho)) may be retained. All Chinook must be adipose and/or ventral fin clipped to be retained.
- (26) Grays River tributaries (unless otherwise listed) (Wahkiakum County):**
  - (a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(27) Grays River, East Fork (Wahkiakum County):**

(a) Selective gear rules, except: Use of barbed hooks is allowed.

(b) Open the Saturday before Memorial Day through October 31.

(c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(d) Salmon:

(i) Open the Saturday before Memorial Day through October 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(iv) Effective August 1, all Chinook must be adipose and/or ventral fin clipped to be kept.

**(28) Grays River, East Fork tributaries (unless otherwise listed) (Wahkiakum County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(29) Grays River, South Fork (Wahkiakum County):**

(a) Selective gear rules, except: Use of barbed hooks is allowed.

(b) Open the Saturday before Memorial Day through October 31.

(c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(d) Salmon:

(i) Open the Saturday before Memorial Day through October 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained; all Chinook must be adipose and/or ventral fin clipped to be kept.

**(30) Grays River, South Fork tributaries (unless otherwise listed) (Wahkiakum County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(31) Grays River, West Fork (Wahkiakum County):**

(a) ~~((Barbless hooks are required for salmon and steelhead.~~

~~(b))~~ Open the Saturday before Memorial Day through December 31.

~~((c))~~ (b) August 1 through November 15: Anti-snagging rule, night closure and stationary gear restriction.

~~((d))~~ (c) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

~~((e))~~ (d) Salmon: Open the Saturday before Memorial Day through December 31.

(i) Daily limit 6; up to 2 may be adults.

(ii) Only hatchery Chinook ~~((or hatchery coho))~~ may be retained; all Chinook must be adipose and/or ventral fin clipped to be kept.

**(32) Grays River, West Fork tributaries (unless otherwise listed) (Wahkiakum County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(33) Green River (Cowlitz County):**

(a) From the mouth to Miner's Creek:

(i) From 400 feet above and 400 feet below the salmon hatchery rack (or from the posted signs above and below the salmon hatchery rack) when the rack is installed in the river: Closed waters.

(ii) From 400 feet below to 400 feet above the water intake at the upper end of the hatchery grounds from September 1 through November 30: Closed waters.

(iii) September 1 through October 31: Anti-snagging rule applies and night closure in effect from the mouth to 400 feet below the salmon hatchery rack.

~~(iv) ((Barbless hooks required for salmon and steelhead August 1 through November 30.~~

~~(v))~~ Selective gear rules from the Saturday before Memorial Day through July 31 and December 1 through March 15.

~~((vi))~~ (v) Open the Saturday before Memorial Day through March 15. Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

~~((vii))~~ (vi) Salmon:

(A) Open August 1 through November 30.

(B) Daily limit 6; up to ((2)) 4 may be adults.

(C) Only hatchery coho may be retained.

(b) From Miner's Creek upstream:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(34) **Green River tributaries (Cowlitz County):**

(a) Selective gear rules.

(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(35) **Grizzly Lake (Skamania County):** Closed waters.

(36) **Hamilton Creek (Skamania County):**

(a) Tributaries downstream from the Highway 14 Bridge: Closed waters.

(b) Selective gear rules, except: Use of barbed hooks is allowed.

(c) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(d) Salmon:

(i) Open August 1 through October 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(37) **Horsethief Lake (Klickitat County):** Open the fourth Saturday in April through October 31.

(38) **Indian Heaven Wilderness Lakes (Skamania County):** Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 8 inches.

(39) **Johnson Creek (Lewis County) (Cowlitz River tributary):** Selective gear rules.

(40) **Kalama River (Cowlitz County):**

(a) From ~~((boundary markers at the mouth upstream to 1,000 feet below the fishway at the upper salmon hatchery:~~

~~(i) From Modrow Bridge downstream to the markers 1,500 feet below the temporary rack when the rack is installed below Modrow Bridge: Closed waters.~~

~~(ii) From the railroad bridge below I-5 to the intake at the lower salmon hatchery: From April 1 through October 31:~~

~~(A) Night closure.~~

~~(B) Anti-snagging rule.~~

~~(iii) It is unlawful to fish from a floating device equipped with an internal combustion motor upstream of Modrow Bridge.~~

~~(iv) Barbless hooks are required for salmon and steelhead.~~  
~~(v) Open September 1 through October 31 for fly fishing only from the natural gas pipeline crossing to the posted deadline at the intake to the lower salmon hatchery.~~  
~~(vi) Open year-round.~~  
~~(vii) Game fish: Statewide minimum length/daily limit, except:~~  
~~(A) Trout: Daily limit 2; minimum length 14 inches.~~  
~~(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.~~  
~~(viii) Salmon:~~  
~~(A) Open January 1 through July 31:~~  
~~(I) Daily limit 6; up to 2 may be adults.~~  
~~(II) Only hatchery Chinook and hatchery coho may be retained.~~  
~~(B) Open August 1 through December 31:~~  
~~(I) Daily limit 6; up to 3 may be adults, of which only 2 may be coho.~~  
~~(II) Only hatchery Chinook and hatchery coho may be retained.~~  
~~(b)) the mouth to the railroad bridge below Interstate 5:~~  
~~(i) July 1 through October 31: Night closure.~~  
~~(ii) Game fish: Open year-round.~~  
~~(A) Statewide minimum length/daily limit, except:~~  
~~(B) Trout: Daily limit 2; minimum length 14 inches.~~  
~~(iii) Steelhead:~~  
~~(A) July 1 through July 31: Daily limit 1 hatchery steelhead; minimum length 20 inches.~~  
~~(B) August 1 through August 31: Release all steelhead.~~  
~~(C) September 1 through October 31: Daily limit 1 hatchery steelhead; minimum length 20 inches.~~  
~~(iv) Salmon:~~  
~~(A) Open January 1 through July 31:~~  
~~(I) Daily limit 6; up to 2 may be adults.~~  
~~(II) Only hatchery Chinook and hatchery coho may be retained.~~  
~~(B) Open August 1 through December 31:~~  
~~(I) Daily limit 6; up to 3 may be adults.~~  
~~(II) Only hatchery Chinook and hatchery coho may be retained.~~  
~~(b) From the railroad bridge below Interstate 5 to Modrow Bridge:~~  
~~(i) From Modrow Bridge downstream to the markers approximately 1,000 feet below the temporary rack when the rack is installed below Modrow Bridge: Closed waters.~~  
~~(ii) April 1 through October 31:~~  
~~(A) Night closure.~~  
~~(B) Anti-snagging rule.~~  
~~(iii) Game fish: Open year-round.~~  
~~(A) Statewide minimum length/daily limit, except:~~  
~~(B) Trout: Daily limit 2; minimum length 14 inches.~~  
~~(C) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.~~  
~~(iv) Salmon:~~  
~~(A) Open January 1 through July 31:~~  
~~(I) Daily limit 6; up to 2 may be adults.~~  
~~(II) Only hatchery Chinook and hatchery coho may be retained.~~  
~~(B) Open August 1 through December 31:~~  
~~(I) Daily limit 6; up to 3 may be adults.~~  
~~(II) Only hatchery Chinook and hatchery coho may be retained.~~  
~~(c) From the Modrow Bridge to the natural gas pipeline crossing:~~  
~~(i) It is unlawful to fish from a floating device equipped with an internal combustion motor.~~

- (ii) April 1 through October 31:
  - (A) Night closure.
  - (B) Anti-snagging rule.
- (iii) Game fish: Open year-round.
  - (A) Statewide minimum length/daily limit, except:
  - (B) Trout: Daily limit 2; minimum length 14 inches.
  - (C) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (iv) Salmon:
  - (A) Open January 1 through July 31:
    - (I) Daily limit 6; up to 2 may be adults.
    - (II) Only hatchery Chinook and hatchery coho may be retained.
  - (B) Open August 1 through December 31:
    - (I) Daily limit 6; up to 3 may be adults.
    - (II) Only hatchery Chinook and hatchery coho may be retained.
- (d) From the natural gas pipeline crossing to the deadline at the intake to the lower salmon hatchery:
  - (i) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (ii) April 1 through October 31:
    - (A) Night closure.
    - (B) Anti-snagging rule.
  - (iii) Open September 1 through October 31 for fly fishing only, except: Use of barbed hooks is allowed.
  - (iv) Game fish: Open year-round.
    - (A) Statewide minimum length/daily limit, except:
    - (B) Trout: Daily limit 2; minimum length 14 inches.
    - (C) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - (v) Salmon:
    - (A) Open January 1 through July 31:
      - (I) Daily limit 6; up to 2 may be adults.
      - (II) Only hatchery Chinook and hatchery coho may be retained.
    - (B) Open August 1 through December 31:
      - (I) Daily limit 6; up to 3 may be adults.
      - (II) Only hatchery Chinook and hatchery coho may be retained.
- (e) From intake of the lower salmon hatchery to 1,000 feet below fishway at the upper salmon hatchery:
  - (i) It is unlawful to fish from a floating device equipped with an internal combustion motor.
  - (ii) Game fish: Open year-round.
    - (A) Statewide minimum length/daily limit, except:
    - (B) Trout: Daily limit 2; minimum length 14 inches.
    - (C) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - (iii) Salmon:
    - (A) Open January 1 through July 31:
      - (I) Daily limit 6; up to 2 may be adults.
      - (II) Only hatchery Chinook and hatchery coho may be retained.
    - (B) Open August 1 through December 31:
      - (I) Daily limit 6; up to 3 may be adults.
      - (II) Only hatchery Chinook and hatchery coho may be retained.
- (f) From 1,000 feet below to 1,000 feet above the fishway at upper salmon hatchery: Closed waters.
- ((-e)) (g) From 1,000 feet above the fishway at the upper salmon hatchery, upstream to Summers Creek:
  - (i) Open year-round.

- (ii) Selective gear rules, except: Use of barbed hooks is allowed.
- (iii) Game fish: Statewide minimum length/daily limit, except:
  - (A) Trout: Daily limit 2; minimum length 14 inches.
  - (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- ~~((d))~~ (h) From Summers Creek upstream to the intersection of 6000 and 6420 roads: ~~((i) Barbless hooks are required for salmon and steelhead.~~
  - ~~((ii))~~ Open year-round:
  - ~~((A))~~ (i) Fly fishing only, except: Use of barbed hooks is allowed.
  - ~~((B))~~ (ii) Game fish: Statewide minimum length/daily limit, except:
    - ~~((I))~~ (A) Trout: Daily limit 2; minimum length 14 inches.
    - ~~((II))~~ (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - ~~((e))~~ (i) From the intersection of 6000 and 6420 roads to the 6600 road bridge immediately downstream of Jacks Creek:
    - (i) Selective gear rules, except: Use of barbed hooks is allowed.
    - (ii) Open the Saturday before Memorial Day through November 30.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Trout: Daily limit 2; minimum length 14 inches.
      - (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - ~~((f))~~ (j) From the 6600 road bridge immediately downstream of Jacks Creek to Kalama Falls and tributaries: Closed waters.

**(41) Klickitat River (Klickitat County):**

  - (a) From the mouth (Burlington Northern Railroad Bridge) to Fisher Hill Bridge:
    - (i) April 1 through the Friday before Memorial Day:
      - (A) Anti-snagging rule.
      - (B) Night closure.
    - (ii) July 1 through July 31: Night closure.
    - (iii) August 1 through January 31:
      - (A) Anti-snagging rule.
      - (B) Night closure.
    - (iv) Game fish:
      - (A) Open Saturday before Memorial Day through January 31.
      - (B) Statewide minimum length/daily limit, except:
      - (C) Trout: Daily limit 2; minimum length 14 inches.
      - (v) Steelhead:
        - (A) Open Saturday before Memorial Day through June 30: Daily limit 3 hatchery steelhead, minimum length 20 inches.
        - (B) Open July 1 through July 31: Daily limit 1 hatchery steelhead, minimum length 20 inches.
        - (C) August 1 through August 31: Catch and release.
        - (D) Open September 1 through October 31: Daily limit 1 hatchery steelhead, minimum length 20 inches.
        - (E) Open November 1 through January 31: Daily limit 3 hatchery steelhead, minimum length 20 inches.
      - (vi) Salmon:
        - (A) Open Saturday before Memorial Day through July 31: Daily limit 6; no more than 2 adults may be retained. Release wild Chinook.
        - (B) Open August 1 through January 31: Daily limit 6; no more than 3 adults may be retained.
      - (vii) Salmon and steelhead:

(A) Open April 1 to the Friday before Memorial Day (~~(open only)~~) for salmon and steelhead on Mondays, Wednesdays, and Saturdays only:

- ~~((A) Anti-snagging rule and night closure.~~
- ~~(B)) (I) Daily limit 2; no more than 2 hatchery steelhead, or 2 salmon, or one of each, may be retained.~~
- ~~((C)) (II) Release wild Chinook.~~
- ~~((D) Barbless hooks required for salmon and steelhead.~~
- ~~(ii) Open Saturday before Memorial Day through July 31.~~
- ~~(A) Game fish: Statewide minimum length/daily limit, except:~~
  - ~~(I) Trout: Daily limit 2; minimum length 14 inches.~~
  - ~~(II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.~~
- ~~(B) Salmon: Daily limit 6; no more than 2 adults may be retained: Release wild Chinook.~~
- ~~(C) Barbless hooks required for salmon and steelhead.~~
- ~~(iii) Open August 1 through January 31.~~
- ~~(A) Anti-snagging rule and night closure.~~
- ~~(B) Game fish: Statewide minimum length/daily limit, except:~~
  - ~~(I) Trout: Daily limit 2; minimum length 14 inches.~~
  - ~~(II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.~~
- ~~(C) Salmon: Daily limit 6; no more than 3 adults may be retained.))~~

(b) From Fisher Hill Bridge to the boundary markers above Klickitat Salmon Hatchery, the following waters are closed: From Fishery Hill Bridge to 400 feet above #5 fishway, tributaries except Bird, Blockhouse, Bowman, Spring, Outlet creeks and the Little Klickitat River, and the waters from the boundary markers above Klickitat Salmon Hatchery to the boundary markers below the hatchery.

(c) From 400 feet above #5 fishway to the boundary markers below Klickitat Salmon Hatchery:

- ~~(i) ((Barbless hooks are required for salmon and steelhead.~~
- ~~(ii)) Open the Saturday before Memorial Day through November 30:~~
  - (A) Game fish: Statewide minimum length/daily limit, except:
  - (B) Trout: Daily limit 2; minimum length 14 inches.
  - (C) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- ~~((iii)) (ii) Whitefish:~~
  - (A) Open December 1 through the last day in February for Whitefish only.
  - (B) Whitefish gear rules.
- ~~((iv)) (iii) Salmon:~~
  - (A) Saturday before Memorial Day through July 31:
  - (I) Limit 6 fish; no more than 2 adults may be retained.
  - (II) Release wild Chinook.
  - (B) August 1 through November 30: Limit 6 fish; no more than 3 may be adults, of which only 2 may be coho.

(d) From the boundary markers above Klickitat Salmon Hatchery to the Yakama Indian Reservation boundary:

- (i) Game fish open the Saturday before Memorial Day through November 30.
- (ii) Game fish: Statewide minimum length/daily limit, except:
  - (A) Trout: Daily limit 2; minimum length 14 inches.
  - (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (iii) Whitefish:

- (A) Open December 1 through the last day in February for whitefish only.
- (B) Whitefish gear rules.
- ~~((iv) Barbless hooks are required for salmon and steelhead.))~~
- (42) Lacamas Creek (Clark County):**
  - (a) From the mouth to the footbridge at the lower falls:
    - (i) Open the Saturday before Memorial Day through August 31.
    - (ii) Selective gear rules, except: Use of barbed hooks is allowed.
    - (iii) Game fish: Statewide minimum length/daily limit, except:
      - (A) Trout: Daily limit 2; minimum length 14 inches.
      - (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
    - (b) From the footbridge at the lower falls upstream: It is permissible to fish up to the base of Lacamas Lake Dam.
- (43) Lacamas Creek, tributary of Cowlitz River (Lewis County):**
  - (a) Selective gear rules, except: Use of barbed hooks is allowed.
  - (b) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
    - (c) Salmon:
      - (i) Open August 1 through October 31.
      - (ii) Daily limit 6; up to 2 may be adults.
      - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (44) Lewis River (Clark County):**
  - (a) ~~((Mouth to the mouth of Colvin Creek:
 
    - ~~(i) Open year-round.~~
    - ~~(ii))~~ From the mouth to the mouth of the East Fork Lewis River:
      - (i) July 1 through October 31: Night closure for salmon and steelhead fishing.
      - (ii) Game fish:
        - (A) Open year-round.
        - (B) Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.
        - (iii) Steelhead:
          - (A) July 1 through July 31: Daily limit 1 hatchery steelhead; minimum length 20 inches.
          - (B) August 1 through August 31: Release all steelhead.
          - (C) September 1 through October 31: Daily limit 1 hatchery steelhead; minimum length 20 inches.
          - (D) November 1 through June 30: Daily limit 3 steelhead; minimum length 20 inches.
        - (iv) Salmon:
          - (A) Open January 1 through April 30: Daily limit 6 hatchery Chinook; only one may be an adult.
          - (B) Open August 1 through September 30:
            - (I) Limit 6; up to 4 may be adults, of which 2 may be Chinook.
            - (II) Only hatchery Chinook and hatchery coho may be retained.
          - (C) Open October 1 through December 31:
            - (I) Limit 6; up to 4 may be adults, of which 2 may be Chinook.
            - (II) Only Chinook and hatchery coho may be retained.
        - (b) From the mouth of the East Fork Lewis River to Johnson Creek.
          - (i) Game fish:
            - (A) Open year-round.
            - (B) Statewide minimum length/daily limit, except:
              - (I) Trout: Daily limit 2; minimum length 14 inches.~~

(II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(ii) Salmon:

(A) Open January 1 through April 30: Daily limit 6 hatchery Chinook; only one may be an adult.

(B) Open August 1 through September 30:

(I) Limit 6; up to 4 may be adults, of which 2 may be Chinook.

(II) Only hatchery Chinook and hatchery coho may be retained.

(C) Open October 1 through December 31:

(I) Limit 6; up to 4 may be adults, of which 2 may be Chinook.

(II) Only Chinook and hatchery coho may be retained.

(c) From Johnson Creek (~~upstream~~) to Colvin Creek:

(i) May 1 through May 31: Closed waters.

~~((iii))~~ (ii) Those waters shoreward of the cable buoy and cork-line at the mouth of the Lewis River Salmon Hatchery fish ladder: Closed waters.

~~((iv))~~ Barbless hooks are required for salmon and steelhead.

~~(v))~~ (iii) June 1 through November 30 and April 1 through April 30: Anti-snagging rule and night closure (~~from Johnson Creek to Colvin Creek June 1 through November 30 and April 1 through April 30.~~

~~(vi) It is unlawful to fish from a floating device from October 1 through November 30 from the mouth of Johnson Creek upstream to the mouth of Colvin Creek).~~

~~((vii))~~ (iv) Game fish:

(A) Open June 1 through April 30.

(B) Statewide minimum length/daily limit, except:

~~((A))~~ (I) Trout: Daily limit 2; minimum length 14 inches.

~~((B))~~ (II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

~~((viii))~~ (v) Salmon:

(A) Open January 1 through April 30: Daily limit 6 hatchery Chinook; only one may be an adult.

(B) Open August 1 through September 30:

(I) Daily limit 6; up to ((2)) 4 may be adults, of which 2 may be Chinook.

(II) Only hatchery Chinook and hatchery coho may be retained.

(C) Open October 1 through December 31:

(I) Limit 6; up to ((2)) 4 may be adults, of which only ((one)) 2 may be ((a)) Chinook.

(II) Only Chinook and hatchery coho may be retained.

~~((b))~~ (d) From the mouth of Colvin Creek to the overhead power-lines at Merwin Dam:

~~(i) (~~Barbless hooks are required for salmon and steelhead.~~~~

~~(ii))~~ Open June 1 through October 31 and December 16 through April 30.

~~((iii))~~ (ii) Anti-snagging rule and night closure April 1 through April 30 and June 1 through October 31.

~~((iv))~~ (iii) Game fish: Statewide minimum length/daily limit, except:

(A) Trout: Daily limit 2; minimum length 14 inches.

(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

~~((v))~~ (iv) Salmon:

(A) (~~Open August 1 through October 31 and December 16 through April 30.~~

~~(B))~~ January 1 through April 30: Limit 6 hatchery Chinook; only one may be an adult.

~~((C))~~ (B) August 1 through September 30:

(I) Daily limit 6; up to ~~((2))~~ 4 may be adults; of which 2 may be Chinook.

(II) Only hatchery Chinook and hatchery coho may be retained.

~~((D))~~ (C) October 1 through October 31 and December 16 through December 31:

(I) Daily limit 6; up to ~~((2))~~ 4 may be adults, of which ~~((one))~~ 2 may be ~~((a))~~ Chinook.

(II) Only Chinook and hatchery coho may be retained.

~~((e))~~ (e) From the overhead powerlines below Merwin Dam to Merwin Dam: Closed waters.

~~((d))~~ (f) From the cable crossing 1,300 feet below Yale Dam to Yale Dam: Closed waters.

~~((e))~~ (g) From the old Lewis River streambed between Swift No. 1 Powerhouse and Swift No. 2 Powerhouse: Closed waters.

~~((f))~~ (h) Lewis River Power Canal:

(i) Open the fourth Saturday in April through October 31.

(ii) It is unlawful to fish from a floating device.

(iii) Game fish: Statewide minimum length/daily limit, except:

(iv) Trout: Daily limit 5; no minimum length.

~~((g))~~ (i) From Eagle Cliff Bridge to and including Muddy River, including tributaries:

(i) Selective gear rules.

(ii) Open the Saturday before Memorial Day through July 15.

(iii) Game fish: Statewide minimum length/daily limit, except:

~~((iv))~~ (A) Trout: ~~((A))~~ Daily limit 10; minimum length 8 inches.

(B) Release wild trout.

~~((h))~~ (j) From above Muddy River to the lower falls and tributaries:

(i) Selective gear rules.

(ii) Release all fish.

**(45) Lewis River, East Fork (Clark/Skamania counties):**

(a) From the posted markers at the lower end of Big Eddy to 100 feet above Lucia Falls: Closed waters.

(b) From 400 feet below to 400 feet above Moulton Falls: Closed waters.

(c) From 400 feet below Horseshoe Falls upstream, including tributaries above Horseshoe Falls: Closed waters.

(d) From the mouth to 400 feet below Horseshoe Falls:

(i) Open the Saturday before Memorial Day through July 15 and September 16 through March 15.

(ii) Selective gear rules, except: Use of barbed hooks is allowed.

(iii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

(iv) Salmon:

(A) Open September 16 through December 31.

(B) Limit 6; up to 2 may be adults.

(C) Only hatchery Chinook and hatchery coho may be retained.

(e) Tributaries from the mouth to 400 feet below Horseshoe Falls:

(i) Selective gear rules.

(ii) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(46) Little Klickitat River (Klickitat County):** Within Goldendale city limits:

(a) Open the fourth Saturday in April through the Friday before Memorial Day to juvenile anglers, senior anglers, and anglers with a disability who possess a designated harvester companion card only.

(b) Open the Saturday before Memorial Day through October 31 to all anglers.

(c) Game fish: Statewide minimum length/daily limit, except: Trout: Limit 5; no minimum length.

(47) **Little Washougal River (Clark County):**

(a) Selective gear rules, except: Use of barbed hooks is allowed.

(b) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(c) Salmon:

(i) Open August 1 through October 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(48) **Little White Salmon River (Skamania County):**

(a) From the orange fishing boundary markers at Drano Lake upstream to the intake near the north boundary of the Little White Salmon National Fish Hatchery: Closed waters.

(b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 5; minimum length 8 inches.

(49) **Love Lake (Clark County):** Closed waters.

(50) **Mayfield Lake (Reservoir) (Lewis County):**

(a) Open from the Mayfield Dam to Onion Rock Bridge.

(b) From the Tacoma Power safety signs at Onion Rock Bridge to Mossyrock Dam: Closed waters.

(c) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 10; minimum length 8 inches.

(ii) Release wild rainbow trout and wild cutthroat trout.

(d) Salmon:

(i) Open September 1 through December 31:

(ii) Daily limit 6; minimum length 12 inches.

(iii) No more than 2 may be adults.

(iv) Only hatchery Chinook and hatchery coho may be retained.

(51) **Merrill Lake (Cowlitz County):**

(a) Fly fishing only.

(b) It is unlawful to fish from a floating device equipped with an internal combustion motor.

(c) Release all fish.

(52) **Merwin Lake (Reservoir) (Clark/Cowlitz counties):** Landlocked salmon rules.

(53) **Mill Creek (Cowlitz County):**

(a) Open the Saturday before Memorial Day through August 31 and November 1 through March 15.

(b) Selective gear rules, except: Use of barbed hooks is allowed.

(c) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(d) Salmon:

(i) Open November 1 through December 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(54) **Mill Creek (Lewis County):** From the mouth to the hatchery road crossing culvert.

- (a) Selective gear rules, except: Use of barbed hooks is allowed.
- (b) Open the Saturday before Memorial Day through October 31 and December 1 through December 31.
- (c) Anti-snagging rule from December 1 through December 31.
- (d) Night closure from December 1 through December 31.
- (e) Game fish: Statewide minimum length/daily limit, except:
  - (i) Trout: Daily limit 2; minimum length 14 inches.
  - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (f) Salmon:
  - (i) Open August 1 through October 31 and December 1 through December 31.
  - (ii) Limit 6; up to 2 may be adults.
  - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (55) **Mineral Lake (Lewis County):** Open the fourth Saturday in April through September 30.
- (56) **Olequa Creek (Lewis/Cowlitz counties):**
  - (a) From 400 feet below to 200 feet above the temporary weir while the weir is installed in the creek: Closed waters.
  - (b) Selective gear rules, except: Use of barbed hooks is allowed.
  - (c) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - (d) Salmon:
    - (i) Open August 1 through October 31.
    - (ii) Limit 6; up to 2 may be adults.
    - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (57) **Ostrander Creek (Cowlitz County):**
  - (a) Selective gear rules, except: Use of barbed hooks is allowed.
  - (b) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (58) **Outlet Creek (Silver Lake) (Cowlitz County):**
  - (a) From the Saturday before Memorial Day through November 30.
  - (b) Selective gear rules, except: Use of barbed hooks is allowed.
  - (c) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - (d) Salmon:
    - (i) Open August 1 through November 30.
    - (ii) Limit 6; up to 2 may be adults.
    - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (59) **Rainey Creek (Lewis County):**
  - (a) From mouth to Highway 12.
  - (b) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 5; minimum length 8 inches.
    - (ii) Release wild rainbow and cutthroat trout.
- (60) **Riffe Lake (Reservoir) (Lewis County):**
  - (a) Open from Mossyrock Dam to Cowlitz Falls Dam:
  - (b) From Cowlitz Falls Dam downstream to the Lewis County PUD safety signs located approximately 800 feet below the dam: Closed waters.
  - (c) It is permissible to fish up to the base of Swofford Pond Dam.

(d) Landlocked salmon rules.

(61) **Rock Creek (Klickitat County):**

(a) From Army Corps of Engineers Park upstream to the source: Closed waters.

(b) Open year-round from the mouth to the Army Corps of Engineers Park. Limits, size restrictions, and gear restrictions are the same as those in the adjacent portion of the Columbia River.

(62) **Rock Creek (Skamania County):** From the mouth to the falls at approximately river mile one:

(a) (~~(b)~~) ~~((Barbless hooks are required for salmon and steelhead.~~

~~(b))~~) Open the Saturday before Memorial Day through March 15.

(~~(e))~~) (b) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(~~(d))~~) (c) Salmon:

(i) Open August 1 through December 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(63) **Rowland Lake, North (Klickitat County):** Open the fourth Saturday in April through March 31.

(64) **Salmon Creek (Clark County):** From the mouth to 182nd Avenue Bridge:

(a) (~~(b)~~) ~~((Barbless hooks are required for salmon and steelhead.~~

~~(b))~~) Open the Saturday before Memorial Day through March 15.

(~~(e))~~) (b) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(~~(d))~~) (c) Salmon:

(i) Open August 1 through December 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook and hatchery coho may be retained.

(65) **Salmon Creek (Lewis County):**

(a) Selective gear rules, except: Use of barbed hooks is allowed.

(b) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

(ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(c) Salmon:

(i) Open August 1 through October 31.

(ii) Limit 6; up to 2 may be adults.

(iii) Only hatchery Chinook or hatchery coho may be retained.

(66) **Silver Lake (Cowlitz County):** Game fish: Statewide minimum length/daily limit, except:

(a) Crappie: Daily limit 10; minimum length 9 inches.

(b) Grass carp: No daily limit; no minimum length.

(67) **Silver Creek (tributary to Cowlitz River) (Lewis County):** From the mouth to USFS Road 4778. Selective gear rules.

(68) **Skamokawa Creek (Wahkiakum County):**

(a) Selective gear rules, except: Use of barbed hooks is allowed.

(b) Open the Saturday before Memorial Day through August 31 and November 1 through March 15.

(c) Game fish: Statewide minimum length/daily limit, except:

(i) Trout: Daily limit 2; minimum length 14 inches.

- (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
- (d) Salmon:
  - (i) Open November 1 through December 31.
  - (ii) Limit 6; up to 2 may be adults.
  - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (69) **Skate Creek (tributary to Cowlitz River) (Lewis County):** Selective gear rules.
- (70) **Spearfish Lake (Klickitat County):** Open the fourth Saturday in April through March 31.
- (71) **Spirit Lake (Skamania County):** Closed waters.
- (72) **Spring Creek (Klickitat County):** From Hill Road upstream to the Goldendale Hatchery: Game fish: Statewide minimum length/daily limit, except: Trout: Limit 5; minimum length 8 inches.
- (73) **Stillwater Creek (Lewis County):**
  - (a) Selective gear rules, except: Use of barbed hooks is allowed.
  - (b) Game fish: Statewide minimum length/daily limit, except:
    - (i) Trout: Daily limit 2; minimum length 14 inches.
    - (ii) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.
  - (c) Salmon:
    - (i) Open August 1 through October 31.
    - (ii) Limit 6; up to 2 may be adults.
    - (iii) Only hatchery Chinook and hatchery coho may be retained.
- (74) **Swift Reservoir (Skamania County):**
  - (a) From dam to posted markers approximately 3/8 mile below Eagle Cliff Bridge:
    - (i) Open the Saturday before Memorial Day through November 30.
    - (ii) Game fish: Statewide minimum length/daily limit, except: Trout:
      - (A) Daily limit 10; minimum length 8 inches.
      - (B) Release wild trout.
      - (C) Release all steelhead.
    - (iii) Salmon:
      - (A) Open the Saturday before Memorial Day through November 30.
      - (B) ~~((Landlocked salmon rules.~~
      - ~~(C))~~ Salmon count toward trout daily limit.
      - (C) Minimum length 8 inches.
      - (D) Maximum length 15 inches.
      - (E) No catch record card required.
  - (b) From the posted markers approximately 3/8 mile below Eagle Cliff Bridge to the bridge:
    - (i) Selective gear rules, except: Use of barbed hooks is allowed.
    - (ii) Open the Saturday before Memorial Day through July 15.
    - (iii) Game fish: Statewide minimum length/daily limit, except: Trout:
      - (A) Daily limit 10; minimum length 8 inches.
      - (B) Release wild trout.
      - (C) Release all steelhead.
    - (iv) Salmon:
      - (A) Open the Saturday before Memorial Day through July 15.
      - (B) Landlocked salmon rules.
      - (C) Maximum length 15 inches.
- (75) **Tilton River (Lewis County):** From the mouth to the West Fork:
  - (a) Within posted "Closed Waters": Signs around the adult fish release site: Closed waters.

~~(b)~~ (~~Barbless hooks are required for salmon and steelhead.~~  
~~(e)~~) Anti-snagging rule from September 1 through October 31.  
~~((d))~~ (c) Night closure from September 1 through October 31.  
~~((e))~~ (d) Game fish: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout. Open year-round.  
~~((f))~~ (e) Salmon:  
(i) Open year-round.  
(ii) Limit 6; up to 2 may be adults.  
(iii) Only (~~hatchery Chinook and~~) hatchery coho may be retained.

**(76) Tilton River, East, North, South and West Forks (Lewis County):** Selective gear rules.

**(77) Toutle River (Cowlitz County):** From the mouth to the forks:  
(a) (~~Barbless hooks required for salmon and steelhead.~~  
~~(b)~~) Open the Saturday before Memorial Day through March 15.  
~~((e))~~ (b) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.  
~~((d))~~ (c) Salmon open August 1 through November 30:  
(i) Daily limit 6; up to ((2)) 4 may be adults(~~(, of which one may be a hatchery Chinook)~~).(ii) Only (~~hatchery Chinook and~~) hatchery coho may be retained.

**(78) Toutle River tributaries (unless otherwise listed) (Cowlitz County):**

(a) Selective gear rules.  
(b) Game fish: Statewide minimum length/daily limit, except: Release wild trout.

**(79) Toutle River, North Fork (Cowlitz County):**  
(a) From the mouth to the posted deadline below the fish collection facility:  
(i) Open the Saturday before Memorial Day through March 15.  
(ii) September 1 through October 15: Anti-snagging rule and night closure on the North Fork from the confluence with the South Fork to the mouth of Green River.

(iii) (~~Barbless hooks are required for salmon and steelhead.~~  
~~(iv)~~) Selective gear rules the Saturday before Memorial Day through July 31 and December 1 through March 15.  
~~((v))~~ (iv) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

~~((vi))~~ (v) Salmon open August 1 through Nov 30:  
(A) Daily limit 6; up to 2 may be adults, of which one may be a Chinook.

(B) Only hatchery Chinook and hatchery coho may be retained.  
(b) From the posted deadline downstream of the fish collection facility upstream and tributaries: Closed waters.

**(80) Toutle River, North Fork tributaries from the mouth to the posted deadline below the fish collection facility (unless otherwise listed) (Cowlitz County):**

(a) Selective gear rules.  
(b) Game fish: Statewide minimum length/daily limit, except: Release cutthroat trout and wild rainbow trout.

**(81) Toutle River, South Fork (Cowlitz County):**  
(a) From the mouth to 4700 Road Bridge:  
(i) Open April 16 through the Friday before Memorial Day:  
(A) Selective gear rules, except: Use of barbed hooks is allowed.  
(B) Game fish: Statewide minimum length/daily limit, except:  
(I) Release trout.

(II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(ii) Open the Saturday before Memorial Day through November 30:  
~~((A) Barbless hooks are required for salmon and steelhead from August 1 through November 30.~~  
~~(B))~~ Game fish: Statewide minimum length/daily limit, except:  
~~((I))~~ (A) Trout: Daily limit 2; minimum length 14 inches.  
~~((II))~~ (B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(iii) Open December 1 through March 15:  
(A) Selective gear rules, except: Use of barbed hooks is allowed.  
(B) Game fish: Statewide minimum length/daily limit, except:  
(I) Trout: Daily limit 2; minimum length 14 inches.  
(II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.  
(C) Salmon:  
(I) Open August 1 through November 30.  
(II) Limit 6; up to 2 may be adults.  
(III) Only hatchery Chinook and hatchery coho may be retained.  
(b) From 4700 Road Bridge upstream:  
(i) ~~((Barbless hooks are required for salmon and steelhead from August 1 through November 30.~~  
~~(ii))~~ Open the Saturday before Memorial Day through March 15.  
~~((iii))~~ (ii) From December 1 through March 15: Selective gear rules, except: Use of barbed hooks is allowed.  
~~((iv))~~ (iii) Game fish: Statewide minimum length/daily limit, except:  
(A) Trout: Daily limit 2; minimum length 14 inches.  
(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.  
~~((v))~~ (iv) Salmon:  
(A) Open August 1 through November 30.  
(B) Limit 6; up to 2 may be adults.  
(C) Only hatchery Chinook and hatchery coho may be retained.

(82) **Vancouver Lake and all other waters west of Burlington Northern Railroad from the Columbia River drawbridge near Vancouver downstream to Lewis River (Clark County):**  
(a) Vancouver Lake flushing channel and the lake shoreline 400 feet east and west of the channel exit: Closed April 1 through May 31.  
(b) Chumming is permissible.  
(c) Game fish: Statewide minimum length/daily limit, except: Trout: Daily limit 2; minimum length 14 inches.

(83) **Walupt Lake (Lewis County):** All inlet streams: Closed waters.

(84) **Washougal River (Clark County):**  
(a) From the mouth to the ~~((Mount Norway Bridge))~~ boat ramp at the WDFW county line access site:  
(i) From 1,000 feet (or posted markers) below to 200 feet above the temporary weir when the weir is installed in the river: Closed waters.  
(ii) Night closure.  
(iii) ~~((Anti-snagging rule from))~~ July 1 through October 31: Anti-snagging rule.  
(iv) Open April 16 through the Friday before Memorial Day:  
(A) Selective gear rules, except: Use of barbed hooks is allowed.  
(B) Game fish: Statewide minimum length/daily limit, except:  
~~((I))~~ Release all trout.

~~((II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.))~~

(v) Open the Saturday before Memorial Day through March 15.

(A) ~~((Barbless hooks are required for salmon and steelhead. (B) Game fish: Statewide minimum length/daily limit, except: ((I)) (B) Trout: Daily limit 2; minimum length 14 inches. ((II) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.))~~

(vi) Steelhead:

(A) Open Saturday before Memorial Day through July 31: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(B) August 1 through October 15: Catch and release.

(C) October 16 through Friday before Memorial Day: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(vii) Salmon:

(A) Open ~~((August 1))~~ October 16 through December 31.

(B) Limit 6; up to ~~((2))~~ 3 may be adults.

(C) Only ~~((hatchery Chinook and))~~ hatchery coho may be retained.

(b) From the ~~((Mount Norway Bridge))~~ boat ramp at the WDFW county line access site to the bridge at Salmon Falls:

(i) From 1,000 feet (or posted markers) below to 200 feet above the temporary weir when the weir is installed in the river: Closed waters.

(ii) August 1 through October 31:

(A) Anti-snagging rule ((from August 1 through October 31)).

~~((iii))~~ (B) Night closure ((from August 1 through October 31)).

(iii) Game fish:

(A) Open from the Saturday before Memorial Day through March 15.

(B) Game fish: Statewide minimum length/daily limit, except:

(C) Trout: Daily limit 2; minimum length 14 inches.

(D) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

(iv) Salmon:

(A) Open August 1 through December 31.

(B) Limit 6; up to 2 may be adults.

(C) Only ~~((hatchery Chinook and))~~ hatchery coho may be retained.

(c) From the bridge at Salmon Falls upstream and tributaries: Closed waters.

(85) **Washougal River, West (North) Fork (Clark/Skamania counties):**

(a) From the mouth to the water intake at the department hatchery: Closed waters.

(b) From the intake at the department hatchery upstream:

(i) ~~((Barbless hooks are required for salmon and steelhead. (ii) Open the Saturday before Memorial Day through March 15. ((iii))~~ (ii) Game fish: Statewide minimum length/daily limit, except:

(A) Trout: Daily limit 2; minimum length 14 inches.

(B) Steelhead: Daily limit 3 hatchery steelhead; minimum length 20 inches.

~~((iv))~~ (iii) Salmon:

(A) Open August 1 through December 31.

(B) Limit 6; up to 2 may be adults.

(C) Only hatchery Chinook and hatchery coho may be retained.

(86) **White Salmon River (Klickitat/Skamania counties):**

(a) From the mouth (Burlington Northern Railroad Bridge) to the county road bridge below the former location of the powerhouse:

(i) ~~((It is unlawful to fish for salmon and steelhead using anything other than barbless hooks.~~

~~(ii))~~ Open year-round.

~~((iii))~~ (ii) Game fish: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat.

(iii) July 1 through October 31: Night closure for salmon and steelhead.

(iv) August 1 through December 31: Anti-snagging rule.

(v) Salmon and steelhead:

(A) April 1 through ~~((July 31))~~ June 30:

(I) Daily limit 2; no more than 2 salmon, or 2 hatchery steelhead, or one of each, may be retained.

(II) Release wild Chinook.

(B) July 1 through July 31:

(I) Daily limit 2; no more than 2 salmon or 1 salmon and 1 hatchery steelhead.

(II) Release wild Chinook.

(C) August 1 through ~~((March 31))~~ August 31:

(I) Daily limit 6; no more than 2 adult salmon (~~(, or 2 hatchery steelhead, or one of each, may be retained)~~). Release all steelhead.

(II) ~~((Salmon))~~ Only hatchery Chinook and hatchery coho may be retained.

(D) September 1 through October 31:

(I) Daily limit 6; no more than 2 adult salmon, or 1 adult salmon and 1 hatchery steelhead.

(II) Only hatchery Chinook and hatchery coho may be retained.

(E) November 1 through March 31:

(I) Daily limit 6; no more than 2 salmon, or 2 hatchery steelhead, or one of each, may be retained.

(II) Only hatchery Chinook and hatchery coho may be retained.

(b) From the county road bridge below the former location of the powerhouse upstream to Big Brother Falls (river mile 16):

(i) From Big Brother Falls downstream 400 feet: Closed waters.

(ii) Game fish: Statewide minimum length/daily limit, except: Release wild rainbow and wild cutthroat trout.

(iii) Selective gear rules, except: Use of barbed hooks is allowed.

(iv) Salmon and steelhead:

(A) Saturday before Memorial Day through July 31:

(I) Daily limit 2 fish, no more than 2 salmon, or 2 steelhead, or one of each may be retained.

(II) Only hatchery salmon and hatchery steelhead may be retained.

(B) August 1 through October 31:

(I) Daily limit 6; no more than 2 adult salmon, or 2 steelhead, or one of each may be retained.

(II) Only hatchery salmon and hatchery steelhead may be retained.

**(87) Wind River (Skamania County):**

(a) From the mouth to the Highway 14 Bridge:

(i) Open year-round.

(ii) ~~((Barbless hooks are required for salmon and steelhead except from March 16 through June 30.~~

~~(iii))~~ March 16 through June 30: Night closure.

~~((iv))~~ (iii) March 16 through June 30: Each angler aboard a vessel may deploy salmon/steelhead angling gear until the salmon/steelhead limit for all anglers aboard has been achieved.

~~((v))~~ (iv) March 16 through June 30: Two-pole fishing for salmon/steelhead is permissible so long as the angler possesses a two-pole endorsement.

(v) July 1 through October 31: Night closure for salmon and steelhead fishing.

(vi) August 1 through October 31: Anti-snagging rule applies.

(vii) Game fish: Statewide minimum length/daily limit, except:

(A) Release cutthroat trout and wild rainbow trout.

(B) Steelhead: Open November 1 through March 15; daily limit 3 hatchery steelhead; minimum length 20 inches.

(viii) Salmon and steelhead:

~~(A) ((Open March 16 through October 31:~~

~~(B))~~ March 16 through June 30: Daily limit 6; no more than 2 adult salmon, or 2 hatchery steelhead, or one of each, may be retained. ~~((C))~~ Release wild Chinook and wild coho.

(B) July 1 through July 31: Daily limit 6, no more than 2 adult salmon or 1 adult salmon and 1 hatchery steelhead. Release wild Chinook and wild coho.

(C) August 1 through August 31: Daily limit 6, no more than 2 adult salmon. Release all steelhead, wild Chinook and wild coho.

(D) September 1 through October 31: Daily limit 6, no more than 2 adult salmon or 1 adult salmon and 1 hatchery steelhead. Release wild Chinook and wild coho.

(b) From the Highway 14 Bridge to 400 feet below Shipherd Falls:

(i) Open year-round.

~~(ii) ((Barbless hooks are required for salmon and steelhead from July 1 through March 15.~~

~~(iii))~~ March 16 through June 30: Night closure.

(iii) July 1 through October 31: Night closure for salmon and steelhead fishing.

(iv) Anti-snagging rule from May 1 through June 30 and August 1 through October 31.

(v) Game fish: Statewide minimum length/daily limit, except:

(A) Release cutthroat trout and wild rainbow trout.

(B) Steelhead: Open November 1 through March 15; daily limit 3 hatchery steelhead; minimum length 20 inches.

(vi) Salmon and steelhead:

~~(A) Open March 16 through ((October 31.~~

~~(B))~~ June 30: Daily limit 6; no more than 2 salmon, or 2 hatchery steelhead, or one of each, may be retained. ~~((C))~~ Release wild Chinook and wild coho.

(B) July 1 through July 31: Daily limit 6, no more than 2 adult salmon or 1 adult salmon and 1 hatchery steelhead. Release wild Chinook and wild coho.

(C) August 1 through August 31: Daily limit 6, no more than 2 adult salmon. Release all steelhead, wild Chinook and wild coho.

(D) September 1 through October 31: Daily limit 6, no more than 2 adult salmon or 1 adult salmon and 1 hatchery steelhead. Release wild Chinook and wild coho.

(c) From 400 feet below to 100 feet above Shipherd Falls fish ladder: Closed waters.

(d) From 100 feet above Shipherd Falls fish ladder to 400 feet below the Coffey Dam:

(i) Anti-snagging rule.

(ii) Night closure.

(iii) Open September 16 through November 30:

(A) Release all fish.

- (B) Selective gear rules, except: Use of barbed hooks is allowed.
- (iv) Salmon and steelhead:
  - (A) Open May 1 through June 30.
  - (B) Limit 6; no more than 2 adult salmon, or 2 hatchery steelhead, or one of each, may be retained.
  - (e) From 400 feet below the Coffe Dam to 100 feet above the Coffe Dam: Closed waters.
  - (f) From 100 feet above the Coffe Dam to 800 yards downstream from Carson National Fish Hatchery:
    - (i) Anti-snagging rule.
    - (ii) Night closure.
    - (iii) Open September 16 through November 30:
      - (A) Release all fish.
      - (B) Selective gear rules, except: Use of barbed hooks is allowed.
    - (iv) Salmon and steelhead open May 1 through June 30: Limit 6; no more than 2 adult salmon, or 2 hatchery steelhead, or one of each, may be retained.
  - (g) From 800 yards downstream from Carson National Fish Hatchery upstream to Moore Bridge:
    - (i) Open September 16 through November 30.
    - (ii) Release all fish.
    - (iii) Selective gear rules.
  - (h) From Moore Bridge upstream: Closed waters.
- (88) **Wind River tributaries (Skamania County):** Closed waters.
- (89) **Yale Reservoir (Cowlitz County):** Landlocked salmon rules.
- (90) **Yellowjacket Creek (tributary to Cispus River) (Lewis County):** Selective gear rules.

**WAC 220-312-060 Freshwater exceptions to statewide rules—Columbia.** The following exceptions to statewide rules apply to the Columbia River, including impoundments and all connecting sloughs, except Wells Ponds:

(1) **General Columbia River rules:**

(a) In the concurrent waters of the Columbia River between Washington and Oregon, the license of either state is valid when fishing from a vessel.

(i) Anglers must comply with the fishing regulations of the state in which they are fishing.

(ii) This subsection does not allow an angler licensed in Oregon to fish on the Washington shore, or in the sloughs or tributaries in Washington except as otherwise provided by department rule.

(iii) Anglers fishing the Columbia River are restricted to one limit, as defined by the laws of the state in which they are fishing, even if they are licensed by both states.

(b) It is unlawful to possess in the field salmon or steelhead mutilated so that size, species, or fin clip cannot be determined until the angler has reached their automobile or principal means of land transportation and completed his or her daily angling.

(c) Salmon and trout handling rules provided in WAC 220-56-118 apply to the Columbia River, except from February 15 through June 15 in the mainstem Columbia from the Rocky Point/Tongue Point line upstream to the Washington-Oregon border where WAC 220-56-118 applies only to anglers fishing from vessels less than 30 feet in length (as substantiated by Coast Guard documentation or Marine Board registration).

(d) From Buoy 10 to the Washington/Oregon border:

(i) From March 1 through May 15, the mainstem Columbia River is open for retention of adipose fin-clipped steelhead and shad only during days and in areas that are open for the retention of adipose fin-clipped spring Chinook salmon.

(ii) From August 1 through December 31, each angler aboard a vessel may deploy salmon/steelhead angling gear until the salmon/steelhead limit for all anglers aboard has been achieved.

(e) Open year-round unless otherwise provided.

(f) Barbless hooks are required for salmon and steelhead from Buoy 10 line upstream to the Washington/Oregon border.

(g) Year-round night closure for salmon and steelhead fishing from Buoy 10 to Highway 395 Bridge at Pasco.

(2) **Rules by river section:**

(a) **From a true north-south line through Buoy 10, upstream to a line projected from Rocky Point on the Washington bank through Red Buoy 44 to ((the)) red navigation ((light)) marker 2 at Tongue Point on the Oregon bank:**

(i) Fishing from the north jetty is permissible when Marine Area 1 or Buoy 10 areas are open for salmon, and the limit and minimum size restrictions follow the most liberal regulations if both areas are open. Only single point barbless hooks may be used for salmon and steelhead.

(ii) Release all trout ~~((, except anglers may retain hatchery steelhead))~~.

(iii) Salmon and steelhead:

(A) ~~((Open))~~ June 16 through July 31: Closed to fishing for salmon and steelhead from Buoy 10 to the Megler-Astoria Bridge.

(B) Open from June 16 through June ~~((21))~~ 30: ~~((+I))~~ Daily limit ~~((6; no more than 2 hatchery steelhead may be retained))~~ 2. ~~((+II))~~ Release all salmon ~~((other than hatchery jack Chinook))~~.

(C) Open from ~~((June 22))~~ July 1 through July ~~((4))~~ 31: ~~((+I))~~ Daily limit ~~((6; up to 2 adult salmon or 2 hatchery steelhead or one of each may be retained.~~

~~+II))~~ 1. Release all salmon ~~((other than hatchery Chinook.~~

~~(D) From July 5 through July 31:~~

~~(I) Daily limit 6; no more than 2 hatchery steelhead may be retained.~~

~~(II) Release all salmon other than hatchery jack Chinook))~~.

~~((+E))~~ (D) Open August 1 through August ~~((24))~~ 20:

(I) Daily limit ~~((one))~~ 2; no more than 1 Chinook may be retained.

(II) Release all salmon and steelhead except Chinook and hatchery coho.

(III) Chinook minimum length 24 inches.

(IV) Coho minimum length 16 inches.

~~((+F))~~ (E) Open August ~~((25))~~ 21 through ~~((September 30))~~ August 31:

(I) Daily limit 2 ~~((, of which only one hatchery steelhead may be retained))~~.

(II) Release all salmon and steelhead other than hatchery coho.

(III) Coho minimum length 16 inches.

~~((+G))~~ (F) Open ~~((October))~~ September 1 through ~~((December 31))~~ September 30:

(I) Daily limit ~~((6; no more than 2 adult hatchery salmon, or one hatchery adult salmon and one hatchery steelhead, may be retained))~~ 1.

(II) Release all salmon except hatchery coho.

(III) Coho minimum length 16 inches.

(G) Open October 1 through December 31:

(I) Daily limit 6; no more than 2 adult hatchery salmon, or 1 adult hatchery salmon and 1 hatchery steelhead, may be retained.

(II) Release all salmon except hatchery coho.

(H) Open January 1 through March 31:

(I) Daily limit 6; no more than 2 adult hatchery Chinook, or 2 hatchery steelhead, or one of each, may be retained.

(II) Release all salmon except hatchery Chinook.

(iv) Shad open May 16 through March 31.

(v) Forage fish and bottomfish: Marine Area 1 general rules apply; eulachon closed.

(b) From a line ~~((projected from Rocky Point on the Washington bank through Red Buoy 44 to the navigation light at Tongue Point))~~ at Rocky Point on the Washington bank through Red Buoy 44 to red navigation marker 2 at Tongue Point on the Oregon bank upstream to a line at the west end of Puget Island projected from green navigation marker 39 on the Washington bank to green navigation marker 41, then to red navigation marker 42, and terminating at red navigation marker 44A on the Oregon bank:

(i) Trout:

(A) Open May 16 through March 31.

(B) Release all trout except hatchery cutthroat.

(C) Daily limit 2 hatchery cutthroat; minimum length 12 inches.

(D) Barbless hooks required for cutthroat trout.

(ii) Salmon and steelhead:

(A) Open August 1 through August 20:

(I) Daily limit 1.

(II) Release all salmon and steelhead other than Chinook and hatchery coho.

(B) Open August 21 through August 31:

(I) Daily limit 6; no more than 2 adult hatchery salmon.

(II) Release all salmon and steelhead other than hatchery coho.

(C) Open September 1 through December 31:

(I) Daily limit 6; no more than 2 adult hatchery salmon, or 1 adult hatchery salmon and 1 hatchery steelhead may be retained.

(II) Release all salmon except hatchery coho.

(iii) Shad: Open May 16 through March 31.

**(c) From a line at the west end of Puget Island projected from green navigation marker 39 on the Washington bank to green navigation marker 41, then to red navigation marker 42, and terminating at red navigation marker 44A on the Oregon bank, upstream to the I-5 Bridge:**

(i) Trout:

(A) Open May 16 through March 31.

(B) Release all trout except hatchery cutthroat.

(C) Daily limit 2 hatchery cutthroat; minimum length 12 inches.

(D) Barbless hooks are required for cutthroat trout.

(ii) Shad open May 16 through March 31.

(iii) For the purpose of this subsection, "Warrior Rock line" is defined as a line projected from the Warrior Rock Lighthouse, through Red Buoy 4, to the ~~((orange))~~ marker atop the piling dolphin located at the downstream end of Bachelor Island on the Washington shore.

(iv) Downstream of Warrior Rock line:

(A) Salmon and steelhead:

(I) Open May 16 through June ~~((21))~~ 15: Daily limit 6; no more than 2 hatchery steelhead may be retained. Release all salmon except hatchery jack Chinook.

~~(II) ((Open June 22 through July 4: Daily limit 6; no more than 2 hatchery adult salmon or 2 hatchery steelhead or one of each may be retained. Release all salmon except hatchery Chinook.~~

~~(III) Open July 5 through July 31: Daily limit 6; no more than 2 hatchery steelhead may be retained. Release all salmon except hatchery jack Chinook.~~ Open June 16 through June 30: Daily limit 2. Release all salmon.

(III) Open July 1 through July 31: Daily limit 1. Release all salmon.

(IV) Open August 1 through ~~((September 2))~~ August 27: Daily limit 6; no more than ~~((one))~~ 1 adult salmon ~~((, or one hatchery steelhead,))~~ may be retained. Release all salmon and steelhead except Chinook and hatchery coho.

(V) Open ~~((September 3))~~ August 28 through ~~((December 31))~~ August 31: Daily limit 6; no more than 2 ~~((hatchery))~~ adult hatchery salmon ~~((, or one adult salmon and one hatchery steelhead,))~~ may be retained. Release all salmon and steelhead except ~~((Chinook and))~~ hatchery coho.

(VI) Open September 1 through December 31: Daily limit 6; no more than 2 adult hatchery salmon, or 1 adult hatchery salmon and 1 hatchery steelhead may be retained. Release all salmon except hatchery coho.

(VII) Open January 1 through March 31: Daily limit 6; no more than 2 hatchery adult salmon, or 2 hatchery steelhead or one of each may be retained. Release all salmon except hatchery Chinook.

(v) Upstream of Warrior Rock line:

(A) Salmon and steelhead:

~~((A))~~ (I) Open May 16 through June ~~((21))~~ 15: Daily limit 6; no more than 2 hatchery steelhead may be retained. Release all salmon except hatchery jack Chinook.

~~((B))~~ (II) Open June 16 through ~~((July 31))~~ June 30: Daily limit ~~((6; no more than 2 hatchery steelhead may be retained))~~ 2. Release all salmon.

~~((C))~~ (III) Open ~~((June 22))~~ July 1 through July ~~((4))~~ 31: Daily limit ~~((6; no more than 2 hatchery adult salmon or one hatchery adult salmon and one hatchery steelhead may be retained))~~ 1. Release all salmon ~~((except hatchery Chinook))~~.

~~((D))~~ (IV) Open January 1 through March 31: Daily limit 6; no more than 2 hatchery adult salmon, or 2 hatchery steelhead or one of each may be retained. Release all salmon except hatchery Chinook.

~~((E))~~ (V) Open August 1 through ~~((September 14))~~ August 31: Daily limit 6; no more than ~~((one))~~ 1 adult salmon ~~((or one hatchery steelhead))~~ may be retained. Release all salmon and steelhead except Chinook and hatchery coho.

~~((F))~~ (VI) Open September ~~((15))~~ 1 through ~~((December 31))~~ September 8: Daily limit 6; no more than ~~((2 hatchery))~~ 1 adult salmon ~~((or one hatchery adult salmon and one))~~ or 1 hatchery steelhead, may be retained. Release all salmon except Chinook and hatchery coho.

~~((e))~~ (VII) Open September 9 through December 31: Daily limit 6; no more than 2 adult hatchery salmon, or 1 adult hatchery salmon, and 1 hatchery steelhead may be retained. Release all salmon except hatchery coho.

(d) From the I-5 Bridge to Bonneville Dam:

(i) The following waters are closed:

(A) From the upstream line of Bonneville Dam to boundary markers 600 feet below the fish ladder at the powerhouse.

(B) January 1 through April 30 from a line between the upstream end of Sand Island (near Rooster Rock) on the Columbia River, to the boundary marker on the Oregon shore, downstream to a line between the lower end of Sand Island and the boundary marker on the Oregon shore.

(C) Closed to angling from a floating device or by any method except hand-casted gear from shore from Bonneville Dam downstream to a line from the Hamilton Island boat ramp to an Oregon boundary marker on the westernmost tip of Robins Island.

(ii) Camas Slough:

(A) It is permissible for an angler licensed in Oregon or Washington to fish from a floating device.

(B) In the waters of the Columbia River downstream from the mouth of the Washougal River, north of Lady Island, and downstream of the Highway 14 Bridge at the upstream end of Lady Island:

(I) From August 1 through December 31: It is permissible to fish with two poles so long as the angler possesses a valid two-pole endorsement.

(II) From August 1 through December 31: Each angler aboard a vessel may deploy salmon/steelhead angling gear until the salmon/steelhead limit for all anglers aboard has been achieved.

(III) Open for salmon when the adjacent mainstem Columbia or Washougal rivers are open for salmon.

(IV) The limit for salmon is the same as the most liberal regulation of either area, except anglers may only retain hatchery Chinook and hatchery coho; release all other salmon.

(iii) Release all trout.

(iv) Salmon and steelhead:

(A) Open (~~(June)~~) May 16 through June (~~(21)~~) 15: Daily limit 6; no more than 2 hatchery steelhead may be retained. Release all salmon except hatchery jack Chinook.

(B) Open June (~~(22)~~) 16 through (~~(July 4)~~) June 30: Daily limit (~~(6; up to 2 hatchery adult salmon or 2 hatchery steelhead or one of each may be retained)~~) 2. Release all salmon (~~(except hatchery Chinook)~~).

(C) Open July (~~(5)~~) 1 through July 31: Daily limit (~~(6; no more than 2 hatchery steelhead may be retained)~~) 1. Release all salmon (~~(except hatchery jack Chinook)~~).

(D) Open August 1 through (~~(September 14)~~) August 31: Limit 6; no more than (~~(one)~~) 1 adult salmon (~~(or one hatchery steelhead)~~) may be retained. Release all salmon and steelhead except Chinook and hatchery coho.

(E) Open September (~~(15)~~) 1 through (~~(December 31)~~) September 8: Daily limit 6; no more than (~~(2 hatchery)~~) 1 adult salmon (~~(, or one hatchery adult salmon and one)~~) or 1 hatchery steelhead (~~(7)~~) may be retained. Release all salmon except Chinook and hatchery coho.

(F) Open September 9 through December 31: Daily limit 6; no more than 2 hatchery adult salmon, or 1 hatchery adult salmon and 1 hatchery steelhead, may be retained. Release all salmon except hatchery coho.

(G) Closed to fishing for salmon and steelhead November 1 through December 31 from Beacon Rock to Bonneville Dam.

(v) Steelhead: Open January 1 through March 31. Daily limit 2 hatchery steelhead.

(vi) Shad: Open May 16 through March 31.

(~~(d)~~) (e) From Bonneville Dam to The Dalles Dam:

(i) Closed waters:

(A) Within one quarter mile of the USFWS Spring Creek Hatchery Grounds, between posted markers located one quarter mile on either side of the fish ladder entrance.

(B) At The Dalles between the upstream line of The Dalles Dam to the upstream side of the Interstate 197 Bridge, except that bank fishing is permitted up to the downstream navigation lock wall on the Washington shore.

(ii) Release all trout (~~(, except anglers may retain hatchery steelhead)~~).

(iii) Steelhead: Open January 1 through March 31: Daily limit 2 hatchery steelhead.

(iv) Salmon and steelhead:

(A) When open from March 16 through June 15: (~~(I)~~) Bank fishing only from Bonneville Dam to Tower Island powerlines (approximately 6 miles below The Dalles Dam). (~~(II)~~) Only hand-cast lines may be used. It is unlawful to use a floating device to set lines for salmon and steelhead.

(B) When open from August 1 through October 15: Anti-snagging rule applies. When the anti-snagging rule is in effect, only fish hooked inside the mouth may be retained.

(C) Open June 16 through (~~(July 31)~~) June 30:

(I) Daily limit (~~(6; no more than 2 hatchery adult salmon or 2 hatchery steelhead or one of each, may be retained)~~) 2.

(II) Release all salmon (~~(except hatchery Chinook)~~).

(~~(C)~~) (D) Open July 1 through July 31: Daily limit 1. Release all salmon.

(E) Open August 1 through (~~(December)~~) August 31:

~~(I) ((August 1 through October 15: Anti-snagging rule applies. When the anti-snagging rule is in effect, only fish hooked inside the mouth may be retained.~~

~~(II)) Daily limit 6; no more than ((2)) 1 adult salmon ((or one adult salmon and one hatchery steelhead)) may be retained. ((No more than one salmon may be an adult Chinook.~~

~~(III)) (II) Release all salmon and steelhead except Chinook and coho.~~

~~((IV)) (F) Open September 1 through December 31:~~

~~(I) Daily limit 6; no more than 1 adult salmon or 1 hatchery steelhead may be retained.~~

~~(II) Release all salmon except Chinook and coho.~~

~~(III) Release wild coho from Bonneville Dam to Hood River Bridge.~~

~~((iv) Steelhead: Open January 1 through March 31. Daily limit 2 hatchery steelhead.~~

~~(e)) (f) **From The Dalles Dam to ((McNary)) John Day Dam:**~~

~~(i) ((Closed waters:~~

~~(A) At John Day Dam between the upstream line of John Day Dam to markers approximately 3,000 feet downstream, except that bank fishing is permitted up to 400 feet below the fishway entrance on the Washington shore.~~

~~(B)) At John Day Dam between the upstream line of John Day Dam to markers approximately 3,000 feet downstream, except that bank fishing is permitted up to 400 feet below the fishway entrance on the Washington shore.~~

~~(ii) Release all trout.~~

~~(iii) Steelhead: Open January 1 through March 31: Daily limit 2 hatchery steelhead.~~

~~(iv) Salmon and steelhead:~~

~~(A) When open from March 16 through June 15:~~

~~(I) Anglers may possess up to 4 hatchery adult Chinook salmon in fresh form.~~

~~(II) Anglers aboard a boat may only possess one daily limit of salmon in fresh form.~~

~~(B) Open June 16 through June 30: Daily limit 2. Release all salmon.~~

~~(C) Open July 1 through July 31: Daily limit 1. Release all salmon.~~

~~(D) When open August 1 through October 15: Anti-snagging rule applies. When the anti-snagging rule is in effect, only fish hooked inside the mouth may be retained.~~

~~(E) Open August 1 through August 31:~~

~~(I) Daily limit 6; no more than 1 adult salmon or 1 hatchery steelhead may be retained.~~

~~(II) Release all salmon except Chinook and coho.~~

~~(F) Open September 1 through September 30: Daily limit 6; no more than 1 adult salmon may be retained. Release all salmon and steelhead except Chinook and coho.~~

~~(G) Open October 1 through December 31: Daily limit 6; no more than 1 adult salmon or 1 hatchery steelhead may be retained. Release all salmon except for Chinook and coho.~~

~~(g) **From John Day Dam to McNary Dam:**~~

~~(i) At McNary Dam between the upstream line of McNary Dam downstream to a line across the river from the red and white marker on the Oregon shore on a line that intersects the downstream end of the wing-wall of the boat lock near the Washington shore: Closed waters.~~

- (ii) Game fish: Statewide minimum size/daily limit; except release all trout ((except hatchery steelhead)).
- (iii) Steelhead: Open January 1 through March 31: Daily limit 2 hatchery steelhead.
- (iv) Salmon and steelhead:
- (A) When open from March 16 through June 15:
- (I) Anglers may possess up to 4 hatchery adult Chinook salmon in fresh form.
- (II) Anglers aboard a boat may only possess one daily limit of salmon in fresh form.
- (B) Open June 16 through ~~((July 31))~~ June 30: ((-I-)) Daily limit ~~((6; no more than 2 hatchery adult salmon, or 2 hatchery steelhead, or one of each may be retained.~~
- ~~(II))~~ 2. Release all salmon except hatchery Chinook.
- (C) Open July 1 through July 31: Daily limit 1. Release all salmon.
- (D) When open August 1 through October 15: Anti-snagging rule applies. When the anti-snagging rule is in effect, only fish hooked inside the mouth may be retained.
- (E) Open August 1 through ~~((December))~~ August 31: ((-I- August 1 through October 15: Anti-snagging rule applies. When the anti-snagging rule is in effect, only fish hooked inside the mouth may be retained.
- ~~(II))~~ Daily limit 6; no more than ((2)) 1 adult((s)), of which no more than ((2 may be)) 1 adult salmon or ((one adult salmon and one)) 1 hatchery steelhead may be retained. ((No more than one salmon may be an adult Chinook.
- ~~(III))~~ Release all salmon except Chinook and coho.
- ~~((iv) Steelhead: Open January 1 through March 31. Daily limit 2 hatchery steelhead.~~
- ~~(f))~~ (F) Open September 1 through October 31: Daily limit 6; no more than 1 adult salmon may be retained. Release all salmon and steelhead except Chinook and coho.
- (G) Open November 1 through December 31: Daily limit 6; no more than 1 adult salmon or 1 hatchery steelhead may be retained. Release all salmon except Chinook and coho.
- (h) From McNary Dam to Highway 395 Bridge at Pasco:**
- (i) Columbia River rules apply downstream of the Burbank-to-Pasco railroad bridge at Snake River mile 1.5.
- (ii) Other game fish: Statewide minimum size/daily limit except release all trout ((except hatchery steelhead)).
- (iii) Steelhead: Open January 1 through March 31: Daily limit 2 hatchery steelhead.
- (iv) Salmon and steelhead:
- (A) When open from March 16 through June 15 from McNary Dam to the Washington/Oregon border:
- (I) Anglers may possess up to 4 hatchery adult Chinook in fresh form.
- (II) Anglers aboard a boat may only possess one daily limit of salmon in fresh form.
- (III) From August 1 through December 31, each angler aboard a vessel may deploy salmon/steelhead angling gear until the salmon/steelhead limit for all anglers aboard has been achieved.
- (B) Open June 16 through July 31: ~~((-I-))~~ Daily limit ~~((6; no more than 2 hatchery adult salmon, or 2 hatchery steelhead, or one of each may be retained.~~
- ~~(II))~~ 2. Release all salmon except hatchery Chinook.

~~((C))~~ Open ~~((August))~~ July 1 through ~~((December 31))~~ June 30: ~~((I))~~ Daily limit ~~((6; no more than 2 adult salmon or one adult salmon and one hatchery steelhead may be retained. No more than one salmon may be an adult Chinook.~~

~~((II))~~ 1. Release all salmon (except Chinook and coho.

~~((iv))~~ Steelhead: Open January 1 through March 31. Daily limit 2 hatchery steelhead.

~~((g))~~.

(D) Open August 1 through September 30: Daily limit 6; no more than 1 adult salmon or 1 hatchery steelhead may be retained. Release all salmon except Chinook and coho.

(E) Open October 1 through November 30: Daily limit 6; no more than 1 adult salmon may be retained. Release all salmon and steelhead except Chinook and coho.

(F) Open December 1 through December 31: Daily limit 6; no more than 1 adult salmon or 1 hatchery steelhead may be retained. Release all salmon except Chinook and coho.

**(i) From the Highway 395 Bridge at Pasco to the Interstate 182 Bridge:**

(i) Closed waters: Within a 400 foot radius of the Columbia Irrigation District (CID) fish barrier at the mouth of the CID wasteway at Columbia Park.

(ii) For all open species except sturgeon: It is permissible to fish with two poles so long as the angler possesses a two-pole endorsement.

(iii) Year-round night closure for salmon and steelhead fishing.

(iv) Other gamefish: Statewide minimum size/daily limit except: Trout: Open year-round catch and release only.

~~((iv))~~ (v) Steelhead:

(A) Open October 1 through October 31: Daily limit 2 hatchery steelhead with both the adipose and a ventral fin clipped may be retained.

(B) Open November 1 through March 31: Daily limit 2 hatchery steelhead.

~~((v))~~ (vi) Salmon: ((A) Open June 16 through August 15:

~~(I) Limit 4; no more than one adult hatchery Chinook salmon.~~

~~(II) Release sockeye and wild adult Chinook.~~

~~(B))~~ Open August 16 through October 31: Limit 6; no more than 2 adult salmon may be retained. Release all salmon except Chinook and coho.

~~((h))~~ **(j) From the Interstate 182 Bridge to the Old Hanford townsite wooden powerline towers, in Sec. ((30)) 24, T13N, ((R28E)) R27E:**

(i) Closed waters:

(A) The area of the Columbia River between the markers located 100 feet upstream and 100 feet downstream of the Ringold Springs Hatchery Creek, and extending 100 feet towards the middle of the river.

(B) West Branch Esquatzel Coulee Block 1 Irrigation Wasteway Lagoon in the Columbia River, September 1 through November 30: Closed waters.

(C) Year-round night closure for salmon and steelhead fishing.

(ii) Trout and steelhead: Ringold Area Bank Fishery waters, from WDFW markers 1/4 mile downstream from the Ringold wasteway outlet, to WDFW markers 1/2 mile upstream from Spring Creek:

(A) Fishing is allowed only from the bank and only on the hatchery side of the river.

(B) Open April 1 through April 15:

(I) Release all trout.

(II) Daily limit 2 hatchery steelhead.

(C) From April 16 through March 31 adjacent Columbia River rules apply.

(iii) For all open species except sturgeon: It is permissible to fish with two poles so long as the angler possesses a two-pole endorsement.

(iv) Trout: Open year-round catch and release only.

(v) Steelhead:

(A) Open October 1 through October 31 daily limit 2 hatchery steelhead with both the adipose and a ventral fin clipped may be retained.

(B) Open November 1 through March 31 daily limit 2 hatchery steelhead.

(vi) Salmon: (~~(A) Open June 16 through August 15:~~

~~(I) Limit 6; no more than 2 adult hatchery Chinook.~~

~~(II) Release sockeye and wild adult Chinook.~~

~~(B)~~) Open August 16 through October 31: Daily limit 6; no more than 2 adult salmon may be retained.

~~(i)~~) **(k) From the Old Hanford townsite wooden power line towers, in Sec. ((30)) 24, T13N, ((R28E)) R27E, to Vernita Bridge, (Highway 24):**

(i) Open February 1 through October 15.

(ii) For all open species except sturgeon: It is permissible to fish with two poles so long as the angler possesses a two-pole endorsement.

(iii) Trout: Catch and release only.

(iv) Steelhead: Closed to fishing.

(v) Salmon: (~~(A) Open June 16 through August 15:~~

~~(I) Limit 6; no more than 2 adult hatchery Chinook.~~

~~(II) Release sockeye and wild adult Chinook.~~

~~(B)~~) Open August 16 through October 15: Limit 6; no more than 2 adult salmon may be retained.

~~(j)~~) **(l) From Vernita Bridge (Highway 24) to Priest Rapids Dam:**

(i) Closed waters:

(A) At Priest Rapids Dam; waters between the upstream line of Priest Rapids Dam downstream to the boundary markers 650 feet below the fish ladders.

(B) At Jackson (Moran) Creek (waters of the Priest Rapids Hatchery system); extending to midstream of the Columbia River between boundary markers located 100 feet upstream and 400 feet downstream of the mouth of Jackson Creek.

(ii) For all open species except sturgeon: It is permissible to fish with two poles so long as the angler possesses a two-pole endorsement.

(iii) Trout: Catch and release only.

(iv) Steelhead: Closed to fishing.

(v) Salmon: (~~(A) Open June 16 through August 15:~~

~~(I) Limit 6; no more than 2 adult hatchery Chinook.~~

~~(II) Release sockeye and wild adult Chinook.~~

~~(B)~~) Open August 16 through October 15: Limit 6; no more than 2 adult salmon may be retained.

~~(k)~~) **(m) From Priest Rapids Dam to Rock Island Dam:**

(i) Closed waters:

(A) Wanapum Dam, between the upstream line of Wanapum Dam to the boundary markers 750 feet downstream of the east fish ladder and 500 feet downstream of the west fish ladder.

(B) Rock Island Dam, between the upstream line of Rock Island Dam to boundary markers 400 feet downstream of the fish ladders.

(ii) ~~((July))~~ September 1 through ~~((August 31))~~ October 15: Fishing two poles is permissible so long as the angler possesses a two-pole endorsement.

(iii) Release all trout.

(iv) Steelhead: Closed to fishing.

(v) Salmon: ~~((A) Open July 1 through August 31:~~

~~(I) Minimum length 12 inches; daily limit 6; no more than 2 adult hatchery Chinook may be retained.~~

~~(II) Release coho, sockeye, and wild adult Chinook.~~

~~(B))~~ Open September 1 through October 15: Open for Chinook only; daily limit 6, no more than 2 adults may be retained.

~~((1))~~ (n) From Rock Island Dam to Wells Dam:

(i) Closed waters:

(A) At Rocky Reach Dam between the upstream line of the dam to boundary markers 400 feet downstream of the fish ladders.

(B) At Wells Dam, between the upstream line of Wells Dam to boundary markers 400 feet downstream of the spawning channel discharge (on Chelan County side) and fish ladder (on Douglas County side).

~~(ii) ((July 1 through August 31: Fishing two poles is permissible so long as the angler possesses a two-pole endorsement.~~

~~(iii))~~ Release all trout.

~~((iv))~~ (iii) Steelhead: Closed to fishing.

~~((v) Salmon open July 1 through October 15:~~

~~(A) Minimum size 12 inches; limit 6; no more than 2 adult hatchery Chinook may be retained.~~

~~(B) Release coho, sockeye, and wild adult Chinook.~~

~~(m))~~ (o) From Wells Dam to Highway 173 Bridge at Brewster:

(i) July 16 through August ~~((31))~~ 15: Fishing two poles is permissible so long as the angler possesses a two-pole endorsement.

(ii) Hatchery trout: Open July 16 through August 15. Minimum size 12 inches. Daily limit 10. Barbless hooks required.

(iii) Steelhead: Closed to fishing.

~~((iv) Salmon open July 16 through August 31:~~

~~(A) Minimum size 12 inches; limit 6; no more than 2 adult hatchery Chinook may be retained.~~

~~(B) Release coho, sockeye, and wild adult Chinook.~~

~~(n))~~ (p) From Highway 173 Bridge at Brewster to Chief Joseph Dam:

(i) Closed waters:

(A) From the Okanogan County shore between Chief Joseph Dam and the Highway 17 Bridge.

(B) From the Douglas County shore from Chief Joseph Dam to the rock jetty at the upstream shoreline of Foster Creek.

(ii) July 1 through August ~~((31))~~ 15: Fishing two poles is permissible so long as the angler possesses a two-pole endorsement.

(iii) It is unlawful to fish from a floating device downstream of Chief Joseph Dam from the boundary marker to the Corps of Engineers safety zone marker.

(iv) Hatchery trout: Open July 1 through August 15. Minimum 12 inches. Daily limit 10. Barbless hooks required.

(v) Steelhead: Closed to fishing.

~~((vi) Salmon: Open July 1 through October 15:~~

~~(A) Minimum size 12 inches; limit 6; no more than 2 adult hatchery Chinook may be retained.~~

~~(B) Release coho, sockeye, and wild adult Chinook.~~

~~(e))~~ (q) **Above Chief Joseph Dam:** See Rufus Woods Lake in WAC 220-310-195.

~~((p))~~ (r) **Above Grand Coulee Dam:** See Lake Roosevelt in WAC 220-310-195.

# **RULE MAKING DOCKET**

## 2019 North of Falcon Rulemaking – Recreational Fishing Rules

Staff: Kelly Henderson, Fish Biologist  
WDFW  
PO Box 43200  
Olympia, WA 98504-3200

Subject matter: Changes to statewide recreational fishing rules, resulting from annual North of Falcon recommendations.

Citations of notices: CR-101 – WSR 19-03-137 and  
CR-102 – WSR 19-11-130

Place of inspection: WDFW  
Natural Resources Building  
1111 Washington St. SE  
Olympia, WA 98501

Deadline for comments: June 24, 2019

Timetable:

<p>Time and place of hearing</p>	<p>June 25, 2019 at NRB in Olympia, WA</p> <p>June 25, 2019 at Region 5 Office in Ridgefield, WA</p> <p>June 26, 2019 at Region 6 office in Montesano, WA</p> <p>June 26, 2019 at Region 6 office in Montesano, WA</p>
<p>Date of adoption</p>	<p>TBD</p>
<p>Date of adoption filing</p>	<p>TBD</p>
<p>Date of publication</p>	<p>TBD</p>
<p>Effective date of rules</p>	<p>TBD</p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>

SECTION 3 PUBLIC COMMENTS ADVISORY GROUP COMMENTS

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Coho mark rates  
**Date:** Tuesday, March 5, 2019 11:37:59 AM

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Mark,

Thanks for your time yesterday. I've given some thought to the discussion of coho seasons and would like to generate a starting proposal with support from the rec folks for the department to consider prior to our first public meeting (March 19).

As we discussed, mark-selective fishing in some key areas such as 8-2 and 9 may be necessary to ensure we don't get into a pinch, especially with Snohomish wild coho. I'm sure we will see the evidence of a challenge with respect to conservation objectives for that "over-fished" stock with the STT's modeling of ocean options with last year's inside fisheries. When FRAM is available for running alternative season proposals for state-managed fisheries, I think it would be helpful to see the effect of mark-selective rules in all fisheries from Area 5-9, not including 8-1. And the season structure for that model run would be as last year but with September restored in 8-1 & 8-2 (October as well?). For contrast, flip the switch to non-selective one area at a time, starting with those times known to have low mark rates such as September in Areas 5, 6, 7, 8-2 and 9. I suspect we'll see that isn't going to be possible, but the impact of non-selective - or the conservation effectiveness of mark-selective - needs to be demonstrated. This analysis will be helpful in turning back the tide of exuberance for non-selective fishing that you heard on Saturday's radio show.

I also think it would be helpful to have the actual mark rates from sampling those fisheries in recent years - say, 2016-18?

Thanks Mark, and let me know what you think.

Pat

**From:** [Highliner Charters](#)  
**To:** [Susewind, Kelly \(DFW\)](#); [Larry Carpenter](#); [Baltzell, Mark E. \(DFW\)](#); [Warren, Ron R. \(DFW\)](#)  
**Cc:** [PL Pattillo](#); [George Harris](#); [mark riedesel](#)  
**Subject:** Director visit  
**Date:** Friday, April 19, 2019 8:05:35 AM

---

Gentlemen,

It's no secret that I was deeply dissatisfied with not only the results of 2019 North of Falcon, but I was quite appalled at the process. I would, however, like to thank the Director and the other staff members for taking the time visit with those who were directly affected by the recent decisions. I hope that you would reach out to the Anacortes PSA chapter and schedule a similar type of meeting very soon. Should this meeting take place, **I would not attend** as I feel the need to look forward now. However, those who fish MA-7 most frequently need to hear from WDFW directly, and very soon.

My wife and I are scrambling to figure out if we can continue to operate our business, and if so what it will look like. One-third of our annual gross was erased by this one decision and that is devastating for a small business. At this point, it appears that unless the details within the Harvest Management Plan are reworked, my business may go under.

My wife Pattie and I have spent ten years and invested hundreds of thousands of dollars building Highliner and R&R Charters in Anacortes. To provide some perspective, I've given you a snapshot of our business operation, and we are just one of a dozen of small businesses potentially sunk by this Harvest Management Plan as it is currently written:

-In 2018 we served over 1100 customers, sold over 750 WDFW One-Day fishing licenses and paid over \$19,000 in state sales taxes.

-We own two boats, one purchased from Islands Marine Center on Lopez Island and the other from a broker here in Anacortes. I have purchased three \$18,500 engines from Master Marine in Mount Vernon in the last ten years.

-We spend over \$17,000 annually in dock and office rental fees at Skyline Marina in Anacortes. This past year we spent over \$22,000 in gasoline purchases.

-This year we spent over \$8000 in tackle and equipment purchases, much of it from Holiday Sports in Burlington, Outdoor Emporium, LFS, and West Marine.

-Many of our customers travel to Anacortes to enjoy its beauty and partake in all it has to offer, especially salmon fishing. A large number of these customers stay in hotels, eat at restaurants, and while here enjoy other local activities such as whale watching and sea kayaking.

-We also employ five captains whose families count on the summer income to help support their households. This past year we donated over \$15,000 to Christian-based charities. One of those organizations, located in Lynden, Washington, is a safe house for women who have been freed from the sex trafficking industry. We've been supporting charities through our business for the entire ten years we've been in operation.

All this to say we create a tremendous amount of economy for a small town like Anacortes. Under the current agreed to Management Plan, my business is destined to be another "unfortunate casualty" of hard but necessary decisions made in the name of conservation. However, I believe this to be avoidable as there are many alternatives. On behalf of the thousands of sport fisherman and hundreds marine & fishing related business owners of Puget Sound, I urge you to work towards a solution with less drastic consequences.

Brett

--

Highliner Charters

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[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

**From:** [PL Pattillo](#)  
**To:** [Adicks, Kyle K \(DFW\)](#); [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Dapp, Derek R \(DFW\)](#)  
**Subject:** In-season management Puget Sound Sport winter  
**Date:** Monday, March 18, 2019 2:21:21 PM

---

Kyle and Mark,

I met this morning with Derek and Dan to discuss a proposal that I've been developing to consider a modification of the current approach to in-season management of sport mark-selective fisheries in Puget Sound. I think it is important to explore the technical basis for such a proposal ahead of a specific proposal. For any proposal to be effective, or implemented, it would ultimately need to be part of the annual North of Falcon agreement with the tribes. To get to that point, WDFW would need to explore the technical and policy issues of the proposal and determine if the proposal has merit for moving forward with the co-management process. So I'm beginning with an early step.

I think Derek has a good understanding of the concepts and the data or estimates (e.g., FRAM forecasts of ERs or encounters) that are key to development of this approach. I'll continue to work with them, understanding they have priorities and are quite busy, to evaluate the concepts and the viability or practicality of the proposal. I also understand how difficult it is to change the status quo for managing these fisheries by agreement and don't have a great expectation that such a proposal brought forward at this point in the North of Falcon process has a very good chance of arrival by mid-April.

I do think it is important to at least make progress with this issue - not a new issue of concern for the recreational fishing public - and still hope WDFW can find a way to make a first step over the next month.

I'll stay in touch,

Thanks. Pat

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Modeling Questions  
**Date:** Wednesday, April 10, 2019 12:14:50 PM

---

Mark,

I doubt that you'll have time today, but when you might have a few minutes could I speak with you about the modeling you shared with me? I see some odd impact results looking at Stilly and MHC and wonder about inputs. I might try to find Derek, assuming he did the modeling. From your explanation yesterday, I am assuming those runs all have the same PS sport fishery inputs (they have the same impacts) and that they reflect a closure of August (and September from last year) in Area 7, as well as a closure in January. That's a huge hit for that area.

Impacts certainly are reduced for each of those stocks. But why was such a drastic move made for just that area? Cutting 2/3 of the summer fishery there while leaving the other areas untouched? Was it all for Stillaguamish? Curiously, the impacts in Area 5 doubled compared with last year's final run for both stocks. And MHC impacts in Area 6 increased during the summer while zeroing out in the winter. What's going on there? Area 11 impacts increased for both stocks in the winter and summer, but that could simply be the reduced abundance of deep SS hatchery fish.

Anyway, I really think this needs more scrutiny. Knowing how these moves have been made in the past and reversals can be interpreted as bad faith negotiating by the Tribes, I hope that WDFW isn't committed to this drastic cut for A7. I thought Shawn Yanity requested WDFW reduce Stilly impacts to 4.0%.

I could have misinterpreted the runs.

Pat

**From:** [Frank Urabeck](#)  
**To:** [Warren, Ron R \(DFW\)](#)  
**Cc:** [Larry Carpenter](#); [Don McIsaac](#); [Barbra Baker FWC](#); [Susewind, Kelly \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Baltzell, Mark E \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Downen, Mark R \(DFW\)](#)  
**Subject:** Re: 2019 Skokomish River recreational salmon fisheries  
**Date:** Tuesday, March 19, 2019 6:43:27 AM

---

Ron:

Appreciate your response. It came while I was in Texas. Just got back. Sorry I had not seen your attached sport salmon fishery proposal before I left as your proposal continues the closure of the most important part of the river for sports angler: SR 106 to TP Power lines, accessed via Hunter Farms. The river from SR 106 to SR 101, first time restricted by the "Float Rule," will yield a lot less sport caught fish than in the past. Did Larry Phillips propose this? Your proposal, while disappointing, would provide some fishing opportunity by allowing some highly restricted sport salmon fishing and therefore acceptable as being better than nothing at this time, if it is being presented as an interim proposal until we resolve the land ownership issue. It is not acceptable as a long-term fishery regulation!! The proposal would result in only a token harvest by sports anglers and continue the huge imbalance in harvest of the Skokomish River Chinook unfairly favoring the Skokomish Tribe.

Let me know if we can talk tomorrow or later this week. I will be expecting a status report on the land ownership issue.

Thanks much.

Frank

**From:** Warren, Ron R (DFW)  
**Sent:** Thursday, March 7, 2019 4:52 AM  
**To:** Frank Urabeck  
**Cc:** Larry Carpenter ; Don McIsaac ; Barbra Baker FWC ; Susewind, Kelly (DFW) ; Adicks, Kyle K (DFW) ; Baltzell, Mark E (DFW) ; Hughes, Kirt M (DFW) ; Downen, Mark R (DFW)  
**Subject:** RE: 2019 Skokoomish River recreational salmon fisheries

Frank thanks for your continued patience on this matter. Attached is the fishery proposal that we sent to multiple levels of the tribal government. This will be made public at our next NOF meeting until then I hope this will remain limited to this small group (notice my distribution differs from yours). I realize, according to your requested date this is late – however I will continue to communicate in a timely manner based on my workload and schedule. I intentionally remain silent on your other items you requested and would be happy to talk with you about those upon your return. Safe travels.

Ron

Ron Warren  
WDFW, Fish Program  
360-791-3945 cell  
360-902-2799 office

---

**From:** Frank Urabeck <urabeck@comcast.net>  
**Sent:** Wednesday, March 6, 2019 3:28 AM  
**To:** Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>; Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>  
**Cc:** Larry Carpenter <lc3896@gmail.com>; Don McIsaac <DONALDMCISAAC@msn.com>; Barbra Baker FWC <bbakerwdfw@gmail.com>; Susewind, Kelly (DFW) <Kelly.Susewind@dfw.wa.gov>; Ron Garner <rgarner755@aol.com>; nello.picinich@ccapnw.org  
**Subject:** Re: 2019 Skokoomish River recreational salmon fisheries

Ron:

Disappointed did not hear back from you. Not consistent with our February 20 chat. If nothing by time I get back from Texas I will be considering comprehensive PDR.

Take care.

Frank

**From:** Frank Urabeck  
**Sent:** Sunday, March 3, 2019 7:19 PM  
**To:** Ron Warren ; Ron.Warren@dfw.wa.gov  
**Cc:** Larry Carpenter ; Don McIsaac ; Barbra Baker FWC ; Kelly Susewind ; Ron Garner ; nello.picinich@ccapnw.org  
**Subject:** 2019 Skokoomish River recreational salmon fisheries

Ron:

Based on our February 20 telephone chat and discussions last Wednesday, February 27, during the 2019 NOF pre-season run forecast meetings, I am under impression that there is fair chance of getting Skokoomish River Chinook and Coho sport fisheries reopened this year. Understand that the Skokoomish tribe is willing to consider a 2019 sport river fishery and will be responding to a proposal you promised to provide them by last Friday, March 1. Please share that proposal with me so you can have the benefit of someone who has enjoyed that fishery a lot and worked hard to get it reopened. Also, please keep me informed of the status of discussions with the tribe and the outlook for this proposal being part of the 2019 NOF package. In addition, please provide a status report on the progress being made by the AG.

Would appreciate hearing back from you by this Tuesday, March 5, as I leave for 10 days in

Texas early Wednesday morning. So glad the Commission made this a top priority for Kelly at it's January 11 meeting.

Thanks much.

Frank

**From:** [Gary](#)  
**To:** ["PL Pattillo"; Baltzell, Mark E \(DFW\)](#)  
**Subject:** RE: Coho Proposal  
**Date:** Saturday, March 9, 2019 4:45:40 AM

---

Pat and Mark:

I see this as a reasonable starting point for the 2019 Coho seasons

I do know that the folks in Area 9 would like to see more non selective Coho fishing opportunity. That change last year caused some confusion and bewilderment from lots of fishers who could not understand how the area 9 needed to be selective and Area 10 and 8.2 where non selective. We probably need to explain the rationale early and often to let the public know.

Gary Krein  
All Star Fishing Charters  
[www.allstarfishing.com](http://www.allstarfishing.com)  
425-252-4188 Office  
Quality fishing daily Puget Sound

**From:** PL Pattillo <pattillopl@gmail.com>  
**Sent:** Friday, March 08, 2019 8:57 AM  
**To:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Cc:** Gary Krein <gary@allstarfishing.com>  
**Subject:** Coho Proposal

Mark,

Here is the last version of the PS coho initial proposal for 2019 that is endorsed by CAPS representatives. I still plan on sending it along to the rest of my support group and to the advisory group membership before officially sending it to WDFW, but if you have the time to discuss it with me and Gary, as Gary suggested this morning, then I am available any time you see the opportunity.  
Pat

**From:** [Curt Kraemer](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Carl Nyman](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [Dave Knutzen](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Mark Riedesel](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#)  
**Cc:** [Steve Kesling](#); [Gary Krein](#); [Keith Robbins \(flymooch@aol.com\)](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Larry Carpenter \(lc3896@gmail.com\)](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 4:51:48 PM

---

Mark -

Thanks for the update! Based on what we heard at Lynnwood the sport season matrix is about what I would have expected. It was indeed unfortunate that some discussion didn't take place on how to use the available impacts. Hopefully not much will be needed in regard to Stilly Chinook impacts though I'm not holding my breath. Finding another fish or two will be extremely painful.

A couple questions

The 75 Stilly Chinook C&S - Hopefully that is a total of 75 fish (the upper limit) including any C & S fish.

Given the forecasts I'm assuming that the 20% reduction for the in-river recreational fishery is directed towards coho and not pinks

Good luck!

Curt

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

**Sent:** Thursday, April 11, 2019 2:10 PM

**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney; Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com

**Cc:** Steve Kesling ; Gary Krein; Keith Robbins (flymooch@aol.com); Stormer, David G (DFW); Hughes, Kirt M (DFW); Adicks, Kyle K (DFW); Larry Carpenter (lc3896@gmail.com); Curt Kraemer

**Subject:** Comanager Model Runs

Hi Everyone,

I wanted to get model runs and an update of where we are as soon as I was able. You will find 2 summaries of the 3 model runs attached to this email for both Chinook and Coho. I will provide some summary information and let folks know what moves we have already put on the table and how I think things may go from here. I have attached a PDF of the proposed seasons for Coho and Chinook in the matrix format we have used in recent years.

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## Mark Baltzell

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807

Cell: 360-688-3410

**From:** [Carl Nyman](mailto:Carl.Nyman)  
**To:** [markriedesel@hotmail.com](mailto:markriedesel@hotmail.com); [Baltzell, Mark E \(DFW\)](mailto:Baltzell, Mark E (DFW)); [andrew.marks@comcast.net](mailto:andrew.marks@comcast.net); [brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com); [Highliner\\_charters@gmail.com](mailto:Highliner_charters@gmail.com); [dcroonquist@gmail.com](mailto:dcroonquist@gmail.com); [dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com); [gmliller@farwestsports.com](mailto:gmliller@farwestsports.com); [Gage.little@gmail.com](mailto:Gage.little@gmail.com); [Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com); [Mark@nmta.net](mailto:Mark@nmta.net); [1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com); [pattillopl@gmail.com](mailto:pattillopl@gmail.com); [thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com); [tom@theoutdoorline.com](mailto:tom@theoutdoorline.com); [Artt@tacomaparks.com](mailto:Artt@tacomaparks.com); [dave.knutzen@nmt.us](mailto:dave.knutzen@nmt.us); [d\\_j\\_puki@hotmail.com](mailto:d_j_puki@hotmail.com); [freemans5@comcast.net](mailto:freemans5@comcast.net); [gregghwilliams@gmail.com](mailto:gregghwilliams@gmail.com); [mrian@microsoft.com](mailto:mrian@microsoft.com); [mikegilchrist@comcast.net](mailto:mikegilchrist@comcast.net); [troymckelvey3@gmail.com](mailto:troymckelvey3@gmail.com)  
**Cc:** [Steve Kesling](mailto:Steve.Kesling); [Gary Krein](mailto:Gary.Krein); [Capt. Keith](mailto:Capt.Keith); [Stormer, David G \(DFW\)](mailto:Stormer, David G (DFW)); [Hughes, Kirt M \(DFW\)](mailto:Hughes, Kirt M (DFW)); [Adicks, Kyle K \(DFW\)](mailto:Adicks, Kyle K (DFW)); [lc3896@gmail.com](mailto:lc3896@gmail.com); [Kraemerfam1@hotmail.com](mailto:Kraemerfam1@hotmail.com)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 4:02:04 PM

---

I need to agree with Mark R. that this seems bizarre that these "adjustments" are being made between NOF 2 and PFMC 2 with no time for public involvement. I understand the process was delayed significantly by negotiation challenges but this is unprecedented in my 20 years of involvement in this process.

Many of us are having a very difficult time understanding how this process became even worse this year.

Those of us in the south sound REALLY appreciate the June Coho remaining in the matrix and hope that it makes it through this storm. Thank you for your hard work in this challenging time.

<''))))><  
Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
[carl@fishingseattle.com](mailto:carl@fishingseattle.com)  
206-632-2611

On Thu, 11 Apr 2019 22:46:43 +0000, mark riedesel wrote:

Mark,  
I'm I reading this right? The department wants to close Area 7 to ALL recreational fishing for the month of August?!?!?! The entire heart of our summer season gone? We can't even get time on the water? The impacts to the Area 7 communities that rely on that portion of the summer season will be truly devastating. Seeing this goes well beyond being disappointed....

Mark Riedesel

---

**From:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Sent:** Thursday, April 11, 2019 2:10 PM  
**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney;

Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troyckelvey3@gmail.com

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## Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** [mark riedesel](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Carl Nyman](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [Dave Knutzen](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#)  
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**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:46:55 PM

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**Sent:** Thursday, April 11, 2019 2:10 PM  
**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney; Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com  
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NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [Captain Keith](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [andrew.marks@comcast.net](#); [brandon\\_jacob\\_mason@yahoo.com](#); [Highliner\\_charters@gmail.com](#); [carl@fishingseattle.com](#); [dcroonquist@gmail.com](#); [dlmccraney@hotmail.com](#); [gmiller@farwestsports.com](#); [Gage.little@gmail.com](#); [Pnwsalmonangler@gmail.com](#); [Mark@nmta.net](#); [1greatrhino@wavecable.com](#); [pattillopl@gmail.com](#); [thomas.a.drews@boeing.com](#); [tom@theoutdoorline.com](#); [Artt@tacomaparks.com](#); [dave.knutzen@nmt.us](#); [d\\_j\\_puki@hotmail.com](#); [freemans5@comcast.net](#); [gregghwilliams@gmail.com](#); [markriedesel@hotmail.com](#); [mrian@microsoft.com](#); [mikegilchrist@comcast.net](#); [troymckelvey3@gmail.com](#)  
**Cc:** [luckyblindsquirrel@yahoo.com](#); [gary@allstarfishing.com](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [lc3896@gmail.com](#); [Kraemerfam1@hotmail.com](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:43:32 PM

---

MARK,

Please again explain the justification for a non sale time Elliot Bay season and what are the dates? Couldn't we use those wild impacts somewhere else that will give us more time on the water?

thanks

Keith

-----Original Message-----

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**To:** Andy Marks <andrew.marks@comcast.net>; Brandon Mason <brandon\_jacob\_mason@yahoo.com>; Brett Rosson <Highliner.charters@gmail.com>; Carl Nyman <carl@fishingseattle.com>; Dave Croonquist <dcroonquist@gmail.com>; David McCraney <dlmccraney@hotmail.com>; Gabe Miller <gmiller@farwestsports.com>; Gage Little <Gage.little@gmail.com>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <Pnwsalmonangler@gmail.com>; Mark Yuasa <Mark@nmta.net>; Norm Reinhardt <1greatrhino@wavecable.com>; Pat Patillo (pattillopl@gmail.com) <pattillopl@gmail.com>; Thomas Drews <thomas.a.drews@boeing.com>; Thomas Nelson <tom@theoutdoorline.com>; Art Tachell <Artt@tacomaparks.com>; Dave Knutzen <dave.knutzen@nmt.us>; David Puki <d\_j\_puki@hotmail.com>; Don Freeman <freemans5@comcast.net>; Gregg Williams <gregghwilliams@gmail.com>; Mark Riedesel <markriedesel@hotmail.com>; Michael Rian <mrian@microsoft.com>; Mike Gilchrist <mikegilchrist@comcast.net>; troymckelvey3@gmail.com <troymckelvey3@gmail.com>  
**Cc:** Steve Kesling <luckyblindsquirrel@yahoo.com>; Gary Krein <gary@allstarfishing.com>; Keith Robbins (flymooch@aol.com) <flymooch@aol.com>; Stormer, David G (DFW) <David.Stormer@dfw.wa.gov>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Larry Carpenter (lc3896@gmail.com) <lc3896@gmail.com>; Curt Kraemer <Kraemerfam1@hotmail.com>  
**Sent:** Thu, Apr 11, 2019 2:11 pm  
**Subject:** Comanager Model Runs

Hi Everyone,

I wanted to get model runs and an update of where we are as soon as I was able. You will find 2 summaries of the 3 model runs attached to this email for both Chinook and Coho. I will provide some summary information and let folks know what moves we have already put on the table and how I think things may go from here. I have attached a PDF of the proposed seasons for Coho and Chinook in the matrix format we have used in recent years.

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- \* A minter creek Chinook sport fishery
- \* Area 7 closed in August to recreational fishing (BhamBay open Aug 16)
- \* 12C Chinook Fishery

- \* Area 7 closed in January
- \* Area 9 closed in January
- \* Elliot Bay open
- \* Treaty Troll fishery at 4500
- \* Stilly at 75 fish C&S
- \* Stilly 20% reduction in pink fishery (has Chinook impacts)

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.....  
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 Trouble Joining? Try Skype Web App<<https://lync.wa.gov/dfw.wa.gov/meet/mark.baltzell/8C6FTJ3Z?sl=1>>

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|Help<<https://o15.officedir.microsoft.com/r/rldLync15?clid=1033&p1=5&p2=2009>>

Mark Baltzell  
 Washington Dept of Fish and Wildlife  
 Puget Sound Salmon Fisheries Management  
 1111 Washington St SE  
 NRB 6th Floor  
 Olympia, WA 98501  
 Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)<mailto:[mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)>  
 Office: 360-902-2807  
 Cell: 360-688-3410

**From:** [Highliner Charters](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:13:39 PM

---

Mark, I can't believe what I think I'm reading here. Do you mean to tell me we will be shut out completely from Pinks and Coho in Aug? I read this as a round about way to get a no-go zone and it stinks to all hell. To me I'm miss reading this!

Highliner Charters  
360.770.0341  
[www.highlinercharters.com](http://www.highlinercharters.com)  
[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

On Apr 11, 2019, at 14:10, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

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- <!--[if !supportLists]-->• <!--[endif]-->A minter creek Chinook sport fishery
- <!--[if !supportLists]-->• <!--[endif]-->Area 7 closed in August to recreational fishing (BhamBay open Aug 16)
- <!--[if !supportLists]-->• <!--[endif]-->12C Chinook Fishery
- <!--[if !supportLists]-->• <!--[endif]-->Area 7 closed in January
- <!--[if !supportLists]-->• <!--[endif]-->Area 9 closed in January
- <!--[if !supportLists]-->• <!--[endif]-->Elliot Bay open
- <!--[if !supportLists]-->• <!--[endif]-->Treaty Troll fishery at 4500
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---

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## Mark Baltzell

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

<ModelComparison3\_Coho1917\_18\_19\_040819.xlsx>

<PSSportMatrix2019-20prop.pdf>

<ModelComparison3\_Chin1919\_2019\_2119\_11April2019.xlsx>

**From:** [Carl Nyman](#)  
**To:** [Steve Kesling](#); [andrew.marks@comcast.net](#); [brandon\\_jacob\\_mason@yahoo.com](#); [Highliner.charters@gmail.com](#); [dcroonquist@gmail.com](#); [dlmccraney@hotmail.com](#); [gmiller@farwestsports.com](#); [Gage.little@gmail.com](#); [Pnwsalmonangler@gmail.com](#); [Mark@nmta.net](#); [1greatrhino@wavecable.com](#); [pattillopl@gmail.com](#); [thomas.a.drews@boeing.com](#); [tom@theoutdoorline.com](#); [Artt@tacomaparks.com](#); [dave.knutzen@nmt.us](#); [d\\_j\\_puki@hotmail.com](#); [freemans5@comcast.net](#); [gregghwilliams@gmail.com](#); [markriedesel@hotmail.com](#); [mrian@microsoft.com](#); [mikegilchrist@comcast.net](#); [troymckelvey3@gmail.com](#); [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Gary Krein](#); [Capt. Keith](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [lc3896@gmail.com](#); [Kraemerfam1@hotmail.com](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:08:01 PM

---

On a similar note as Steve I'm curious about the encounter number plugged in for winter fisheries, specifically area 10. Is there a more realistic number that this winter was for area 10 winter season that might allow it to run it's course or most of it?

It's very disappointing to again see no opportunity for Salmon fishing in areas 9 or 10 Nov 16-Dec 30. I heard from many operators and also I know first hand that was a big loss during the holidays when there's a demand for family activities.

The value of Area 8-2 in late April is high for charters and it would make sense to split that winter Chinook season by closing it in February and/or March to assure an April full fishery, and I don't know what savings you might get from that but maybe it could add time back to another area?

<''))))><

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](#)  
[carl@fishingseattle.com](mailto:carl@fishingseattle.com)  
206-632-2611

On Thu, 11 Apr 2019 21:22:34 +0000 (UTC), "Steve K." wrote:

Hi Mark,

What numbers are area 9 & 10 at for Summer chinook in this model? Is there a pin for the conference call?

Thank you,  
Steve K.

On Thursday, April 11, 2019, 2:11:25 PM PDT, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone,

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summaries of the 3 model runs attached to this email for both Chinook and Coho. I will provide some summary information and let folks know what moves we have already put on the table and how I think things may go from here. I have attached a PDF of the proposed seasons for Coho and Chinook in the matrix format we have used in recent years.

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---

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## Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** [David McCraney](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 2:26:10 PM

---

Mark;

The timely update is much appreciated. In some earlier meetings and conversations, there had been discussions of some enhanced opportunities in Area 11. Is that still a possibility.

I plan to be on the call tomorrow morning.

Thanks.

David Mc

*David L. McCraney*

1212 N. J. Street

Tacoma, WA 98403

Home--253/627-8748

Cell--253/341-0625

[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

**Sent:** Thursday, April 11, 2019 2:10 PM

**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney; Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com

**Cc:** Steve Kesling ; Gary Krein; Keith Robbins (flymooch@aol.com); Stormer, David G (DFW); Hughes, Kirt M (DFW); Adicks, Kyle K (DFW); Larry Carpenter (lc3896@gmail.com); Curt Kraemer

**Subject:** Comanager Model Runs

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Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Co-manager model runs  
**Date:** Monday, April 8, 2019 9:19:50 AM

---

Mark,

If you have any time before traveling to California, I would like to discuss some of the modeling and impact issues you described, including WDFW's view of the SRKW situation for 2019. I would also like to have your frank assessment of whether or not WDFW would entertain any changes to the in-season management of winter MSFs for next year. I certainly don't want to be pushing something that wastes valuable staff time this late in the game. It might be my new perspective as a member of the public, but the entire WDFW team looked pretty weary last Wednesday.

Let me know if I can visit, or I'll just see you in California (I'm coming down on Wednesday). Thanks, Pat

On Fri, Apr 5, 2019 at 2:57 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone

It appears that we may be getting closer to a co-manager model run for Chinook as early as today, but more likely, early next week before California. I thought it would be appropriate to communicate to all of you some of the fishery reductions WDFW are considering based on public comment, advisor input and commission guidance. As I expressed to those who were there or watching on Wednesday, there are any number of challenging dynamics in play which are exacerbated by many unknowns. In general, these are the approaches that we are taking:

- Structuring our Ocean package to maximize harvest and opportunity while minimizing impacts on Puget Sound stocks.
- Looking at the recreational fisheries with the highest impacts on Stillaguamish and Mid-Hood Canal
- Coupled with conservation moves, looking at what reductions would do to contribute to SRKW conservation
- Maximizing time and area opportunities that have minimal impacts on stocks of concern

Right now we are considering Summer reductions in Area 7, Adjusting Ocean sport and troll fisheries to reduce Mid-HC impacts, assessing the balance of winter and summer fisheries and eyeing potential reductions to spread out geographically, and reduced Coho opportunity in 82.

Everything is very fluid and dynamic right now. Hopeful that we can reach agreement on everything by the 15<sup>th</sup>.

We will communicate more as we figure things out and obviously will share model runs when we have them.

+++

Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** [Carl Nyman](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Adicks, Kyle K \(DFW\)](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Susewind, Kelly \(DFW\)](#)  
**Subject:** Re: Co-manager model runs  
**Date:** Friday, April 5, 2019 3:32:06 PM

---

Ron, Mark and WDFW staff,

After our Charter Association PS Meeting last night, I want to share the requests of our constituents.

Our members continue to stress that time on the water is the priority regardless if this means fishing for Coho, Chum or Chinook salmon and time on the water is valuable any time of year.

JUNE Coho opportunity in area 10 took the lead as a priority (assuming that 9 and/or 10 will be open in July and August for something)

It was expressed by multiple charter operators that Chum salmon IS a valuable opportunity, and if Chum is open commercially and/or tribally it seems fair to offer recreational Chum fishing as well.

I heard from our members that the loss of November and December was a big hit to the industry last year.

I was sent with the message that trying to have one of/either of the areas area 9 OR 10 (and to some extent 8-2) open as much as possible, going back to the "checkerboard" approach that we worked so hard to get over the last 15 years in order to provide some opportunity. And area 11 has some value to our industry.

We have seen a shift in that checkerboard approach and I understand that it may be necessary to meet conservation objectives, but our goal is to give some pushback on losing SOMEPLACE to go fishing for some salmon species AS MANY Days as possible!

Thank you for listening.

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
(206) 632-2611  
Sent from my phone.

On Apr 5, 2019, at 2:57 PM, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

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## Mark Baltzell

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1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [urabeck@comcast.net](mailto:urabeck@comcast.net)  
**To:** [Baltzell, Mark E \(DFW\)](mailto:Baltzell, Mark E (DFW))  
**Subject:** RE: Feb. 24 Marine Areas 6-10 Chinook encounters estimates  
**Date:** Friday, March 1, 2019 4:26:04 PM

---

Mark:

The success of NOF 2019 will be judged on how much public was able to vetifiably influence the outcome and gain meaningful fisheries, not on the opportunities for comments. We need much more meaningful fisheries than last year, including the Skokomish.

Share this with Ron and Kelly.

Thanks

Frank

Sent from Xfinity Connect Application

-----Original Message-----

**From:** Mark.Baltzell@dfw.wa.gov  
**To:** gage.little@gmail.com  
**Cc:** Vincent.Adicks@dfw.wa.gov, andrew.marks@comcast.net, Artt@tacomaparks.com, brandon\_jacob\_mason@yahoo.com, Highliner.charters@gmail.com, carl@fishingseattle.com, dcroonquist@gmail.com, dlmccraney@hotmail.com, urabeck@comcast.net, gmiller@farwestsports.com, gary@allstarfishing.com, Kirt.Hughes@dfw.wa.gov, flymooch@aol.com, Pnwsalmonangler@gmail.com, markriedesel@hotmail.com, Mark@nmta.net, 1greatrhino@wavecable.com, pattillopl@gmail.com, ryleyf@gmail.com, Ann.Stephenson@dfw.wa.gov, luckyblindsquirrel@yahoo.com, David.Stormer@dfw.wa.gov, thomas.a.drews@boeing.com, tom@theoutdoorline.com, dgstormer@gmail.com, rgarner755@aol.com  
**Sent:** 2019-03-01 2:37:33 PM  
**Subject:** RE: Feb. 24 Marine Areas 6-10 Chinook encounters estimates

The North of Falcon process is exactly the forum to make your opinions heard.

**From:** Gage Little <gage.little@gmail.com>  
**Sent:** Friday, March 1, 2019 2:05 PM  
**To:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Cc:** Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Andy Marks (andrew.marks@comcast.net) <andrew.marks@comcast.net>; Art Tachell (Artt@tacomaparks.com) <Artt@tacomaparks.com>; Brandon Mason (brandon\_jacob\_mason@yahoo.com) <brandon\_jacob\_mason@yahoo.com>; Brett Rosson (Highliner.charters@gmail.com) <Highliner.charters@gmail.com>; Carl Nyman (carl@fishingseattle.com) <carl@fishingseattle.com>; Dave Croonquist (dcroonquist@gmail.com) <dcroonquist@gmail.com>; David McCraney (dlmccraney@hotmail.com) <dlmccraney@hotmail.com>; Frank Urabeck (urabeck@comcast.net) <urabeck@comcast.net>;

Gabe Miller (gmiller@farwestsports.com) <gmiller@farwestsports.com>; Gary Krein (gary@allstarfishing.com) <gary@allstarfishing.com>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Keith Robbins (flymooch@aol.com) <flymooch@aol.com>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <Pnwsalmonangler@gmail.com>; Mark Riedesel (markriedesel@hotmail.com) <markriedesel@hotmail.com>; Mark Yuasa (Mark@nmta.net) <Mark@nmta.net>; Norm Reinhardt (1greatrhino@wavecable.com) <1greatrhino@wavecable.com>; Pat Patillo (pattillopl@gmail.com) <pattillopl@gmail.com>; Ryley Fee (ryleyf@gmail.com) <ryleyf@gmail.com>; Stephenson, Ann E (DFW) <Ann.Stephenson@dfw.wa.gov>; Steve Kesling (luckyblindsquirrel@yahoo.com) <luckyblindsquirrel@yahoo.com>; Stormer, David G (DFW) <David.Stormer@dfw.wa.gov>; Thomas Drews (thomas.a.drews@boeing.com) <thomas.a.drews@boeing.com>; Thomas Nelson (tom@theoutdoorline.com) <tom@theoutdoorline.com>; dgstormer@gmail.com; rgarner755 (rgarner755@aol.com) <rgarner755@aol.com>

**Subject:** Re: Feb. 24 Marine Areas 6-10 Chinook encounters estimates

Thanks for that Mark, my STR's wouldn't show any effort in MA6 as Weather has limited effort for me and when allowed I was unable to "double down" after retaining a fish in MA9 which is what my STR would show for area. Would like to clarify that there isn't any restriction for us to move MA6 back to a 2 fish limit after the derby.... have I mentioned I'm not a derby fan? really feel it important that the state find a way to manage/limit derbies.... or stop them entirely.

Gage

On Fri, Mar 1, 2019 at 1:56 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone,

This was our screw up from last year. The permanent regulations filed under last spring were 1 fish for Area 6 in the winter time period. 2 fish were printed in the pamphlet. There are 2 reasons we did not just let this one fly under the radar. So far, we have very low sample sizes of VTR's from area 6 and we have only been able to get 1 overflight so far this winter to assess effort, so the current estimates are likely biased low. A couple of VTR's with a number of fish on them could change the estimates dramatically (like double) with such low sample sizes. The other reason is knowing the that there is a very popular fishing derby about to take place with a high number of participants could very well put a huge dent in those encounters estimates. We have been hearing from you that more time on the water was more important than a high bag limit.

We will re-assess after the derby and discuss with the group at that point.

I am really sorry that this happened. I know that when we make a mistake like this it creates confusion, mistrust, angst, and several other things. It is always our goal to do better, and here is another example.

Mark

**From:** Gage Little <[gage.little@gmail.com](mailto:gage.little@gmail.com)>  
**Sent:** Friday, March 1, 2019 1:19 PM  
**To:** Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>  
**Cc:** Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Andy Marks (<[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)> <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>); Art Tachell (<[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)> <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>); Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>; Brandon Mason (<[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)> <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>); Brett Rosson (<[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)> <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>); Carl Nyman (<[carl@fishingseattle.com](mailto:carl@fishingseattle.com)> <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>); Dave Croonquist (<[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)> <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>); David McCraney (<[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)> <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>); Frank Urabeck (<[urabeck@comcast.net](mailto:urabeck@comcast.net)> <[urabeck@comcast.net](mailto:urabeck@comcast.net)>); Gabe Miller (<[gmilller@farwestsports.com](mailto:gmilller@farwestsports.com)> <[gmilller@farwestsports.com](mailto:gmilller@farwestsports.com)>); Gary Krein (<[gary@allstarfishing.com](mailto:gary@allstarfishing.com)> <[gary@allstarfishing.com](mailto:gary@allstarfishing.com)>); Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Keith Robbins (<[flymooch@aol.com](mailto:flymooch@aol.com)> <[flymooch@aol.com](mailto:flymooch@aol.com)>); Kyle Sorenson (<[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)> <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>); Mark Riedesel (<[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)> <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>); Mark Yuasa (<[Mark@nmta.net](mailto:Mark@nmta.net)> <[Mark@nmta.net](mailto:Mark@nmta.net)>); Norm Reinhardt (<[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)> <[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)>); Pat Patillo (<[pattillopl@gmail.com](mailto:pattillopl@gmail.com)> <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>); Ryley Fee (<[ryleyf@gmail.com](mailto:ryleyf@gmail.com)> <[ryleyf@gmail.com](mailto:ryleyf@gmail.com)>); Stephenson, Ann E (DFW) <[Ann.Stephenson@dfw.wa.gov](mailto:Ann.Stephenson@dfw.wa.gov)>; Steve Kesling (<[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)> <[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)>); Thomas Drews (<[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)> <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>); Thomas Nelson (<[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)> <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>); dgstormer (<[dgstormer@gmail.com](mailto:dgstormer@gmail.com)> <[dgstormer@gmail.com](mailto:dgstormer@gmail.com)>); rgarner755 (<[rgarner755@aol.com](mailto:rgarner755@aol.com)> <[rgarner755@aol.com](mailto:rgarner755@aol.com)>);  
**Subject:** Re: Feb. 24 Marine Areas 6-10 Chinook encounters estimates

David, Mark and all

I need some serious clarification and honesty regarding the emergency rule change for area 6. I looked back at my notes from last years NOF and from what I have the already reduced area 6 winter fishery was intended to be a 2 fish limit as indicated in the reg book! The fact that for two months it has been and fish checkers have been turning in data showing it leads me to believe there wasn't an error in the regulation book! Coupled with only being at 16% it's absurd to reduce this bag limit. All I can think of is that there has been recommendations or push to reduce the limit to one fish during the upcoming derby which I'm on board and support completely; if the case then why not just issue a rule change that says just that? We are supposed to be... and I certainly am, trying to provide the maximum opportunity for anglers to get on the water and catch fish! I'd like to suggest moving area 6 back to a two fish limit less the derby days.

Gage

On Thu, Feb 28, 2019 at 4:22 PM Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)> wrote:

Good afternoon all,

I am attaching the most recent estimates of Chinook encounters in areas 6 - 10. As of Feb. 24, 2019 we are at 16% of the total encounters guideline in area 6, 55% and 46% of the total and total unmarked encounters guideline respectively in area 7, 52% of the total encounters guideline in areas 8.1/8.2 and 43% of the total encounters guideline in area 9. FYI, there is an error in the 2018/19 rules pamphlet for Area 6 daily salmon limit. The salmon daily limit in Area 6 is one fish, not two as stated in the pamphlet. Here is a link to the WAC for reference (<https://apps.leg.wa.gov/wac/default.aspx?cite=220-313-060>). We just issued a fishing rule change to reflect this correction. Please let us know if you have any questions.

Cheers,  
David

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Email: [David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)

**From:** [Carl Nyman](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(PnwSalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [Dave Knutzen](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Mark Riedesel](#); [Michael Rian](#); [Mike Gilchrist](#); [troyckelvey3@gmail.com](#); [Stormer, David G \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Keith Robbins \(flymooch@aol.com\)](#); [Steve Kesling](#); [Gary Krein](#); [Adicks, Kyle K \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Peterson, Laurie L \(DFW\)](#); [Curt Kraemer](#)  
**Subject:** Re: latest Chinook Model Runs  
**Date:** Friday, April 12, 2019 7:42:09 AM

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Mark,

I see part of the stilly impacts 1.8% on treaty troll and I'm wondering is that the Makah chinook troll fishery and what number is plugged into the model at this time for their chinook troll fisheries?

I'm just looking to see if we are at a point yet that the numbers we are plugging into the model reflect realistic numbers from fisheries that are likely to occur.

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
(206) 632-2611  
Sent from my phone.

On Apr 12, 2019, at 6:48 AM, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone

Attached are the most recent model run for Chinook from the council from last night. We are at 1 Ocean option. We will go over it on the call this morning. There was an error on the NT side which put stilly at 4.1% NT. Much to talk about.

**Mark Baltzell**

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Cell: 360-688-3410

<2219.pdf>

<Table6NSLC-Chin2219.pdf>

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Dapp, Derek R \(DFW\)](#); [Stormer, David G \(DFW\)](#)  
**Subject:** Re: Model Runs  
**Date:** Tuesday, March 12, 2019 10:41:22 AM

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Mark, Derek and David,

As for coho, it looks like the Snohomish ER will need to be at about 12% to hit the 55,000 escapement target for 2019. Area 8-2 and the Snohomish River sport fisheries will obviously need to be much reduced from what was modeled.

Thompson @ 10% will likely require reductions in non-selective for both areas 5 and 7. And for chinook- the current options for both ocean and inside appear unrealistic for both mid-Hood Canal and Stillaguamish. Mark, you mentioned the MHC rate of last year was about 4.2%, but I believe it was actually 3.2% (Chin3218). The Treaty troll ER with 0819 looks like it is 4.4% compared with last year's 3.6%, so the ocean options appear to be putting on a tighter squeeze than last year on the system. For Stilly it is clear that the initial modeling of tribal fisheries isn't a match with the intention of the 8% as the average ER for 2009-14. So the dance begins eh?

Thanks for the early look at the estimates. I won't share these, but look forward to discussing things as soon as you come up for air.

Pat

On Mon, Mar 11, 2019 at 7:47 PM PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)> wrote:

Mark,

Thanks very much for this info and your inside insight. I'll look it over and get back to you tomorrow.

I have not made a connection with the PSSFAG on season proposals for Chinook or coho. The knowledgeable ones like Krein will understand the modeling results but other will require some more deft handling.

Talk or email soon

Pat

On Mon, Mar 11, 2019 at 6:58 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Pat

Thought I would share model runs with you since you are likely the only one I can think of that understands where we are. As has been in recent years, this PFMC 1 has been a brutal display of grandstanding and line drawing. I even got the Director to admit today that he missed wolf issues. I have played around with the proposals you sent as much as I could without having all of the inside treaty inputs, but given the rhetoric we heard this week, I think non-selective coho fisheries in the straits or even 8-2 may be dicey, just my perspective. Also we will be bumping up on Thompson depending on where we land in the Ocean on coho. Chinook wise. You'll see the Ocean ended up at about 3% On Mid-HC. I think last year's fisheries in there are at about 4.2% so it does not seem like we are that far away. Not enough Stilly in the Ocean .2% to do much with, so that will likely be more of a driver inside.

Let's plan on talking later this week before NOF#1 next week.

Let Derek or I know if you have questions.

Mark Baltzell

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**From:** [Gage Little](#)  
**To:** [Dave Knutzen](#)  
**Cc:** [Carl Nyman](#); [Baltzell, Mark E \(DFW\)](#); [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Mark Riedesel](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Tony Floor](#); [Peterson, Laurie L \(DFW\)](#)  
**Subject:** Re: NOF Update  
**Date:** Wednesday, March 27, 2019 6:05:20 PM

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Mark, does the data that wdfw have support the claim made by the tribes regarding MA10 and 5? i am aware how 10 can hold small fish but seems more early summer than winter, albeit i dont spend a lot of time in 10 winter. i continue to be opposed to a smaller fish size; its like watching the toilet water flush, smaller and smaller until nothing..... similar perhaps to gill netters catching all the big fish until catches are down so they reduce the net size and so on until all we have is lots of small fish! i think some solid ground when it comes to srkw is reminding the co managers that terminal fisheries hardly "dont steal from the mouths of the whales" because theyre at the rivers. those fish are the next wave of food, netting them prior to spawn is an absolute contributing factor. dont want to shoulder this burden purely on the the 1%

gage

On Wed, Mar 27, 2019 at 11:09 AM Dave Knutzen <[Dave.Knutzen@nmt.us](mailto:Dave.Knutzen@nmt.us)> wrote:

Thanks Mark – good to see a report and the follow-up emails.

I support Carl’s comments. The attack on Mark Selective Fisheries is ongoing and one I would hope the department continues to support and push on unwarranted criticism whether it is the tribes or the commission. It is our only option if we want to maintain our fisheries under ESA.

Yes, we should lower the size limit on hatchery Chinook and minimize the release mortality argument plus remove hatchery fish from the system.

Thanks everyone for working the issues

---

**From:** Carl Nyman <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>

**Sent:** Wednesday, March 27, 2019 10:17 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Cc:** Andy Marks <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>; Brandon Mason <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>; Brett Rosson <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>; Dave Croonquist <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>; David McCraney <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>; Gabe Miller <[gmillier@farwestsports.com](mailto:gmillier@farwestsports.com)>; Gage Little <[Gage.little@gmail.com](mailto:Gage.little@gmail.com)>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>; Mark Yuasa <[Mark@nmta.net](mailto:Mark@nmta.net)>; Norm Reinhardt <[l1greatrhino@wavecable.com](mailto:l1greatrhino@wavecable.com)>; Pat Patillo ([pattillopl@gmail.com](mailto:pattillopl@gmail.com)) <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>; Thomas Drews <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>; Thomas Nelson <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>; Art Tachell <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>; Dave Knutzen <[Dave.Knutzen@nmt.us](mailto:Dave.Knutzen@nmt.us)>; David Puki <[d\\_j\\_puki@hotmail.com](mailto:d_j_puki@hotmail.com)>; Don Freeman <[freemans5@comcast.net](mailto:freemans5@comcast.net)>; Gregg Williams <[gregghwilliams@gmail.com](mailto:gregghwilliams@gmail.com)>; Mark Riedesel <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>; Michael Rian <[mrrian@microsoft.com](mailto:mrrian@microsoft.com)>; Mike Gilchrist <[mikegilchrist@comcast.net](mailto:mikegilchrist@comcast.net)>; [troymckelvey3@gmail.com](mailto:troymckelvey3@gmail.com); Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>; Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Warren, Ron R (DFW) <[Ron.Warren@dfw.wa.gov](mailto:Ron.Warren@dfw.wa.gov)>; Tony Floor <[tony.truth.floor@gmail.com](mailto:tony.truth.floor@gmail.com)>; Peterson, Laurie L (DFW) <[Laurie.Peterson@dfw.wa.gov](mailto:Laurie.Peterson@dfw.wa.gov)>

**Subject:** Re: NOF Update

Mark,

So you're saying that the calculated estimate of mortality on released fish exceeded harvested fish in Marine area 10 in that three-week fishery and that's one if the sticky points with the tribes right now?

Being that was such a short fishery with a small number for total encounters it seems odd to focus on attacking our selective fisheries.

Also there were a lot of keepers and a high success rate so I'm surprised at that statement of more mortalities than kept fish.

I think most of know that reducing the minimum size limit would alleviate allot of release mortality concerns.

Could probably have a two fish bag during the whole winter fishery and far fewer releases while increasing access to hatchery origin chinook.

Thank you,

Carl Nyman

Fish Finders Private Charters

[www.fishingseattle.com](http://www.fishingseattle.com)

(206) 632-2611

Sent from my phone.

On Mar 26, 2019, at 3:15 PM, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Good Afternoon Everyone,

I have been meaning to update everyone for several days, but each day seems to be full before it even starts... I'll do my best in this email to describe the events of the 1<sup>st</sup> PFMC meeting, the subsequent state and tribal meetings, where things stand today, and some things to expect next week in Lynwood.

The first PFMC meetings took place from March 6-12 in Vancouver, WA. The Ocean options that were developed capture a wide range of alternatives that will provide a lot of flexibility when crafting final seasons in the ocean this year. The tribes expressed great concern over the Columbia River Coho forecasts and how the recent year trends are towards over-predicting. The low option for Coho attempts to address some of these concerns by keeping last year's sub-area caps in place for the recreational and troll fisheries in Areas 2,3, and 4 and moves the remaining quota to Area 1. The Coho options are much better than previous years, while the Chinook options are very similar to last year. I have attached the modeling results from the meeting (Labeled Chin 1119-Middle option and Coho Options). Please remember that for both Chinook and Coho modeling thus far, what is modeled is this year's abundances and ocean options with LAST YEAR'S Puget Sound fisheries.

After our NOF Public Meeting on March 19 in Olympia, we had 2 days of tribal meetings in Lacey. Tribes continue to have concerns surrounding mark-selective fisheries. This year they have focused on fisheries where we have more mortalities due to releases than we have harvested catch. This is not a regular occurrence in most areas, but recent years in Area 5 in the summer and Area 10 in the winter were a focus. There was also a lot of consternation surrounding modeling and fishery proposals. As of today, there is not an agreed to co-manager joint model run with proposed 2019-20 fisheries. Unrelated to recreational opportunities but for your information, the tribes have also made Chum fisheries a major discussion item this spring, so staff have also devoted quite a bit of time to addressing those concerns.

The modeling results coming out of the PFMC meetings show that on several of our key Chinook stocks, we have a long way to go to meet our conservation and management objectives. It is difficult to know how little or how much we need

to move, due to the lack of agreement on initial modeling of this year's package. I know that I have been warning folks for a while that Stillaguamish and Mid-Hood Canal stocks would be the biggest drivers to our fisheries, but I also want to make sure that we are not losing sight of other concerning stocks like Nisqually and the Mid-Sound Aggregate (Lk WA, Green, Puyallup). Wherever we land on an Ocean option for Chinook, could have a big effect on how much or how little we need to shape fisheries. I have also attached the AEQ tables for the mid-ocean option and where the impacts are in sport fisheries. Lastly, I have attached a word document that we will be putting on the website soon that gives people the 3 main things we are considering when crafting seasons this year and then some of the fishery modifications we are considering this year.

I want to reiterate that no fishery proposals are set in stone yet. I am hopeful that by the time we gather together next Wednesday, we will have updated co-manager model runs that will provide us more clarity in our fishing package. There is also a planned plenary session for next Wednesday afternoon with the tribes. I also want to reiterate, that we have received direction from both our F&W Commission and NOAA that we need to be considering the needs of SRKW when crafting our fisheries this year. Once again, we are in a very dynamic situation with regards to recreational fisheries in the Sound and things will be very fluid going forward. David and I will do our best to communicate as much as we can as soon as we can.

Mark Baltzell

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<Chin1119.pdf>

<Coho\_Options\_PS\_2019.pdf>

<1119\_MidOceanOpt\_AEQ.pdf>

<Puget Sound Marine Recreational Seasons 2019.docx>

**From:** [Highliner Charters](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Pinks  
**Date:** Friday, March 22, 2019 7:37:42 AM

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Ok. Our regulations state that the bag limit is two fish, one of which can be a chinook. For the record, in coming years I'm for applying this (one of which can be a chinook) to Coho and Pinks as well. I know this is out of your purview, but I read recently about the increased bag limits on bottom fish on the coast and I shook my head. They cited the success of past rebuilding efforts as the reason. Alternatively, I feel giving anglers increased opportunity by way of actual days on the water rather than increased bag limits makes much more sense. Conservatively increasing the number of days we can fish, combined with very narrow bag limits keeps us on the water but constantly rebuilding stocks. The same logic could be applied when a certain stock is in a downward trend (like our Pinks and Coho), ie, keep the anglers on the water but restrict their daily bag limit.

b

On Thu, Mar 21, 2019 at 7:22 AM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Thanks Brett. Our plan for this year was to make pink retention in the marine areas part of the daily limit like it was in 2017.

**From:** Highliner Charters <[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)>  
**Sent:** Wednesday, March 20, 2019 6:37 PM  
**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Subject:** Pinks

Mark can we look at limiting the pinks to (1) this season, at least in Area 7. The last few runs have been dismal up here and after looking at the data I see no reason why we can't just include Pinks in the (2) fish bag limit. Given that Coho run about the same time up here there would still be a reasonable chance to put two fish in the box and yet we would be giving the pinks a chance to rebuild without having to close it down. I don't think this proposal would meet with too much opposition. What do you think?

b

--

Highliner Charters  
360.770.0341  
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[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

--

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360.770.0341  
[www.highlinercharters.com](http://www.highlinercharters.com)  
[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

**From:** [PL Pattillo](#)  
**To:** [Carl Nyman](#)  
**Cc:** [Adicks, Kyle K \(DFW\)](#); [Andy Marks \(andrew.marks@comcast.net\)](#); [Art Tachell \(Artt@tacomaparks.com\)](#); [Baltzell, Mark E \(DFW\)](#); [Brandon Mason \(brandon\\_jacob\\_mason@yahoo.com\)](#); [Brett Rosson \(Highliner\\_charters@gmail.com\)](#); [Dave Croonquist \(dcroonquist@gmail.com\)](#); [David McCraney \(dlmccraney@hotmail.com\)](#); [Frank Urabeck \(urabeck@comcast.net\)](#); [Gabe Miller \(gmiller@farwestsports.com\)](#); [Gage Little \(Gage.little@gmail.com\)](#); [Gary Krein \(gary@allstarfishing.com\)](#); [Hughes, Kirt M \(DFW\)](#); [Keith Robbins \(flymooch@aol.com\)](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Riedesel \(markriedesel@hotmail.com\)](#); [Mark Yuasa \(Mark@nmta.net\)](#); [Norm Reinhardt \(1greatrhino@wavecable.com\)](#); [Ryley Fee \(ryleyf@gmail.com\)](#); [Stephenson, Ann E \(DFW\)](#); [Steve Kesling \(luckyblindsquirrel@yahoo.com\)](#); [Stormer, David G \(DFW\)](#); [Thomas Drews \(thomas.a.drews@boeing.com\)](#); [Thomas Nelson \(tom@theoutdoorline.com\)](#); [dgstormer@gmail.com](#); [rgarner755 \(rgarner755@aol.com\)](#)  
**Subject:** Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019  
**Date:** Wednesday, April 24, 2019 2:39:17 PM

---

All,

Adding to Carl's concern, it seems that WDFW has inserted additional conservatism for a fishery that is already managed well beyond any precautionary approach applied to other fisheries they manage. I think WDFW made a miscalculation by closing 8-2 in the midst of sensitive NoF negotiations. I don't see evidence that the move prevented negative outcomes. It's hard to believe that managing for the agreed total encounters of the LOAF commitment could have produced a worse outcome for our winter fisheries next year. To our knowledge the co-management process didn't even allow for discussion of in-season management.

Pat

On Wed, Apr 24, 2019 at 2:23 PM Carl Nyman <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)> wrote:

Thank you David,

It does not entirely answer my question. I have the understanding that these winter fisheries are managed to an objective of "total encounters" and not unmarked encounters.

I can see that to pass the red face test it might be wise to sometimes close when we grossly exceed unmarked encounters. but when mildly exceeding them I'm not sure it's a big red flag especially when other times and areas the encounters are significantly lower than forecasted on sub categories such as unmarked encounters.

Thank you,

Carl Nyman

Fish Finders Private Charters

[www.fishingseattle.com](http://www.fishingseattle.com)

(206) 632-2611

Sent from my phone.

> On Apr 24, 2019, at 1:37 PM, Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)> wrote:

>

> Hi, Carl:

>

> If you recall the last preliminary draft report (03/31/2019) for 8.1/8.2; the total unmarked Chinook encounters estimate was 99% of FRAM modeled encounters and prompted the agency to close this area. We are at 101% of planned total unmarked encounters and almost two and a half times the legal unmarked encounters guideline as of the 4/15 estimate. WDFW felt it was prudent to maintain the closure since we have exceeded the planned "wild" impact. I hope this helps address your question.

>

> Cheers,

> David

>

> -----Original Message-----

> From: Carl Nyman <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>

> Sent: Wednesday, April 24, 2019 12:39 PM

> To: Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>

> Cc: Andy Marks ([andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)) <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>; Art Tachell ([Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)) <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>; Brandon Mason ([brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)) <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>; Brett Rosson ([Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)) <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>; Dave Croonquist ([dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)) <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>; David McCraney ([dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)) <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>; [dgstormer@gmail.com](mailto:dgstormer@gmail.com); Frank Urabeck ([urabeck@comcast.net](mailto:urabeck@comcast.net)) <[urabeck@comcast.net](mailto:urabeck@comcast.net)>; Gabe Miller ([gmiller@farwestsports.com](mailto:gmillier@farwestsports.com)) <[gmiller@farwestsports.com](mailto:gmillier@farwestsports.com)>; Gage Little ([Gage.little@gmail.com](mailto:Gage.little@gmail.com)) <[Gage.little@gmail.com](mailto:Gage.little@gmail.com)>; Gary Krein ([gary@allstarfishing.com](mailto:gary@allstarfishing.com)) <[gary@allstarfishing.com](mailto:gary@allstarfishing.com)>; Keith Robbins ([flymooch@aol.com](mailto:flymooch@aol.com)) <[flymooch@aol.com](mailto:flymooch@aol.com)>; Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Kyle Sorenson ([Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)) <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>; Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>; Mark Riedesel ([markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)) <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>; Mark Yuasa ([Mark@nmta.net](mailto:Mark@nmta.net)) <[Mark@nmta.net](mailto:Mark@nmta.net)>; Norm Reinhardt ([1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)) <[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)>; Pat Patillo ([pattillopl@gmail.com](mailto:pattillopl@gmail.com)) <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>; rgarner755 ([rgarner755@aol.com](mailto:rgarner755@aol.com)) <[rgarner755@aol.com](mailto:rgarner755@aol.com)>; Ryley Fee ([ryleyf@gmail.com](mailto:ryleyf@gmail.com)) <[ryleyf@gmail.com](mailto:ryleyf@gmail.com)>; Stephenson, Ann E (DFW) <[Ann.Stephenson@dfw.wa.gov](mailto:Ann.Stephenson@dfw.wa.gov)>; Steve Kesling ([luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)) <[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)>; Thomas Drews ([thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)) <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>; Thomas Nelson ([tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)) <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>

> Subject: Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019

>

> If 8-2 is at 89% why is it closed? Am I missing something?

>

> Thank you,

> Carl Nyman

> Fish Finders Private Charters

> [www.fishingseattle.com](http://www.fishingseattle.com)

> (206) 632-2611

> Sent from my phone.

>

>> On Apr 24, 2019, at 11:54 AM, Stormer, David G (DFW)

>> <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)> wrote:

>>

>> Good afternoon all,

>>

>> I am attaching the most recent estimates of Chinook encounters in areas 6 - 10. As of April 15, 2019 we are at 68% of the total encounters guideline in area 6, 86% and 72% of the total and total unmarked encounters guideline respectively in area 7, 82% of the total encounters guideline in areas 8.1/8.2 and 89% of the total encounters guideline in area 9. Some of you have asked for the Puget Sound Fisheries section of the 2019\_20 LOAF. It

should be ready for dissemination soon and I will distribute it to you as soon as I get the final version. Please let us know if you have any questions.

>>

>> Cheers,

>> David

>>

>>

>> David Stormer

>> Puget Sound [Recreational Fisheries](#) Management Unit Washington

>> Department of Fish and Wildlife

>> 1111 Washington St SE

>> NRB 6th Floor

>> Olympia, WA 98501

>> Office : 360-902-0058

>> Mobile: 360-280-3048

>> Fax : 360-249-4628<tel:(360)%20249-4628>

>> Email: [David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)

>>

>> <winmail.dat>

>

>

**From:** [Carl Nyman](#)  
**To:** [Stormer, David G \(DFW\)](#)  
**Cc:** [Andy Marks \(andrew.marks@comcast.net\)](#); [Art Tachell \(Artt@tacomaparks.com\)](#); [Brandon Mason \(brandon\\_jacob\\_mason@yahoo.com\)](#); [Brett Rosson \(Highliner.charters@gmail.com\)](#); [Dave Croonquist \(dcroonquist@gmail.com\)](#); [David McCraney \(dlmccraney@hotmail.com\)](#); [dgstormer@gmail.com](#); [Frank Urabeck \(urabeck@comcast.net\)](#); [Gabe Miller \(gmiller@farwestsports.com\)](#); [Gage Little \(Gage.little@gmail.com\)](#); [Gary Krein \(gary@allstarfishing.com\)](#); [Keith Robbins \(flymooch@aol.com\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Baltzell, Mark E \(DFW\)](#); [Mark Riedesel \(markriedesel@hotmail.com\)](#); [Mark Yuasa \(Mark@nmta.net\)](#); [Norm Reinhardt \(1greatrhino@wavecable.com\)](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [rgarner755 \(rgarner755@aol.com\)](#); [Ryley Fee \(ryleyf@gmail.com\)](#); [Stephenson, Ann E \(DFW\)](#); [Steve Kesling \(luckyblindsquirrel@yahoo.com\)](#); [Thomas Drews \(thomas.a.drews@boeing.com\)](#); [Thomas Nelson \(tom@theoutdoorline.com\)](#)  
**Subject:** Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019  
**Date:** Wednesday, April 24, 2019 2:23:49 PM

---

Thank you David,

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Sent from my phone.

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> -----Original Message-----

> From: Carl Nyman <carl@fishingseattle.com>

> Sent: Wednesday, April 24, 2019 12:39 PM

> To: Stormer, David G (DFW) <David.Stormer@dfw.wa.gov>

> Cc: Andy Marks (andrew.marks@comcast.net) <andrew.marks@comcast.net>; Art Tachell (Artt@tacomaparks.com) <Artt@tacomaparks.com>; Brandon Mason (brandon\_jacob\_mason@yahoo.com) <brandon\_jacob\_mason@yahoo.com>; Brett Rosson (Highliner.charters@gmail.com) <Highliner.charters@gmail.com>; Dave Croonquist (dcroonquist@gmail.com) <dcroonquist@gmail.com>; David McCraney (dlmccraney@hotmail.com) <dlmccraney@hotmail.com>; dgstormer@gmail.com; Frank Urabeck (urabeck@comcast.net) <urabeck@comcast.net>; Gabe Miller (gmiller@farwestsports.com) <gmiller@farwestsports.com>; Gage Little (Gage.little@gmail.com) <Gage.little@gmail.com>; Gary Krein (gary@allstarfishing.com) <gary@allstarfishing.com>; Keith Robbins (flymooch@aol.com) <flymooch@aol.com>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <Pnwsalmonangler@gmail.com>; Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>; Mark Riedesel (markriedesel@hotmail.com) <markriedesel@hotmail.com>; Mark

Yuasa (Mark@nmta.net) <Mark@nmta.net>; Norm Reinhardt (lgreatrhino@wavecable.com) <lgreatrhino@wavecable.com>; Pat Patillo (pattillopl@gmail.com) <pattillopl@gmail.com>; rgarner755 (rgarner755@aol.com) <rgarner755@aol.com>; Ryley Fee (rileyf@gmail.com) <rileyf@gmail.com>; Stephenson, Ann E (DFW) <Ann.Stephenson@dfw.wa.gov>; Steve Kesling (luckyblindsquirrel@yahoo.com) <luckyblindsquirrel@yahoo.com>; Thomas Drews (thomas.a.drews@boeing.com) <thomas.a.drews@boeing.com>; Thomas Nelson (tom@theoutdoorline.com) <tom@theoutdoorline.com>

> Subject: Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019

>

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>

> Thank you,

> Carl Nyman

> Fish Finders Private Charters

> www.fishingseattle.com

> (206) 632-2611

> Sent from my phone.

>

>> On Apr 24, 2019, at 11:54 AM, Stormer, David G (DFW) <David.Stormer@dfw.wa.gov> wrote:

>>

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>>

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>>

>> Cheers,

>> David

>>

>>

>> David Stormer

>> Puget Sound Recreational Fisheries Management Unit Washington

>> Department of Fish and Wildlife

>> 1111 Washington St SE

>> NRB 6th Floor

>> Olympia, WA 98501

>> Office : 360-902-0058

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>> Fax : 360-249-4628<tel:(360)%20249-4628>

>> Email: David.Stormer@dfw.wa.gov

>>

>> <winmail.dat>

>

>

**From:** [mark riedesel](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: SoundWatch 2018 report out  
**Date:** Tuesday, March 19, 2019 6:45:19 PM

---

Mark,

I've looked at some of this briefly. I have very serious concerns as to the accuracy of this document and how it could or would be used.

Thanks for sharing it with me!

Mark

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Sent:** Tuesday, March 19, 2019 2:23 PM  
**To:** Mark Riedesel; Brett Rosson  
**Cc:** Pat Patillo (pattillopl@gmail.com)  
**Subject:** FW: SoundWatch 2018 report out

FYI

---

**From:** Becker, Penny A (DFW) <Penny.Becker@dfw.wa.gov>  
**Sent:** Tuesday, March 12, 2019 10:43 AM  
**To:** Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>; Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>; Peterson, Laurie L (DFW) <Laurie.Peterson@dfw.wa.gov>; Davis, Jeffrey P (DFW) <Jeffrey.Davis@dfw.wa.gov>; Gardner, Eric S (DFW) <Eric.Gardner@dfw.wa.gov>; Pamplin, Nathan (DFW) <Nathan.Pamplin@dfw.wa.gov>; Anderson, Hannah E (DFW) <Hannah.Anderson@dfw.wa.gov>; Culver, Michele K (DFW) <Michele.Culver@dfw.wa.gov>; Dunlop, Michelle K (DFW) <Michelle.Dunlop@dfw.wa.gov>; Myers, Alan A (DFW) <Alan.Myers@dfw.wa.gov>; Bear, Steve H (DFW) <Steve.Bear@dfw.wa.gov>; Windrope, Amy (DFW) <Amy.Windrope@dfw.wa.gov>; Susewind, Kelly (DFW) <Kelly.Susewind@dfw.wa.gov>; Bennett, Rebecca P (DFW) <Becky.Bennett@dfw.wa.gov>; Mullins, Russ K (DFW) <Russ.Mullins@dfw.wa.gov>; McCausland, Carrie A (DFW) <Carrie.McCausland@dfw.wa.gov>  
**Subject:** SoundWatch 2018 report out

Hello team mates,

FYI, our partner SoundWatch just released their annual report for education, outreach and monitoring of vessel activity around orcas (attached). For anyone interested, Page 53 has specific data about the voluntary no-go zone that we promoted last year.

This information will be helpful to us for the future for sure.

Regards

Penny

*Penny A. Becker, Ph.D.*  
*Washington Department of Fish and Wildlife*  
*600 Capital Way North*  
*Olympia WA 98501*  
*Office: 360-902-2694*

**From:** [PL Pattillo](#)  
**To:** [Andrew Marks](#)  
**Cc:** [Stormer, David G \(DFW\)](#); [Art Tachell](#); [Brandon Mason](#); [Brett Rosson](#); [Carl Nyman](#); [Dave Croonquist](#); [David McCraney](#); [David Stormer](#); [Frank Urabeck](#); [Gabe Miller](#); [Gage Little](#); [Gary Krein](#); [Keith Robbins](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Kyle Sorenson](#); [Baltzell, Mark E \(DFW\)](#); [Mark Riedesel](#); [Mark Yuasa](#); [Norm Reinhardt](#); [rgarner755](#); [Ryley Fee](#); [Stephenson, Ann E \(DFW\)](#); [Steve Kesling](#); [Thomas Drews](#); [Thomas Nelson](#)  
**Subject:** Re: updated chinook and coho sport seasons  
**Date:** Monday, April 15, 2019 10:50:52 AM  
**Attachments:** [Chin Matrix 2019 comparison.xlsx](#)

---

All,

I think the attached spreadsheet captures accurately the changes in Puget Sound marine areas chinook sport opportunity for this year's agreement compared to last year's agreement and, for longer term contrast, to 2014 seasons. Comparisons for Areas 9 and 10 summer seasons are difficult because they are likely much shorter than the matrix graphs depict.

I express some caution still with using these without more time for WDFW or advisors to triple check accuracy.

Pat

On Mon, Apr 15, 2019 at 9:57 AM <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)> wrote:

Dave, Thank you for the information.

Might you prepare a spreadsheet for us that contrasts PS Non-tribal fisheries this year versus the immediate past year for us? We need to be able to characterize the loss of opportunity as a result of this years NOF.

Thank you.

Andy

-----Original Message-----

From: Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>  
Sent: Monday, April 15, 2019 9:51 AM  
To: Andy Marks ([andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)) <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>; Art Tachell ([Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)) <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>; Brandon Mason ([brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)) <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>; Brett Rosson ([Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)) <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>; Carl Nyman ([carl@fishingseattle.com](mailto:carl@fishingseattle.com)) <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>; Dave Croonquist ([dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)) <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>; David McCraney ([dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)) <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>; [dgstormer@gmail.com](mailto:dgstormer@gmail.com); Frank Urabeck ([urabeck@comcast.net](mailto:urabeck@comcast.net)) <[urabeck@comcast.net](mailto:urabeck@comcast.net)>; Gabe Miller ([gmiller@farwestsports.com](mailto:gmillier@farwestsports.com)) <[gmiller@farwestsports.com](mailto:gmillier@farwestsports.com)>; Gage Little ([Gage.little@gmail.com](mailto:Gage.little@gmail.com)) <[Gage.little@gmail.com](mailto:Gage.little@gmail.com)>; Gary Krein ([gary@allstarfishing.com](mailto:gary@allstarfishing.com)) <[gary@allstarfishing.com](mailto:gary@allstarfishing.com)>; Keith Robbins ([flymooch@aol.com](mailto:flymooch@aol.com)) <[flymooch@aol.com](mailto:flymooch@aol.com)>; Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Kyle Sorenson ([Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)) <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>; Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>; Mark Riedesel ([markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)) <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>; Mark Yuasa ([Mark@nmta.net](mailto:Mark@nmta.net)) <[Mark@nmta.net](mailto:Mark@nmta.net)>; Norm Reinhardt ([1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)) <[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)>; Pat Patillo ([pattillopl@gmail.com](mailto:pattillopl@gmail.com)) <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>; rgarner755 ([rgarner755@aol.com](mailto:rgarner755@aol.com))

<[rgarner755@aol.com](mailto:rgarner755@aol.com)>; Ryley Fee ([rileyf@gmail.com](mailto:rileyf@gmail.com)) <[rileyf@gmail.com](mailto:rileyf@gmail.com)>;  
Stephenson, Ann E (DFW) <[Ann.Stephenson@dfw.wa.gov](mailto:Ann.Stephenson@dfw.wa.gov)>; Steve Kesling  
([luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)) <[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)>; Thomas Drews  
([thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)) <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>; Thomas Nelson  
([tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)) <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>

Subject: updated chinook and coho sport seasons

Good morning, everyone:

Thanks for all your constructive comments, concerns and questions earlier this morning. I am attaching the latest revisions of the sport seasons for chinook and coho. Please let us know if you have any questions or comments.

Thanks!

David

David Stormer  
Puget Sound Recreational Fisheries Management Unit Washington Department of  
Fish and Wildlife  
1111 Washington St SE  
NRB 6th Floor  
Olympia, WA 98501  
Office : 360-902-0058  
Mobile: 360-280-3048  
Fax : 360-249-4628<tel:(360)%20249-4628>  
Email: [David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Winter Troll catch history  
**Date:** Monday, April 1, 2019 1:44:41 PM

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Thanks Mark. Helpful. Not exactly encouraging, but it's something to work with and you're being straight with us. There isn't much optimism out there with the current NoF "non-process".

You and Kyle and Ron have probably thought of this argument, but the 8% management objective was developed originally by the Tribe to represent the average for 2009-14. I don't think WDFW should acknowledge that 4% is half of 8% because there is no requirement to share wild impacts on a 50% basis. The non-Indian impact for 2009-14 was 4.6% and the tribal impact was just 2.5%. So if WDFW agrees to 4%, then it is tantamount to agreeing to reduce the non-Indian impacts by 0.6% (-14%) from the average, while the tribes *increase* their fishery impact by 1.5% (+60%). WDFW might consider taking the high road of conservation with 4% - accept that for our fisheries, but request the tribes maintain their impact at the average of 2.5%. Force the tribes to live with the principle that they fought for in the Plan negotiation.

My 2 cents.

As for mid-Hood Canal, I hope WDFW is talking to NMFS about the ocean squeeze. I will not bring it up again given the blasting I got at PFMC 1 for suggesting this was an inside-outside allocation issue. Hasn't anyone thought about requesting some sort of flexibility for MHC given the clear fact that the status of that population will not be remedied by further fishery reductions. Request NMFS set up a post-North of Falcon working group to address this non-conservation issue with a real fix such as introducing a new stock to take the place of the current, non-existent management unit.

Pat

On Mon, Apr 1, 2019 at 1:03 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Pat,

I called and left you a message and hopefully you and I can connect at some point before Wed. Things are not looking very favorable from my perspective. Not having any sort of indication as to what moves the tribes may make or not and not having agreed to co-manager modeling is really making the depth of the conservation problem a complete unknown. Stillaguamish has indicated that they would like to see NT impacts on stilly at 4% on UM and 6% on Marked Stilly. At least it is half! Ron has not agreed that we would land at 6% on Marked, but once again, I'm not sure it is going to matter because of Mid HC. I have attached a tool that Derek came up with that shows different modeling scenarios (Cuts) and what it would take to get to our objectives. The tool takes the middle ocean option and puts Winter troll at 3k. Since Derek developed the tool in a number of different model runs, I do not have exact T and NT splits on impacts, but I think Derek indicated that we were more that 2% higher than the tribes on Mid HC. The tool works by putting X's in "Chosen" column and adjusting as necessary. Our Chum meeting is just starting, so hopefully I will be able to touch base with you later today.

Cheers.

Mark

## Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>  
**Sent:** Saturday, March 30, 2019 8:44 AM  
**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Subject:** Re: Winter Troll catch history

Mark,

I know you are busy but can I talk with you before you head to Lynnwood?

Pat

On Thu, Mar 28, 2019 at 2:32 PM PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)> wrote:

Mark,

Thanks.

I dredged it out of the TAMMs from the validation runs for 2009-16. Same average

(2108) for that period.

If the average catch was modeled, it would reduce impacts from Chin1119 as follows:

Mid Hood Canal - 0.7%

Stillaguamish - 2.6%

Nooksack Early - 1.5%

Lake Washington/Green/Puyallup - 1.9%

Again working with that middle PFMC option, with realistic modeling of that fishery we would not have a LW/Green/Puyallup problem, we wouldn't have a Nooksack problem and we'd be within one point of solving mid Hood Canal annual challenge.

When will Puget Sound sport fishery inputs be updated to reflect this year's abundances and expected harvest/encounter rates? The PFMC runs show nearly all Puget Sound areas with slightly higher rates using last year's inputs - nearly one full point increase on mid-Hood Canal. With lower south sound hatchery production down as predicted, and as compared to last year, surely the predicted catches will be lower as well. It seems to me that adjustment of those predicted catches/impacts with 2018 seasons would be an important step to take prior to next Wednesday.

It's going to come down to Stillaguamish and the Tribes will want WDFW to reduce to 8% proportionally from this first set of runs. Remember that song - "wipeout". That's where it is headed. Three weeks to go!

If you have time for a chat before next Wednesday, please let me know.

Pat

On Thu, Mar 28, 2019 at 1:45 PM Baltzell, Mark E (DFW)  
<[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Pat.

In a nutshell, it doesn't. I'm not sure I can share specific information, but it is something I have looked at. Remember there are rules about us sharing single tribe catch information. I went back to 2009 and looked at all of the winter catches until now. The low yearly catch was

472 and a high of 3780. Average over that time period is 2,109.

Hope that helps.

Mark

**From:** PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>

**Sent:** Thursday, March 28, 2019 7:48 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** Winter Troll catch history

Mark,

Would you please point me to who has the catch history for the winter treaty troll fishery? I'd like to understand how that matches up with the 8,500 model number.

Thanks

Pat

## SECTION 3 PUBLIC COMMENTS PROGRAM COMMENTS

May 11, 2019

Kelly Susewind, Director, WDFW  
Ron Warren, Assistant Director, WDFW  
Craig Burley, Fish Management Division Leader, WDFW  
Jennifer Whitney, District 13 Fish Biologist

Dear Director Susewind, Assistant Director Warren, Fish Management Division Leader Burley, and District 13 Biologist Whitney,

I am writing to express my displeasure and disdain regarding the Department's management actions regarding fresh water recreational fishing seasons on the Stillaguamish River in north Puget Sound. Instead of being open to recreational fishing for the usual summer seasons for sea run cutthroat trout and summer run steelhead, the river remains closed until September 16, foreclosing three-and-one-half months of recreational stream fishing opportunity. The alleged reason is conservation of ESA-listed Stillaguamish River Chinook salmon. I say alleged because any informed person knows that the conservation benefit to Chinook salmon is entirely imaginary when your own Departmental analyses estimate impacts ranging from 1.4 to 4 salmon if the recent year closures hadn't occurred.

The conservation concern regarding Stillaguamish Chinook salmon is real. As a discreet stock these Chinook, referring to natural spawners here, have not been able to maintain a recruit per spawner of 1.0 or greater for decades. Lacking the efforts of the Stillaguamish Indian Tribe to culture this Chinook stock at the tribal hatchery for the last 40 years, they would more likely than not be extinct by now. The Stillaguamish watershed is in such poor condition, largely from forest practices on highly unstable slopes, that the natural habitat can no longer sustain its endemic Chinook salmon population. And the Oso landslide of five years ago, with its extreme sediment deposition, may have been the final nail in the coffin for Chinook productivity in the Stillaguamish basin.

Fishing, and especially the sea run cutthroat and summer steelhead fishing on the Stillaguamish River is not now, nor ever has been, the problem with this Chinook population. The legitimate conservation concern is impacts to wild (and hatchery) Chinook, which are extremely depressed (but are encountered in marine fisheries in vastly larger numbers than would ever be handled in the summer flyfishing season). Impacts to Stillaguamish Chinook in freshwater are already minimal with flyfishing only, single barbless hooks, and no bait requirements. If greater restrictions were actually necessary to further conserve Chinook, imposing regulations allowing only the use of floating fly lines and a small maximum barbless hook size, like size 6, would satisfy most anglers who participate in the fishery and decrease the odds of hooking a Chinook to nearly zero. Of course, use of gear restrictions to prevent the catch of Chinook in the fishery would only be "effective" if the actual goals of management were to simultaneously conserve Chinook as well as preserve the sport fishing seasons for gamefish. As it stands, a fishery with essentially no impacts to Chinook is being indefensibly sacrificed under false pretenses.

It should also be noted that Stillaguamish Chinook are threatened with extinction independent of any and all fishing in WA waters. The fly fishing anglers don't target Chinook, and the number incidentally hooked while sport fishing pales in comparison to the number poached each year by snaggers, spear guns, and dynamite (all of which I have witnessed in years gone by). Stillaguamish Chinook are in a world of hurt, but closing sport fishing makes zero measurable difference to the future of this salmon population.

Yet again WDFW has sold out recreational angling to appease treaty tribes in the North of Falcon negotiations (which are closed to public observation). Word on the street is that the WDFW negotiator(s) want to get along with the treaty tribes. Well, of course, most of us want to get along with the tribal co-managers and pretty much everyone. However, informed citizens are quite aware that if WDFW were to tell one of the treaty tribes how to manage its treaty fishery, the tribe would tell WDFW to “go pound sand.” Or words to that effect. Yet when a tribe demands that WDFW close a recreational fishery that has zero measurable effect of Chinook stock abundance, WDFW, you, the people I and other anglers hire with our state tax and license fee dollars to manage angling opportunity for us, decided to throw sport fishing under the bus for imaginary salmon conservation benefits, presumably so you can “get along with the tribes.” This is the third time in the most recent four seasons that WDFW has decided to bite the hand that feeds it for alleged and or imaginary salmon conservation benefits, at the direct expense of recreational fisheries that have zero or de minimus effects on salmon.

Let me be clear: I am not opposed to the treaty tribes exercise of their legal fishing rights. However I am very much opposed to the “tail wagging the dog,” where tribes dictate to the Department what recreational seasons may occur and when and how. That is not their bailiwick. The Department must advocate for its primary constituents, those of us who fund the Department’s very existence and keep the doors open at the NRB. So stop already with biting the hand that feeds you!

The only reasonable recourse and effective conservation action is for the tribal, state, and federal fishery agencies to support the continued operation of the Stillaguamish Tribe's hatchery effort to maintain the unique Stillaguamish Chinook stock, very much like the California condor hatchery effort. Meanwhile, even if you could stop all fisheries in the marine environment that might take a Stillaguamish Chinook salmon, the stock would remain imperiled for the reason I mentioned above.

WDFW leadership is driving the agency to the brink of anadromous sportfishing irrelevancy. WDFW sought recreational license and fee increases again in the latest legislative session, but was rebuffed due largely to push back by sportfishing groups. These are the same people who have supported WDFW funding in the Legislature for decades. The reversal in support is directly because WDFW has chosen not to support or advocate for various recreational fisheries. And that begets the logical question of why should anglers whose fisheries are unnecessarily closed continue to support WDFW? Much as I loathe Legislative meddling, it’s become

increasingly apparent that an overhaul of the Department from the outside may be preferable to the status quo. Washington's recreational anglers deserve a Departmental Fish Program that works for the people who pay for it. Wouldn't you agree?

Steve Fransen

Olympia, WA 98513  
360-790-8939

## Adicks, Kyle K (DFW)

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**From:** Assistant Director, Fish Program (DFW)  
**Sent:** Tuesday, May 28, 2019 11:44 AM  
**To:** Salmo\_g@hotmail.com  
**Cc:** Susewind, Kelly (DFW); Burley, Craig C (DFW); Whitney, Jennifer L (DFW)  
**Subject:** Stillaguamish River recreational fishing closure

Dear Mr. Fransen,

Thank you for your letter and for sharing your concerns about the loss of fresh water recreational fishing opportunity on the Stillaguamish River. Your input is valued and I would like to offer an explanation on how we got to the point of restricting Stillaguamish gamefish seasons to protect Chinook.

As you state, the conservation concern regarding Stillaguamish Chinook salmon is real. The status of wild Puget Sound Chinook salmon listed under the Endangered Species Act (ESA) has not improved in the 20 years since ESA listing, in spite of the huge efforts across multiple arenas to recover these populations. WDFW agrees with your thinking that until habitat is improved in the Stillaguamish watershed, maintaining and expanding the Chinook hatchery recovery programs for both summer and fall Chinook is a key component to the recovery of Stillaguamish Chinook stocks. The Stillaguamish Tribe and WDFW continue to work together on this recovery effort which involves three hatcheries, the two Stillaguamish tribal hatcheries and WDFW's Whitehorse Hatchery.

The Chinook forecast for the Stillaguamish River this year is estimated to be 943 fish (376 wild, 567 hatchery). This forecasted low abundance of Stillaguamish Chinook automatically restricts all fisheries to an 8% total exploitation rate on this stock. In contrast, the 2018 predicted abundance was approximately 1,500 Chinook, allowing a 13% exploitation rate. You may or may not be aware that in order for the co-managers to obtain a permit to fish under the ESA, all of our planned fisheries combined must meet the management objectives in any given year. At the beginning of the pre-season, last year's fisheries were entered into the planning model with this year's forecasted abundances. The exploitation rate for that scenario was almost 16%. It should not be surprising that constraints on fishing and impacts of fisheries grow tighter as ESA-listed populations fall to these critically low levels.

As you mention, fishing seasons in Puget Sound are not set unilaterally by decision of the Department of Fish and Wildlife; rather, they are the result of complex and dynamic negotiations with the tribal co-managers during the North of Falcon process. Not surprisingly, as abundances of salmon returning to individual watersheds continued to decline, the tribes in those watersheds have also faced significant decreases to their fisheries. While the economic impact and angler disappointment around sport fishery closures in various areas and months are undoubtedly large, they are weighed against treaty tribal fisheries that will not be able to harvest enough fish to meet the ceremonial or subsistence needs of the tribe. The final co-manager fishing package this year used all of the allowable impacts on Stillaguamish Chinook. Both Tribal fisheries and State fisheries were greatly curtailed for next year and the non-treaty sector ended up with more impacts (52%) on Stillaguamish Chinook than the tribes (48%). The Stillaguamish Tribe reduced their impacts to just 22 Chinook, 15 in directed ceremonial and subsistence fisheries and another 7 during their coho fisheries. While I agree that there is likely very little Chinook salmon mortality in a fly-fishing only, barbless hook, catch and release gamefish fishery such as the one we have historically had on the North Fork Stillaguamish, I don't think we can say that there is zero mortality. Combined Stillaguamish in-river sport gamefish fisheries had a modeled impact of three Chinook mortalities. We reserved those three fish impacts for gamefish all the way through the PFMC discussions until the last day. Ultimately those three fish were needed to meet the conservation objectives for

Stillaguamish Chinook. Your point about poachers and snaggers taking Chinook has not gone unnoticed by WDFW enforcement or tribal co-managers and is often used as an argument for why all sport fisheries should be closed when Chinook are present in the river. It is also difficult to conduct limited creel evaluations that could aid in our discussions while developing season structure without adequate funding to do so. Restricting Stillaguamish gamefish seasons once again this year was not a decision WDFW took lightly or without considering the impacts to anglers such as yourself.

Once again, thank you again for taking the time to share your thoughts and concerns. We recognize and appreciate recreational anglers' substantial contribution to the fishing-related economy of our state and their concern for the sustainability of our salmon runs for generations into the future.

If you should have any further questions, please contact Edward Eleazer at the WDFW Region 4 Mill Creek Office at (425) 775-1311 ext. 109 or via email at [Edward.eleazer@dfw.wa.gov](mailto:Edward.eleazer@dfw.wa.gov). We wish you the best of luck fishing this year.

## Adicks, Kyle K (DFW)

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**From:** Assistant Director, Fish Program (DFW)  
**Sent:** Tuesday, May 28, 2019 4:17 PM  
**To:** alpinequest08@yahoo.com  
**Cc:** Whitney, Jennifer L (DFW)  
**Subject:** FW: North of Falcon Decision on Nfk Stillaguamish River:

Dear Mr. McLeod,

Thank you for your letter and for sharing your concerns about the loss of gamefish opportunity on the Stillaguamish. The Washington Department of Fish & Wildlife deeply appreciates the work that you and your Grandfather have done. Not only in the preservation of fly-fishing traditions, but also demonstrating their important role that they play in conservation. Your input is greatly valued and I would like to offer an explanation on how we ended up restricting Stillaguamish gamefish seasons to protect Chinook.

As you know, the status of wild Puget Sound Chinook salmon listed under the Endangered Species Act (ESA) has not improved in the 20 years since ESA listing, in spite of the huge efforts across multiple arenas to recover these populations. It should not be surprising that constraints on fishing and impacts of fisheries grow tighter as ESA-listed populations fall to critically low levels, in spite of our efforts to boost fishing through hatcheries and mark-selective fisheries.

The Chinook forecast for the Stillaguamish River this year is just over 900 fish (376 wild, 567 hatchery). Stillaguamish Chinook were the most limiting stock for almost all Puget Sound fisheries this year. I know that you are aware that fishing seasons in Puget Sound are not set unilaterally by decision of the Department of Fish and Wildlife; rather, they are the result of complex and dynamic negotiations with the tribal co-managers during the North of Falcon Process. Not surprisingly, as abundances of salmon returning to individual watersheds have dwindled, the tribes in those watersheds have faced massive decreases to their fisheries. While the economic impact of sport fishery closures in various areas and months are undoubtedly large, they are weighed against treaty tribal fisheries that will not be able to harvest enough fish to meet the ceremonial or subsistence needs of the tribe. The final co-manager fishing package this year used all of the allowable impacts on Stillaguamish Chinook. Tribal fisheries were greatly curtailed along with sport fisheries and the non-treaty sector ended up with more impacts (52%) on Stillaguamish Chinook than the tribes (48%). The Stillaguamish Tribe reduced their impacts to just 22 Chinook, 15 in directed ceremonial and subsistence fisheries and another 7 in coho fisheries.

While I agree that there is likely very little Chinook salmon mortality in a fly-fishing only, barbless hook, catch and release gamefish fishery such as the one your Grandfather established, and WDFW hopes to restore to the North Fork Stillaguamish, I don't think we can say that there is zero mortality. Combined Stillaguamish in-river sport gamefish fisheries had a modeled impact of three Chinook mortality. We reserved that three fish impact for gamefish all the way through the PFMC discussions until the last day. Ultimately those three fish were needed to meet the conservation objectives for Stillaguamish Chinook. Restricting Stillaguamish gamefish seasons once again this year was not a decision WDFW took lightly or without considering the impacts to anglers such as yourself.

Thank you again for your thoughtful letter and comments on the 2019 North of Falcon process, and I look forward to your continued engagement on these difficult topics.

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**From:** "Ken j. Mcleod" <[alpinequest08@yahoo.com](mailto:alpinequest08@yahoo.com)>  
**Date:** May 8, 2019 at 6:30:35 PM PDT  
**To:** "[Ron.Warren@dfw.wa.gov](mailto:Ron.Warren@dfw.wa.gov)" <[Ron.Warren@dfw.wa.gov](mailto:Ron.Warren@dfw.wa.gov)>  
**Subject:** Fw: North of Falcon Decision on Nfk Stillaguamish River:  
**Reply-To:** "Ken j. Mcleod" <[alpinequest08@yahoo.com](mailto:alpinequest08@yahoo.com)>

On Wednesday, May 8, 2019 6:28 PM, Ken J. McLeod <[alpinequest08@yahoo.com](mailto:alpinequest08@yahoo.com)> wrote:

The North Fork and South Fork Stillaguamish Rivers have been North of Falcon (tribal co managers mandates) "emergency closed" to all fishing from May 25 to Sept 15th due to predicted low wild Chinook run of 2019. "Sigh." Once again there is little if any mortality rate on Chinook Salmon wherein an established fly fishing only, barbless hook, catch & release regulation is in effect as has been for decades in the North Fork. I am extremely disenchanted with the WDFW, for allowing this to happen, caving its charter as it relates to sport game fishing pertaining to trout & steelhead and catering to this North of Falcon decision making process. "Total loss of opportunity." Aside but related, I have little left of confidence in the WDFW to date primarily due to this decision. My family has owned property on the North Fork since 1928, my grandfather established the 1st fly fishing only river in the U.S.A, the Nfk Stilly, shame on the Dept. and powers to be for not standing firm for sports fishing opportunity herewith.

Sincerely,

Ken James McLeod

past pres. Steelhaed Trout Club of Wa. (5 terms)

Snohomish Sportsmen's Club member since 1990

past Trail Blazers Club member (alpine lakes fish stockers) 32 years

grandson of the founding father (Ken McLeod) of Washington Game Dept.

cc: Jennifer Whitney  
Ron Warren



State of Washington  
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: P.O. Box 43200, Olympia, WA 98504-3200 • (360) 902-2200 • TDD (360) 902-2207  
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

May 16, 2019

George Harris  
President and CEO  
Northwest Marine Trade Association  
1900 N. Northlake Way, Suite 233  
Seattle, Washington 98103-9087

Dear Mr. Harris:

Thank you for your recent letter to the Fish and Wildlife Commission on the 2019 North of Falcon process, and for your interest in Puget Sound salmon fishing. Your views, concerns and input are valued, so I would like to offer some explanations and slightly different perspectives on several of the issues that you have raised.

As you know, the status of wild Puget Sound chinook salmon listed under the Endangered Species Act (ESA) has not improved in the 20 years since ESA listing, in spite of the huge efforts across multiple arenas to recover these populations, including all of the steps taken to limit the impact of fisheries, such as the implementation of mark-selective recreational fisheries throughout the Sound. I agree that mark-selective fishing is the backbone of Washington's salmon fishing industry, and is the only tool we have that allows us to continue salmon harvest in many areas of the state with ESA-listed salmon populations. While mark-selective fisheries can minimize the impact of harvest of hatchery fish on wild populations, they still result in mortality of wild fish. It should not be surprising that constraints on fishing and impacts of fisheries grow tighter as ESA-listed populations fall to critically low levels, in spite of our efforts to boost fishing through hatcheries and mark-selective fisheries.

Your letter states that "WDFW's decision to decrease mark-selective fishing opportunity... was not essential to conservation of wild chinook." You are probably aware that fishing seasons in Puget Sound are not set unilaterally by decision of the Department of Fish and Wildlife; rather, they are the result of complex and dynamic negotiations with the tribal co-managers during the North of Falcon process. Not surprisingly, as abundances of salmon returning to individual watersheds have dwindled, the tribes in those watersheds have faced massive decreases to their fisheries. While the economic impact of marine recreational fishery closures in various areas and months are undoubtedly large, they are weighed against treaty tribal fisheries that will not be able to harvest enough fish to meet the ceremonial or subsistence needs of the tribe. The final co-manager fishing package this year used all of the allowable impacts on at least two Puget Sound chinook stocks – Nooksack and Stillaguamish. Additional mark-selective fishing opportunity in times and areas that have impacts on either of these stocks would have required

reductions to other fisheries. While you may be unhappy with planned fisheries due to the allocation outcomes between state and tribal fisheries, or between various state fisheries, decreases to fisheries were necessary to meet conservation objectives for listed chinook this year.

You also express disappointment that WDFW partially justified the Puget Sound closures as conservation for southern resident killer whales (SRKW). WDFW described all of the fishery reductions as being made for chinook conservation, but as also likely providing some benefit to SRKW. It was unclear whether NMFS would ask for additional restrictions to fisheries to protect SRKW this year, as they did after the end of North of Falcon in 2018. While NMFS did not implement their draft framework for evaluating the effects of Puget Sound fisheries on SRKW prey, it was clear that they would be evaluating fishery effects. Ignoring the potential effects of the fishery reductions in 2019 to SRKW, rather than outlining their potential benefit to NOAA prior to NOAA's ESA review of Puget Sound fisheries, did not seem like a prudent approach given the increased scrutiny this year.

Finally, you claim that WDFW did not follow the Commission's North of Falcon policy C-3608 in three areas:

1. *Prioritize chinook harvest for recreational opportunity in Marine Catch Area 7.* WDFW planned 2019 recreational fisheries using a balanced approach across the different Puget Sound marine catch areas, which follows the Commission's 2019-2023 North of Falcon policy. Chinook harvest was prioritized for recreational opportunity throughout Puget Sound, and fishery reductions were made across diverse Puget Sound marine areas to reduce impacts on stocks of concern, while distributing meaningful fishing opportunities across the various marine catch areas. The recreational closure of Area 7 in August was proposed after careful consideration of the impacts of that fishery on critical stocks, and comparison to the number and size of closures that would have been needed in other areas to have a similar effect on critical stocks.
2. *Provide proper stakeholder input and transparency:* WDFW's annual efforts during the North of Falcon process to simultaneously negotiate fisheries with tribal co-managers while engaging stakeholders to receive and consider their input as we work to provide transparency is a struggle in any year, and was particularly a challenge in 2019 due to the dynamic and complex manner in which negotiations unfolded. Because of the emphasis placed on negotiations around chum salmon management, fishery models for chinook and coho were not available until much later in the process than normal. Department staff were clear with the public and advisors throughout the process that reduction to recreational fisheries in Puget Sound would be necessary in 2019, and sought input on how to prioritize reductions. In large part due to delays in having updated fishery models available, little constructive input was received prior to negotiations reaching the point where proposals needed to be made in the co-manager negotiations. This was frustrating for WDFW as it was for the public, but dissatisfaction with the decisions that were made does not indicate there was not opportunity for input leading up to the decisions.

George Harris  
May 16, 2019  
Page 3

3. *Use mark-selective fishing to maximize opportunity and protect depressed stocks:*  
Virtually all recreational chinook fishing planned in Puget Sound in 2019 will be mark-selective, and conservation objectives for all stocks are projected to be met. While you may be unhappy with the allocation outcomes between various state fisheries, or between state and tribal fisheries, this does not mean that the policy goal of using mark-selective fishing to maximize opportunity was not followed.

Finally, you commented on the lack of action to renegotiate a ten-year Chinook Management Plan for Puget Sound. As you know, the original plan submitted in December 2017 was deemed insufficient by NOAA, necessitating more work by the co-managers before a revised plan can be submitted. WDFW was also asked to take another look at several components of the plan and renegotiate them. WDFW has continued work on renegotiation and revision of the plan over the past year. Negotiating an ESA fishery management plan that covers 14 chinook management units with 16 tribal governments is obviously a complex and difficult task. While there have not been significant breakthroughs in negotiations to report, I will ensure that the Department communicates developments with the revised plan to the Commission and to the public.

Thank you again for your thoughtful letter and comments on the 2019 North of Falcon process, and I look forward to your continued engagement on these difficult topics.

Sincerely,



Kelly Susewind  
Director

cc: Fish and Wildlife Commission  
Ron Warren



April 19, 2019

1900 N. Northlake Way, Suite 233  
Seattle, WA 98103-9087

Phone: (206) 634-0911  
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Fish & Wildlife Commission  
600 Capitol Way North  
Olympia, WA 98501

Re: North of Falcon 2019 & Chinook Harvest Management Plan

Dear Commissioners:

I am writing to you today about my deep concern that WDFW's 20-year investment in Puget Sound mark-selective fisheries is in serious jeopardy.

Based on the recently concluded North of Falcon salmon season-setting process, I question WDFW's commitment to mark-selective fishing and priority use of hatchery chinook salmon for recreational fishing opportunity that is the back bone of Washington's \$6.9B recreational boating and fishing industry (attached), with recreational anglers providing nearly 40% of WDFW funding through license fee sales. Following are my specific areas of concern.

#### Massive Closures of Puget Sound Mark-Selective Fisheries

WDFW's decision, this past weekend, to decrease recreational mark-selective fishing opportunity in Puget Sound for the 2019-2020 seasons by 50% or more in some of the most popular fishing areas was not essential to conservation of wild chinook and will be devastating to our member businesses. WDFW reported that Puget Sound hatchery chinook returns in 2018 were up 24% over the 10-year average and a similar forecast was made for the 2019 season. With the status of Puget Sound wild chinook salmon remaining critical, benefits from the massive public investment in our hatcheries requires the Department's full employment of mark-selective fishing.

#### No Action by WDFW to renegotiate 10-year Chinook Management Plan

WDFW has been directed by the Commission to renegotiate the Puget Sound Chinook Harvest Management Plan (Management Plan) with the Puget Sound Tribes and to my knowledge WDFW has taken no meaningful steps to accomplish this. Attached is my December 28, 2017 letter to the Commission outlining my concerns with the Management Plan. Sadly, as we predicted the "devastation" of mark-selective recreational fishing in Puget Sound is taking place.

Fish and Wildlife Commission

April 19, 2019

Page 2

Southern Resident Killer Whale (SRKW) Conservation

I serve on Governor Inslee's SRKW Task Force and I am disappointed that WDFW partially justified the Puget Sound closures as SRKW conservation. The Task Force did not recommend recreational fishing closures for SRKW conservation for either prey availability or vessel disturbance. Additionally, NMFS has not directed WDFW to implement additional restrictions to Puget Sound recreational fisheries for SRKW conservation this year

WDFW is not following Commission Policy C-3608

In three areas WDFW did not follow commission policy during this year's North of Falcon.

1. Prioritize chinook harvest for recreational opportunity in Marine Catch Area 7
2. Provide proper stakeholder input and transparency
3. Use mark-selective fishing to maximize opportunity and protect depressed stocks

I would welcome the opportunity to meet with you in person to discuss these concerns more thoroughly.

Thank you for your service.

Sincerely and respectfully,



George Harris  
President & CEO

cc: Kelly Susewind, Director Washington Department of Fish & Wildlife



December 28, 2017

1900 N. Northlake Way, Suite 233  
Seattle, WA 98103-9087

Phone: (206) 634-0911  
Fax: (206) 632-0078

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Fisheries Supply Company

---

*Promoting the  
Recreational Boating  
Industry in the  
Pacific Northwest*

Fish & Wildlife Commission  
600 Capitol Way North  
Olympia, WA 98501

Re: Puget Sound Chinook Harvest Management Plan

Dear Commissioners:

I am writing to you today about the most concerning issue to ever come across my desk as President/CEO of the Northwest Marine Trade Association (NMTA) – The Comprehensive Puget Sound Chinook Harvest Management Plan.

NMTA recently marked its 70th year of service, and is the nation's oldest and largest regional marine trade association with 725-member businesses and public ports, many of which are small, family-owned businesses. Our state has nearly 240,000 boats registered statewide and more than half of these boats are used for fishing. These boats are built, serviced, sold, outfitted and stored by our members. In 2014, Governor Inslee's Blue Ribbon Outdoor Recreation Task Force recognized that boating and fishing are the largest contribution – over \$3.2 billion (National Marine Manufacturers Association) - to Washington's outdoor recreation economy of \$21.6 billion (Recreation and Conservation Office's "Economic Analysis of Outdoor Recreation in Washington State").

The conservation of Puget Sound Chinook is of the utmost importance to NMTA. Since 2001, the state of Washington has removed the adipose fin of hatchery fish prior to their release, allowing Washington anglers to selectively harvest hatchery salmon and conserve wild salmon. In addition, this has allowed fishery managers to improve sampling and data collection. This Plan effectively ends our state's 20-year investment in Mark-Selective Fishing.

After careful review of the Plan immediately after it was released on December 1, 2017, NMTA and recreational fishing groups had two meetings with the Director and staff of the Washington Department of Fish and Wildlife (WDFW). We learned from information provided by WDFW that the Plan would devastate selective fishing in Puget Sound for the next 10 years, confirming our worst fears.

Fish and Wildlife Commission  
December 28, 2017  
Page 2

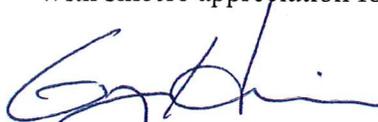
Equally troubling was the total lack of transparency in the development of the Plan. The public, businesses or anglers had no idea of what was in the Plan. In fact, it appears that not even the Fish and Wildlife Commission (Commission) was aware of what was in the Plan until after it was signed.

Finally, to make matters worse we learn that even with closing down selective fishing in Puget Sound, we still will not recover critical Chinook runs as described on page 167 of the Plan - "*due to the limited productivity of the existing habitat, it is unlikely that fishery actions alone can rebuild Stillaguamish Chinook to higher levels.*" NMTA would like to know why WDFW would support a Plan that closes Puget Sound selective fishing and provides no conservation benefit for doing so.

It is our understanding that the Commission sets policies, goals and objectives for WDFW and the Director and as stated on the WDFW website "*establishes the basic rules and regulations governing the time, place, manner and methods used to harvest or enjoy fish and wildlife.*" We recognize that there are tribal and federal requirements which the Commission must take into account when carrying out these responsibilities. But, these requirements validate the responsibility to inform the public about these matters. Especially when the consequences of attempting to fulfill those responsibilities are so serious.

We are asking that the Commission intervene in the implementation of the Plan before it is finalized. We are ready and willing to work with WDFW to develop a Plan that achieves appropriate selective fishing opportunities and conservation benefits.

With sincere appreciation for your public service,



George Harris  
President/CEO

cc: The Honorable Jay Inslee, Governor  
Jim Unsworth, Director Washington Department of Fish & Wildlife  
State of Washington Senate & House Members  
State of Washington Members of Congress  
Mike Grossman, Washington Attorney General's Office

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SOURCES: Unless otherwise noted, data is from the NMMA 2017 Recreational Boating Statistical Abstract, NMMA 2018 Boating Economic Impact Study, and NMMA's 2016 Recreational Boating Participation Study.

**From:** [lars.sorensen](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Area 7 Summer Fishing  
**Date:** Monday, April 15, 2019 3:47:06 PM

---

Hello Mark,  
I know management of these issues are very challenging.

I heard that there was some conversation about no fishing in Area 7 this Summer.

All interested parties need to work together. Sports fisherman, commercial and tribal. The burden cannot just be on one group.

Last year just days after the Summer season closed for Coho, I saw 20+ purse seine boats just off Open Bay and the end of Henry Island. I'm not sure how this makes sense.

It's unfortunate that sports fisherman get hit the hardest. We are allowed one fish most of the time and have a very restricted season.

I hope you understand and will consider how important fishing is for those who live in the San Juan Islands. I believe that any shut down will only lead to poaching and more illegal activities and prevent the true honest fishermen from being on the water to assist in observation and keeping others honest. We are your eyes on the water when the season is on.

Thank you,  
Lars Sorensen  
1641 San Juan Drive  
Friday Harbor, Wa. 98250  
360-378-0118 Home  
206-718-8800 Mobile

**From:** [Marc Krueger](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re:  
**Date:** Friday, April 19, 2019 8:02:38 AM

---

Mark,

This does not explain why your closing area 7 and not other areas. This is not the only area that you will find those particular runs.

I am retired now, but I owned and operated a salmon charter business in Anacortes for 22 years. Every year there is a cut back it happens in area 7.

I believe it's because we are a smaller user group and you want to appease the larger group of fishermen. Less bitching.

This is wrong!!!

If your going take August, give us June. That would protect the runs you mentioned.

I'm sure that won't happen. One thing about our WDFW, once they take some away, we usually never get it back.

Thanks

Marc Krueger  
360 770 6563

On Wed, Apr 17, 2019, 4:22 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Marc,

Thank you for your recent correspondence regarding salmon fishing in Area 7. The 2019-20 sport fishing package was a result of the need to meet management and conservation objectives for several Puget Sound Chinook stocks listed under the Endangered Species Act including Stillaguamish, Nooksack Springs, and the Mid-Hood Canal aggregate. Unfortunately, wild salmon stocks continue to decline not only in Puget Sound, but all through the Salish sea. Canada also recently announced delayed openings and closures to their Chinook seasons as well to address conservation of these stocks.

<https://islandfishermanmagazine.com/dfw-announces-chinook-fishery-shutdown/>

WDFW does not take closing fisheries lightly. We recognize and regret the impacts that these fishery closures will have on fishers and the communities that support fishing opportunities. My contact information is below should you have further questions.

Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6th Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** Marc Krueger <[fistale5@gmail.com](mailto:fistale5@gmail.com)>

**Sent:** Saturday, April 13, 2019 7:02 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:**

Keep area 7 open in August. Why are we the only area with new restrictions.

I wouldn't mind annual limits but let us fish.

Marc Krueger

Long time Anacortes fisherman

**From:** [Dunlop, Michelle K \(DFW\)](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#)  
**Subject:** caller  
**Date:** Friday, April 19, 2019 2:52:48 PM

---

I don't know if you're routing questions from the public to the customer service staff or if one of you are returning calls.

Jerry, from Stanwood, would like to know why we're closed in January in MA7. He says there are no whales around at that time ☹ and no fish are migrating to the rivers to spawn. And he wants to know if it's open in December.

360-629-3548

**From:** [FISHPGM \(DFW\)](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Dufault, Aaron M \(DFW\)](#)  
**Cc:** [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#)  
**Subject:** FW: Area 7 August closure  
**Date:** Wednesday, April 24, 2019 10:14:36 AM

---

**FYI...**

**Jeff**

---

**From:** Director (DFW) <[director@dfw.wa.gov](mailto:director@dfw.wa.gov)>  
**Sent:** Tuesday, April 23, 2019 10:36 AM  
**To:** FISHPGM (DFW) <[FISHPGM@dfw.wa.gov](mailto:FISHPGM@dfw.wa.gov)>  
**Subject:** FW: Area 7 August closure

FYI

---

**From:** Jeff Gipson <[gigrizz@yahoo.com](mailto:gigrizz@yahoo.com)>  
**Sent:** Friday, April 19, 2019 3:01 PM  
**To:** Director (DFW) <[director@dfw.wa.gov](mailto:director@dfw.wa.gov)>  
**Subject:** Area 7 August closure

Sent from [Mail](#) for Windows 10

Dear sir,

Due to the history of Washington's salmon decline we can finally agree that something needs to be done to preserve and expand this resource. From the beginning everyone involved came up with every excuse imaginable to support fish stocks decline. Thanks to a federal judge, his sole decision caused the deaths of our wild stocks. The order was made as a payment for a century old treaty. The way I see it is this: If there is to be compensation, then it should be done as a nation. In other words not just have all the sportsman pay, anyone who lives here must share the burden. The Bolte Decision is a complete failure. No recovery will happen unless there's a new plan of compensation. The main reason I wrote to you is to let you know that out of all the marine areas, area 7 is the least populated fishery compared to the rest. They don't target local stocks. Most of the fish in August are unclipped. Canada has a non-retention fishery before August, Then it becomes a one fish limit until September in which goes to 2 fish. I feel we should have at least non-retention fishery in August.

Thank You,  
Graydon

Gipson

**From:** [NorthofFalcon \(DFW\)](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** FW: SRKWs and salmon - North of Falcon process and allocation  
**Date:** Friday, April 12, 2019 9:11:26 AM

---

Sister?

---

**From:** Anne Dalrymple <darkover@me.com>  
**Sent:** Tuesday, April 9, 2019 11:23 AM  
**To:** NorthofFalcon (DFW) <NorthofFalcon@dfw.wa.gov>  
**Subject:** SRKWs and salmon - North of Falcon process and allocation

Hello -

I was a volunteer at People for Puget Sound in the early 2000 in order to work to protect our orcas. We have even fewer now.

They are starving and we are seeing the end of our J, K and L pods unless dramatic rescue action is taken.

Please give our Southern Resident orcas a "seat at the table" and be taken into consideration when allocations and management decisions are made re salmon.

Thank you - Anne Dalrymple  
Seattle WA 98115

---

What is North of Falcon? ☐

Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational & commercial salmon fisheries. This series of meetings – involving representatives from federal, state and tribal governments & recreational & commercial fishing industries – is known as the North of Falcon process. This process is folded into the Pacific Fisheries Management Council, which oversees fishing in the Pacific Coast region.☐

☐

The North of Falcon process integrates management of ocean fisheries between Cape Falcon (on the north Oregon coast) and the Canadian border, including fisheries in the Columbia River, Puget Sound, & inland Washington coastal waters. Columbia River fisheries are a significant component of the North of Falcon process.☐

☐

In this public process, there are allocation agreements reached between Oregon and Washington ocean and freshwater commercial and sport fisheries, as well as mandated allocation agreements between the states and treaty Indian tribes.☐

☐

Historically the orcas have not had a seat at the table during these talks or been given a harvest allocation. With the steady decline of the SRKW population due to diminishing prey abundance, fisheries managers have become aware of the need to include the SRKWs in the dialogue. The needs of the whales have been discussed on

several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues. □

□

You can help by respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made. □

**From:** [Bryan Finney](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Dufault, Aaron M \(DFW\)](#)  
**Subject:** question about pink salmon returns?  
**Date:** Sunday, March 17, 2019 9:22:29 AM

---

Mark,

Thank you for your work estimating the salmon returns this year. Do you have any insight into whether the strong pink returns we have seen over the previous few odd-year cycles will return? I understand the drop off in '19 is primarily due to outlier environmental conditions in '17. If environmental conditions stabilize do you see the pink fishery returning in the 1m+ range in future years? That has been one of our favorite fisheries in the State.

Thank you,

Bryan Finney

Bryan Finney  
President  
Democracy Live, Inc.  
[bryan@democracylive.com](mailto:bryan@democracylive.com)  
206-465-5636

**From:** [Chad Huffman](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: 8-1 and 8-2  
**Date:** Tuesday, April 23, 2019 1:47:16 PM

---

I understand protecting the resources but according to multiple fish checkers at various ramps they have had very few people with wild fish encounters compared to other areas. And the protecting of snohomish run doesn't make a lot of sense seeing how you have a scheduled fishery in the snohomish! I understand protecting fish but this is ass backwards why not just close south of hat island seeing how you're also having a fishery in the stillly what run are you protecting? Seems like north sound took it in the shorts we have the most limited fisheries to begin with. And to wipe out half of our blackmouth season when we came up short on our quota this year with a 2 fish limit part of the season. In trying to make sense of your guys' Decisions but opening an area like mukilteo south doesn't do anything to protect snohomish fish I get the hatch only but why not open all of 8-2 not just the portion that will effect the snohomish the most

Sent from my iPhone

> On Apr 23, 2019, at 12:59 PM, Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov> wrote:

>

> Hi Chad,

> Apologies for not getting back to you sooner, I was busy working on next year's fishing package. WDFW chose to close 81 and 82 early because we exceeded the amount of wild Chinook impacts that had been predicted for the season. As I'm sure you are aware, Chinook salmon are listed under the Endangered Species Act and require strict protections and limits on how many wild fish can be impacted in any given year. You are correct, we do not have the available resources to conduct test fisheries in every marine area that has a mark-selective fishery, so we ask that anglers like yourself fill out VTR reports so that we can better evaluate what is happening in the fishery. For the entire winter fishery only 18 VTR's had been turned in. Since we can only evaluate the fishery with the data we have, we chose to be more conservative in our management and close.

> Area 8-1 will be open for Coho from Aug 1- Oct 31 and Area 8-2 will be open from Aug 16-Sep 15 under mark-selective coho regulations and only in the area of 8-2 south west of the Clinton-Mukilteo ferry line. The 8-2 summer season was put in place to help protect wild Snohomish coho.

> Hope this information is helpful.

> Mark

>

> Mark Baltzell

> Washington Dept of Fish and Wildlife

> Puget Sound Salmon Fisheries Management

> 1111 Washington St SE

> NRB 6th Floor

> Olympia, WA 98501

> Email: mark.baltzell@dfw.wa.gov

> Office: 360-902-2807

> Cell: 360-688-3410

>

>

> -----Original Message-----

> From: Chad Huffman <huffmanchad58@yahoo.com>

> Sent: Tuesday, April 23, 2019 9:23 AM

> To: Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

> Subject: 8-1 and 8-2

>

> Apparently you do not return phone calls! I was contacting you in regards of 8-1,8-2 your reasoning for shutting down this fishery early makes no sense you claim it's wild encounters but we both know that's bs. Did you trade out last month for a fishery on the skagit? Us north sound fisherman are really getting tired of this bogus inseason management when you don't even have a test fisheries. I want to see these so called VTR reports that showed many

wilds being caught and correct me if I'm wrong but they are also anonymous so any anti fishing or tribal person could shut our season down by falsely reporting! I logged 35 days in 8-1 and 8-2 caught very few sublegals fish less than 10 in all trips combined and 3 wild fish encountered so it really makes no sense I talk to pretty much everyone that fishes Camano and no one has seen anything to justify your guys decision to close. In just over a years time you guys have lost over 3 months of fishing in northern puget sound are coho opportunities have dwindled makes me wonder where it ends i know many guys not even wanting to purchase license saying what's the point the min they do you will shut it down! Also regarding 8-2 I read the coho regs as only being open from ferries south am I reading this wrong?

>

> Sent from my iPhone

**From:** [alex sluyter](mailto:alex.sluyter)  
**To:** [Baltzell, Mark E \(DFW\)](mailto:Mark.E.DFW@dfw.wa.gov)  
**Subject:** Re: Area 7 restrictions  
**Date:** Wednesday, April 17, 2019 8:15:44 PM

---

Mark, closing sport fishing only targets less than 10% of fish pressure, we use a single rod/ reel and barbless hooks. If the fish and game takes salmon fishing closers seriously,  
-it doesn't make sense to ignore commercial and Native American over consumption!  
-why segregate the sport fishermen that pay abundantly for their salmon?  
-Do to mis management. The orcas are being fed king salmon in result they refuse to eat seals...  
Orcas and seals now eat king salmon.  
-blackmouth (king salmon) have been adequate in the winter, (area 7) local fishery.  
- you still charge inflating costs every year yet offer less and less.  
And demand sport fishermen cooperation...

Sent from my iPhone

> On Apr 17, 2019, at 1:41 PM, Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov> wrote:

>

> Alex,

> Thank you for your recent correspondence regarding salmon fishing in Area 7. The 2019-20 sport fishing package was a result of the need to meet management and conservation objectives for several Puget Sound Chinook stocks listed under the Endangered Species Act including Stillaguamish, Nooksack Springs, and the Mid-Hood Canal aggregate. Unfortunately, wild salmon stocks continue to decline not only in Puget Sound, but all through the Salish sea. Canada also recently announced delayed openings and closures to their Chinook seasons as well to address conservation of these stocks.

>

> <https://islandfishermanmagazine.com/dfo-announces-chinook-fishery-shutdown/>

>

> WDFW does not take closing fisheries lightly. We recognize and regret the impacts that these fishery closures will have on fishers and the communities that support fishing opportunities. My contact information is below should you have further questions.

>

> Mark Baltzell

> Washington Dept of Fish and Wildlife

> Puget Sound Salmon Fisheries Management

> 1111 Washington St SE

> NRB 6th Floor

> Olympia, WA 98501

> Email: mark.baltzell@dfw.wa.gov

> Office: 360-902-2807

> Cell: 360-688-3410

>

>

>

> -----Original Message-----

> From: alex sluyter <sluyteralex@gmail.com>

> Sent: Tuesday, April 16, 2019 11:09 AM

> To: Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

> Subject: Area 7 restrictions

>

> My name is Alex Sluyter, I buy fishing licenses for my family of 5 every year!

> Restrictions on area 7 are negligent and careless!

> Target netting the river or the ocean netting and your salmon return will improve!!

> Native Americans make huge profits off our government funded salmon! And they net 100% of the river.

- > Our salmon migrate into public waters and get depleted by commercial nets with 100% kill rate.
- > I am taxed on my boat, my trailer, tackle sales, and liscensing! My fisherman friends have given up on the misappropriation of fishing funds in WA and I am giving up on you as well if you shorten another season! You can't just take our money and run!
- > Alex Sluyter 360-202-8130
- >
- >
- > Sent from my iPhone

**From:** [Warren, Ron R \(DFW\)](#)  
**To:** [Lance Yerkes; Director \(DFW\); Baltzell, Mark E \(DFW\)](#)  
**Subject:** RE: July 25th  
**Date:** Monday, April 15, 2019 1:59:18 PM

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Mr. Yerkes, Thank you for your written comments. Offering predictability to our public is a high priority. Unfortunately, this year's low abundance of numerous Chinook populations caused us to align start dates to avoid effort shifts between marine areas. Although this year's situation is regrettable, hopefully next year's forecasted returns will be at an abundance that allows for the predictability we strive to achieve.

Thank you again for taking the time to share your thoughts with us and I hope you stay involved into the future.

Ron Warren  
WDFW – Fish Program  
360-902-2799 office  
360-791-3945 cell

---

**From:** Lance Yerkes <LanceY@Ocularinc.com>  
**Sent:** Monday, April 15, 2019 10:34 AM  
**To:** Director (DFW) <director@dfw.wa.gov>; Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>; Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Subject:** July 25th

Good morning Gentlemen,

My name is Lance Yerkes and I wanted to take a minute to comment on the salmon season setting. I took the opportunity to listen to each of the 4 conference calls that concluded today. I didn't feel it was my place to speak at all because I was just trying to learn and would have felt out of place saying anything. My basic frustration is that it is becoming nearly impossible to make plans for a specific fishery. My family makes a trip every year to Fort Flagler State Park to camp and fish the Port Townsend area. If any of you have stayed at this park you will know how difficult it is to get a summer reservation. You have to book exactly 9 months prior to your date of arrival or you won't get in. So this year I am booked from July 16<sup>th</sup> to the 25<sup>th</sup>. I know I don't need to tell you guys why I choose July 16<sup>th</sup> each year. Obviously learning that it won't open until the 25<sup>th</sup> wasn't good news. I know that the quota would have been significantly reduced if it opened on the 16<sup>th</sup> so I understand why you didn't do that but now I have no idea what to expect in the future. I share this because I know it isn't just me, there are many others at this park and other parks that will have the same issue. Not to mention all of the folks that make moorage reservations at marinas. So now I will most likely cancel my reservation and hope to find a spot somewhere else so we can still fish. My reservation cost me \$508. The cost to cancel will be \$258 because I have had the reservation for over 6 months. You are always looking for ways to increase revenue; you should talk to the state

parks because they have it figured out! I know you guys work extremely hard and I would not want to be in your position but anything you can do to get consistent start dates would really help. Thanks for taking the time to listen.

Best Regards,  
Lance

**From:** [Highliner Charters](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: NOF Lynwood  
**Date:** Monday, April 1, 2019 4:00:41 PM

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Thanks,

You know well the drum I've been beating for a year now, that being cuts made to meet objectives for Stilly and MHC be counted toward the SRKW available harvest objectives. I just ask that this is kept as part of the conversation.

b

On Tue, Apr 2, 2019 at 7:13 AM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Brett,

Sorry you won't make it. To say things are challenging would be an understatement. We have big conservation objectives to try and get at this year and it is not just Stilly. Mid-HC is also rearing its ugly head again this year and I'm not sure anything we do for Stilly is going to solve both. What exacerbates the issues is that we still do not have co-manager agreement on modeling and how we will split the conservation burden. There have been some proposals, but nothing concrete as of yet. I'm hopeful that will change tomorrow and we can have some new results to share with folks on Wed. I will make sure to keep you in the loop on thoughts and ideas moving forward. Travel safe.

Mark

**Mark Baltzell**

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** Highliner Charters <[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)>

**Sent:** Monday, April 1, 2019 11:46 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** NOF Lynwood

Mark, I land in Seattle at 3 pm on Wednesday so I won't be at the meeting. Mark R. and a few others with interest in area 7 should be there. Any heads-up you can give me on direction would be appreciated. This way I can pass my inputs to those who will be in the room the day of.

Thanks, I know time is something you have little of this week.

b

--

Highliner Charters  
360.770.0341  
[www.highlinercharters.com](http://www.highlinercharters.com)  
[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

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[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

**From:** [Marc Krueger](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re:  
**Date:** Friday, April 19, 2019 8:02:38 AM

---

Mark,

This does not explain why your closing area 7 and not other areas. This is not the only area that you will find those particular runs.

I am retired now, but I owned and operated a salmon charter business in Anacortes for 22 years. Every year there is a cut back it happens in area 7.

I believe it's because we are a smaller user group and you want to appease the larger group of fishermen. Less bitching.

This is wrong!!!

If your going take August, give us June. That would protect the runs you mentioned.

I'm sure that won't happen. One thing about our WDFW, once they take some away, we usually never get it back.

Thanks

Marc Krueger  
360 770 6563

On Wed, Apr 17, 2019, 4:22 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Marc,

Thank you for your recent correspondence regarding salmon fishing in Area 7. The 2019-20 sport fishing package was a result of the need to meet management and conservation objectives for several Puget Sound Chinook stocks listed under the Endangered Species Act including Stillaguamish, Nooksack Springs, and the Mid-Hood Canal aggregate. Unfortunately, wild salmon stocks continue to decline not only in Puget Sound, but all through the Salish sea. Canada also recently announced delayed openings and closures to their Chinook seasons as well to address conservation of these stocks.

<https://islandfishermanmagazine.com/dfw-announces-chinook-fishery-shutdown/>

WDFW does not take closing fisheries lightly. We recognize and regret the impacts that these fishery closures will have on fishers and the communities that support fishing opportunities. My contact information is below should you have further questions.

Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6th Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** Marc Krueger <[fistale5@gmail.com](mailto:fistale5@gmail.com)>

**Sent:** Saturday, April 13, 2019 7:02 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:**

Keep area 7 open in August. Why are we the only area with new restrictions.

I wouldn't mind annual limits but let us fish.

Marc Krueger

Long time Anacortes fisherman

**From:** [4stringman@gmail.com](mailto:4stringman@gmail.com)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Shakers and mortality  
**Date:** Monday, April 1, 2019 10:20:53 PM

---

Mr. Baltzell,

I attended the Mill Creek meeting and met you there.

I just started Blackmouth fishing this year after taking 40 years off from fishing.

This year I have caught a lot of shakers and only one legal size hatchery fish. It seems to me the mortality rate is pretty high on shakers. I have had two fish in my last trip out where the hook involved an eye. I've heard those fish usually die. It seems a waste to let them go. I know they enter the food chain but has WDFW ever considered a rule change to allow, or even require fish that have eye involvement or significant bleeding to be retained if they are hatchery fish? These fish are bigger than trout, bigger than kokanee all of which have huge followings of people fishing for them. They would make good eating and would take people off the water and reduce the number of other fish being injured.

I just thought I would ask the question. I am using a pinched down barbs and I have a nice dehooker so I am trying my best to keep them ticking.

All the best,

Mike Henderson  
Whidbey Island

**From:** [Mark Litzenberger](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Skokomish  
**Date:** Tuesday, April 16, 2019 12:44:13 PM

---

So Mark,

It looks like the State gave in on the Skokomish again. Could you please let me know what the reason was? I really feel the state misled us on what happened last year. I am feel like this has gone on long enough and that no change is ever going to happen. If the sides can not come to a simple agreement in 4 years, why would we ever believe they will. It is not complicated. A clear view of the treaty and past court cases make it clear that the tribe does not have standing. I realize the state does not want a law suit, but this is ridiculous. Please give me a clear understanding of what the issue is that is holding up an agreement.

Mark Litzenberger

-----Original Message-----

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**To:** Mark.Baltzell <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Sent:** Mon, Apr 8, 2019 3:35 pm  
**Subject:** Re: Skokomish

Thanks Mark,

Like I said, some rumors were bouncing around. I figured it was best to just ask then to accept them at face value. I appreciate you taking time to respond. Good luck and I hope everything goes well.

Mark Litzenberger

-----Original Message-----

**From:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**To:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**Sent:** Mon, Apr 8, 2019 3:21 pm  
**Subject:** RE: Skokomish

Hi Mark.

Well if the tribes walked out that is news to me. I can say that so far things have been very difficult and at times I wondered which way things were going. I am hopeful headed to California that we can reach agreement and have fishing seasons in place for 2019-20. If you want to tune in, we have set up conference calls from California from Fri-Mon of next week to keep folks in the loop about what is going on. Info is on the website.

Cheers.

Mark

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**Sent:** Monday, April 8, 2019 11:43 AM

**To:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Subject:** Re: Skokomish

Mark,

I have been seeing rumors that the tribes walked out of NOF. Is this true and if so, is the department going to address this openly? I realize that some negotiations are probably going on, but if possible it would be nice to know what is happening and how it might effect the overall process. I would prefer that the State be open but any information you can give would be appreciated.

Thanks,

Mark Litzenberger

-----Original Message-----

From: Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
To: Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
Sent: Thu, Mar 7, 2019 10:31 am  
Subject: RE: Skokomish

Hi Mark,

Thanks for your note. The director and other policy representatives from the agency recently met with Skokomish tribal leadership. I was not present at the meeting, but my understanding is that it was a productive discussion and both sides are continuing to discuss the issues. I have not heard anything about the tribe proposing fees. I do not think I would be out of line to say that the state would not agree to anything that would support the tribal position of river ownership. As we move forward through the NOF process, we should gain a clearer picture of a potential river fishery for this year. I know the co-manager biological staff have also been in discussions for a potential river fishery.

Feel free to reach out and I'll do my best to provide as much information as I can.

Mark

**Mark Baltzell**

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**Sent:** Thursday, March 7, 2019 9:50 AM  
**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Subject:** Fwd: Skokomish

Mark

As we are getting very close to the NOF meeting, I was wondering if any new information has come out about the Skokomish.

The rumor I have heard is that the Tribe is holding out for fees. The fact is, that the tribe could do this without the State's approval (Several tribes, including the Quinault, Makah and Colleville tribes charge and allow some type of fishing on Tribal land). I ask that the state does not agree to this, as it will likely be considered as agreeing to the Tribe's assertion that they own the land. Once this concession is given, it will be very hard to get back to not paying. The tribe, then, would be in control of the fee and access. If they want to be compensated for some type of joint cleaning and monitoring of the river that is reasonable, or asking for an increased enforcement personal, that would be acceptable, just as long as it is not able to be perceived as an acknowledgement of their claim of ownership.

Thanks

Mark Litzenberger

-----Original Message-----

From: Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

To: Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>

Cc: Downen, Mark R (DFW) <[Mark.Downen@dfw.wa.gov](mailto:Mark.Downen@dfw.wa.gov)>

Sent: Tue, Feb 19, 2019 8:34 am

Subject: RE: Skokomish

Hi Mark

At the risk of being too optimistic, I can tell you that our new Director has had 1 meeting with the Skokomish and is slated to have another this week. He has stated to them that fishing on the river was one of his priorities. We should have an answer to the question by mid-April when the North of Falcon meetings wrap up.

The state, the co-managers and NOAA have been working for the past several years on a new Chinook plan. There are just a couple of outstanding details to wrap up and I am confident that a new plan will be submitted by the summer.

Hope my brief answers help.

Mark

## **Mark E Baltzell**

Washington Dept of Fish and Wildlife

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Email: [mark.baltzell@dfw.w.gov](mailto:mark.baltzell@dfw.w.gov)

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>

**Sent:** Monday, February 18, 2019 7:59 PM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** Skokomish

Mark,

We are now into mid-February, so I am wondering if any headway has been made with the Skokomish Tribe in opening the river. Also, you mentioned in the past that the state was thinking about getting a long term Chinook management plan that is approved by NOAA fisheries. This first came up on 2016 and was discussed at that time, but apparently not pursued. That was almost 3 years ago, so I am wondering why there has been a delay. I realize it was limited and for a one time exemption, but the tribe was able to present a passable option in less a very short time. My guess is that it has not been a priority, but if not, then why.

Thanks

Mark Litzenberger  
253-279-6706

**From:** [Rob Larsen](#)  
**To:** [Livingood-Schott, Tara L \(DFW\)](#); [Losee, James P \(DFW\)](#)  
**Subject:** Re: Minter fishery  
**Date:** Wednesday, April 3, 2019 10:30:11 PM

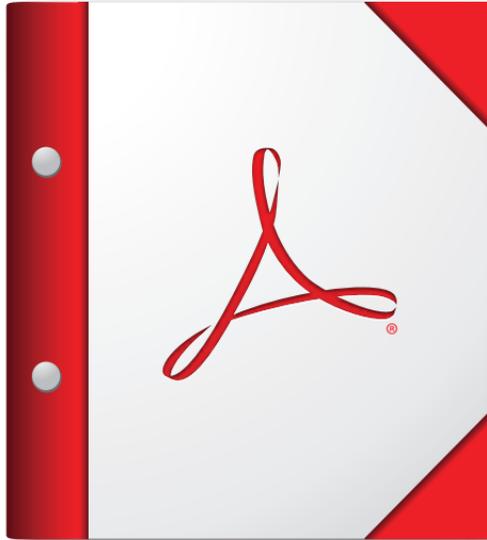
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Tara,

I appreciate both you and James taking the time to listen to our recommendations and am pleased that you are making the effort to try and increase sportsman opportunity at Minter Creek.

If a concern over egg take requires an in season update to the fishery that is certainly understandable. and critical. As far as the garbage SOF PSA would again be willing to organize a clean up and encourage fisherman to pack out what they bring in. With regards to the porta potties we are a small club and I would need to know what the cost of the additional month before agreeing to fund them. I will discuss this funding with our board if you can provide the cost for an additional month. That said last year we had encouraged the use of funds from the porta potties on the Skokomish river where they have not been used since that fishery has been discontinued. I believe we could get the Gig Harbor chapter of PSA to do organize a clean up as well. When I discussed it with their past President he had indicated that they would . I believe we can make this increased opportunity work and want to help where we can thanks for your help on this effort.

Rob Larsen  
SOF PSA President  
253-230-2839



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## Memorandum

To: Columbia River Compact States  
Fr: The Conservation Angler  
Dt: May 15, 2019  
Re: 2019 Summer and Fall Fishery Conservation Measures

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The purpose of this Memorandum is to provide comments and recommendations for wild fish conservation measures for consideration in fishery regulation and implementation actions planned or taken during 2019.

### **I. Concerns with the Columbia River Compact and North of Falcon Methodologies**

The Conservation Angler believes that the data underlying the forecasting of salmon and steelhead returns to the Columbia River suffers from multiple flawed assumptions, unacceptable margin of error ranges, excessive application of professional judgement and statistically invalid observation and creel census effort used to implement modeling runs and to estimate harvest impacts and exploitation rates.

### **II. Specific Concerns During Authorized Fisheries**

1. There are no reports of interceptions of non-target species from the Select Area fisheries.
2. There is no consistent application of a statistically valid monitoring program for select area commercial fisheries, sport fisheries or mainstem drift net commercial fisheries which is essential to establish accurate and reliable mortality and encounter rate data.
3. Methods of estimating natural-origin spawning escapement are not consistently applied in rivers without counting stations.
4. There is no clear method of accounting for illegal harvest or catch and release mortality for the shore and boat sport fishery in the data that comprises the fishery summaries year-to-year.
5. Ocean and in-river harvest rates are too high on most salmon species to allow natural-origin escapement to result in the nutrient loading necessary to provide forage for emerging and rearing juvenile salmon. Any harvest rate over 20% fails to contribute the necessary nutrients for subsequent generational survival within natal rivers.<sup>1</sup>

### **III. Compact and North of Falcon Process Issues**

The public process for the Columbia River Compact continues to suffer from late notice of public hearings and even later delivery of factual data on the issues being discussed and decided.

There continues to be a lack of transparency with the data being used by agencies to make forecasts and conduct updates on the progress of salmon and steelhead runs to the Columbia and tributaries.

Because the US v. Oregon court case is over, TAC proceedings, data and models must become publicly available.

### **IV. Ocean, Marine and In-River Harvest Regimes:**

The region has institutionalized the Causes for Recovering and Restoring Columbia and Snake River Wild Salmon and Steelhead.

1. The Ocean and Lower Columbia River are non-selective, mix-stock fisheries that are preventing recovery of ESA-listed spring and fall chinook.

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<sup>1</sup> Knudsen, E. Eric, Eric W. Symmes and F. Joseph Margraf. 2003. Searching for a life history Approach to Salmon Escapement Management. In: Nutrients in Salmonid Ecosystems: Sustaining Production and Biodiversity. Editor, John Stockner. American Fisheries Society Symposium 34.



2. Monitoring for wild populations of ESA-listed and other wild unlisted salmon (mid-Columbia Spring, Summer and Fall Chinook as well as Upper Columbia sockeye salmon) is currently accomplished by management of aggregate populations that are counted as they cross dams.
3. Fishery Managers account for harvest with creel surveys and account for wild fish escapement with dam passage counts, not spawning ground surveys.
4. While there may be spawning escapement goals or targets – also based on aggregate salmon and steelhead passage for both wild and hatchery fish of a particular species – there are no River Specific Management (RSM) criteria for spawning populations of natural-origin species. Furthermore, there are no egg-deposition criteria by river and species.
5. Columbia River and ocean harvest rates above 20% do not account for the importance of the spawned carcasses that are essential for the ensuing generation of juvenile salmon and steelhead emerging from natal river gravels.<sup>2</sup>

## **V. Concerns About 2019 Lower Columbia River Spring and Summer Chinook**

While the closure of spring chinook sport fishing in the lower Columbia River was the right thing to do, it is shocking to learn that wild spring chinook numbers in the Cowlitz and Lewis have dropped to under triple digits. How and why did this happen?

Not enough is known about status of wild populations, particularly below Bonneville Dam. Where is data on spring chinook wild escapement by natal river? How low did the wild spring chinook runs on Cowlitz and Lewis Rivers get before Federal and State managers had to take such drastic with little if any warning?

Hatchery brood escapement and sport fishing creel surveys are no surrogate to wild escapement, abundance or productivity estimates that should be established and maintained based on spawning counts or carcass surveys.

The Joint Staff Reports on 2019 forecast numbers for Upriver Columbia Spring Chinook do not contain data from the Deschutes or John Day. While these runs are part of the Mid-Columbia Chinook ESU, the failure to maintain or publish the run data is dooming these rivers (particularly the Deschutes) to the same fate as the Cowlitz or Lewis Rivers.

As is clear from recent joint staff notices, the only management concern expressed is whether hatcheries will make their egg take requirements. There is no reporting on whether rivers will make their egg deposition requirements. Why? Because there are not egg deposition or spawner escapement requirements for rivers. Thus, it is little wonder why the wild salmon and steelhead runs are slipping into extinction. The fishery agencies do not have love for wild salmon.

## **VI. Concerns about Spring – Summer chinook data**

What is the formula to determine the conversion of springers entering Columbia River mouth and then making the run update based on Bonneville passage? How do the states calculate for predation, harvest, tributary turn-off, illegal harvest and wild escapement?

The management dates delineating spring chinook and summer chinook are arbitrary for the spring and summer chinook. Furthermore, this date is based on passage at Bonneville Dam, and does not account for the on-going entry of summer chinook into the lower Columbia and their rate of harvest in Select Areas and shore-based sport fisheries.

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<sup>2</sup> Knudsen, E. Eric, Eric W. Symmes, and F. Joseph Margraf. 2003. Searching for a life history approach to salmon escapement management. Pages 261-276 in J. G. Stockner, editor. Nutrients in salmonid ecosystems: sustaining production and biodiversity. American Fisheries Society, Symposium 34, Bethesda, Maryland.



Another major management problem for managing wild summer chinook to the Snake and Upper Columbia is that the mark rate is insufficient and leads to problems estimating wild abundance and harvest rate.

Is any sampling at AFF able to refine the ability to determine Spring chinook from Summer chinook? What tools do the state's use in determining the impacts of SAFE encounters and harvest, as well as the sport and tribal impacts in terms of wild Summer Chinook escapement? What is the confidence interval on estimating wild summer chinook spawning escapement abundance on Upper Columbia and tributaries?

## **VII. Concerns About Summer Steelhead and Fall Chinook**

The forecasts for Columbia River summer steelhead and fall chinook are both quite low – with 950 wild B-run steelhead predicted to return – which is 14% lower than the 2017 pre-season forecast of 1,100 wild B-runs.

What will be done with LCR fisheries (SAFE, non-treaty mainstem commercial, sport fisheries and below-Bonneville tribal fisheries to:

- a. Minimize impacts on ESA-listed winter and early summer wild steelhead?
- b. Minimize impacts on ESA listed wild UCR and MCR summer steelhead
- c. Eliminate impacts on ESA-listed wild SR B-run summer steelhead

## **VIII. Wild Fish Sanctuaries and Required Specific Angling Practices Can Reduce Lethal Encounters**

Low wild returns and warm Columbia River water require immediate conservation action.

All cool water refugia, no matter the size or volume of water, will attract migrating wild salmon and steelhead if the Columbia River is warmer. It is a natural life-history trait of salmon, trout and steelhead. Perhaps the most important cold-water refugia is at the Deschutes-Columbia confluence, where the Deschutes will start cooling down in August, just as Columbia heats up and as the up-river salmon and steelhead migration peaks. The mouth of the Deschutes will be an incredibly important sanctuary for wild steelhead and salmon when the Columbia River is warmer. Oregon should invoke an no fishing sanctuary very similar to what was established in 2018.

All cold water refugia (CWR) will be very important to the health and productivity of ESA-listed wild salmon and particularly, wild steelhead which are known to remain in the cool-water plumes for weeks and months.

Fishing, even catch and release fishing, has an inordinate impact on wild steelhead in these locations because they are caught and released multiple times.

Fishing in sanctuary areas during warm water episodes when wild fish run sizes are low should not be permitted.

We should learn how the 2018-2019 Deschutes River Wild Steelhead return turned out by end of June. The recent wild runs have been low and present a strong case for conservation measures aimed at reducing lethal encounters. Considering the amount of angling that takes place, it is not inconceivable that Deschutes River steelheaders could encounter every single wild fish – and some- more than once.

All of us have a responsibility to minimize our impacts on these wild fish:

1. Use barbless hooks which should be mandatory in any fishery where certain species must be released
2. Use appropriate gear to allow safe and efficient landing of your steelhead
3. Keep your fish in the water when landing and unhooking it.
4. Use care when handling, photographing and releasing your catch
5. Anglers should have to rack their rods once they have taken their daily bag limit.
6. Refrain from angling when the Deschutes is over 66f.
7. Handle juvenile trout carefully when trout fishing (they may be steelhead smolts).



## **Comments in Response to Oregon and Washington Fishing Regulations in the Columbia River**

The Conservation Angler appreciates the efforts that joint state staff have given to provide angling opportunity during the dismal forecasts of the coming 2019 Summer and Fall Fisheries in the Columbia and Snake Rivers.

However, given the poor run-sizes, the opportunity to fish and retain hatchery fish, particularly in the early steelhead fishing season, rides on the backs of wild steelhead.

### **Problems with the Early Summer Fishery: June 16 thru July 31**

For the early-summer season (June 16 thru July 31) from the Astoria Bridge to just downstream of the Snake River confluence, the only fish that can be retained by anglers in the mainstem Columbia are hatchery-origin steelhead, and the daily angler bag-limit is two hatchery steelhead through June 30, and one hatchery steelhead during July. Wild steelhead and all chinook and sockeye salmon must be released unharmed.

1. The Columbia River summer steelhead run has more wild fish in the early part of the run than it does after August 1.

Bonneville Dam Passage Data: June 1 thru July 31

2018: 14,265 wild steelhead pass BON during this period  
31,220 total steelhead pass BON during this period  
**Wild Steelhead comprise 46% of the steelhead present**

2017: 10,261 wild steelhead pass BON during this period  
19,559 total steelhead pass BON during this period  
**Wild Steelhead comprise 53% of the steelhead present**

2016: 22,026 wild steelhead pass BON during this period  
56,868 total steelhead pass BON during this period  
**Wild Steelhead comprise 40% of the steelhead present**

**Therefore, the focus on steelhead angling and retention of two hatchery fish will place undue burden on the early portion of the 2019 summer steelhead. Anglers will sort through many wild fish to catch their two-hatchery fish bag limit. The high percentage of wild steelhead in the early run puts those fish at risk of high encounter rates.**

2. To make matters worse, anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Anglers who take their limit should be required to rack their rods.
3. Anglers may use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
4. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.

### **Problems with the Summer – Fall Fishery: August 1 thru December 31**

The 2019 Forecast predicts a very small run of upriver summer steelhead.

#### **Upriver Summer Steelhead: July 1 – Oct 31: 2019 Forecast is 38% of the 10-Year Average**

These steelhead are bound for the Klickitat, Deschutes, John Day, Umatilla, and other rivers in the Upper Columbia and Snake Basins such as the Grand Ronde, Clearwater, Salmon and Imnaha.

2019 Forecast for Upriver Summer Steelhead:	118,200 total A and B-run adults
TYA of Upriver A & B-run summer steelhead:	315,202 A & B-run steelhead



## 2019 Upriver Summer Steelhead Predicted to Pass Bonneville Dam

2019 Upriver Summer Steelhead	2018 Forecast	2018 Return	2019 Forecast	Run Timing
<b>Total Upriver Steelhead</b>	190,350	100,483	126,950	to BON Dam
Early summer-run (H+W)	7,950	6,483	8,750	April - June
<i>(early summer wild)</i>	<b>3,000</b>	<b>2,595</b>	<b>3,200</b>	
A-Run (total H + W)	158,000	69,338	110,200	July - Oct
<i>(A-run wild)</i>	<b>44,800</b>	<b>21,725</b>	<b>33,900</b>	
B-Run (Total H + W)	24,400	24,662	8,000	July -Oct
<i>(B-run wild)</i>	<b>3,400</b>	<b>2,382</b>	<b>950</b>	July-June
<b>Total Wild Steelhead Past BON</b>	<b>51,200</b>	<b>26,699</b>	<b>38,050</b>	April - Oct

1. Anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Therefore, anglers who take their limit should be required to rack their rods.
2. Anglers use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
3. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.
4. Jack salmon (a smaller, younger but sexually mature salmon of either chinook or Coho species) limits are 5 fish per angler per day. These limits should be reduced because of the important role they play in spawning success.
5. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The Dalles Dam and John Day Dam should be extended to at least mid-October due to the presence of wild B-run steelhead in that region.
6. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The John Day Dam and McNary Dam should be extended to at least mid-November due to the presence of wild B-run steelhead in that region.

### Cold Water Sanctuaries Are Critical for Wild and Hatchery Fish migrating up the Columbia River

The US Environmental Protection Agency (EPA) has identified dozens of cold water refugia along the Columbia. We know that 13 of these areas are extremely important to migrating salmon and steelhead.

When the Columbia River water temperatures reach 66f, the importance of these areas increases, and when the mainstem water temperatures reach 68f, they become life-saving river reaches for salmon and steelhead. At 68.5f, they become refuges for salmon and steelhead in which fish linger for weeks and months.

Commercial fishing is already prohibited in river-mouth sanctuaries.

It is time for Oregon and Washington to create sanctuaries for migrating salmon and steelhead in these 13 CWR by prohibiting all angling in specific geographic areas created by the cold-water inputs for a specific period. The time period could be tailored by historic temperature data but could also be established based on blocks determined strictly by dates of known salmon and steelhead use – but at least three months (July thru September).

**From:** [Net zero](#)  
**To:** [Lothrop, Ryan L \(DFW\)](#); [Tweit, William M \(DFW\)](#)  
**Subject:** NOF  
**Date:** Tuesday, March 12, 2019 9:50:46 AM

---

Ryan, Bill, I will be unable to attend the meeting on Mar 18 as I will be out of the State. I will try to find a substitute, but not sure if that will happen. I would like to provide a little input.

For summer chinook, it appears that due to the low run size that opportunity below Bonneville will be very limited or non existent. Due to continued under escapement to the spawning beds and the presence of too many hatchery fish on the spawning beds, we recommend that all fisheries above and below Bonneville be mark selective. The Group will probably discuss bag limits, and we recommend the limit that will provide maximum opportunity while still achieving the harvest quota.

For fall chinook, we prefer options that allow opportunity throughout the Columbia River.

With the large coho forecast, there will be lots of discussion regarding Buoy 10, the ocean, and the river. We do not have input for this item.

For summer steelhead, we recommend aggressively pursuing options that maximize opportunity in June, July, August and September since other fishing opportunities will be severely limited. Both B-Runs and summer chinook catch will be concerns. If a one fish limit extends opportunity, it should be considered as well as a schedule that reduces effort(days per week).

Have a great meeting, and the subject looks challenging.

Regards, Harry Barber

Sent from my iPhone

**From:** Giulia C. <giuliavc06@gmail.com>  
**Sent:** Saturday, April 13, 2019 1:26 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** 2019 harvest allocation and the Southern Resident orcas

---

Hello there,

I am kindly asking you, that before you finalize your recommendations to the Secretary of Commerce Wilbur Ross, you will take the Southern Resident orcas into consideration when final salmon harvest allocations and management decisions are made. These beloved cetaceans are on the brink of extinction, and if there's anyone whose future truly depends on the salmon availability, and therefore deserves a fair and equitable share of the salmon harvest, is the critically endangered Southern Resident orca population.

My best regards.

Giulia C.

**From:** Giulia C. <giuliavc06@gmail.com>  
**Sent:** Friday, April 12, 2019 5:48 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** 2019 harvest allocation and the Southern Resident orcas

---

Hello there,

I hope that before you finalize your recommendations to the Secretary of Commerce Wilbur Ross, you will take the Southern Resident orcas into consideration when final harvest allocations and management decisions are made. These beloved cetaceans are on the brink of extinction, and if there's anyone whose future truly depends on the salmon availability, and therefore deserve a fair and equitable share of the salmon harvest, is the critically endangered Southern Resident orca population.

My best regards.

Giulia C.

**From:** Krestine <nopvoices@att.net>  
**Sent:** Friday, April 05, 2019 8:08 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** 2019 North of Falcon Process Comment

---

The Southern Resident Orcas deserve to have a seat at the table during the North of Cape Falcon process. The original species of the Pacific Northwest are entitled to a fisheries harvest allocation. During the 2019 North of Falcon allocation agreements, please consider Southern Resident Orcas when allocations and management decisions are made.

Thank you for your consideration.

Krestine Reed  
Carlsborg, Washington

**From:** Sue Berkstresser <suebruiz@yahoo.com>  
**Sent:** Sunday, April 07, 2019 11:48 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** A seat at the table for Southern Resident Orcas

---

Good morning,

I'm writing today to respectfully request that allocations of salmon for our southern resident orcas be considered in this year's discussions. It has been scientifically documented that our orcas are in dire need at this time of this primary food source for their survival as a species. Many believe it would be a devastating loss if they succumb to further losses in their population.

Thank you.  
Sue Berkstresser  
Snohomish, WA

Sent from my iPhone

**From:** Elizabeth Buchter <ebuchter@gmail.com>  
**Sent:** Saturday, April 06, 2019 6:07 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** A seat at the table

---

Hello,

I have been visiting the San Juan Islands for 30 years because the orcas come to forage there in the summer. I am heart broken to see the orcas starving to death. Please consider their needs prominently when making allocations of salmon. Thank you

Sent from my iPad

**From:** Whitney Neugebauer <whitney.neugebauer@gmail.com>  
**Sent:** Wednesday, April 03, 2019 10:20 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** All areas - comments

---

Hi

Please consider the impacts these fishing rules will have on endangered Southern Resident killer whales. These whales should be the first to have access to the fish and it is our responsibility to ensure they are given priority.

I realize that this has been mandated, however the whales continue to decline and so is like to urge this process to deeply consider what's at stake and take a precautionary approach that will in the end benefit all of us in the long-term.

Thank you

Whitney Neugebauer

**From:** Anne de Marcken <ademarcken@gmail.com>  
**Sent:** Wednesday, April 10, 2019 7:30 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocate salmon for orcas

---

A quick note to add my voice to those already asking that the resident orcas be factored into this year's North of Falcon salmon allocation. This is a crucial part of a more long term solution. Think ecologically. Keep our orcas from starving.

Anne de Marcken Forbes

**From:** Heather Nicholson <heatherfold@yahoo.com>  
**Sent:** Friday, April 05, 2019 3:11 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** allocate Southern Resident Orca their food

---

Members of North of Falcon,

As a resident of Washington State, of the United States and of this planet that is naturally interconnected beyond borders, I am very concerned about the health of all ecosystems and right now especially for the Southern Resident Orca.

It is regional and global knowledge the SRO are at the brink of extinction and that their fate is tied to ours. While I don't need reasons that specifically benefit humans in order to want them to thrive, some people look to those reasons. There are plenty and some are pretty scary in regard to the future of life. The fact of the matter is the Southern Residents are an integral part of the nature of this planet and humans have put them and the planet's ecosystems in jeopardy. EVERYONE wants the Southern Resident Orca to be ensured a thriving future. And everyone wants healthy ecosystems.

Please make sure to provide ample allocations of the Southern Resident's salmon for them. We don't need it to survive. Not on our plates or in our bank accounts.

I strongly question whether it's safe to continue with commercial and sport fishing. Aside from what yourselves and others may think of as realistic possibilities or desired possibilities, the time may be soon coming to eliminate it altogether and extend an invitation and incentives to Tribes to do the same. I understand the strange rule of thumb that our industry of fish 'take' is one of the things preventing us from annihilating the fish in other ways, however it's probably time we learn how to protect what we love, simply because we love it, not because we eat it or make money from it. If we don't think of the future, we are disregarding our children and all that provides a home for us to exist.

We know the number one thing the Southern Residents need immediately is the salmon they eat. It would be egregious on our part to allow them to continue starving and go extinct. Please make sure they receive an ample allocation of their salmon.

Thank you,  
Heather Nicholson

Friday Harbor, WA

**From:** Aimee Aguilar <aimeem.aguilar@gmail.com>  
**Sent:** Friday, April 05, 2019 7:06 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation Agreements

---

Hello,

I am emailing to request that orcas are given a seat at the table and are considered during allocation and management decisions.

**From:** Erin Casellas <erin.casellas@gmail.com>  
**Sent:** Monday, April 08, 2019 7:11 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation for the southern resident killer whales

---

Hello,

My name is Erin Casellas. Please let the southern resident killer whales be considered when allocation and management decision are made. They depend on salmon fisheries as their food resource, whereas we, as a society, have the means to get food elsewhere and are not dependent on one fragile, already depleted food source. Humans have already pushed these whales to the brink of extinction, and it is our responsibility to repair what our actions have caused. We must begin reversing the adverse effects that our development has had on the ecosystems which have existed on our planet far longer than we have. It has now become our responsibility, and preserving these salmon fisheries is one of the first steps we must take. Please help make a difference.

Sincerely,  
Erin Casellas

**From:** Gloria Pancrazi <gloria@coextinctionfilm.com>  
**Sent:** Monday, April 08, 2019 6:49 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation for the southern resident orcas

---

Hi there,

My name is Gloria. Please let the Southern Resident orcas be given a seat at the table and be taken into consideration when allocations and management decisions are made. They need salmon, we don't. We can't watch them die off one by one because of our lack of action to fix what we've broken. Please help make a difference.

Many thanks,  
Gloria Pancrazi

**From:** tiffainethomas.auriol@laposte.net  
**Sent:** Wednesday, April 10, 2019 12:30 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation for the southern resident orcas

---

Dear All,

My name is Tiffaine. Please let the Southern Resident orcas be given a seat at the table and be taken into consideration when allocations and management decisions are made.

They need salmon, we don't. We can't watch them die off one by one because of our lack of action to fix what we have broken.

Please help make a difference.

Thank you very much!

Best Regards,

Tiffaine Auriol

**From:** Diane Chantler <di\_plymouth@icloud.com>  
**Sent:** Friday, April 05, 2019 2:53 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation of fishing quotas

---

Please consider the Southern Resident Killer Whales in your allocations- they are in desperate need of salmon as this is their only source of food.

I have been following their plight for some time and have watched the traumatic loss of members of these close knit families through starvation, due to the catastrophic drop in the salmon population and competition for this vital food source.

I am writing from the UK, one of many overseas followers who are desperate to see them thrive, not die from starvation.

Thank you for your consideration.

Diane Chantler  
Plymouth, UK.

**From:** BONNIE GRETZ <bgwhaluv@comcast.net>  
**Sent:** Friday, April 05, 2019 4:57 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation of salmon

---

I respectfully request that you the Southern Resident Killer Whales be given "a seat at the table" and that a decent portion of the estimated harvest be allotted to them. While humans have many choices of food, they do not. It is our responsibility, as guardians of the Salish Sea, to restore the habitat so they have a chance to survive and thrive.

Thank you so much for your consideration.

Bonnie Gretz

Coupeville, WA

**From:** Romina Y <romina.yamashiro84@gmail.com>  
**Sent:** Tuesday, April 09, 2019 10:08 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocations and management

---

To whom it may concern,

I hereby respectfully ask you that the Southern Resident orcas be "given a seat at the table" and taken into consideration when allocations and management decisions are made.

There is only 74 of these type of orcas left in the wild and their food is 95% made out of Salmon. They are starving into extinction.

Thank you for your consideration.

Sincerely,  
Romina Yamashiro

**From:** Starry Medicine <starrymedicine@gmail.com>  
**Sent:** Monday, April 15, 2019 4:30 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocations for the SRKW

---

To whom it may concern,

Please be a powerful voice for our Southern Resident Killer Whales and include their Chinook needs in your allocations. They are literally starving to death and they must have abundant Chinook for their survival. We do not need fish for our survival and it is time we learn to share with the life around us. Please, I wholeheartedly implore you to include them in our allocations. Your efforts on their behalf will mean so much to them and to all those who love them.

Thank you so much for your time and consideration.

Warmly,  
Bonnie Sharkey

**From:** Andrew Derksema <sjifishing@gmail.com>  
**Sent:** Sunday, April 14, 2019 6:33 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Area 7

---

I'm writing this email as a concerned charter operator of the San Juan Islands Area 7. Removing the entire month August for fishing will do nothing to improve the stillaguamish run of chinook salmon. The river health should be addressed before taking away opportunity. I encourage you to look at the cost benefit of shutting an area completely down over a river that could arguably be considered already extinct.

If the decision is because of the whales, I encourage you to look at the recent data and check to see how often the SRKWs have actually been in area 7 during August over the last three years.

The loss of August will economically impact a great deal of businesses from charters, boat sales, tackle shops to even hotels and restaurants in the islands. Some of these businesses barely get by as is with a continually reduced season. And what about the lost funds from reduced license sales?

It is also an unfair burden to put on one area when areas west of seven have no proposed reductions. The area 7 salmon not only travel through strait of Georgia but straight of Juan de fuca as well. Would it not be more prudent to spread the pain through other areas?? Reduce smaller chunks of opportunity over a larger geographic area? OR reduce use similar to crab where the area is shut down two days a week instead of one entire month? It seems like management could be more creative and less economically painful. I encourage you to reconsider the area [7 August](#) closure. Sincerely, Andy Derksema

Sent from my iPhone

Sent from my iPhone

**From:** [Hal Beecher](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Area 13 minimum length for Chinook salmon harvest in late summer and early fall  
**Date:** Friday, March 22, 2019 9:56:59 AM

---

I support the proposed reduction in minimum length for sport harvest of hatchery Chinook salmon in Area 13 (south Puget Sound) during late summer and early fall months. I understand that there is currently a large surplus at the hatchery that is then sold for pet food. Reduction in minimum length to 18" would allow increased recreational harvest in south Puget Sound, probably increasing the value of that production without interfering with orca feeding as orcas rarely feed in south Puget Sound in late summer.

Hal Beecher

**From:** debra4stuff@gmail.com  
**Sent:** Tuesday, April 09, 2019 12:52 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** chinook salmon allotment for SRKWs

---

Please ensure that a sufficient allotment of chinook salmon is provided for the critically endangered Southern Resident Orcas. They require over 300 lbs of chinook per day, and do not have other options available to them, unlike humans who can fish for other species.

Orca scientists such as Ken Balcomb say that getting the Southern Resident Orca a lot more salmon this year is crucial to their reproductive success and ultimate survival.

Sincerely yours,  
Debra Ellers  
Port Townsend, WA

Sent from [Mail](#) for Windows 10

**From:** Garrett Moody <diehardfisherman215@gmail.com>  
**Sent:** Friday, March 29, 2019 5:50 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Coastal freshwater

---

Hello, I would like to comment on Grays harbor fishery options. I'm a life long angler of grays harbor and its tributaries. I would like to see option C seasons. The December late coho fishery is very important to many anglers In the area, as well as native coho retention (where available), in the mainstem chehalis.

Thanks  
Garrett Moody

Sent from my iPhone

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Wednesday, March 27, 2019 7:33 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Coastal freshwater

---

I'm in favor of Model C and I hope season makers can find a way to allow for Model C.

I would also support a 1 marked Chinook in the Humptulips as instead of a 2 fish bag. We have had a 1 Chinook limit for many years in the past and it's just fine. The guides book plenty of trips, many, many people come out to fish recreationally, and 1 Chinook is a realistic limit these days. Consider modifying Model C to reflect a 1 marked Chinook limit.

Side note, whether or not it has come up, I'm opposed to a 3 Coho limit in the harbor.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

-----  
Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** [ARSC](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Coastal freshwater  
**Date:** Wednesday, March 27, 2019 7:33:39 PM

---

I'm in favor of Model C and I hope season makers can find a way to allow for Model C.

I would also support a 1 marked Chinook in the Humptulips as instead of a 2 fish bag. We have had a 1 Chinook limit for many years in the past and it's just fine. The guides book plenty of trips, many, many people come out to fish recreationally, and 1 Chinook is a realistic limit these days. Consider modifying Model C to reflect a 1 marked Chinook limit.

Side note, whether or not it has come up, I'm opposed to a 3 Coho limit in the harbor.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
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-----  
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425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** pearsonfr@comcast.net  
**Sent:** Monday, March 25, 2019 10:26 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Columbia River and tributaries

---

The decision to continue the use of non-selective gear in the Columbia River is very disappointing. If this was a financial venue, it is tantamount to spending our capital (the ability to create value in the future) instead of living off the interest and growth of capital. No successful Wall Street investor would be so foolhardy.

The use of non-selective gear will result in unavoidable deadly bycatch.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

Home: 425.392.2571 (preferred)  
Cell: 425.922.9754

**From:** [Dave Riddle](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Columbia River and tributaries  
**Date:** Wednesday, March 20, 2019 7:33:52 PM

---

Hi...it seems almost impossible to imagine that there will be even a discussion about salmon or steelhead seasons for the Columbia and Snake rivers. Warmer water, increased fishing pressure, environmental challenges, and global warming are all impacting the runs. It's time for significant and radical changes.

I would like you to consider implementing a moratorium on all salmon and steelhead fishing in the Columbia and Snake river system for at least four years. Give the fish a break from the fishing pressure, hopefully some modulation on the environmental conditions, and an opportunity to regenerate the runs. If at the end of that four year period the runs seem to have stabilized then allow a fishery that limits sport anglers to no more than one fish per day until such time that the runs have stabilized.

If the Department does not take drastic action soon, the likelihood that our cherished salmon and steelhead will become one more item on a growing list of endangered or extinct species grows exponentially.

Thank you for the opportunity to provide my comments on this important topic.

Sincerely,

Dave Riddle  
Burbank, Wa.

**From:** [David Moskowitz](#)  
**To:** [Tucker Jones](#); [Tweit, William M \(DFW\)](#); [Lothrop, Ryan L \(DFW\)](#); [Sippel, Timothy J \(DFW\)](#); [John North](#); [Geoffrey Whisler](#); [Lefleur, Cindy \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Chris Kern](#)  
**Subject:** Comments on the 2019 Summer - Fall Fishery Recommendations  
**Date:** Thursday, May 16, 2019 10:10:45 AM  
**Attachments:** [CRC-NOF Summer-Fall Fishery Comments 2019 - TCA.pdf](#)

---

The Conservation Angler believes that 2019 Columbia River Fisheries need more stringent measures to protect low numbers of wild salmon and wild steelhead.

Our rationale is contained in the attached Memo.

Sincerely,

David Moskowitz

David A. Moskowitz  
Executive Director  
971-235-8953 (Direct)  
[www.theconservationangler.com](http://www.theconservationangler.com)



Conservation means fair and honest dealings with the future, usually at some cost to the immediate present. It is simply morality, with little to offset the glamour and quick material rewards of the North American deity, "Progress".  
Roderick Haig-Brown

**From:** Brittany Philbin <brittany.n.philbin@gmail.com>  
**Sent:** Tuesday, April 09, 2019 12:45 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Consider SRKW during North of Falcon

---

To whom it may concern:

I am writing to you regarding my great concern for our critically endangered Southern Resident Killer Whales (SRKWs) of the Salish Sea. As a resident of the State of Washington, I feel there is more we can do for the recovery of both the salmon population and the SRKWs. Although it appears the Orca Task Force, which was established in 2018, has been hard at work our beloved SRKWs will have to travel longer distances and forage in waters outside the Salish Sea unless we take immediate and drastic action.

These are my requests:

1. Please give the SRKWs a “seat at the table” during the North of Falcon allocation process when determining fishery allocations for Oregon and Washington ocean and freshwater commercial and sport fishing, specifically salmon and herring, as well as mandated allocation agreements between the states and treaty tribes.
2. Immediately place a moratorium on all salmon fishing (not including tribal rights) until the dams are breached and there are enough salmon to support the survival of the SRKWs. If we continue to harvest salmon at current rates the SRKWs will not have enough to sustain current population levels and eventually will disappear altogether.

We as humans have a duty to protect the environment we live in and to ensure that future generations can enjoy the same beauty and abundance as generations before us.

Thank you for your consideration.

Sincerely,  
The Philbin Family

**From:** Kelly Robbins <kellyrobbins89@gmail.com>  
**Sent:** Sunday, April 14, 2019 7:38 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Consider the Orcas

---

Hello,

I am writing on behalf of the southern resident orcas, who are starving due to lack of salmon cause by overfishing among other things. I ask that the Southern Residents be taken into consideration when allocations and management decisions are made.

Thank you,  
Kelly



## Memorandum

To: Columbia River Compact States  
Fr: The Conservation Angler  
Dt: May 15, 2019  
Re: 2019 Summer and Fall Fishery Conservation Measures

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The purpose of this Memorandum is to provide comments and recommendations for wild fish conservation measures for consideration in fishery regulation and implementation actions planned or taken during 2019.

### **I. Concerns with the Columbia River Compact and North of Falcon Methodologies**

The Conservation Angler believes that the data underlying the forecasting of salmon and steelhead returns to the Columbia River suffers from multiple flawed assumptions, unacceptable margin of error ranges, excessive application of professional judgement and statistically invalid observation and creel census effort used to implement modeling runs and to estimate harvest impacts and exploitation rates.

### **II. Specific Concerns During Authorized Fisheries**

1. There are no reports of interceptions of non-target species from the Select Area fisheries.
2. There is no consistent application of a statistically valid monitoring program for select area commercial fisheries, sport fisheries or mainstem drift net commercial fisheries which is essential to establish accurate and reliable mortality and encounter rate data.
3. Methods of estimating natural-origin spawning escapement are not consistently applied in rivers without counting stations.
4. There is no clear method of accounting for illegal harvest or catch and release mortality for the shore and boat sport fishery in the data that comprises the fishery summaries year-to-year.
5. Ocean and in-river harvest rates are too high on most salmon species to allow natural-origin escapement to result in the nutrient loading necessary to provide forage for emerging and rearing juvenile salmon. Any harvest rate over 20% fails to contribute the necessary nutrients for subsequent generational survival within natal rivers.<sup>1</sup>

### **III. Compact and North of Falcon Process Issues**

The public process for the Columbia River Compact continues to suffer from late notice of public hearings and even later delivery of factual data on the issues being discussed and decided.

There continues to be a lack of transparency with the data being used by agencies to make forecasts and conduct updates on the progress of salmon and steelhead runs to the Columbia and tributaries.

Because the US v. Oregon court case is over, TAC proceedings, data and models must become publicly available.

### **IV. Ocean, Marine and In-River Harvest Regimes:**

The region has institutionalized the Causes for Recovering and Restoring Columbia and Snake River Wild Salmon and Steelhead.

1. The Ocean and Lower Columbia River are non-selective, mix-stock fisheries that are preventing recovery of ESA-listed spring and fall chinook.

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<sup>1</sup> Knudsen, E. Eric, Eric W. Symmes and F. Joseph Margraf. 2003. Searching for a life history Approach to Salmon Escapement Management. In: Nutrients in Salmonid Ecosystems: Sustaining Production and Biodiversity. Editor, John Stockner. American Fisheries Society Symposium 34.



2. Monitoring for wild populations of ESA-listed and other wild unlisted salmon (mid-Columbia Spring, Summer and Fall Chinook as well as Upper Columbia sockeye salmon) is currently accomplished by management of aggregate populations that are counted as they cross dams.
3. Fishery Managers account for harvest with creel surveys and account for wild fish escapement with dam passage counts, not spawning ground surveys.
4. While there may be spawning escapement goals or targets – also based on aggregate salmon and steelhead passage for both wild and hatchery fish of a particular species – there are no River Specific Management (RSM) criteria for spawning populations of natural-origin species. Furthermore, there are no egg-deposition criteria by river and species.
5. Columbia River and ocean harvest rates above 20% do not account for the importance of the spawned carcasses that are essential for the ensuing generation of juvenile salmon and steelhead emerging from natal river gravels.<sup>2</sup>

## **V. Concerns About 2019 Lower Columbia River Spring and Summer Chinook**

While the closure of spring chinook sport fishing in the lower Columbia River was the right thing to do, it is shocking to learn that wild spring chinook numbers in the Cowlitz and Lewis have dropped to under triple digits. How and why did this happen?

Not enough is known about status of wild populations, particularly below Bonneville Dam. Where is data on spring chinook wild escapement by natal river? How low did the wild spring chinook runs on Cowlitz and Lewis Rivers get before Federal and State managers had to take such drastic with little if any warning?

Hatchery brood escapement and sport fishing creel surveys are no surrogate to wild escapement, abundance or productivity estimates that should be established and maintained based on spawning counts or carcass surveys.

The Joint Staff Reports on 2019 forecast numbers for Upriver Columbia Spring Chinook do not contain data from the Deschutes or John Day. While these runs are part of the Mid-Columbia Chinook ESU, the failure to maintain or publish the run data is dooming these rivers (particularly the Deschutes) to the same fate as the Cowlitz or Lewis Rivers.

As is clear from recent joint staff notices, the only management concern expressed is whether hatcheries will make their egg take requirements. There is no reporting on whether rivers will make their egg deposition requirements. Why? Because there are not egg deposition or spawner escapement requirements for rivers. Thus, it is little wonder why the wild salmon and steelhead runs are slipping into extinction. The fishery agencies do not have love for wild salmon.

## **VI. Concerns about Spring – Summer chinook data**

What is the formula to determine the conversion of springers entering Columbia River mouth and then making the run update based on Bonneville passage? How do the states calculate for predation, harvest, tributary turn-off, illegal harvest and wild escapement?

The management dates delineating spring chinook and summer chinook are arbitrary for the spring and summer chinook. Furthermore, this date is based on passage at Bonneville Dam, and does not account for the on-going entry of summer chinook into the lower Columbia and their rate of harvest in Select Areas and shore-based sport fisheries.

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<sup>2</sup> Knudsen, E. Eric, Eric W. Symmes, and F. Joseph Margraf. 2003. Searching for a life history approach to salmon escapement management. Pages 261-276 in J. G. Stockner, editor. Nutrients in salmonid ecosystems: sustaining production and biodiversity. American Fisheries Society, Symposium 34, Bethesda, Maryland.



Another major management problem for managing wild summer chinook to the Snake and Upper Columbia is that the mark rate is insufficient and leads to problems estimating wild abundance and harvest rate.

Is any sampling at AFF able to refine the ability to determine Spring chinook from Summer chinook? What tools do the state's use in determining the impacts of SAFE encounters and harvest, as well as the sport and tribal impacts in terms of wild Summer Chinook escapement? What is the confidence interval on estimating wild summer chinook spawning escapement abundance on Upper Columbia and tributaries?

## **VII. Concerns About Summer Steelhead and Fall Chinook**

The forecasts for Columbia River summer steelhead and fall chinook are both quite low – with 950 wild B-run steelhead predicted to return – which is 14% lower than the 2017 pre-season forecast of 1,100 wild B-runs.

What will be done with LCR fisheries (SAFE, non-treaty mainstem commercial, sport fisheries and below-Bonneville tribal fisheries to:

- a. Minimize impacts on ESA-listed winter and early summer wild steelhead?
- b. Minimize impacts on ESA listed wild UCR and MCR summer steelhead
- c. Eliminate impacts on ESA-listed wild SR B-run summer steelhead

## **VIII. Wild Fish Sanctuaries and Required Specific Angling Practices Can Reduce Lethal Encounters**

Low wild returns and warm Columbia River water require immediate conservation action.

All cool water refugia, no matter the size or volume of water, will attract migrating wild salmon and steelhead if the Columbia River is warmer. It is a natural life-history trait of salmon, trout and steelhead. Perhaps the most important cold-water refuge is at the Deschutes-Columbia confluence, where the Deschutes will start cooling down in August, just as Columbia heats up and as the up-river salmon and steelhead migration peaks. The mouth of the Deschutes will be an incredibly important sanctuary for wild steelhead and salmon when the Columbia River is warmer. Oregon should invoke an no fishing sanctuary very similar to what was established in 2018.

All cold water refugia (CWR) will be very important to the health and productivity of ESA-listed wild salmon and particularly, wild steelhead which are known to remain in the cool-water plumes for weeks and months.

Fishing, even catch and release fishing, has an inordinate impact on wild steelhead in these locations because they are caught and released multiple times.

Fishing in sanctuary areas during warm water episodes when wild fish run sizes are low should not be permitted.

We should learn how the 2018-2019 Deschutes River Wild Steelhead return turned out by end of June. The recent wild runs have been low and present a strong case for conservation measures aimed at reducing lethal encounters. Considering the amount of angling that takes place, it is not inconceivable that Deschutes River steelheaders could encounter every single wild fish – and some- more than once.

All of us have a responsibility to minimize our impacts on these wild fish:

1. Use barbless hooks which should be mandatory in any fishery where certain species must be released
2. Use appropriate gear to allow safe and efficient landing of your steelhead
3. Keep your fish in the water when landing and unhooking it.
4. Use care when handling, photographing and releasing your catch
5. Anglers should have to rack their rods once they have taken their daily bag limit.
6. Refrain from angling when the Deschutes is over 66f.
7. Handle juvenile trout carefully when trout fishing (they may be steelhead smolts).



## **Comments in Response to Oregon and Washington Fishing Regulations in the Columbia River**

The Conservation Angler appreciates the efforts that joint state staff have given to provide angling opportunity during the dismal forecasts of the coming 2019 Summer and Fall Fisheries in the Columbia and Snake Rivers.

However, given the poor run-sizes, the opportunity to fish and retain hatchery fish, particularly in the early steelhead fishing season, rides on the backs of wild steelhead.

### **Problems with the Early Summer Fishery: June 16 thru July 31**

For the early-summer season (June 16 thru July 31) from the Astoria Bridge to just downstream of the Snake River confluence, the only fish that can be retained by anglers in the mainstem Columbia are hatchery-origin steelhead, and the daily angler bag-limit is two hatchery steelhead through June 30, and one hatchery steelhead during July. Wild steelhead and all chinook and sockeye salmon must be released unharmed.

1. The Columbia River summer steelhead run has more wild fish in the early part of the run than it does after August 1.

Bonneville Dam Passage Data: June 1 thru July 31

2018: 14,265 wild steelhead pass BON during this period  
31,220 total steelhead pass BON during this period  
**Wild Steelhead comprise 46% of the steelhead present**

2017: 10,261 wild steelhead pass BON during this period  
19,559 total steelhead pass BON during this period  
**Wild Steelhead comprise 53% of the steelhead present**

2016: 22,026 wild steelhead pass BON during this period  
56,868 total steelhead pass BON during this period  
**Wild Steelhead comprise 40% of the steelhead present**

**Therefore, the focus on steelhead angling and retention of two hatchery fish will place undue burden on the early portion of the 2019 summer steelhead. Anglers will sort through many wild fish to catch their two-hatchery fish bag limit. The high percentage of wild steelhead in the early run puts those fish at risk of high encounter rates.**

2. To make matters worse, anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Anglers who take their limit should be required to rack their rods.
3. Anglers may use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
4. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.

### **Problems with the Summer – Fall Fishery: August 1 thru December 31**

The 2019 Forecast predicts a very small run of upriver summer steelhead.

#### **Upriver Summer Steelhead: July 1 – Oct 31: 2019 Forecast is 38% of the 10-Year Average**

These steelhead are bound for the Klickitat, Deschutes, John Day, Umatilla, and other rivers in the Upper Columbia and Snake Basins such as the Grand Ronde, Clearwater, Salmon and Imnaha.

2019 Forecast for Upriver Summer Steelhead:	118,200 total A and B-run adults
TYA of Upriver A & B-run summer steelhead:	315,202 A & B-run steelhead



## 2019 Upriver Summer Steelhead Predicted to Pass Bonneville Dam

2019 Upriver Summer Steelhead	2018 Forecast	2018 Return	2019 Forecast	Run Timing
<b>Total Upriver Steelhead</b>	190,350	100,483	126,950	to BON Dam
Early summer-run (H+W)	7,950	6,483	8,750	April - June
<i>(early summer wild)</i>	<b>3,000</b>	<b>2,595</b>	<b>3,200</b>	
A-Run (total H + W)	158,000	69,338	110,200	July - Oct
<i>(A-run wild)</i>	<b>44,800</b>	<b>21,725</b>	<b>33,900</b>	
B-Run (Total H + W)	24,400	24,662	8,000	July -Oct
<i>(B-run wild)</i>	<b>3,400</b>	<b>2,382</b>	<b>950</b>	July-June
<b>Total Wild Steelhead Past BON</b>	<b>51,200</b>	<b>26,699</b>	<b>38,050</b>	April - Oct

1. Anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Therefore, anglers who take their limit should be required to rack their rods.
2. Anglers use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
3. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.
4. Jack salmon (a smaller, younger but sexually mature salmon of either chinook or Coho species) limits are 5 fish per angler per day. These limits should be reduced because of the important role they play in spawning success.
5. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The Dalles Dam and John Day Dam should be extended to at least mid-October due to the presence of wild B-run steelhead in that region.
6. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The John Day Dam and McNary Dam should be extended to at least mid-November due to the presence of wild B-run steelhead in that region.

### Cold Water Sanctuaries Are Critical for Wild and Hatchery Fish migrating up the Columbia River

The US Environmental Protection Agency (EPA) has identified dozens of cold water refugia along the Columbia. We know that 13 of these areas are extremely important to migrating salmon and steelhead.

When the Columbia River water temperatures reach 66f, the importance of these areas increases, and when the mainstem water temperatures reach 68f, they become life-saving river reaches for salmon and steelhead. At 68.5f, they become refuges for salmon and steelhead in which fish linger for weeks and months.

Commercial fishing is already prohibited in river-mouth sanctuaries.

It is time for Oregon and Washington to create sanctuaries for migrating salmon and steelhead in these 13 CWR by prohibiting all angling in specific geographic areas created by the cold-water inputs for a specific period. The time period could be tailored by historic temperature data but could also be established based on blocks determined strictly by dates of known salmon and steelhead use – but at least three months (July thru September).

**From:** Tracie Sugo <koholakaiblog@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Fishery Allocations and the Southern Resident Orca

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With the steady decline of the Southern Resident orca population due to diminishing salmon, please include the Southern Residents in fishery allocation and management decisions are made. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues!

Thank you,  
Tracie Sugo

**From:** Lisa Mintz Kavas <lmkavas@yahoo.com>  
**Sent:** Friday, April 05, 2019 4:52 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Give Orcas a seat at the Salmon Table!

---

Now is such a critical time for the Southern Resident Orca...if we don't start addressing the issues belaboring them they are doomed. It is time for those responsible and in a position to do so allocate a significant and appropriate portion of the annual salmon fisheries yield for these Orca. Getting them more food is the easiest of the items to help them. The spotlight is on the PNW to effect local action to this end, and this will also reflect locally in terms of tourist dollars into our region. Additionally, in alignment with the view of many of the indigenous tribes and Orca advocates, it is the right thing to do after human intervention first terrorized this population in the 70's, and how human over-fishing, dam building, and water/sound pollution had adversely affected this population. Personally I am very willing to eat less salmon myself (my favorite fish) in order to make sure there are enough for the Orca to thrive.

Thank you,

Lisa M. Mintz Kavas  
Lynnwood, WA

**From:** Bianca Tarleton <bianca.tarleton@gmail.com>  
**Sent:** Friday, April 05, 2019 2:16 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Give orcas a seat at the table

---

The SRKW population is dying; their reproducing females have one a few years left until menopause. Orcas are one of the few mammals that experience menopause; which strengthens the matrilineal line and allows the elder female to be a leader and caretaker for her younger family members.

Without salmon, orcas will slowly die of starvation. Without immediate action, any pregnancies that might occur in the next few years will continue to be unviable, such as the tortuous experience of Tahlequah and her calf last summer.

We can't bring them back after they are gone. They are a unique *tribe*, that cannot be replaced. The Salish Sea and PNW are icons in the world because of these beautiful creatures.

Bianca Tarleton

**From:** deb8209 <deb8209@cox.net>  
**Sent:** Tuesday, April 09, 2019 2:48 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Give Orcas a seat

---

Please give the Orcas a seat at the table?  
They NEED the salmon!  
We don't, we can wait for the numbers to return!

Thank you

Compassion is not just an emotion:  
It's a way of life...

**From:** Jill Bliss <jill@jillbliss.com>  
**Sent:** Friday, April 05, 2019 8:55 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Give the Orcas a seat!

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Hello,

Please take the Southern Resident orcas into consideration when allocations and management decisions are made in the North of Falcon meetings.

Thank you!  
Jill

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Salish Sea Artist & Naturalist

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[jillbliss.com](http://jillbliss.com) -:- [instagram.com/jill\\_bliss](https://www.instagram.com/jill_bliss) -:- [twitter.com/jill\\_bliss](https://twitter.com/jill_bliss) -:- [facebook.com/Jill-Bliss-Artwork](https://www.facebook.com/Jill-Bliss-Artwork)

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**From:** charlottelcumming <charlottelcumming@gmail.com>  
**Sent:** Thursday, April 04, 2019 5:28 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Help the Southern Resident Killer Whaled

---

Please be sure the Southern Resident orcas are given a seat at the table and taken into consideration when allocations and management decisions are made.

Sincerely,  
Charlotte Cumming

Sent via the Samsung Galaxy S8, an AT&T 5G Evolution capable smartphone

**From:** Stephanie Snopek <stephaniesnopek@gmail.com>  
**Sent:** Monday, April 08, 2019 12:38 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Include orcas in your salmon allocation discussion

---

Hello there,

I am a concerned citizen of the pacific northwest and request that you give the southern resident killer whales (orcas) a seat at the table in your discussion and decision-making process of establishing salmon allocations. Their survival depends on a thriving and accessible salmon population.

Thanks,  
Stephanie

**From:** Teresa Frazer Gravlin <ctr91625@centurytel.net>  
**Sent:** Tuesday, April 09, 2019 8:42 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Inquiry

---

I am writing to ask that you PLEASE give the SRKW a chance at survival and give them the ONLY seat at the Chinook Salmon table this year and for as many years as it takes to recover this particular pod of orca. We, the human race, have done these orca serious harm by stealing the only prey that matters to them --- the Chinook salmon. The times have changed, the world needs to change, and wouldn't it be wonderful if YOU were the first to show these whales some compassion? We watched J35 and her horrific tour of grief all the while watching beautiful little J50 - Scarlet - lose her battle to starvation. There is not one single reason in this world today why we should have marine life that is starving, other than the fact that the fault lies solely with humans. We contaminate their waters, we deafen and injure them with ship strikes and noise, and now we are virtually ripping food from their mouths - food that could help them survive long enough to maybe recover some of their numbers. We cannot afford to lose another SRKW. Please, please, please, put them at the table before humans.

Sincerely,  
Teresa K Gravlin  
1421 S. Van Dyke Rd.  
Marlette MI 48453

--  
Teresa

**From:** Ashlie McGuire <amcsuperstar@yahoo.com>  
**Sent:** Monday, April 08, 2019 10:30 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Let Orcas have a say

---

Aloha

I am Ashlie McGuire and I live in Hawaii.

Here our government may not be the best at protecting our wildlife either, but most civilian people here understand the delicate nature and balance of the ecosystem-especially the relationship between fresh water systems and the ocean.

I beg you to give Orcas a seat at the table, let their needs be met and heard. Without a steady supply of salmon to feed themselves and their young, you will be losing a key part of your ecosystem there and the repurchasing are of yet not fully known. Please take the time to protect these creatures. Find it within your hearts to ensure salmon be free for the Orcas for all time-at the very least the time we are here.

Mahalo.

Sent from my iPhone

**From:** [Don Freeman](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** MA 13 chinook jack Retention  
**Date:** Friday, March 22, 2019 5:41:06 PM

---

Fishing opportunities in Marine Area 13 are limited and there is an opportunity to allow some additional harvest of chinook jacks that are not needed for hatchery production. It makes sense to allow fishers to keep returning adult chinook jacks (18" to 22") that would otherwise return to the hatchery and be surplus, i.e., sold for dog food. My license fees in part go toward the production of hatchery fish, and recreational fishers should get the benefit of these fish, and not used for pet food.

Don Freeman  
Tumwater

**From:** [Alan Hortin](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Date:** Wednesday, March 20, 2019 5:36:21 PM

---

Wee are supporting the idea of increasing the take of jack salmon from 18" or larger, by sports fishermen,

during the months of July, August, and September starting this year.

Alan Hortin

Olympia, Washington

Sent from [Mail](#) for Windows 10

**From:** [Scott Gibson](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Marine area 13 regulation change proposal  
**Date:** Monday, March 25, 2019 12:42:35 PM

---

## Proposal:

I am writing to submit a proposed regulation change for Area 13.

We have observed that the average size of mature Chinook returning to the south Sound has decreased in recent years and it is not uncommon for us to catch 18" to 21" adipose-clipped maturing Chinook in the late summer/early fall. These are not blackmouth but are maturing fish destined for the Deschutes, Nisqually or Minter Creek hatcheries. The current regulations do not allow us to keep these fish.

We would like to propose a regulation change for Marine Area 13 for sport fishermen to retain Chinook >18" during the period July - September annually. This proposal has the support of the Olympia chapter of Puget Sound Anglers and other sport fishermen that we have reached out to.

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**From:** [Net zero](#)  
**To:** [Lothrop, Ryan L \(DFW\)](#); [Tweit, William M \(DFW\)](#)  
**Subject:** NOF  
**Date:** Tuesday, March 12, 2019 9:50:46 AM

---

Ryan, Bill, I will be unable to attend the meeting on Mar 18 as I will be out of the State. I will try to find a substitute, but not sure if that will happen. I would like to provide a little input.

For summer chinook, it appears that due to the low run size that opportunity below Bonneville will be very limited or non existent. Due to continued under escapement to the spawning beds and the presence of too many hatchery fish on the spawning beds, we recommend that all fisheries above and below Bonneville be mark selective. The Group will probably discuss bag limits, and we recommend the limit that will provide maximum opportunity while still achieving the harvest quota.

For fall chinook, we prefer options that allow opportunity throughout the Columbia River.

With the large coho forecast, there will be lots of discussion regarding Buoy 10, the ocean, and the river. We do not have input for this item.

For summer steelhead, we recommend aggressively pursuing options that maximize opportunity in June, July, August and September since other fishing opportunities will be severely limited. Both B-Runs and summer chinook catch will be concerns. If a one fish limit extends opportunity, it should be considered as well as a schedule that reduces effort(days per week).

Have a great meeting, and the subject looks challenging.

Regards, Harry Barber

Sent from my iPhone

**From:** CerviPedic - INFO <info@cervipedic.com>  
**Sent:** Tuesday, April 09, 2019 10:09 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North Of Falcon - Allocation meeting

---

To whom it may concern,

I hereby respectfully ask you that the Southern Resident orcas be "given a seat at the table" and taken into consideration when allocations and management decisions are made.

There is only 74 of these type of orcas left in the wild and their food is 95% made out of Salmon. They are starving into extinction.

Thank you for your consideration.

Sincerely,  
Ed Tansingco

**From:** Jil Wells <jilljowells.jw@gmail.com>  
**Sent:** Monday, April 08, 2019 7:17 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon

---

Hello,

As a Washington State resident I request that the Southern Resident Orcas be given a seat at the table during the North of Falcon process.

Thank you,

Jillian Wells

**From:** Nadira Rivera <nadiramandy@yahoo.com>  
**Sent:** Tuesday, April 09, 2019 7:02 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon addressing Orcas

---

Hello,

I am requesting that the Orcas are given a seat at the table and taken into consideration when allocations and management decisions are made pertaining to ocean fisheries. It is clear that the depletion in the amount of reproduction of salmon is affecting us all. If we band together in figuring out how to cohesively live with nature, it will be abundant for all. Animals do not take more than what they need. I suggest we do the same.

The depletion of salmon and herring survival has now transitioned over to starvation and death to the larger species such as the Orcas. These are clear indications we, humans, are next. We still have time to make a difference before extinction of several species occur. Let's heed the signs that are clear for us at this time to change the way we have been doing things to a new and improved way of living.

Thank you for taking consideration for the Orcas in upcoming decisions. By helping them, it is creating a ripple effect of saving the lives of many. Including ourselves.

I also ask that we push for the lower four dams of the Snake River be breached to assist in reproduction and livelihood of the salmon.

In Gratitude,

Mandy Rivera  
Nadiramandy@yahoo.com  
434-466-9747

**From:** Romina Yamashiro <ryamashiro@cervipedic.com>  
**Sent:** Tuesday, April 09, 2019 10:09 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon allocation

---

To whom it may concern,

I hereby respectfully ask you that the Southern Resident orcas be "given a seat at the table" and taken into consideration when allocations and management decisions are made.

There is only 74 of these type of orcas left in the wild and their food is 95% made out of Salmon. They are starving into extinction.

Thank you for your consideration.

**Sincerely,**  
**Romina Yamashiro**  
*CerviPedic Neck-Relief*  
[www.Cervipedic.com](http://www.Cervipedic.com)  
[www.facebook.com/cervipedic](https://www.facebook.com/cervipedic)  
[www.instagram.com/cervipedic](https://www.instagram.com/cervipedic)  
[www.youtube.com/cervipedic](https://www.youtube.com/cervipedic)  
*Toll-Free: 888-788-1053*  
*Cell: 714-717-5962*

**From:** kelsie bowden <kelsiebowden@gmail.com>  
**Sent:** Monday, April 08, 2019 10:29 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon Process

---

Hello,

I am writing this email to voice my concerns regarding the Southern Resident Orcas.

As you are aware these Orcas are struggling to survive due to many man made issues, one of them being the deletion of food sources including Salmon.

I am urging you to please consider the well being and survive of these iconic creatures when discussing the recreational and commercial fisheries at this years North of Falcon process.

Please give the Orcas a seat at the table and be part of the solution in helping these magnificent animals survive.

Thanks you,

Kelsie Bowden

**From:** Julierabeau <julierabeau@aol.com>  
**Sent:** Thursday, April 11, 2019 10:54 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon process

---

Please consider the Southern Resident Killer Whales when allocating and management decisions are made in the 2019 fish quota. They must be included in fish quotas. Their salmon resource has been severely depleted and are at serious threat of distinction.

Respectfully

Julie Rabeau

5415 Crescent Beach Rd NW

Vaughn, Wa 98394

Sent from my iPhone

**From:** Sarah Graham <sarah.graham1327@gmail.com>  
**Sent:** Monday, April 08, 2019 9:46 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon

---

I am respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made. This is beyond important for them to be included.

Thank you.

Sent from Sarah G.

**From:** Chloe Read <chloe\_read@icloud.com>  
**Sent:** Monday, April 08, 2019 1:03 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon Seat Allocation

---

To whom it may concern,

Each year at North of Falcon, the wild salmon population is discussed amongst several interested parties to ensure the harmonious conduction of fishing between the tribal and commercial fishing of wild salmon, including but not limited to the chinook salmon species.

Given the current climate threats as well as pollution threats to our oceans, I simply ask that at this year's North of Falcon meeting the Southern Resident orcas be given a seat at the table and included in talks to ensure they have enough allocation to see their survival and eventual growth.

Each year their numbers decline and each year the threat to their future grows larger. You have the chance to change that. By giving the southern resident orcas, you hold the key to seeing these remarkable creatures thrive once again, whilst still meeting the needs of those also at the meeting.

Your actions at this year's North of Falcon could change the manmade fate of these incredible mammals; enable the Southern Resident orcas to have a voice.

Kindest Regards,  
Chloe Read

**From:** Elisabet Riya <elisabet.riya1414@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:16 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon

---

I respectfully ask that the Southern Resident orcas be given 'a seat at the table' and be given consideration when allocation and decision management is made. Don't let them go hungry, please.

Thank you and God bless.

**From:** drsurbeck@surbeckortho.com  
**Sent:** Friday, March 29, 2019 10:33 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas (Area 3 La Push Late Season Fishery)

---

To whom it may concern:

As a life long Washington resident and angler, of my favorite fishing opportunities, the Area 3 (La Push) Late Season fishery is at the very top. My family and I have enjoyed this fishery over the last 15 years, but it has been understandably closed for the last three years on account of the poor return of Coho to the Bogachiel.

In light of the improvement in the expected return of adult Coho, I would hope that regardless of the season option selected, that you will consider re-opening this fishery. Tax payer funding of the salmon hatcheries on Quillayute has provided salmon for harvest that we have not been able to access in this target specific terminal fishery. I have never once seen an Orca whale at the mouth of the Quillayute while participating in this fishery, and would think that this is exactly the type of fishery that should be highlighted.

Please strongly consider re-opening the Area 3 (La Push) Late Season fishery.

Respectfully,

Burleigh Surbeck

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Monday, April 08, 2019 9:37 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

Please consider that the SRKW need the chinook too when deciding allocations. Please don't let humans take all the salmon and leave none for the Southern Residents! They are dying from starvation, and the humans are not. They need them more! Thank you.

Cathleen Burns  
Friday Harbor, WA 98250

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Tuesday, April 09, 2019 3:44 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

The SRKW need approximately 550,000 chinook salmon/yr. to survive, so please stop all commercial and recreational fishing for chinook due to the Endangered Species Act, This Act requires we do all we can to prevent their extinction. Humans have many other options for food, the Southern Residents don't. This of course, excludes tribes, who are entitled to their salmon. The few salmon should only be taken by tribes and the SRKW.

Cathleen Burns  
98250

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Wednesday, March 27, 2019 7:34 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

I support option 1, starting as early as possible keeping conservation in mind.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

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Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Wayne Clifford <wc.fishtales@gmail.com>  
**Sent:** Tuesday, April 16, 2019 9:41 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

I am disappointed to see no pink salmon retention included in the current season. That means that we will be hooking and releasing many pinks which only injures the fish and flies against our ethics as sportsmen. Unless I am mistaken, or hopefully there is an inadvertent omission from the season.

Wayne

Sent from my iPhone

**From:** [pearsonfr@comcast.net](mailto:pearsonfr@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Ocean areas  
**Date:** Monday, March 25, 2019 10:25:11 AM

---

The decision to continue the use of non-selective gear is very disappointing. If this was a financial venue, it is tantamount to spending our capital (the ability to create value in the future) instead of living off the interest and growth of capital. No successful Wall Street investor would be so foolhardy.

The use of non-selective gear will result in unavoidable deadly bycatch.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

Home: 425.392.2571 (preferred)

Cell: 425.922.9754

**From:** [ARSC](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Ocean areas  
**Date:** Wednesday, March 27, 2019 7:34:28 PM

---

I support option 1, starting as early as possible keeping conservation in mind.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

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Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Janet marx <janetmarx\_76@msn.com>  
**Sent:** Wednesday, April 10, 2019 11:52 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orca allocations

---

Do not continue to ignore the plight of our Southern Resident Orcas. Please allot them allocations before it is too late.

Thank You,  
Janet Marx  
112 Lockerbie PI  
Port Angeles, WA 98362



Virus-free. [www.avast.com](http://www.avast.com)

**From:** tjkkmargo@juno.com  
**Sent:** Friday, April 05, 2019 1:29 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas

---

I am asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

JoAnn Margo  
Duluth, MN

**From:** Becky <beckypat1843@gmail.com>  
**Sent:** Friday, April 05, 2019 2:08 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas Count Too

---

To Whom It May Concern,

I have always been a strong advocate of commercial and sport fishing, however, I strongly believe that times are changing in our precious waters and we need to look past the needs of humans and respect our mammals as well. Please allow the needs of our resident orcas to have a seat at the table while the allotments are being discussed. Their needs are are priority and I hope you will consider this during your discussions.

Respectfully,  
Becky Patterson  
6110 Parkside Drive  
Anacortes, WA 98221

**From:** Grace Wright <gjwright@sonic.net>  
**Sent:** Friday, April 05, 2019 7:05 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas deserve seat at the table

---

Please include the orcas when you allocate the chinook salmon. They deserve a seat at the table along with the rest. They are literally starving to death and need all the help we can muster. Thank you!

Grace Wright  
Port Townsend, WA

Sent from my iPad

**From:** Linda Park <lpark@rc.edu>  
**Sent:** Monday, April 08, 2019 6:51 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas

---

I have been a supporter of the southern resident killer whales for many years and had the supreme honor of seeing and interacting with them in 2015. These amazing animals must be saved if we are to call ourselves a civilized society. Therefore, I adamantly request your consideration when allocations and management decisions are made in the 2019 North of Falcon process.

Sincerely,  
Dr. Linda Park

Sent from my iPhone

**From:** Sara O'Connell <sarah0911@gmail.com>  
**Sent:** Sunday, April 07, 2019 10:33 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas need a seat at the table

---

Hello,

As a former kayak guide on the west side of San Juan and a resident of Friday Harbor, I plead with you to give SRKW (Orcas) an allocation of Chinook salmon sufficient enough to recover their population. This needs to happen NOW!!

With all due respect,  
Sierra O'Connell  
SJI Youth Conservation Corps Coordinator  
206-602-9185

**From:** Jill Hein <jillhein@comcast.net>  
**Sent:** Friday, April 05, 2019 9:35 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas need an allotment too

---

Please please allot a quota of chinook salmon to our SRKW's, they have no choice, all their food MUST come from the ocean. Humans at least have a choice.

Thank you.  
Jill Hein  
Coupeville, WA

**From:** Christina Mullee <christinamullee@icloud.com>  
**Sent:** Wednesday, April 10, 2019 3:52 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas need salmon too

---

Please allocate the proper amount of salmon for the orcas of the Salish Sea.

Thank you  
Chaliea Mullee

Sent from my iPad

**From:** Blaire Harrington <harringtonbe@gmail.com>  
**Sent:** Tuesday, April 09, 2019 1:14 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas

---

Hi,

I stopped eating fish when I followed the story of Orca mom who pushed her dead calf for 17 days last year. Please give the starving SRKW a seat at the table when considering salmon allocations. I don't want the orcas to go extinct! Thank you for your help and assistance!

Very Respectfully,  
Blaire Harrington

Washington resident

Sent from my iPhone

**From:** Maren Custer <maren.custer@gmail.com>  
**Sent:** Tuesday, April 09, 2019 5:17 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Our resident orcas

---

Hi,

Please, in your discussions regarding northwest fisheries this year, include discussion of the plight our resident orcas are facing as they struggle to find food.

Thank you for your time,  
Maren Custer

**From:** Ed Chadd <edchadd@olympen.com>  
**Sent:** Saturday, April 06, 2019 10:40 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please allocate salmon for orcas

---

The orcas deserve a seat at the table when determining fishery allocations. Since they can't sit in the room with you all, someone will have to do their best to represent them.  
Sincerely, Ed Chadd, Port Angeles, WA

**From:** Steve Smith <alpinejustice@gmail.com>  
**Sent:** Friday, April 05, 2019 11:04 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please consider orcas in your salmon allocations

---

More than ever, the critically-endangered Southern Resident Killer Whales need all the help they can get, if future generations are going to continue to see them. The work it will take to recover these whales is widespread, but no single piece makes a bigger difference in the short-term than food availability.

By factoring orcas into the fishing allocations (especially, chinook salmon allocations), you have an opportunity to make a crucial difference.

Thanks for considering this piece of the ecosystem as you strive for a reasonable and sustainable balance between many factors that rely on salmon. No species relies on them more than the Southern Resident Killer Whales, however.

Steve Smith  
Seattle, WA

**From:** cindy@orcانetwork.org  
**Sent:** Wednesday, April 10, 2019 9:05 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please consider Southern Resident orcas in harvest allocations

---

Washington Department of Fish and Wildlife,

I was part of a small group that attended several of the North of Falcon, Pacific Fisheries Management Council, and Washington Fish and Wildlife Commission meetings, representing the Southern Resident orcas and their need for a salmon allocation. We are still learning and trying to understand how this process works and I want to thank all of the staff, particularly Penny Becker, for being so welcoming. I also want to thank you for including the Southern Resident orcas in the conversation and discussing the need to ensure that fisheries are not affecting them in a negative way. This was very encouraging to hear. I am hopeful that with ongoing salmon recovery efforts, it will be possible to make sure the Southern Residents get what they need while honoring tribal treaty rights and including commercial and recreational fishing in the quotas as well. I am not sure how to make that happen but I urge you to continue including this topic in the deliberations and giving the Southern Resident orcas a seat at the table this year and into the future.

Sincerely,  
Cindy Hansen

*Cindy Hansen*  
*Education and Events Coordinator, Orca Network*  
[www.orcanetwork.org](http://www.orcanetwork.org)



**From:** Arthur Rochester <arthurr@digitraxsound.com>  
**Sent:** Friday, April 05, 2019 2:13 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please Consider the Orcas

---

Dear North of Falcon,

To maintain a healthy and balanced ecosystem in the Salish Sea, it is most important to consider the Southern Population of Orcas. Since it does not look like the dams on the Lower Snake River will be breached anytime soon, we must closely ration the take of salmon.

Historically the orcas have not had a seat at the table during these talks or been given a harvest allocation. With the steady decline of the Southern Resident orca population due to diminishing prey abundance, fisheries managers have become aware of the need to include the Southern Residents in the dialogue. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues.

Sincerely,

Arthur Rochester  
4601 Lopez Ave.  
Port Townsend, WA 98368-2746  
[arthurr@digitraxsound.com](mailto:arthurr@digitraxsound.com)  
Text: (818) 402-9570  
Phone (360) 316-1650

**From:** TreefrogBeads <TreefrogBeads@gmail.com>  
**Sent:** Monday, April 08, 2019 7:39 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please consider the Southern Resident killer whales!

---

Hello,

I just read that the North of Falcon process oversees fishing in the Pacific Coast region, and allocates fishing quotas. The blog that I read explained that historically, the Southern Residents have not been incorporated during these talks or been given a harvest allocation.

I'm writing today to ask that the Southern Resident killer whales please be taken into consideration when allocations and management decisions are made. As you know, our resident orca whales are in grave danger of extinction, and the choices that we make today can have a profound impact on their survival. Please consider their needs as you make your decisions regarding 2019 fishing quotas.

Thanks and best wishes,

Andrea Adams  
Olympia, WA

**From:** John Boyd <jbfhpc@gmail.com>  
**Sent:** Sunday, April 07, 2019 6:42 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please Consider the SRKWs When Deciding Allocations

---

I just wanted to respectfully ask that when you sit down and divvy up the “allocation pie”, that one of the most important stakeholders should be the Southern Resident Killer Whales. As I’m sure you are very well aware, these amazing animals are starving to death. They have had one successful birth in the last 3 years. And the number one factor in determining survivability of the calves is a sustainable and large amount of salmon to eat for mom.

Contrast this birth trend with those of the Bigg’s Killer Whales, aka Mammal-feeding orcas. In the last 9 years, we have seen 75 new births! These calves are not only surviving, but thriving and it is directly attributable to the plentiful pinniped population found in our local waters. These whales are ahead on doing their own version of culling the seals and sea lions.

Shouldn’t SRKWs have the same opportunity to thrive as well? Please give them their allocation first before any other stakeholder so that we can ensure these amazing animals continue to live in our waters for generations to come.

Thank you for the opportunity to share my opinions.

Sincerely

John Boyd  
Friday Harbor, WA  
Certified Marine Naturalist  
Founding Member, Salish Sea Association of Marine Naturalists Founding Member, Salish Sea Ecosystem Advocates

**From:** Kelly Maeva hollier <whishka@hotmail.com>  
**Sent:** Monday, April 08, 2019 12:20 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give a seat to the table for southern resident Killer whales

---

Dear,

Please, give a place to the table for southern resident killer whales so that they are always taken into account when allocations and management decisions are made.

They need help, they need salmon to survive. Their future is in our hands, they deserve the right to be considered and protected. We love them with all our heart.

Cordially,

Kelly Maeva

Envoyé de mon iPhone

**From:** Las Vegas Climate Save <lasvegasclimatesave@gmail.com>  
**Sent:** Tuesday, April 09, 2019 2:45 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Orcas a Seat at the Table

---

- Historically, orcas have not had a seat at the table during harvest allocation talks, but with the steady decline of the Southern Resident orca population due to diminishing prey abundance, fisheries managers have become aware of the need to include the Southern Residents in the dialogue. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues. Please do everything you can to ensure the Southern Resident orcas are "given a seat at the table" and be taken into consideration when allocations and management decisions are made this season.

Thank you,  
Lauren Williamson  
Henderson, NV 89074

**From:** Daryth Morrissey <darythmorrissey@gmail.com>  
**Sent:** Sunday, April 07, 2019 6:58 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Orcas a seat at the table

---

When you know better, you do better. Please let representatives of the Southern Residents, who rely primarily on salmon for their survival have attend North of Falcon.  
Please make decisions at this meeting that benifit these sentiate beings. Don't deny them food based on man's greed. Please.

Daryth Morrissey

**From:** Tomoko Shimotomai <tshimotomai@accuray.com>  
**Sent:** Friday, April 05, 2019 3:48 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Southern Resident Killer Whales a seat at the table

---

Hello,

Please give Southern Resident Killer Whales a seat at the table when you talk about how to manage the Northwest's recreational and commercial salmon fisheries. My family and I visit San Juan Island every year, and we have been witnessing these highly endangered whales die one by one from starvation.

Please allocate enough salmon for Southern Resident Killer Whales to survive without going to extinction.

Sincerely,  
Tomoko Shimotomai  
Nicene Porter Shimotomai  
Ryuta Shimotomai  
22 Hatton Ave.,  
Watsonville, CA 95076

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**From:** Martha Rosas <mir2103@tc.columbia.edu>  
**Sent:** Wednesday, April 10, 2019 6:50 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Southern Resident Orcas a seat at the table

---

To Whom It May Concern:

I am writing to respectfully ask that the Southern Residents Orcas be taken into consideration when allocations and management decisions are made. These animals are amazingly beautiful and intelligent and it would be very upsetting to watch them starve for lack of salmon. Furthermore, they have helped the San Juan Islands and Washington by increasing tourism. I myself am a native New Yorker who went to Washington for the first time a few years ago expressly to see the Southern Resident Killer Whales. As part of a research project, my daughter found the Whale Museum and adopted Cookie because he was born the same year my daughter was. It was beautiful to see them up close at Lime Kiln State Park and I have recommended that many people visit the San Juan Islands as a result of that trip and plan to return soon as well.

Please consider these Orcas and the livelihood of the people that live from the tourism that they generate in the San Juan Islands when allocating fishing quotas this year.

Respectfully yours,

Martha Rosas

**From:** Jennifer Kupsch <jenniferbooth1981@gmail.com>  
**Sent:** Tuesday, April 09, 2019 8:14 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Please give the orcas a seat at the table

---

To whom it may concern,

I respectfully ask you to please give the orcas a seat at the table! They desperately need our help.

Thank you

Jennifer Kupsch  
Delta BC

**From:** Debbie Hite <debbiejhite@gmail.com>  
**Sent:** Wednesday, April 10, 2019 4:20 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please Give the Orcas a Seat

---

Certainly hope you will give the Orcas a seat at the table! Heart felt thanks for caring! 🌟👉☆

Sent from my iPad

**From:** Amy Nesler <anesler3784@gmail.com>  
**Sent:** Saturday, April 06, 2019 11:04 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give the Southern Residents a seat at the table

---

To Whom It Concerns,

I'm writing to you today to ask that the Southern Resident community of orcas be given a seat at the table when fishery allocations are made. Columbia River salmon are a significant prey source for these pods, whose populations continue to decline due to a lack of food. We owe it to both these totems of the Northwest to make sure they have their best chance of survival and recovery. Thank you for your consideration in this matter.

Sincerely,

Amy Nesler

**From:** Serena Feller <serenat23@msn.com>  
**Sent:** Monday, April 08, 2019 9:41 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give the SRKWs a seat at the table

---

To whom it may concern,

I am a Canadian citizen writing with great concern regarding the precarious fate of the Southern Resident Orcas. I respectfully request that you please consider the southern resident orcas while considering your salmon allocation. I beg of you to consider the consequences of starving the SRKWs to extinction if we do not take action to help support them at this time. You are able to make the choices that allow them to survive or become extinct.... please use your voice for the betterment of the SRKWs.

Many thanks in advance for your dedication to the wellbeing of our shared ecosystems.

Kindest Regards,

Serena Feller

You must be the change you wish to see in the world.  
Mahatma Gandhi

**From:** hansonsarahliz@gmail.com  
**Sent:** Saturday, April 06, 2019 4:24 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Proper allocation of salmon

---

The Southern Resident Killer Whales need their weight in food allocated in order to have adequate chance for survival.  
Thank you, Sarah Hanson Friday Harbor resident

Sent from my iPhone

**From:** mz. Lynn <raidergal70@yahoo.com>  
**Sent:** Tuesday, April 09, 2019 9:15 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** protecting the southern resident killer whales

---

I understand that each year, Federal and tribal fishery managers gather to plan for the Northwest's recreational and commercial salmon fisheries. Known as the North of Falcon process, it oversees fishing in the Pacific Coast region & allocates fishing quotas. .

Historically, the Southern Residents have not been incorporated during these talks or been given a harvest allocation. This year, let's change that to help ensure the Southern Residents get the food they need to survive. I implore you to take into consideration a moratorium this year on chinook fishing to allow the population to replenish itself or in the very least to reduce the allotment given to sports fishing and tribal fishing.

We have all see the unbearable scenes of J35 carrying her decaying baby around for 17 days, the anguish is evident in this act of mourning. We all witnessed the "too late, too little" attempt by NOAA to save the starving J50 and we have all seen the images of the numerous starving Orcas out there, not to mention that there are a couple out there that are currently pregnant. They need food to survive, primarily Chinook salmon because of the high fat content to produce the milk to feed their babies and in general to increase fat storage so that they don't have to deplete their current fat storage which has PCB's in them...thanks to humans.

It is our duty to right the wrongs that we have done to them. It is a sad time, when the marine life that once flourished, has to depend on the one thing (Humans) that put them in this situation, to save them.

How many more are we going to let starve to death or how many more babies will die within hours, days, months of birth because mom can't provide enough milk for them. PLEASE DO THE RIGHT THING to save them from extinction....this world can live without salmon....they can't

Sincerely,

Meris Untalan

**From:** [Stephanie Buffum](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Public Comment: North of Falcon Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 11:33:00 AM  
**Attachments:** [image001.png](#)

---

Dear Members,

We are watching your livestream meeting of the North of Falcon process from the San Juans today.

On behalf of our 2,000 members, Friends of the San Juans commends the North of Falcon collaborative process. Chinook salmon are a priceless asset to our regional economy and culture. Especially to our Southern Resident orca whales who are starving. In the past 30 years the average King Salmon has become smaller. Southern Resident Orca need ~300 lbs. salmon per day to survive. If a Chinook salmon weighs 15 lbs. each SRKW need 20 salmon per day. (75 SRKW x 20 salmon) x 365 = 547,500 Chinook salmon per year.

We ask you to consider these factors in your decisions. Please give the Southern Resident Orca a seat at the allocation table.

Sincerely,

Stephanie Buffum, MPA, MURP  
Executive Director  
Friends of the San Juans  
P.O. Box 1344 | Friday Harbor, WA 98250  
Main: 360.378.2319 | Direct: 360.378.2324 | Cell: 360.4723.0404  
[www.sanjuans.org](http://www.sanjuans.org) | [donate](#) | [facebook](#) | [e-news](#)



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Register at [sanjuans.org/upcoming-events](http://sanjuans.org/upcoming-events)

**From:** [PT Person](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound Chinook  
**Date:** Saturday, March 23, 2019 9:41:47 AM

---

I strongly support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September.

Peter Epperson  
Lacey, WA

**From:** william pettibone <williampettibone@gmail.com>  
**Sent:** Friday, March 29, 2019 7:16 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Why do the salt fisherman get to reap all the benefits from this I don't own a boat I'm s solid river bank fisherman with no change yet I'm still paying the state to sit home this should be an all in one affair regardless of the taste of water this is just bias and the fresh water fishermen are as always losing

**From:** Jeff Christen <jthalibet@yahoo.com>  
**Sent:** Friday, April 05, 2019 5:29 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

The marine area 10 June coho fishery, is very important to me as a salmon fisherman. The fishery comes at a great time of the year , and is enjoyable.

Thanks, Jeff Christen 425 308 6928  
5108 80th ST NE Marysville WA 98270

[Sent from Yahoo Mail on Android](#)

**From:** william pettibone <williampettibone@gmail.com>  
**Sent:** Friday, March 29, 2019 7:16 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Why do the salt fisherman get to reap all the benefits from this I don't own a boat I'm s solid river bank fisherman with no change yet I'm still paying the state to sit home this should be an all in one affair regardless of the taste of water this is just bias and the fresh water fishermen are as always losing

**From:** Shaun Terry <oldbait805@gmail.com>  
**Sent:** Wednesday, April 03, 2019 10:55 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

To whom it may concern. I was not able to attend this morning's meeting due to my work schedule. However, it is important to submit a comment and have a voice in support of freshwater fisheries. I grew up in Snohomish and Skagit counties. My family has fished local rivers and area 8-1, 8-2 and 9 since the early 60's focusing our attention on fishing for Steelhead, chums, Coho, sockeye, kings and sturgeon until recent years. I reviewed your fish return run estimates and proposed upcoming 2019 fishing opportunities for both rivers and marine areas and find myself reminiscing about years past when Snohomish county held the largest coho derby on the west coast. Pink salmon and chum salmon were in an abundance. Steelhead, sockeye and king salmon returns supported fishing for all who pursued them and there was a sturgeon catch and keep season. What happened? 2015 and 2017 drought conditions existed and rivers were closed but perseiners were allowed to continue fishing Everett to Mukilteo and southington area 9. I counted 18 boats at a time over several weeks that had nets so full of salmon they were listing and we wonder why there are only 600,000 pinks estimated return. Or, blame it on poor ocean conditions. Pink salmon was the last consistant fishery our local rivers had before 2015. Chum salmon are depleted since a demand in grocery stores happened. The Snohomish, Skagit and Stilly rivers had a stellar chum return before that. We have noticed different eagle behavior on the Skagit river. This year and the last several years there have been less eagles in the upper river. This winter we saw the most eagles in the tributaries of the Skagit. Coho runs are down, sockeye on the Skagit are limited to a small area promoting combat fishing. King salmon on the Skagit and skykomish rivers are also confined to small areas of the river. Steelhead runs are at an all time low since 2013 after the outcone of lawsuits from WFC. The Steelhead is susposed to be our state fish. It is embarrassing when I have friends and family from other parts of the country ask when to come out and fish and I have to tell them that another year of low returns so the river is closed. Sea lion and cormorants population have to be at an all time high and nothing seems to be happening to control them. Pollution, water filtration I have not heard any updates in work on updating water filtration treatment plants to stop pharmaceutical and micro contaminants from being released into the sound. It is great you are buying up land and fixing culverts and plugged water ways but when are we going to see something done to increase actual fish runs and manage predation? I love fishing for Salmon, Steelhead and Sturgeon in Washington and would love to see future generations enjoy the experience I had growing up vs just going for a boat ride as one of my friends have said or explaining and keeping interest of my son during an outing on the river fishing. There is a saying just getting outside and enjoying time on the water and who you are with is what it is all about if you catch or don't catch anything. You can an only say that so many times. To sum it up, River fishing in Snohomish and Skagit county is at an all time low. If an angler doesn't have a boat to get out in Puget sound most likely they won't have much to look forward to locally. Low returns of fish affect everyone in the community and counties, tribal, anglers and commercial.

Thank you,  
Shaun Terry

**From:** twogoodsatpa <twogoodsatpa@olympen.com>  
**Sent:** Friday, April 05, 2019 8:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

WHY ARE RECREATIONAL FISHERMAN PENALIZED WITH LIMITED TIME TO FISH AND 1 FISH LIMITS BASED ON WILD FISH PROJECTED RETURNS WHEN WE CANT KEEP THE WILD STOCKS.

JOE TWOGOOD

Sent from my Galaxy Tab® A

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Friday, April 05, 2019 5:06 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

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It's crucial to local fishing charters, residents, and tourist that Marine Area 10 is open for Coho salmon in June, whether it be catch and release, or catch and keep. Honestly, a catch and keep fishery would probably result in less impacts overall.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

-----  
Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Joey D <joeyoutdoorsman@gmail.com>  
**Sent:** Tuesday, April 02, 2019 12:29 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Samish river should be fly fishing only and baroness! Tired of fishing next to snaggers! Nooksack river should be 2 Wild+4 Hatchery Coho on the mainstem of river. Seriously, Samish River needs to be Fly Fishing Only.

**From:** Robert Dreyer <supertrain222@gmail.com>  
**Sent:** Friday, March 29, 2019 4:50 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

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Concerning the possibility of a spring chinook season on the Skagit river from the mouth to gilligan creek. Would like to see this but wouldn't it be better to open the river up to say concrete for those of us that live between concrete and seder woolley. On the sockeye side would like to see the same, but with maybe just a Friday afternoon to Sunday night if the upper Skagit tribe would agree. Think that this is not to much to ask for, seemed to work last year for silvers. Just a idea. Thank you for your time

**From:** shane.a.hunter@hotmail.com  
**Sent:** Sunday, March 31, 2019 2:27 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Open up the skokomish river to nontribal or shut down the hatchery and remove state funding.

Get [Outlook for Android](#)

**From:** Lowe, Larry <LGLowe@SNOPUD.com>  
**Sent:** Thursday, March 28, 2019 11:57 AM  
**To:** NorthofFalcon (DFW)  
**Cc:** McDonnell, Andrew; Binkley, Keith  
**Subject:** Puget Sound freshwater salmon seasons

---

**The proposed Skykomish River (mouth to Wallace River) fishery which is scheduled to open on June 1 has devastating effects on wild winter steelhead.** Approximately 10% of the winter steelhead in the area spawn after June 1 and the peak spawning month is May. Therefore returning steelhead that have not yet spawned are impacted by this fishery but more importantly is the impact on kelts. Skykomish/Snohomish winter steelhead escapement has been on a severe decline in recent years and the 2018 escapement was approximately half of the historic low.

Target species for this fishery are summer Chinook returning to the Wallace Hatchery and summer run steelhead returning to Reiter Ponds and fishing pressure is extremely high. WDFW has not done a creel census for many years. I have heard rumors that this fishery may open on May 25.

**Please delay the opening of this fishery to June 15 at the earliest in order to reduce the harmful impact it has on our winter steelhead.**

**From:** Brian Ingalls <briantingalls@gmail.com>  
**Sent:** Saturday, March 30, 2019 10:44 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

These proposed regulations discriminate against freshwater fisherman, such as myself, that do not have the means or equipment to fish saltwater. The ability to fish for salmon in Washington state should not depend on one's affluence. I would ask you to reconsider the draft regulations, particularly for the Snohomish river. It is grossly unfair to allocate the fishing opportunities to only saltwater anglers.

Thank you.

Brian Ingalls

**From:** Ben Ingalls <ben.c.ingalls@gmail.com>  
**Sent:** Sunday, March 31, 2019 8:29 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Looking at the proposed seasons, it looks like river fisherman and bank anglers in the Snohomish river system are going to be getting the short end of the stick. The saltwater and river seasons should be set to give equal opportunity to us river anglers. Salmon fishing in this state has quickly become a rich person's privilege, and there are a lot of people who can't afford the equipment and travel cost associated with saltwater salmon fishing.

Please think about us river anglers when setting the seasons. I have lots of friends and family that will decide not to buy fishing licenses at all this year and into the future if we are to continue to be neglected.

-Ben Ingalls

**From:** Patti Ingalls <jus.moo2@gmail.com>  
**Sent:** Sunday, March 31, 2019 12:25 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

I am writing to voice my concerns with the proposed fishing guidelines for 2019. It appears, just like last year, that a disproportionate share of the Snohomish river coho salmon run will be allocated to saltwater anglers. Opening the river up for only the month of September effectively creates a one week season. Fish do not typically show up in fish-able numbers until the last week of that month.

Additionally, not all of us are blessed enough to be able to afford the necessary boat and equipment to safely fish in the saltwater. The proposed regulations unfairly penalize bank fishermen and those with craft too small for saltwater use.

I urge you to reconsider the proposed draft and devise a plan to equitably distribute the run among all the stakeholders. Fishing should not be a privilege enjoyed by only those with sufficient means. Simply purchasing a fishing license should be enough to ensure that we all have equal opportunity to chase these fish, regardless of run size.

Thank you.

**From:** Torrey Banes <cohoking@hotmail.com>  
**Sent:** Sunday, March 31, 2019 11:54 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

On the behalf of myself and the group Stilly Valley Sport Fisherman. We would like to see the Stillaguamish river open to Coho salmon fishing this year.

Sent from [Mail](#) for Windows 10

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 9:00:30 AM

---

## Swan Creek park Juvenile fishing only

The end of swan creek has a large pond just before going under pioneer road and into the puyallup river.

Juvenile fishing should be allowed from Nov 1st - Dec. 30th for chum salmon

We see people fishing there every winter, but pretty sure it's illegal. It would be a perfect juvenile fishing pond.

Easy access, and hopes of a huge fish

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:24:54 AM

---

## Puyallup River

Closure of within 400 feet of clarks creek to be limited to bank angling only. Boats can access waters within 400 feet.

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:56:37 AM

---

## Make Flossing/Snagging illegal

Leader lengths should not exceed 36 inches. Make flossing illegal. Fish are being snagged outside the mouth at sunrise, and sunset in super high numbers as fish move up river.

**Snagging:** Take or attempting to take a fish with a hook and line by hooking the fish anywhere other than in the mouth or in a way that does not entice the fish to voluntarily take the hook inside it's mouth, includes flossing. Game fish hooked anywhere other than inside the mouth must be immediately released unharmed.

Below is a link describing what Oregon enforced on the Rogue River to end snagging/flossing

<http://mailtribune.com/oregon-outdoors/fishing-rule-changes-will-target-flossing->

J  
}<(((\*)>  
ignorantfisherman@me.com

**From:** [Brian Stone](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Tuesday, March 26, 2019 3:43:16 PM  
**Attachments:** [image003.png](#)

---

Hello,

Thanks for taking the time to read my comments.

Here is what I'd like to see as far as Puget Sound salmon season go.

MA 8-1 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 8-2 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 9 – Open July 1<sup>st</sup> through October 31<sup>st</sup> for retention of two hatchery coho. Release wild coho and pinks.

If you are going to restrict MA 9 in October, make it shore fishing only during for the month of October. Two hatchery coho limit in October. Release wild coho in October.

Open MA 9 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Open MA 10 Open June 1st through October 31<sup>st</sup> for retention of two hatchery coho. Release wild coho.

Open MA 10 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Thank you,  
Brian Stone  
Seattle, WA

--

Brian Stone – Account Executive  
United Business Machines of WA. Inc.  
11050 118<sup>th</sup> Place NE Kirkland, WA. 98033  
425-897-4003 (Direct Line)  
425-827-2672 (Fax)



**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:29:23 AM

---

## Puyallup River

Sunday closure on Puyallup river should be down river where the white river enter the puyallup. Not entire river closure.

This will not interfere with the netting that occurs on sunday, monday tuesday from the white river to the mouth

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:31:02 AM

---

Puyallup River

Catch and release wild coho

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:27:11 AM

---

## Puyallup River

Flossing illegal. This form of fishing is wiping out the runs. Leaders not to exceed 36 inches. I used to participate, and now watch as fish are legally snagged outside the mouth. It's easy, and can produce easy fish without much effort.

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [pearsonfr@comcast.net](mailto:pearsonfr@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Monday, March 25, 2019 10:21:01 AM

---

The Endangered Species Act lists Puget Sound chinook as “Endangered”. Efforts to recover those fish have not made significant progress in the last decade. It is time to take immediate action that can make a difference: stop chinook harvest in Puget Sound, both commercial and recreational. Especially after the recent release of the dismal return estimates by the WDFW, it would be criminal to ignore those facts, and harvest the very few returning adults. It is time for radical action. I had personally given up fishing for salmon and steelhead last year. The entire economy must follow suit, or we will have no fish in the very near future.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

**From:** [gary guinotte](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area 13 salmon seasons  
**Date:** Wednesday, March 20, 2019 6:24:05 PM

---

I strongly support a change for minimum size on chinook in area 13 from 22 inches down to 18 or 16 inches during July, August, and September. These chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. adult jacks have to be release at this time in area 13.

A lot of those jacks use to be harvested in Capitol lake by sportsmen but that harvest was lost by the closure of the lake to fishing. I had fished the Lake for 25 years and caught lots of jacks in the 16 to 20 inch range on eggs.

WDFW In-Season Hatchery Escapement Report for

2018 TUMWATER FALLS HATCHERY Deschutes River Hatchery Stock- H jacks 3,806  
2017 - TUMWATER FALLS HATCHERY Deschutes River Hatchery Stock- H jacks 702

**From:** Hughes, Kirt M (DFW)  
**Sent:** Monday, April 08, 2019 1:50 PM  
**To:** NorthofFalcon (DFW)  
**Cc:** sbmathews38@yahoo.com  
**Subject:** Puget Sound marine area salmon seasons

---

Attention ALL STAFF:

In addition to their inclusion in our public input meetings for the North of Falcon process, I am posting the following proposals on behalf of Dr. Stephen B. Mathews, to our NOF comment page ensuring that they are part of the formal rule-making record.

WA FISH AND WILDLIFE COMMISSION TESTIMONY. Mar. 2, 2019. Steve Mathews. [sbmathews38@yahoo.com](mailto:sbmathews38@yahoo.com).

**The present fishing mortality regime on chinook salmon is unsustainable. The effort at times is too much; the seasons are too long; the gear is too powerful; the by-catch mortality of little ones is too great. If fishing were closed for 10 years and then re-set, a more rational chinook salmon fishing regime might look like this:**

NO YEAR ROUND FISHING- summers only on mature (end of life) chinook salmon.

NO CATCH AND RELEASE- for either sport or commercial; (chinook salmon are not trout in a stream).

Annual, individual sport catch quotas in numbers; enforced by electronic (I-phone) reporting.

Commercial quotas by gear type; 100% observer coverage; electronic, real-time monitoring.

NO MINIMUM-SIZE LIMITS- because throwbacks would be illegal.

NO SPAWNING GROUND FISHING- all stream spawning sections closed for the spawning season.

NO NATURAL BAITS- herring, shrimp, or salmon eggs; (dogfish, rockfish, sturgeon swallow these too).

NO TREBLE HOOKS- single barbless everywhere; (lures with three, barbed treble hooks are still legal).

NO FLASHERS, NO HOOTCHIES- only large plugs, spoons, jigs, spinners, etc.

NO UNLIMITED-DEPTH COMMERCIAL NETS- the redundant web in the water kills other marine life too.

NO NIGHTTIME GILLNETTING- chinooks come up at night; the other salmon can be caught all day long.

NO TOWING ON OPENED PURSE SEINES- target species can be caught without "trawling".

#### **WHAT ELSE WOULD GO AWAY?**

BY-CATCH- of small, immature chinook; that elephant in the room would tend to vanish.

WASTAGE- of small, dead but edible chinook salmon.

MASS MARKING- that expensive, suspect program needs evaluation by a blue ribbon science panel.

RECOVERY BOXES- that unnecessary plumbing is mostly for show.

CONTROVERSIAL "HOOKING MORTALITY" STUDIES- let's stop debating that problematic science.

SPECIAL RULES- like different sport landing rules for boats over and under 30 feet.

HATCHERY SURPLUSES- there would be none if carcasses above reproductive needs were distributed throughout each river for fertilization.

The current fishing regime is driven by **THE NEEDS OF THE FISHERMEN** not **THE NEEDS OF THE FISH**. The alternative would self-correct fishing abuses, and also provide better fishing mortality data.

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Tuesday, April 09, 2019 3:42 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

The SRKW need approximately 550,000 chinook salmon/yr. to survive, so please stop all commercial and recreational fishing for chinook due to the Endangered Species Act, This Act requires we do all we can to prevent their extinction. Humans have many other options for food, the Southern Residents don't. This of course, excludes tribes, who are entitled to their salmon. The few salmon should only be taken by tribes and the SRKW.

Cathleen Burns  
98250

**From:** Robert Reeder <antaresnavigation@gmail.com>  
**Sent:** Tuesday, April 09, 2019 10:05 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Please consider the needs of our Southern Resident Killer Whale population as you consider our fisheries generally. They are more dependent on the salmon runs than any of the rest of us.

Very respectfully,  
Captain Robert Reeder, USMM Master 1600 tons

**From:** Brian Stone <bstone@ubmofwa.com>  
**Sent:** Wednesday, March 27, 2019 11:32 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Hello,  
Thanks for taking the time to read my comments.  
Here is what I'd like to see as far as Puget Sound salmon season go.

MA 8-1 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 8-2 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 9 – Open July 1<sup>st</sup> through October 31<sup>st</sup> for retention of two hatchery coho. Release wild coho and pinks.  
If you are going to restrict MA 9 in October, make it shore fishing only during for the month of October. Two hatchery coho limit in October. Release wild coho in October.  
Open MA 9 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Open MA 10 Open June 1st through October 31<sup>st</sup> for retention of two hatchery coho. Release wild coho.  
Open MA 10 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Thank you,  
Brian Stone  
Seattle, WA

--  
Brian Stone – Account Executive  
United Business Machines of WA. Inc.  
11050 118<sup>th</sup> Place NE Kirkland, WA. 98033  
425-897-4003 (Direct Line)  
425-827-2672 (Fax)



**From:** Bill Macaras <wmacaras@centurytel.net>  
**Sent:** Thursday, March 28, 2019 9:25 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

WDFW,

In 2017 a suggestion to open Area 11 to a two pole endorsement was submitted to WDFW. I very often fish by myself, probably about half the time I that I go out.

The response I received indicated that two pole endorsement was not approved in 2016 because of an expected low return of coho in 2016. Here is the response:

"I am not sure if you are aware, but WDFW did propose a two-pole endorsement in Area 11 during the 2016 NOF but the poor coho runs essentially nixed any expansion as you may have noticed we had several significant closures that year. If we can get out of the poor coho runs (hopefully we see more improvement this year), then we have a better shot of adding more 2 pole areas."

I am not sure what occurred during the 2017 and 2018 NOF negotiations, but I again submitted a suggestion in 2018 to add two-pole endorsement in Area 11. As I recall, in 2018 both the coho and hatchery chinook returns were expected to be good, but it appears there wasn't any discussion to open Area 11 to two-pole endorsement.

This year, the coho returns are expected to be very good. As indicated in the 2017 response from WDFW, it appears this would be a good year to again bring up the idea of opening Area 11 to a two pole endorsement during the negotiations. It also appears the hatchery chinook return for 2019 is greater than the most recent 10 year average. So, both coho and chinook returns are expected to be better, to much better than average.

In another email from WDFW in 2017, I received the following: "WDFW has taken the cautious approach of added two-poles to areas with relatively low effort or catch rates to allow staff to monitor and evaluate the effects of using two poles." This comment was 2 years ago. Has the department completed it's evaluation of using two poles? In that same email, it was stated that two pole increases encounters of wild chinook by 11%. On my boat, I believe that number to be relatively accurate, maybe a bit high. I will add, that every wild fish that was caught on my boat, was returned very healthy. A recent study indicates that most fish released survive. The same can not be said for gill netting.

I request that Area 11 be opened to two-pole endorsement for the following reasons:

- Allows for the angler to experiment with lure, color, scent, depth, attractor, etc
- Provides an opportunity to catch a fish (I rarely catch my limit when I fish). Like most recreational anglers, I am an occasional angler and not a professional and my catch rate and encounter is much lower than the test fishers.
- There is value to the fishing community, angler and local businesses
- Most of the members of a fishing club I am a member, want the two-pole endorsement
- Fuel economy

Open Area 11 to two pole endorsement and study the impact. Adjust if necessary. If anything, allow two pole endorsement for the single angler in a boat.

Thank you,

Bill Macaras  
Lakebay, Wa.

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Sunday, April 14, 2019 1:58 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Marine area 7.

We have have families, friends, and businesses that rely on sport fishing in the San Juan Islands and it is important that we can have a salmon fishery in August each year. Our seasons are already short enough and losing the biggest month of the year would be devastating.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

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Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Monday, April 08, 2019 9:36 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Please consider that the SRKW need the chinook too when deciding allocations. Please don't let humans take all the salmon and leave none for the Southern Residents! They are dying from starvation, and the humans are not. They need them more! Thank you.

Cathleen Burns  
Friday Harbor, WA 98250

**From:** CAPT St Luce <amystluce@gmail.com>  
**Sent:** Thursday, April 04, 2019 7:47 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Area 10 is a very important marine area for the Kitsap Peninsula and for our business. Please continue to allow it to be an area that can be fished within appropriate limits and seasons and we welcome any new opportunities for fishing in the South Sound and Area 10. As anglers, we respect the environment and the need to protect it and the Orca's but we also make our living from the Sound and the Salmon which we fish. We believe there is a way to ensure the survival of the Orca's and provide an enjoyable fishing season for all.

Lawrence (CAPT Lorenzo) St Luce  
No Worries Fishing Charters

**From:** Bill Healy <dumpsterbill@hotmail.com>  
**Sent:** Wednesday, April 03, 2019 9:13 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

My family and I are looking forward to salmon fishing in the summer in Puget Sound. Specifically off of Edmonds and north of Edmonds. We want to make sure we are able to fish this summer. We are looking forward to fishing. We hope that lots more hatchery salmon are released so there is enough salmon for sportsmen and for The Orcas. We are also supportive of killing off the sea lions that are killing the salmon.

Bill healy.  
Shoreline, WA.

**From:** [TONY JUDAH](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 21, 2019 11:22:05 AM

---

I enthusiastically support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September. The chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. I estimate this change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time.

Thanks for your consideration

Tony Judah

Lifetime Washington resident

**From:** [Brad Caldwell](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Wednesday, March 20, 2019 11:38:42 AM

---

I strongly support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September. These chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. I estimate this change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time.

Sent from my iPhone

**From:** [Curt Kraemer](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Wednesday, March 20, 2019 1:17:49 PM

---

I have several PS salmon season suggestions for consideration during the 2019 NOF process.

1. MAs 9 through 11 June through August mark selective for coho.

The last several years wild coho returns to key primary stocks have been an issue. Over the last 20 years I have seen quite variable unclipped coho contributing to the “resident coho fishery during the summer in central sound. Clearly some years those stocks of concern are contributing to that fishery. It would seem that conducting those summer fisheries as MSF would reduce the take of unclipped coho providing a potential buffer to the wild populations such as the Snohomish during years of low returns.

2. Annual limit of 10 Chinook from MAs 5 through 13

More and more often am hearing requests to stretch out our fisheries to provide additional recreation. In this era of ESA listed stocks providing additional fishing within the allowable impacts is difficult. It is now time to consider how best to use the allowable impacts over the entire population of potential anglers. An annual limit would allow more fish to be available to the more casual angler – a broader angler base. 10 Chinook should be more than adequate for personal use for most anglers. For larger families where 10 fish may not be enough there should be family members who could contribute additional fish to the family’s table.

3. Prioritize the use of limited allowable ESA impacts during summer seasons over winter seasons.

A review of the annual MSF WDFW reports consistently have shown that for a given level of impacts summer fisheries typically produce more angler trips and more hatchery adults harvested. In addition the summer period typical provides better weather and appeals to a broader group of anglers – increasing the angler base.

4. In at least one MA during the summer season require the use of “large profile lures”; that is a lure with 4 or 5 inch profile (without hooks) such as a plug.

A review of the co-manager 2017 draft co-manager plan indicated that for Stillaguamish Chinook approximately 2/3 of the recreational impacts occurred as “shaker mortality”. If method(s) can be found to reduce the numbers of shakers encountered longer recreational seasons with increased harvest of target hatchery fish could be achieved; see suggestion #3. My and other experienced anglers (including WDFW test fishers) have consistently noticed that for example fishing with plugs significantly reduce shaker encounters while still providing a reasonable opportunity for legal size fish. This suggestion is nothing more than the next iteration of selective fishing – that is adopting methods that maximize the harvest of target fish while minimizing the impacts on stocks of concerns.

Curt Kraemer  
Marysville, Washington  
Sent from [Mail](#) for Windows 10

**From:** [Tim Lewis](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 8:02:35 PM

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Dear NOF Members,

I am a western Washington salmon angler. My recommendations for the 2019 season are as follows:

MA-9 Open for hatchery silver salmon July 15th to October 31st. Limit of 2 hatchery silver salmon. Release all wild silver salmon. Release all wild pink salmon. Release all wild chinook salmon.

MA-10 Open for hatchery silver salmon July 15th to October 31st. Limit of 2 hatchery silver salmon. Release all wild silver salmon. Release all wild pink salmon. Release all wild chinook salmon.

MA-8.2 Open for hatchery silver salmon August 15th to October 31st. Limit of 2 hatchery silver salmon. Release all wild silver salmon. Release all wild pink salmon. Release all wild chinook salmon.

Sincerely,

Tim Lewis  
Washington Resident Angler

**From:** [James Pacheco](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 26, 2019 5:35:01 PM

---

Greetings Commissioners

I strongly support the proposed change for minimum size on Chinook in area 13 from 22 inches down to 18 inches during July, August, and September. These are the months when many Chinook jacks head toward the Deschutes and Nisqually hatcheries. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. Currently we have to release these mature jacks which are mostly all surplus and sold for dog food. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. This rule change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time, providing a benefit to Washington anglers without affecting escapement goals. Please support this rule change.

Gratefully,  
James Pacheco  
orcafriend@yahoo.com

**From:** [Bill Macaras](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 28, 2019 9:25:36 AM

---

WDFW,

In 2017 a suggestion to open Area 11 to a two pole endorsement was submitted to WDFW. I very often fish by myself, probably about half the time I that I go out. The response I received indicated that two pole endorsement was not approved in 2016 because of an expected low return of coho in 2016. Here is the response:

"I am not sure if you are aware, but WDFW did propose a two-pole endorsement in Area 11 during the 2016 NOF but the poor coho runs essentially nixed any expansion as you may have noticed we had several significant closures that year. If we can get out of the poor coho runs (hopefully we see more improvement this year), then we have a better shot of adding more 2 pole areas."

I am not sure what occurred during the 2017 and 2018 NOF negotiations, but I again submitted a suggestion in 2018 to add two-pole endorsement in Area 11. As I recall, in 2018 both the coho and hatchery chinook returns were expected to be good, but it appears there wasn't any discussion to open Area 11 to two-pole endorsement.

This year, the coho returns are expected to be very good. As indicated in the 2017 response from WDFW, it appears this would be a good year to again bring up the idea of opening Area 11 to a two pole endorsement during the negotiations. It also appears the hatchery chinook return for 2019 is greater than the most recent 10 year average. So, both coho and chinook returns are expected to be better, to much better than average.

In another email from WDFW in 2017, I received the following: "WDFW has taken the cautious approach of added two-poles to areas with relatively low effort or catch rates to allow staff to monitor and evaluate the effects of using two poles." This comment was 2 years ago. Has the department completed it's evaluation of using two poles? In that same email, it was stated that two pole increases encounters of wild chinook by 11%. On my boat, I believe that number to be relatively accurate, maybe a bit high. I will add, that every wild fish that was caught on my boat, was returned very healthy. A recent study indicates that most fish released survive. The same can not be said for gill netting.

I request that Area 11 be opened to two-pole endorsement for the following reasons:

Allows for the angler to experiment with lure, color, scent, depth, attractor, etc  
Provides an opportunity to catch a fish (I rarely catch my limit when I fish). Like most recreational anglers, I am an occasional angler and not a professional and my catch rate and encounter is much lower than the test fishers.

There is value to the fishing community, angler and local businesses  
Most of the members of a fishing club I am a member, want the two-pole endorsement  
Fuel economy

Open Area 11 to two pole endorsement and study the impact. Adjust if necessary. If anything, allow two pole endorsement for the single angler in a boat.

Thank you,

Bill Macaras  
Lakebay, Wa.

**From:** [pearsonfr@comcast.net](mailto:pearsonfr@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Monday, March 25, 2019 10:21:28 AM

---

The Endangered Species Act lists Puget Sound chinook as “Endangered”. Efforts to recover those fish have not made significant progress in the last decade. It is time to take immediate action that can make a difference: stop chinook harvest in Puget Sound, both commercial and recreational. Especially after the recent release of the dismal return estimates by the WDFW, it would be criminal to ignore those facts, and harvest the very few returning adults. It is time for radical action. I had personally given up fishing for salmon and steelhead last year. The entire economy must follow suit, or we will have no fish in the very near future.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

**From:** [kaidius32@gmail.com](mailto:kaidius32@gmail.com)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 21, 2019 4:37:48 AM

---

With the increase in coho return I would love to see another season for 8-1 / 8-2 fisheries and at least a short pink season in the same areas. It really helps get kids out and interested in the fishing in Puget sound!

Sent from [Mail](#) for Windows 10



Virus-free. [www.avg.com](http://www.avg.com)

**From:** [M.Vekved](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 12:40:52 PM

---

The media and the scientists are making a compelling point. The orca are starving. Please give the orca the necessary salmon, the food they need to survive. If we are considering the sustainability of our Salish sea, our islands, our economy, and our community, the orcas should have an **allocation** just as the people do.

Thanks, Michel

**From:** [Jennifer Price](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Saturday, March 23, 2019 2:47:19 PM

---

Please do not open “catch and release” for charter boats. This is a waste of true fishing opportunities for other recreational boaters.

Please open catch and keep seasons, and those kept fish should be the only fish counted. Don't count the encounters.

Jennifer Price

**From:** [lanceye@comcast.net](mailto:lanceye@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Sunday, March 24, 2019 9:21:19 AM

---

Hi, I wanted to voice my disappointment over the way marine area 9 was managed last year. It opened on a Monday and then closed Sunday for an "evaluation" and then reopened the following Thursday through Sunday. How are people possibly supposed to plan for that? A lot of us plan our vacations around this fishery literally a year in advance because that's what you have to do to get accommodations. If it had closed because the quota was hit we would be fine with that, we know there aren't any guarantees. This fishery needs to be managed and updated in real time. Each day there should be a post on the website so that we know where we are with respect to the quota.

There was a group of people that showed up at their campsite on Friday who were booked until Wednesday. As they are setting up camp they get the email saying that their 5 day fishing trip is now only 2 days. And then on Tuesday they find out that it will open again the day after they leave. That is tough to take and doesn't need to happen.

I'm not asking for more fish or more time, all I'm asking is to let it run consecutive days until the quota is reached.

Thanks,  
Lance

**From:** [Jon Jennings](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 21, 2019 8:06:54 AM

---

I strongly support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September. These chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. I estimate this change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time. From what I have seen fishing, there are lots of disheartened and frustrated recreational fisherpersons. Because while opportunity technically exists due to the season being open, the reality is disappointing. Opening this area for jacks provides a reality where fishers are able to retain salmon when regulations are open. Thank you for your time.

Jon

**From:** [mglariviere@aol.com](mailto:mglariviere@aol.com)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 1:25:02 PM

---

I am writing to submit a proposed regulation change for Area 13.

We have observed that the average size of mature Chinook returning to the south Sound has decreased in recent years and it is not uncommon for us to catch 18" to 21" adipose-clipped maturing Chinook in the late summer/early fall. These are not blackmouth but are maturing fish destined for the Deschutes, Nisqually or Minter Creek hatcheries. The current regulations do not allow us to keep these fish.

We would like to propose a regulation change for Marine Area 13 for sport fishermen to retain Chinook >18" during the period July - September annually. This proposal has the support of the Olympia chapter of Puget Sound Anglers and other sport fishermen that we have reached out to.

Mark LaRiviere  
Cell # (253) 381-9657

**From:** Elisabet Riya <elisabet.riya1414@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:17 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Re: North of Falcon

---

I respectfully ask that the Southern Resident orcas be given a seat at the table and be given consideration when allocation and decision management is made. Please don't let them go hungry.

Thank you and God bless.

On Tue, Apr 9, 2019, 9:15 PM Elisabet Riya <[elisabet.riya1414@gmail.com](mailto:elisabet.riya1414@gmail.com)> wrote:

I respectfully ask that the Southern Resident orcas be given 'a seat at the table' and be given consideration when allocation and decision management is made. Don't let them go hungry, please.

Thank you and God bless.

**From:** Jeanne Hyde <l41157@yahoo.com>  
**Sent:** Thursday, April 04, 2019 8:04 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** re: seat at the table for the Southern Resident Orcas

---

The Southern Resident orcas have inhabited these waters and fed on wild Chinook salmon for more years than anyone knows. Yet, when allocation for the fish began, the orcas did not have a say. No one has represented them.

For many years now, the Southern Resident orcas have been giving the humans the information regarding the lack of salmon, but evidently they were discounted or not even considered. However, they are a community that is part of this ecosystem and need to be 'listened to'.

Please, it's time for them to be included and have a 'seat at the table' when allocations and management decisions are made.

Sincerely,

Jeanne Hyde  
Friday Harbor, WA

**From:** Teresa Stokes <tlstokespoetry@gmail.com>  
**Sent:** Thursday, April 11, 2019 4:18 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Regarding Allocation of Salmon & Other Fish Resources

---

I grew up on Fox Island, in the south Puget Sound. Recently with the growing research and data on the critically endangered Southern Resident Orcas, and the endangered Chinook Salmon, I hope you will consider greatly reducing the number of fish allocated across the board. To fix a broken system, we need to help it rebalance and become abundant once more. We must not drain any fish resources at this time. We can all step back and allow nature to replenish itself. Please consider the starving orcas first, before any human allocation for now.

Thank you for considering my comments. May you make wise decisions that our children and our children's children will be proud you made.

Respectfully,

Teresa Stokes

**From:** Stacey Hansen <renegadefox@icloud.com>  
**Sent:** Friday, April 05, 2019 4:24 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Regarding the southern resident orcas

---

Please consider allowing more salmon for the southern resident orcas

Sent from my iPhone

**From:** Vera Wieland <glasslass50@gmail.com>  
**Sent:** Saturday, April 06, 2019 8:56 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Remember the Orcas!

---

Please make sure that the Southern Resident Orcas are "given a seat at the table" during the allocation process. They should NOT be ignored!!!! Thank you from Vera Wieland

**From:** Sandy Carlsen <clarysandy@gmail.com>  
**Sent:** Saturday, April 13, 2019 9:14 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Response

---

I would like to suggest that you divide area nine into an area 9a and 9b with the dividing line from Foul Weather Bluff across to Double Bluff, this would allow you to better manage numbers of Chinook and Coho going into Hood Cana and past this line around the lower end of Whidbey Island and towards the lower Sound. You could alternate openings in these two areas to allow fisherman to have a place to go and at the same time allow fish passage. Example 9a open for 1 or 2wks then 9b open for 1 or 2wks then back to 9a for a week then 9b for a week etc. I have never understood why this Puget Sound area that is so important for fish passage into the canal overlaps with passage beyond and is not divided.

Thank You Clary Carlsen

**From:** Michelle Secord <michellesecord@gmail.com>  
**Sent:** Monday, April 08, 2019 2:34 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon allocation

---

Please allow enough Chinook Salmon to be allocated to the Southern resident Orcas so they dont starve-to death ! Have mercy!

Sent from my iPhone

**From:** Pamela Lorca <pamelitalorca@hotmail.com>  
**Sent:** Monday, April 08, 2019 2:25 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon allocations

---

When allocations and management decisions are being made I ardently urge your team to consider the great Southern Resident orcas and give them a seat at the table. They rely on salmon as their main food source and these decisions determine their survivability. We have a responsibility to be stewards for our Earth and all living creatures.

Pamela Casanova Lorca

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**From:** Cyndie-Lea Wang <cyndielea@hotmail.com>  
**Sent:** Monday, April 08, 2019 8:47 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon for Orcas

---

To those involved in the North Falcon process I humbly ask that you please give Southern Resident orcas "a seat at the table" that they be taken into consideration when allocations and management decisions are made.

Thank you,  
Cyndie-Lea Wang

**From:** [OnBoard Tours](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Salmon for SRKW  
**Date:** Tuesday, March 26, 2019 6:51:51 PM

---

Please consider collaborating and addressing fisheries and management impacts on prey availability for endangered, species in the spotlight, starving Southern Resident killer whales (SRKW).

Please consider establishing terminal fishing, including tribal knowledge, for restoration, recovery, and sustainable commercial fisheries.

Chinook salmon are 80% of the diet of SRKW. In the past 30 years the average Chinook salmon has become smaller by all our human impacts. Southern Resident killer whales need ~300 lbs. of salmon per day to survive. If a Chinook salmon weighs 15 lbs., each SRKW need 20 salmon per day.  
 $SRKW\ 75 \times 20\ salmon \times 365 = 547,500\ salmon\ needed\ per\ year.$

NOAA has historically allocated prey for endangered species, such as salmon allocated for St Lawrence Beluga whales.

Southern Resident killer whales need a seat at the management table, they need a share of salmon to survive. Please allocate salmon for SRKW.

Thank you for your consideration, I hope sustainable changes actually happen.

Sincerely,  
Caroline Armon  
Marine Ecology Educator

[Sent from Yahoo Mail on Android](#)

**From:** Christine Balcom <beesnblossoms@live.com>  
**Sent:** Sunday, April 14, 2019 12:31 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon Harvest Allocation

---

Please consider and include our southern resident Orca's during the current allocation as they are directly impacted by these numbers and in dire need of our help.

Thank you,  
Christine Balcom

**From:** Shayna McCagg <shayna.mccagg@gmail.com>  
**Sent:** Monday, April 08, 2019 10:08 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon

---

Hello,

Are we 100% positive that we are making the best decisions for our future food supply and ecosystems? As the people with this important responsibility, I have my confidence in you to make these informed decisions.

As a registered dietitian, I am faced with similar questions each day ie. what am I doing to improve things and make them right again?

As you know, there are many issues with our food system. Each a result of past decisions, perhaps influenced by various motives. Some will take decades to reverse. However, together we can change the norm, starting with our next decision.

Thank you for being the people to look at the bigger picture and make the right decision for the world.

Respectfully,

Shayna Huang, RD.

**From:** Katie Jones <orcan1281@yahoo.com>  
**Sent:** Friday, April 05, 2019 1:58 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer Whale Salmon Allocation

---

To Whom it May Concern:

I am writing on behalf of the endangered Southern Resident killer whale (SRKW) population. This very special population of orcas has graced the news a lot lately and not for good reasons. They are dying. Their population is very critically endangered and down to 75 individuals primarily because of a lack of their preferred prey: Chinook salmon. Chinook salmon make up about 80% of the SRKW diet.

I am respectfully asking that a salmon allocation be considered for Southern Resident killer whales. According to the Center for Whale Research, an adult SRKW can consume 200-450 pounds of salmon per day. Based on this estimate, they must catch 18-25 adult salmon per day (depending on the size of the salmon). This estimate works out to be approximately 1,400 salmon per day for the population (approximately 1/2 million salmon per year) for the population to maintain their current numbers. More than that would be needed for the population to grow.

Please help this iconic, invaluable species escape extinction - please consider a salmon allocation for Southern Resident killer whales.

Respectfully,  
Katie Jones

**From:** Jessica Huie <jlhuie9@gmail.com>  
**Sent:** Monday, April 08, 2019 12:32 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer Whales

---

On behalf of the Southern Resident Killer Whales, please give the starving SRKW a seat at the table when considering salmon allocations.

Thank you,  
Jessica Huie

**From:** Alison Engle <whalespirit@rockisland.com>  
**Sent:** Saturday, April 06, 2019 2:35 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer Whales Salmon Allocation

---

Dear North of Falcon representatives.

Please consider the Southern Resident Killer Whales when making your fish allocations and management decisions. This population of Orcas is on the brink of extinction and science shows that plentiful Salmon is what they need most. You can make a difference by giving them a seat at the table.

Thank you for your time and consideration.

Respectfully,  
Alison Engle

Alison Engle  
PO Box 3327  
Friday Harbor, WA 98250  
360-378-1840  
[whalespirit@rockisland.com](mailto:whalespirit@rockisland.com)

**From:** Kelly Shepard <kellyshepard82@gmail.com>  
**Sent:** Monday, April 08, 2019 9:35 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer whales

---

To whom it may concern:

Please give the southern resident Orcas a seat at your table when discussing purposed salmon fishing for 2019. The southern residents are starving to death and need every extra chinook salmon available to survive.

Thank you,  
Kelly Shepard

**From:** ojenna1 <ojenna1@gmail.com>  
**Sent:** Monday, April 08, 2019 7:28 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orca Salmon Allocations

---

I'm a Washington Resident who is politely asking for the numbers of salmon to the Southern Resident Orcas be increased.

These whales have been on my radar since I first saw them in the early 1990's. Things have changed for them and they desperately need our help. They do not have enough salmon and have been/are starving to death from malnutrition.

Please help them. They are unique pods of Orcas that are not found in this tight matriarchal group anywhere else in the world. We must do what we can to save them and increase their numbers.

Not doing so will be something we will regret. Let's please not let these pods go extinct.

Sincerely,

Jenna Flynn

Sent from my iPhone

**From:** Christina Mullee <christinamullee@icloud.com>  
**Sent:** Saturday, April 06, 2019 6:38 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern resident orcas

---

Please allocate the proper amount of fish for the starving southern resident orcas.  
We need to not let them go extinct, they are a very important part of the eco system.  
Thank you for your time.

Christina Mullee

Sent from my iPad

**From:** Mercedes benz <mercy2uandu@hotmail.com>  
**Sent:** Monday, April 08, 2019 3:06 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern resident orcas

---

To whom it may concern,  
I just wanted to send a quick message asking that the Southern resident orcas be taken into consideration when you are reviewing allocations and management decisions.  
Thankyou for your time,  
Peta Little

**From:** Stefan Roberts <stefanr@hotmail.co.uk>  
**Sent:** Tuesday, April 09, 2019 12:03 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Dear North Of Falcon,  
I hope you are well.

I understand that you are currently revisiting Northwests recreational and commercial salmon fisheries to make allocation arrangements.

Please, please, consider the impact this is having on Southern Resident Orcas. If there are no salmon left, they will simply just die out.

I am a resident of the UK, and I have visited Washington, stayed in Seattle and visited and spent time on the San Juan Islands. An area of natural beauty. I got to see these beautiful Orcas living in their natural environments, the way nature should be.

The number of salmon being caught for human consumption is too high, leaving little food for these Orcas. They need this, we don't.

I kindly ask that you please continue to consider this.

Thank you for your time.

Best wishes,  
Stefan Roberts

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**From:** C.McConnell <claudia27g@gmail.com>  
**Sent:** Tuesday, April 09, 2019 2:32 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas!

---

Please save our Southern Resident Orcas from extinction. This is the power you have and the legacy you will leave behind during your lifetime.

Sincerely,

Claudia McConnell  
1909 North Lake Ave  
Snohomish, Wa 98290

**From:** Iris deV <irisdevoogd@gmail.com>  
**Sent:** Monday, April 08, 2019 9:46 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern resident Orcas and salmon quota allocation

---

Dear Sir, Madam,

With an eye to the survival and thriving of the Southern Resident orcas, I respectfully ask that they be 'given a seat at the table' and their needs be taken into consideration as you allocate salmon fishing quotas in the North of Falcon process.

Respectfully yours,  
Iris de Voogd  
Amsterdam  
The Netherlands

**From:** Carla DeCrona <cdecrona@icloud.com>  
**Sent:** Monday, April 08, 2019 10:18 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

To the state, federal and tribal fishery managers at the North of Falcon meetings,

I am writing to ask that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made during the 2019 North of Falcon meetings, and during annual conversations of the North of Falcon process.

Thank you,

Carla Decrona  
11933 SW Cove Rd  
Vashon, WA 98070

**From:** Colleen Moore <colleenmoorewa@gmail.com>  
**Sent:** Friday, April 05, 2019 10:19 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Please give Southern Resident orcas "a seat at the table" and take them into consideration when allocations and management decisions are made.

Sincerely,  
Colleen Moore

**From:** Jenna Thornber <jennapcd@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:24 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas Deserve Fish Quota

---

Hello there,

I hope this message finds you well, I want to express that this is the year to finally include the Southern Resident Killer Whales in the dialogue of fish quotas so that they can survive and revive their population.

Please take the southern resident killer whales into consideration when allocations and management decisions are made during the North of Falcon Process.

Thank you,

Jenna Thornber

**From:** Donna <goldentd128@gmail.com>  
**Sent:** Monday, April 08, 2019 10:21 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

I am writing on behalf of the Southern Resident orcas that desperately need more salmon in order to survive and avoid extinction. Please limit the catch allotments so they will find enough food to survive. Human greed is sad thing and it's hurting our planet and it's beautiful wildlife everywhere. The orcas are loved worldwide and they are the absolute symbol of the Pacific NW. It would be a serious travesty to allow them to go extinct. Each of the Southern Resident orcas has a name and is personally known and loved. The balance of the ocean is seriously out of whack when there is not enough salmon to feed a handful - a mere 75 - whales. Thank you for listening.

Donna George

Sent from my iPhone

**From:** Tisa A <tisa.agloro@gmail.com>  
**Sent:** Friday, April 05, 2019 2:22 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Hello,

I recently became aware of the North of Falcon process and really think that the Southern Resident orcas be taken into consideration when allocations and management decisions are made. It is just too important of an issue right now while we potentially have a chance to fix. I have personally seen a lot of the impact that commercial, recreational, and tribal fishing has had on the salmon populations.

Thanks for your consideration,  
~ Tisa Agloro

**From:** cormierbernadette <cormierbernadette@yahoo.com>  
**Sent:** Wednesday, April 10, 2019 2:31 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Simply and respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

Thank you,

Bernadette Cormier

**From:** Monika Wieland <monika.wieland@gmail.com>  
**Sent:** Friday, April 05, 2019 2:49 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Residents and North of Falcon

---

To Whom It May Concern:

I'm writing to respectfully request that you consider the needs of the critically endangered Southern Resident killer whales when assigning fisheries allocations for the 2019 season and beyond. It is well known that the main issue facing these whales is lack of food, and one of the only things we can do that will have an immediate impact to benefit them is to leave more fish in the water and ensure they get a seat at the table when dividing up the fisheries management "pie". Fishermen and orcas have long co-existed, and it is my fervent wish that they will continue to do so for many generations to come.

Thanks for your consideration,

Monika Wieland Shields

President, Orca Behavior Institute

San Juan Island, Washington

**From:** jjohnstonrn@rockisland.com  
**Sent:** Monday, April 08, 2019 12:56 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Residents

---

Please give our orcas a seat at the table this year. Thank you!

**From:** seversoningrid@gmail.com  
**Sent:** Monday, April 08, 2019 5:38 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW

---

Please allow the Southern Resident orca to have a seat at the table .  
Thank you  
Ingrid Severson  
Sent from my iPad

**From:** Cy Scammell <cyscammell@yahoo.com>  
**Sent:** Saturday, April 06, 2019 12:45 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW Allocation

---

North of Falcon,

Please allocate at least 500K chinook salmon for our SRKW for 2019. It's the only way they will be able to survive.

Cy Scammell  
[www.pnwprotectors.com](http://www.pnwprotectors.com)

Sent from my iPhone

**From:** Teresa Brown <downtownteresa@gmail.com>  
**Sent:** Saturday, April 06, 2019 8:49 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW

---

Hello,

- I'm writing to you today to ask that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made in regard to chinook salmon as their lives depend on it. Thank you for your time,
- Teresa Young
- 801-420-7980

Sent from [Mail](#) for Windows 10

**From:** S Tuck <susantuck01@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW

---

Good morning,

This letter is to ask and plead with you and your committee members to please learn and understand how much salmon each southern resident orca needs to thrive. We have driven this critically endangered species to a point of possible extinction. I have given up eating salmon as have my family. It means this much to me to give my portions to the southern resident killer whales. This is their lifeline. Please consider their needs and give them double seats at the table when considering allowed fishing amounts. I also would prefer if there was a guideline of no net fishing. Too much harm and bycatch is coming to marine life due to these nets. Short line and pole fishing is the desired form to catch fish as far as I am concerned. I pay the extra dollar or so a can for my tuna this way. The southern resident are a different type of killer whale. They are an icon. Let's help them stick around!!

Wholeheartedly,

Susan Tuck  
Of Georgia, us

**From:** Anne Dalrymple <darkover@me.com>  
**Sent:** Tuesday, April 09, 2019 11:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKWs and salmon - North of Falcon process and allocation

---

Hello -

I was a volunteer at People for Puget Sound in the early 2000 in order to work to protect our orcas. We have even fewer now.

They are starving and we are seeing the end of our J, K and L pods unless dramatic rescue action is taken.

Please give our Southern Resident orcas a "seat at the table" and be taken into consideration when allocations and management decisions are made re salmon.

Thank you - Anne Dalrymple

Seattle WA 98115

—  
What is North of Falcon?

Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational & commercial salmon fisheries. This series of meetings – involving representatives from federal, state and tribal governments & recreational & commercial fishing industries – is known as the North of Falcon process. This process is folded into the Pacific Fisheries Management Council, which oversees fishing in the Pacific Coast region.

The North of Falcon process integrates management of ocean fisheries between Cape Falcon (on the north Oregon coast) and the Canadian border, including fisheries in the Columbia River, Puget Sound, & inland Washington coastal waters. Columbia River fisheries are a significant component of the North of Falcon process.

In this public process, there are allocation agreements reached between Oregon and Washington ocean and freshwater commercial and sport fisheries, as well as mandated allocation agreements between the states and treaty Indian tribes.

Historically the orcas have not had a seat at the table during these talks or been given a harvest allocation. With the steady decline of the SRKW population due to diminishing prey abundance, fisheries managers have become aware of the need to include the SRKWs in the dialogue. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues.

◆ You can help by respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

**From:** Melissa Borden <inrpeas4meb@yahoo.com>  
**Sent:** Friday, April 05, 2019 6:07 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKWs given a seat at the table

---

Hello,

I am respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

Thank You,  
Melissa Borden

**From:** Amy Eberling <anorman2@gmail.com>  
**Sent:** Friday, April 05, 2019 10:00 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKWs

---

To Whom it May Concern,

The SRKWs deserve a seat at the table. I hope that the decision in mid-April will reflect this.

Thank you for looking out for a very special ecotype that deserves every last chance and fish it can find.

Best,

Amy Eberling

Include in NOF public  
comment

WA FISH AND WILDLIFE COMMISSION TESTIMONY. Mar. 2, 2019. Steve Mathews.  
[sbmathews38@yahoo.com](mailto:sbmathews38@yahoo.com).

**The present fishing mortality regime on chinook salmon is unsustainable. The effort at times is too much; the seasons are too long; the gear is too powerful; the by-catch mortality of little ones is too great. If fishing were closed for 10 years and then re-set, a more rational chinook salmon fishing regime might look like this:**

NO YEAR ROUND FISHING- summers only on mature (end of life) chinook salmon.

NO CATCH AND RELEASE- for either sport or commercial; (chinook salmon are not trout in a stream).

Annual, individual sport catch quotas in numbers; enforced by electronic (I-phone) reporting.

Commercial quotas by gear type; 100% observer coverage; electronic, real-time monitoring.

NO MINIMUM-SIZE LIMITS- because throwbacks would be illegal.

NO SPAWNING GROUND FISHING- all stream spawning sections closed for the spawning season.

NO NATURAL BAITS- herring, shrimp, or salmon eggs; (dogfish, rockfish, sturgeon swallow these too).

NO TREBLE HOOKS- single barbless everywhere; (lures with three, barbed treble hooks are still legal).

NO FLASHERS, NO HOOTCHIES- only large plugs, spoons, jigs, spinners, etc.

NO UNLIMITED-DEPTH COMMERCIAL NETS- the redundant web in the water kills other marine life too.

NO NIGHTTIME GILLNETTING- chinooks come up at night; the other salmon can be caught all day long.

NO TOWING ON OPENED PURSE SEINES- target species can be caught without "trawling".

#### **WHAT ELSE WOULD GO AWAY?**

BY-CATCH- of small, immature chinook; that elephant in the room would tend to vanish.

WASTAGE- of small, dead but edible chinook salmon.

MASS MARKING- that expensive, suspect program needs evaluation by a blue ribbon science panel.

RECOVERY BOXES- that unnecessary plumbing is mostly for show.

CONTROVERSIAL "HOOKING MORTALITY" STUDIES- let's stop debating that problematic science.

SPECIAL RULES- like different sport landing rules for boats over and under 30 feet.

HATCHERY SURPLUSES- there would be none if carcasses above reproductive needs were distributed throughout each river for fertilization.

**The current fishing regime is driven by THE NEEDS OF THE FISHERMEN not THE NEEDS OF THE FISH. The alternative would self-correct fishing abuses, and also provide better fishing mortality data.**

**From:** [george.ging](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Support for changing size limit of chinook salmon in Area 13 from 22" to 18" during July through September  
**Date:** Friday, March 22, 2019 11:40:32 AM

---

Fishing opportunities in Marine Area 13 are limited and there is an opportunity to allow some additional harvest of chinook jacks that are not needed for hatchery production. It makes sense to allow fishers to keep returning adult chinook jacks (18" to 22") that would otherwise return to the hatchery and be surplus, i.e., sold for dog food. My license fees in part go toward the production of hatchery fish, and recreational fishers should get the benefit of these fish, and not used for pet food.

Gwill Ging

**From:** Colleen Weiler <colleen.weiler@whales.org>  
**Sent:** Friday, April 12, 2019 1:28 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons  
**Attachments:** WDC North of Falcon letter April 2019.pdf

---

Please accept the attached letter from Whale and Dolphin Conservation (WDC) for input into planning the marine area salmon seasons in 2019.

Thank you,  
-Colleen

**Colleen Weiler**  
WDC Fellow, Rekos Fellowship for Orca Conservation

Telephone: +1 508 746 2522  
Mobile: +1 810 813 1643  
Skype: cmweiler

WDC, Whale and Dolphin Conservation  
7 Nelson Street  
Plymouth  
MA  
02360-4044  
United States  
[whales.org](http://whales.org)



***Sign our Pledge Never to Plunge with the forgotten whales and dolphins***

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Whale and Dolphin Conservation ("WDC"), Inc. is an IRS recognized 501(c)3 non-profit organization. Your contributions are tax deductible to the fullest extent of the law.

WDC, 7 Nelson Street, Plymouth, MA 02360-4044 Tel: +1 (508) 746-2522

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Washington Department of Fish and Wildlife  
Director Kelly Susewind  
Natural Resources Building  
1111 Washington St. SE  
Olympia, WA 98501  
Submitted via email to: [NorthofFalcon@dfw.wa.gov](mailto:NorthofFalcon@dfw.wa.gov)

April 12, 2019

Dear Director Susewind,

Whale and Dolphin Conservation (WDC) is the leading global charity dedicated to the protection of whales and dolphins worldwide. On behalf of WDC and our thousands of supporters in Washington State, as well as many more across the United States and internationally who are concerned with the survival of the critically endangered Southern Resident orca community, we respectfully submit these comments regarding salmon management decisions for 2019.

We urge the Washington Department of Fish and Wildlife (WDFW) to incorporate additional protection for Southern Resident orca foraging opportunities into their decisions for the upcoming salmon season, and to explore ways in which management measures can protect both Southern Resident orcas and critical salmon stocks.

According to WDFW's pre-season forecasts, specific Chinook salmon runs returning to the Stillaguamish and Nooksack rivers, Hood Canal, and Lake Washington are the most critical stocks for 2019, and will be limiting factors for harvest and fishing activities in areas where these stocks have high rates of incidental catch. We encourage WDFW to combine management measures that protect these stocks with approaches that also maximize foraging opportunities for the Southern Resident orcas.

For example, Stillaguamish summer/fall Chinook have high catch rates in Marine Areas 5 and 7 in July through September, a time that Southern Resident orcas are likely to be around the San Juan Islands (Marine Area 7) and in and out of the Strait of Juan de Fuca (includes Marine Area 5). Closing or limiting fishing for Chinook salmon in these areas during this time period can protect returning Stillaguamish Chinook and leave more salmon available for Southern Resident orcas in their core summer habitat.

All the options considered by WDFW in its North of Falcon planning process, prior to the Pacific Fisheries Management Council (PFMC) meeting which is currently underway, failed to meet the Exploitation Rate (ER) ceiling established for Stillaguamish summer/fall Chinook, and additional actions will be necessary to protect this vulnerable stock. We urge WDFW to incorporate the potential presence of Southern Resident orcas into those management decisions to maximize the protection of both orcas and salmon.

Stillaguamish summer/fall Chinook are included in the Northern Puget Sound fall Chinook group of the National Marine Fisheries Service/WDFW Southern Resident orca priority Chinook stock list, and is in fact given the top rating, reflecting the importance of these salmon runs to the orcas. Other salmon stocks of special concern for 2019 are also in the top ten for orca priority stocks, including Southern Puget Sound (Hood Canal) and Northern Puget Sound spring Chinook (Nooksack).

Nooksack spring Chinook have high catch rates in Marine Area 7 in October-April. The Southern Residents historically start to return to this area in April, and J pod has already been seen around the San Juan Islands this spring. Management measures in Marine Area 7 during this early spring period could protect both at-risk Nooksack spring Chinook and maximize Southern Resident orca foraging opportunities as the orcas come back into the Salish Sea from their winter foraging grounds.

We recognize that salmon have declined throughout the Pacific Northwest due to a number of reasons, and we support efforts to rebuild depleted populations through habitat protection and restoration, reconnecting watersheds, and reducing contaminants. However, all of these actions take time to result in benefits to salmon and orcas. The most immediate action the agency can take to increase currently available prey for Southern Resident orcas is implementing fishery management measures that give the orcas the best chance to forage on available salmon throughout their range. Combining these actions with measures that protect critical salmon stocks



will maintain fishing opportunities while also allowing critical salmon runs a chance to rebuild and reducing direct competition with orcas in historic foraging areas – measures can serve a dual purpose of protecting both salmon and the Southern Residents.

Salmon returning to the Fraser River in British Columbia and to rivers throughout Puget Sound comprise the majority of the Southern Residents' diet when they are present in the Salish Sea region of their range – typically spring through fall or early winter. Many of these salmon runs are also declining or at-risk, and are in need of additional precautionary measures to ensure their survival in marine area harvest activities.

WDFW has an opportunity to protect both orcas and salmon with targeted, area-based management that reduces catch rates for critical wild salmon stocks and gives Southern Resident orcas an opportunity to find available salmon in historic foraging areas. We urge WDFW to take advantage of this opportunity and enact combined management measures in 2019 for the protection of both of these iconic species.

Thank you for the opportunity to provide comments on the North of Falcon process, and please do not hesitate to reach out with additional questions.

Regards,



Colleen Weiler  
Jessica Rekos Fellow  
Whale and Dolphin Conservation

WHALE AND  
DOLPHIN  
CONSERVATION



**From:** Lora Frost <frost.lora@gmail.com>  
**Sent:** Saturday, April 06, 2019 4:38 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Whales and fishing

---

Hello,

As you may be aware, the southern pod of Orcas are declining. One of the reasons is not being able to get enough salmon.

I am writing today to request that the food needs of the orcas be considered when you make the decision on fishing allocation and management.

Thank you for your consideration,

Lora Frost

**From:** [David Moskowitz](#)  
**To:** [Tucker Jones](#); [Tweit, William M \(DFW\)](#); [Lothrop, Ryan L \(DFW\)](#); [Sippel, Timothy J \(DFW\)](#); [John North](#); [Geoffrey Whisler](#); [Lefleur, Cindy \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Chris Kern](#)  
**Subject:** Comments on the 2019 Summer - Fall Fishery Recommendations  
**Date:** Thursday, May 16, 2019 10:10:45 AM  
**Attachments:** [CRC-NOF Summer-Fall Fishery Comments 2019 - TCA.pdf](#)

---

The Conservation Angler believes that 2019 Columbia River Fisheries need more stringent measures to protect low numbers of wild salmon and wild steelhead.

Our rationale is contained in the attached Memo.

Sincerely,

David Moskowitz

David A. Moskowitz  
Executive Director  
971-235-8953 (Direct)  
[www.theconservationangler.com](http://www.theconservationangler.com)



Conservation means fair and honest dealings with the future, usually at some cost to the immediate present. It is simply morality, with little to offset the glamour and quick material rewards of the North American deity, "Progress".  
Roderick Haig-Brown



## Memorandum

To: Columbia River Compact States  
Fr: The Conservation Angler  
Dt: May 15, 2019  
Re: 2019 Summer and Fall Fishery Conservation Measures

---

The purpose of this Memorandum is to provide comments and recommendations for wild fish conservation measures for consideration in fishery regulation and implementation actions planned or taken during 2019.

### **I. Concerns with the Columbia River Compact and North of Falcon Methodologies**

The Conservation Angler believes that the data underlying the forecasting of salmon and steelhead returns to the Columbia River suffers from multiple flawed assumptions, unacceptable margin of error ranges, excessive application of professional judgement and statistically invalid observation and creel census effort used to implement modeling runs and to estimate harvest impacts and exploitation rates.

### **II. Specific Concerns During Authorized Fisheries**

1. There are no reports of interceptions of non-target species from the Select Area fisheries.
2. There is no consistent application of a statistically valid monitoring program for select area commercial fisheries, sport fisheries or mainstem drift net commercial fisheries which is essential to establish accurate and reliable mortality and encounter rate data.
3. Methods of estimating natural-origin spawning escapement are not consistently applied in rivers without counting stations.
4. There is no clear method of accounting for illegal harvest or catch and release mortality for the shore and boat sport fishery in the data that comprises the fishery summaries year-to-year.
5. Ocean and in-river harvest rates are too high on most salmon species to allow natural-origin escapement to result in the nutrient loading necessary to provide forage for emerging and rearing juvenile salmon. Any harvest rate over 20% fails to contribute the necessary nutrients for subsequent generational survival within natal rivers.<sup>1</sup>

### **III. Compact and North of Falcon Process Issues**

The public process for the Columbia River Compact continues to suffer from late notice of public hearings and even later delivery of factual data on the issues being discussed and decided.

There continues to be a lack of transparency with the data being used by agencies to make forecasts and conduct updates on the progress of salmon and steelhead runs to the Columbia and tributaries.

Because the US v. Oregon court case is over, TAC proceedings, data and models must become publicly available.

### **IV. Ocean, Marine and In-River Harvest Regimes:**

The region has institutionalized the Causes for Recovering and Restoring Columbia and Snake River Wild Salmon and Steelhead.

1. The Ocean and Lower Columbia River are non-selective, mix-stock fisheries that are preventing recovery of ESA-listed spring and fall chinook.

---

<sup>1</sup> Knudsen, E. Eric, Eric W. Symmes and F. Joseph Margraf. 2003. Searching for a life history Approach to Salmon Escapement Management. In: Nutrients in Salmonid Ecosystems: Sustaining Production and Biodiversity. Editor, John Stockner. American Fisheries Society Symposium 34.



2. Monitoring for wild populations of ESA-listed and other wild unlisted salmon (mid-Columbia Spring, Summer and Fall Chinook as well as Upper Columbia sockeye salmon) is currently accomplished by management of aggregate populations that are counted as they cross dams.
3. Fishery Managers account for harvest with creel surveys and account for wild fish escapement with dam passage counts, not spawning ground surveys.
4. While there may be spawning escapement goals or targets – also based on aggregate salmon and steelhead passage for both wild and hatchery fish of a particular species – there are no River Specific Management (RSM) criteria for spawning populations of natural-origin species. Furthermore, there are no egg-deposition criteria by river and species.
5. Columbia River and ocean harvest rates above 20% do not account for the importance of the spawned carcasses that are essential for the ensuing generation of juvenile salmon and steelhead emerging from natal river gravels.<sup>2</sup>

## **V. Concerns About 2019 Lower Columbia River Spring and Summer Chinook**

While the closure of spring chinook sport fishing in the lower Columbia River was the right thing to do, it is shocking to learn that wild spring chinook numbers in the Cowlitz and Lewis have dropped to under triple digits. How and why did this happen?

Not enough is known about status of wild populations, particularly below Bonneville Dam. Where is data on spring chinook wild escapement by natal river? How low did the wild spring chinook runs on Cowlitz and Lewis Rivers get before Federal and State managers had to take such drastic with little if any warning?

Hatchery brood escapement and sport fishing creel surveys are no surrogate to wild escapement, abundance or productivity estimates that should be established and maintained based on spawning counts or carcass surveys.

The Joint Staff Reports on 2019 forecast numbers for Upriver Columbia Spring Chinook do not contain data from the Deschutes or John Day. While these runs are part of the Mid-Columbia Chinook ESU, the failure to maintain or publish the run data is dooming these rivers (particularly the Deschutes) to the same fate as the Cowlitz or Lewis Rivers.

As is clear from recent joint staff notices, the only management concern expressed is whether hatcheries will make their egg take requirements. There is no reporting on whether rivers will make their egg deposition requirements. Why? Because there are not egg deposition or spawner escapement requirements for rivers. Thus, it is little wonder why the wild salmon and steelhead runs are slipping into extinction. The fishery agencies do not have love for wild salmon.

## **VI. Concerns about Spring – Summer chinook data**

What is the formula to determine the conversion of springers entering Columbia River mouth and then making the run update based on Bonneville passage? How do the states calculate for predation, harvest, tributary turn-off, illegal harvest and wild escapement?

The management dates delineating spring chinook and summer chinook are arbitrary for the spring and summer chinook. Furthermore, this date is based on passage at Bonneville Dam, and does not account for the on-going entry of summer chinook into the lower Columbia and their rate of harvest in Select Areas and shore-based sport fisheries.

---

<sup>2</sup> Knudsen, E. Eric, Eric W. Symmes, and F. Joseph Margraf. 2003. Searching for a life history approach to salmon escapement management. Pages 261-276 in J. G. Stockner, editor. Nutrients in salmonid ecosystems: sustaining production and biodiversity. American Fisheries Society, Symposium 34, Bethesda, Maryland.



Another major management problem for managing wild summer chinook to the Snake and Upper Columbia is that the mark rate is insufficient and leads to problems estimating wild abundance and harvest rate.

Is any sampling at AFF able to refine the ability to determine Spring chinook from Summer chinook? What tools do the state's use in determining the impacts of SAFE encounters and harvest, as well as the sport and tribal impacts in terms of wild Summer Chinook escapement? What is the confidence interval on estimating wild summer chinook spawning escapement abundance on Upper Columbia and tributaries?

## **VII. Concerns About Summer Steelhead and Fall Chinook**

The forecasts for Columbia River summer steelhead and fall chinook are both quite low – with 950 wild B-run steelhead predicted to return – which is 14% lower than the 2017 pre-season forecast of 1,100 wild B-runs.

What will be done with LCR fisheries (SAFE, non-treaty mainstem commercial, sport fisheries and below-Bonneville tribal fisheries to:

- a. Minimize impacts on ESA-listed winter and early summer wild steelhead?
- b. Minimize impacts on ESA listed wild UCR and MCR summer steelhead
- c. Eliminate impacts on ESA-listed wild SR B-run summer steelhead

## **VIII. Wild Fish Sanctuaries and Required Specific Angling Practices Can Reduce Lethal Encounters**

Low wild returns and warm Columbia River water require immediate conservation action.

All cool water refugia, no matter the size or volume of water, will attract migrating wild salmon and steelhead if the Columbia River is warmer. It is a natural life-history trait of salmon, trout and steelhead. Perhaps the most important cold-water refugia is at the Deschutes-Columbia confluence, where the Deschutes will start cooling down in August, just as Columbia heats up and as the up-river salmon and steelhead migration peaks. The mouth of the Deschutes will be an incredibly important sanctuary for wild steelhead and salmon when the Columbia River is warmer. Oregon should invoke an no fishing sanctuary very similar to what was established in 2018.

All cold water refugia (CWR) will be very important to the health and productivity of ESA-listed wild salmon and particularly, wild steelhead which are known to remain in the cool-water plumes for weeks and months.

Fishing, even catch and release fishing, has an inordinate impact on wild steelhead in these locations because they are caught and released multiple times.

Fishing in sanctuary areas during warm water episodes when wild fish run sizes are low should not be permitted.

We should learn how the 2018-2019 Deschutes River Wild Steelhead return turned out by end of June. The recent wild runs have been low and present a strong case for conservation measures aimed at reducing lethal encounters. Considering the amount of angling that takes place, it is not inconceivable that Deschutes River steelheaders could encounter every single wild fish – and some- more than once.

All of us have a responsibility to minimize our impacts on these wild fish:

1. Use barbless hooks which should be mandatory in any fishery where certain species must be released
2. Use appropriate gear to allow safe and efficient landing of your steelhead
3. Keep your fish in the water when landing and unhooking it.
4. Use care when handling, photographing and releasing your catch
5. Anglers should have to rack their rods once they have taken their daily bag limit.
6. Refrain from angling when the Deschutes is over 66f.
7. Handle juvenile trout carefully when trout fishing (they may be steelhead smolts).



## **Comments in Response to Oregon and Washington Fishing Regulations in the Columbia River**

The Conservation Angler appreciates the efforts that joint state staff have given to provide angling opportunity during the dismal forecasts of the coming 2019 Summer and Fall Fisheries in the Columbia and Snake Rivers.

However, given the poor run-sizes, the opportunity to fish and retain hatchery fish, particularly in the early steelhead fishing season, rides on the backs of wild steelhead.

### **Problems with the Early Summer Fishery: June 16 thru July 31**

For the early-summer season (June 16 thru July 31) from the Astoria Bridge to just downstream of the Snake River confluence, the only fish that can be retained by anglers in the mainstem Columbia are hatchery-origin steelhead, and the daily angler bag-limit is two hatchery steelhead through June 30, and one hatchery steelhead during July. Wild steelhead and all chinook and sockeye salmon must be released unharmed.

1. The Columbia River summer steelhead run has more wild fish in the early part of the run than it does after August 1.

Bonneville Dam Passage Data: June 1 thru July 31

2018: 14,265 wild steelhead pass BON during this period  
31,220 total steelhead pass BON during this period  
**Wild Steelhead comprise 46% of the steelhead present**

2017: 10,261 wild steelhead pass BON during this period  
19,559 total steelhead pass BON during this period  
**Wild Steelhead comprise 53% of the steelhead present**

2016: 22,026 wild steelhead pass BON during this period  
56,868 total steelhead pass BON during this period  
**Wild Steelhead comprise 40% of the steelhead present**

**Therefore, the focus on steelhead angling and retention of two hatchery fish will place undue burden on the early portion of the 2019 summer steelhead. Anglers will sort through many wild fish to catch their two-hatchery fish bag limit. The high percentage of wild steelhead in the early run puts those fish at risk of high encounter rates.**

2. To make matters worse, anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Anglers who take their limit should be required to rack their rods.
3. Anglers may use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
4. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.

### **Problems with the Summer – Fall Fishery: August 1 thru December 31**

The 2019 Forecast predicts a very small run of upriver summer steelhead.

#### **Upriver Summer Steelhead: July 1 – Oct 31: 2019 Forecast is 38% of the 10-Year Average**

These steelhead are bound for the Klickitat, Deschutes, John Day, Umatilla, and other rivers in the Upper Columbia and Snake Basins such as the Grand Ronde, Clearwater, Salmon and Imnaha.

2019 Forecast for Upriver Summer Steelhead:	118,200 total A and B-run adults
TYA of Upriver A & B-run summer steelhead:	315,202 A & B-run steelhead



## 2019 Upriver Summer Steelhead Predicted to Pass Bonneville Dam

2019 Upriver Summer Steelhead	2018 Forecast	2018 Return	2019 Forecast	Run Timing
<b>Total Upriver Steelhead</b>	190,350	100,483	126,950	to BON Dam
Early summer-run (H+W)	7,950	6,483	8,750	April - June
<i>(early summer wild)</i>	<b>3,000</b>	<b>2,595</b>	<b>3,200</b>	
A-Run (total H + W)	158,000	69,338	110,200	July - Oct
<i>(A-run wild)</i>	<b>44,800</b>	<b>21,725</b>	<b>33,900</b>	
B-Run (Total H + W)	24,400	24,662	8,000	July -Oct
<i>(B-run wild)</i>	<b>3,400</b>	<b>2,382</b>	<b>950</b>	July-June
<b>Total Wild Steelhead Past BON</b>	<b>51,200</b>	<b>26,699</b>	<b>38,050</b>	April - Oct

1. Anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Therefore, anglers who take their limit should be required to rack their rods.
2. Anglers use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
3. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.
4. Jack salmon (a smaller, younger but sexually mature salmon of either chinook or Coho species) limits are 5 fish per angler per day. These limits should be reduced because of the important role they play in spawning success.
5. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The Dalles Dam and John Day Dam should be extended to at least mid-October due to the presence of wild B-run steelhead in that region.
6. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The John Day Dam and McNary Dam should be extended to at least mid-November due to the presence of wild B-run steelhead in that region.

### Cold Water Sanctuaries Are Critical for Wild and Hatchery Fish migrating up the Columbia River

The US Environmental Protection Agency (EPA) has identified dozens of cold water refugia along the Columbia. We know that 13 of these areas are extremely important to migrating salmon and steelhead.

When the Columbia River water temperatures reach 66f, the importance of these areas increases, and when the mainstem water temperatures reach 68f, they become life-saving river reaches for salmon and steelhead. At 68.5f, they become refuges for salmon and steelhead in which fish linger for weeks and months.

Commercial fishing is already prohibited in river-mouth sanctuaries.

It is time for Oregon and Washington to create sanctuaries for migrating salmon and steelhead in these 13 CWR by prohibiting all angling in specific geographic areas created by the cold-water inputs for a specific period. The time period could be tailored by historic temperature data but could also be established based on blocks determined strictly by dates of known salmon and steelhead use – but at least three months (July thru September).

**From:** [Net zero](#)  
**To:** [Lothrop, Ryan L \(DFW\)](#); [Tweit, William M \(DFW\)](#)  
**Subject:** NOF  
**Date:** Tuesday, March 12, 2019 9:50:46 AM

---

Ryan, Bill, I will be unable to attend the meeting on Mar 18 as I will be out of the State. I will try to find a substitute, but not sure if that will happen. I would like to provide a little input.

For summer chinook, it appears that due to the low run size that opportunity below Bonneville will be very limited or non existent. Due to continued under escapement to the spawning beds and the presence of too many hatchery fish on the spawning beds, we recommend that all fisheries above and below Bonneville be mark selective. The Group will probably discuss bag limits, and we recommend the limit that will provide maximum opportunity while still achieving the harvest quota.

For fall chinook, we prefer options that allow opportunity throughout the Columbia River.

With the large coho forecast, there will be lots of discussion regarding Buoy 10, the ocean, and the river. We do not have input for this item.

For summer steelhead, we recommend aggressively pursuing options that maximize opportunity in June, July, August and September since other fishing opportunities will be severely limited. Both B-Runs and summer chinook catch will be concerns. If a one fish limit extends opportunity, it should be considered as well as a schedule that reduces effort(days per week).

Have a great meeting, and the subject looks challenging.

Regards, Harry Barber

Sent from my iPhone

**From:** [Rob Larsen](#)  
**To:** [Livingood-Schott, Tara L \(DFW\)](#); [Losee, James P \(DFW\)](#)  
**Subject:** Re: Minter fishery  
**Date:** Wednesday, April 3, 2019 10:30:11 PM

---

Tara,

I appreciate both you and James taking the time to listen to our recommendations and am pleased that you are making the effort to try and increase sportsman opportunity at Minter Creek.

If a concern over egg take requires an in season update to the fishery that is certainly understandable. and critical. As far as the garbage SOF PSA would again be willing to organize a clean up and encourage fisherman to pack out what they bring in. With regards to the porta potties we are a small club and I would need to know what the cost of the additional month before agreeing to fund them. I will discuss this funding with our board if you can provide the cost for an additional month. That said last year we had encouraged the use of funds from the porta potties on the Skokomish river where they have not been used since that fishery has been discontinued. I believe we could get the Gig Harbor chapter of PSA to do organize a clean up as well. When I discussed it with their past President he had indicated that they would . I believe we can make this increased opportunity work and want to help where we can thanks for your help on this effort.

Rob Larsen  
SOF PSA President  
253-230-2839

**From:** [lars.sorensen](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Area 7 Summer Fishing  
**Date:** Monday, April 15, 2019 3:47:06 PM

---

Hello Mark,  
I know management of these issues are very challenging.

I heard that there was some conversation about no fishing in Area 7 this Summer.

All interested parties need to work together. Sports fisherman, commercial and tribal. The burden cannot just be on one group.

Last year just days after the Summer season closed for Coho, I saw 20+ purse seine boats just off Open Bay and the end of Henry Island. I'm not sure how this makes sense.

It's unfortunate that sports fisherman get hit the hardest. We are allowed one fish most of the time and have a very restricted season.

I hope you understand and will consider how important fishing is for those who live in the San Juan Islands. I believe that any shut down will only lead to poaching and more illegal activities and prevent the true honest fishermen from being on the water to assist in observation and keeping others honest. We are your eyes on the water when the season is on.

Thank you,  
Lars Sorensen  
1641 San Juan Drive  
Friday Harbor, Wa. 98250  
360-378-0118 Home  
206-718-8800 Mobile

**From:** [Marc Krueger](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re:  
**Date:** Friday, April 19, 2019 8:02:38 AM

---

Mark,

This does not explain why your closing area 7 and not other areas. This is not the only area that you will find those particular runs.

I am retired now, but I owned and operated a salmon charter business in Anacortes for 22 years. Every year there is a cut back it happens in area 7.

I believe it's because we are a smaller user group and you want to appease the larger group of fishermen. Less bitching.

This is wrong!!!

If your going take August, give us June. That would protect the runs you mentioned.

I'm sure that won't happen. One thing about our WDFW, once they take some away, we usually never get it back.

Thanks

Marc Krueger  
360 770 6563

On Wed, Apr 17, 2019, 4:22 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Marc,

Thank you for your recent correspondence regarding salmon fishing in Area 7. The 2019-20 sport fishing package was a result of the need to meet management and conservation objectives for several Puget Sound Chinook stocks listed under the Endangered Species Act including Stillaguamish, Nooksack Springs, and the Mid-Hood Canal aggregate. Unfortunately, wild salmon stocks continue to decline not only in Puget Sound, but all through the Salish sea. Canada also recently announced delayed openings and closures to their Chinook seasons as well to address conservation of these stocks.

<https://islandfishermanmagazine.com/dfw-announces-chinook-fishery-shutdown/>

WDFW does not take closing fisheries lightly. We recognize and regret the impacts that these fishery closures will have on fishers and the communities that support fishing opportunities. My contact information is below should you have further questions.

Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6th Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** Marc Krueger <[fistale5@gmail.com](mailto:fistale5@gmail.com)>

**Sent:** Saturday, April 13, 2019 7:02 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:**

Keep area 7 open in August. Why are we the only area with new restrictions.

I wouldn't mind annual limits but let us fish.

Marc Krueger

Long time Anacortes fisherman

**From:** [Dunlop, Michelle K \(DFW\)](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#)  
**Subject:** caller  
**Date:** Friday, April 19, 2019 2:52:48 PM

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I don't know if you're routing questions from the public to the customer service staff or if one of you are returning calls.

Jerry, from Stanwood, would like to know why we're closed in January in MA7. He says there are no whales around at that time ☹ and no fish are migrating to the rivers to spawn. And he wants to know if it's open in December.

360-629-3548

**From:** [FISHPGM \(DFW\)](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Dufault, Aaron M \(DFW\)](#)  
**Cc:** [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#)  
**Subject:** FW: Area 7 August closure  
**Date:** Wednesday, April 24, 2019 10:14:36 AM

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**FYI...**

**Jeff**

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**From:** Director (DFW) <[director@dfw.wa.gov](mailto:director@dfw.wa.gov)>  
**Sent:** Tuesday, April 23, 2019 10:36 AM  
**To:** FISHPGM (DFW) <[FISHPGM@dfw.wa.gov](mailto:FISHPGM@dfw.wa.gov)>  
**Subject:** FW: Area 7 August closure

FYI

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**From:** Jeff Gipson <[gigrizz@yahoo.com](mailto:gigrizz@yahoo.com)>  
**Sent:** Friday, April 19, 2019 3:01 PM  
**To:** Director (DFW) <[director@dfw.wa.gov](mailto:director@dfw.wa.gov)>  
**Subject:** Area 7 August closure

Sent from [Mail](#) for Windows 10

Dear sir,

Due to the history of Washington's salmon decline we can finally agree that something needs to be done to preserve and expand this resource. From the beginning everyone involved came up with every excuse imaginable to support fish stocks decline. Thanks to a federal judge, his sole decision caused the deaths of our wild stocks. The order was made as a payment for a century old treaty. The way I see it is this: If there is to be compensation, then it should be done as a nation. In other words not just have all the sportsman pay, anyone who lives here must share the burden. The Bolte Decision is a complete failure. No recovery will happen unless there's a new plan of compensation. The main reason I wrote to you is to let you know that out of all the marine areas, area 7 is the least populated fishery compared to the rest. They don't target local stocks. Most of the fish in August are unclipped. Canada has a non-retention fishery before August, Then it becomes a one fish limit until September in which goes to 2 fish. I feel we should have at least non-retention fishery in August.

Thank You,  
Graydon

Gipson

**From:** [NorthofFalcon \(DFW\)](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** FW: SRKWs and salmon - North of Falcon process and allocation  
**Date:** Friday, April 12, 2019 9:11:26 AM

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Sister?

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**From:** Anne Dalrymple <darkover@me.com>  
**Sent:** Tuesday, April 9, 2019 11:23 AM  
**To:** NorthofFalcon (DFW) <NorthofFalcon@dfw.wa.gov>  
**Subject:** SRKWs and salmon - North of Falcon process and allocation

Hello -

I was a volunteer at People for Puget Sound in the early 2000 in order to work to protect our orcas. We have even fewer now.

They are starving and we are seeing the end of our J, K and L pods unless dramatic rescue action is taken.

Please give our Southern Resident orcas a "seat at the table" and be taken into consideration when allocations and management decisions are made re salmon.

Thank you - Anne Dalrymple  
Seattle WA 98115

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What is North of Falcon? ☐

Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational & commercial salmon fisheries. This series of meetings – involving representatives from federal, state and tribal governments & recreational & commercial fishing industries – is known as the North of Falcon process. This process is folded into the Pacific Fisheries Management Council, which oversees fishing in the Pacific Coast region.☐

☐

The North of Falcon process integrates management of ocean fisheries between Cape Falcon (on the north Oregon coast) and the Canadian border, including fisheries in the Columbia River, Puget Sound, & inland Washington coastal waters. Columbia River fisheries are a significant component of the North of Falcon process.☐

☐

In this public process, there are allocation agreements reached between Oregon and Washington ocean and freshwater commercial and sport fisheries, as well as mandated allocation agreements between the states and treaty Indian tribes.☐

☐

Historically the orcas have not had a seat at the table during these talks or been given a harvest allocation. With the steady decline of the SRKW population due to diminishing prey abundance, fisheries managers have become aware of the need to include the SRKWs in the dialogue. The needs of the whales have been discussed on

several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues. □

□

You can help by respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made. □

**From:** [Bryan Finney](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Dufault, Aaron M \(DFW\)](#)  
**Subject:** question about pink salmon returns?  
**Date:** Sunday, March 17, 2019 9:22:29 AM

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Mark,

Thank you for your work estimating the salmon returns this year. Do you have any insight into whether the strong pink returns we have seen over the previous few odd-year cycles will return? I understand the drop off in '19 is primarily due to outlier environmental conditions in '17. If environmental conditions stabilize do you see the pink fishery returning in the 1m+ range in future years? That has been one of our favorite fisheries in the State.

Thank you,

Bryan Finney

Bryan Finney  
President  
Democracy Live, Inc.  
[bryan@democracylive.com](mailto:bryan@democracylive.com)  
206-465-5636

**From:** [Chad Huffman](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: 8-1 and 8-2  
**Date:** Tuesday, April 23, 2019 1:47:16 PM

---

I understand protecting the resources but according to multiple fish checkers at various ramps they have had very few people with wild fish encounters compared to other areas. And the protecting of snohomish run doesn't make a lot of sense seeing how you have a scheduled fishery in the snohomish! I understand protecting fish but this is ass backwards why not just close south of hat island seeing how you're also having a fishery in the stillly what run are you protecting? Seems like north sound took it in the shorts we have the most limited fisheries to begin with. And to wipe out half of our blackmouth season when we came up short on our quota this year with a 2 fish limit part of the season. In trying to make sense of your guys' Decisions but opening an area like mukilteo south doesn't do anything to protect snohomish fish I get the hatch only but why not open all of 8-2 not just the portion that will effect the snohomish the most

Sent from my iPhone

> On Apr 23, 2019, at 12:59 PM, Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov> wrote:

>

> Hi Chad,

> Apologies for not getting back to you sooner, I was busy working on next year's fishing package. WDFW chose to close 81 and 82 early because we exceeded the amount of wild Chinook impacts that had been predicted for the season. As I'm sure you are aware, Chinook salmon are listed under the Endangered Species Act and require strict protections and limits on how many wild fish can be impacted in any given year. You are correct, we do not have the available resources to conduct test fisheries in every marine area that has a mark-selective fishery, so we ask that anglers like yourself fill out VTR reports so that we can better evaluate what is happening in the fishery. For the entire winter fishery only 18 VTR's had been turned in. Since we can only evaluate the fishery with the data we have, we chose to be more conservative in our management and close.

> Area 8-1 will be open for Coho from Aug 1- Oct 31 and Area 8-2 will be open from Aug 16-Sep 15 under mark-selective coho regulations and only in the area of 8-2 south west of the Clinton-Mukilteo ferry line. The 8-2 summer season was put in place to help protect wild Snohomish coho.

> Hope this information is helpful.

> Mark

>

> Mark Baltzell

> Washington Dept of Fish and Wildlife

> Puget Sound Salmon Fisheries Management

> 1111 Washington St SE

> NRB 6th Floor

> Olympia, WA 98501

> Email: mark.baltzell@dfw.wa.gov

> Office: 360-902-2807

> Cell: 360-688-3410

>

>

> -----Original Message-----

> From: Chad Huffman <huffmanchad58@yahoo.com>

> Sent: Tuesday, April 23, 2019 9:23 AM

> To: Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

> Subject: 8-1 and 8-2

>

> Apparently you do not return phone calls! I was contacting you in regards of 8-1,8-2 your reasoning for shutting down this fishery early makes no sense you claim it's wild encounters but we both know that's bs. Did you trade out last month for a fishery on the skagit? Us north sound fisherman are really getting tired of this bogus inseason management when you don't even have a test fisheries. I want to see these so called VTR reports that showed many

wilds being caught and correct me if I'm wrong but they are also anonymous so any anti fishing or tribal person could shut our season down by falsely reporting! I logged 35 days in 8-1 and 8-2 caught very few sublegals fish less than 10 in all trips combined and 3 wild fish encountered so it really makes no sense I talk to pretty much everyone that fishes Camano and no one has seen anything to justify your guys decision to close. In just over a years time you guys have lost over 3 months of fishing in northern puget sound are coho opportunities have dwindled makes me wonder where it ends i know many guys not even wanting to purchase license saying what's the point the min they do you will shut it down! Also regarding 8-2 I read the coho regs as only being open from ferries south am I reading this wrong?

>

> Sent from my iPhone

**From:** [alex sluyter](mailto:alex.sluyter)  
**To:** [Baltzell, Mark E \(DFW\)](mailto:Mark.E.DFW@dfw.wa.gov)  
**Subject:** Re: Area 7 restrictions  
**Date:** Wednesday, April 17, 2019 8:15:44 PM

---

Mark, closing sport fishing only targets less than 10% of fish pressure, we use a single rod/ reel and barbless hooks. If the fish and game takes salmon fishing closers seriously,  
-it doesn't make sense to ignore commercial and Native American over consumption!  
-why segregate the sport fishermen that pay abundantly for their salmon?  
-Do to mis management. The orcas are being fed king salmon in result they refuse to eat seals...  
Orcas and seals now eat king salmon.  
-blackmouth (king salmon) have been adequate in the winter, (area 7) local fishery.  
- you still charge inflating costs every year yet offer less and less.  
And demand sport fishermen cooperation...

Sent from my iPhone

> On Apr 17, 2019, at 1:41 PM, Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov> wrote:

>

> Alex,

> Thank you for your recent correspondence regarding salmon fishing in Area 7. The 2019-20 sport fishing package was a result of the need to meet management and conservation objectives for several Puget Sound Chinook stocks listed under the Endangered Species Act including Stillaguamish, Nooksack Springs, and the Mid-Hood Canal aggregate. Unfortunately, wild salmon stocks continue to decline not only in Puget Sound, but all through the Salish sea. Canada also recently announced delayed openings and closures to their Chinook seasons as well to address conservation of these stocks.

>

> <https://islandfishermanmagazine.com/dfo-announces-chinook-fishery-shutdown/>

>

> WDFW does not take closing fisheries lightly. We recognize and regret the impacts that these fishery closures will have on fishers and the communities that support fishing opportunities. My contact information is below should you have further questions.

>

> Mark Baltzell

> Washington Dept of Fish and Wildlife

> Puget Sound Salmon Fisheries Management

> 1111 Washington St SE

> NRB 6th Floor

> Olympia, WA 98501

> Email: mark.baltzell@dfw.wa.gov

> Office: 360-902-2807

> Cell: 360-688-3410

>

>

>

> -----Original Message-----

> From: alex sluyter <sluyteralex@gmail.com>

> Sent: Tuesday, April 16, 2019 11:09 AM

> To: Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

> Subject: Area 7 restrictions

>

> My name is Alex Sluyter, I buy fishing licenses for my family of 5 every year!

> Restrictions on area 7 are negligent and careless!

> Target netting the river or the ocean netting and your salmon return will improve!!

> Native Americans make huge profits off our government funded salmon! And they net 100% of the river.

- > Our salmon migrate into public waters and get depleted by commercial nets with 100% kill rate.
- > I am taxed on my boat, my trailer, tackle sales, and liscensing! My fisherman friends have given up on the misappropriation of fishing funds in WA and I am giving up on you as well if you shorten another season! You can't just take our money and run!
- > Alex Sluyter 360-202-8130
- >
- >
- > Sent from my iPhone

**From:** [Warren, Ron R \(DFW\)](#)  
**To:** [Lance Yerkes; Director \(DFW\); Baltzell, Mark E \(DFW\)](#)  
**Subject:** RE: July 25th  
**Date:** Monday, April 15, 2019 1:59:18 PM

---

Mr. Yerkes, Thank you for your written comments. Offering predictability to our public is a high priority. Unfortunately, this year's low abundance of numerous Chinook populations caused us to align start dates to avoid effort shifts between marine areas. Although this year's situation is regrettable, hopefully next year's forecasted returns will be at an abundance that allows for the predictability we strive to achieve.

Thank you again for taking the time to share your thoughts with us and I hope you stay involved into the future.

Ron Warren  
WDFW – Fish Program  
360-902-2799 office  
360-791-3945 cell

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**From:** Lance Yerkes <LanceY@Ocularinc.com>  
**Sent:** Monday, April 15, 2019 10:34 AM  
**To:** Director (DFW) <director@dfw.wa.gov>; Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>; Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Subject:** July 25th

Good morning Gentlemen,

My name is Lance Yerkes and I wanted to take a minute to comment on the salmon season setting. I took the opportunity to listen to each of the 4 conference calls that concluded today. I didn't feel it was my place to speak at all because I was just trying to learn and would have felt out of place saying anything. My basic frustration is that it is becoming nearly impossible to make plans for a specific fishery. My family makes a trip every year to Fort Flagler State Park to camp and fish the Port Townsend area. If any of you have stayed at this park you will know how difficult it is to get a summer reservation. You have to book exactly 9 months prior to your date of arrival or you won't get in. So this year I am booked from July 16<sup>th</sup> to the 25<sup>th</sup>. I know I don't need to tell you guys why I choose July 16<sup>th</sup> each year. Obviously learning that it won't open until the 25<sup>th</sup> wasn't good news. I know that the quota would have been significantly reduced if it opened on the 16<sup>th</sup> so I understand why you didn't do that but now I have no idea what to expect in the future. I share this because I know it isn't just me, there are many others at this park and other parks that will have the same issue. Not to mention all of the folks that make moorage reservations at marinas. So now I will most likely cancel my reservation and hope to find a spot somewhere else so we can still fish. My reservation cost me \$508. The cost to cancel will be \$258 because I have had the reservation for over 6 months. You are always looking for ways to increase revenue; you should talk to the state

parks because they have it figured out! I know you guys work extremely hard and I would not want to be in your position but anything you can do to get consistent start dates would really help. Thanks for taking the time to listen.

Best Regards,  
Lance

**From:** [Highliner Charters](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: NOF Lynwood  
**Date:** Monday, April 1, 2019 4:00:41 PM

---

Thanks,

You know well the drum I've been beating for a year now, that being cuts made to meet objectives for Stilly and MHC be counted toward the SRKW available harvest objectives. I just ask that this is kept as part of the conversation.

b

On Tue, Apr 2, 2019 at 7:13 AM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Brett,

Sorry you won't make it. To say things are challenging would be an understatement. We have big conservation objectives to try and get at this year and it is not just Stilly. Mid-HC is also rearing its ugly head again this year and I'm not sure anything we do for Stilly is going to solve both. What exacerbates the issues is that we still do not have co-manager agreement on modeling and how we will split the conservation burden. There have been some proposals, but nothing concrete as of yet. I'm hopeful that will change tomorrow and we can have some new results to share with folks on Wed. I will make sure to keep you in the loop on thoughts and ideas moving forward. Travel safe.

Mark

**Mark Baltzell**

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** Highliner Charters <[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)>

**Sent:** Monday, April 1, 2019 11:46 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** NOF Lynwood

Mark, I land in Seattle at 3 pm on Wednesday so I won't be at the meeting. Mark R. and a few others with interest in area 7 should be there. Any heads-up you can give me on direction would be appreciated. This way I can pass my inputs to those who will be in the room the day of.

Thanks, I know time is something you have little of this week.

b

--

Highliner Charters  
360.770.0341  
[www.highlinercharters.com](http://www.highlinercharters.com)  
[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

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Highliner Charters  
360.770.0341  
[www.highlinercharters.com](http://www.highlinercharters.com)  
[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

**From:** [Marc Krueger](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re:  
**Date:** Friday, April 19, 2019 8:02:38 AM

---

Mark,

This does not explain why your closing area 7 and not other areas. This is not the only area that you will find those particular runs.

I am retired now, but I owned and operated a salmon charter business in Anacortes for 22 years. Every year there is a cut back it happens in area 7.

I believe it's because we are a smaller user group and you want to appease the larger group of fishermen. Less bitching.

This is wrong!!!

If your going take August, give us June. That would protect the runs you mentioned.

I'm sure that won't happen. One thing about our WDFW, once they take some away, we usually never get it back.

Thanks

Marc Krueger  
360 770 6563

On Wed, Apr 17, 2019, 4:22 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Marc,

Thank you for your recent correspondence regarding salmon fishing in Area 7. The 2019-20 sport fishing package was a result of the need to meet management and conservation objectives for several Puget Sound Chinook stocks listed under the Endangered Species Act including Stillaguamish, Nooksack Springs, and the Mid-Hood Canal aggregate. Unfortunately, wild salmon stocks continue to decline not only in Puget Sound, but all through the Salish sea. Canada also recently announced delayed openings and closures to their Chinook seasons as well to address conservation of these stocks.

<https://islandfishermanmagazine.com/dfw-announces-chinook-fishery-shutdown/>

WDFW does not take closing fisheries lightly. We recognize and regret the impacts that these fishery closures will have on fishers and the communities that support fishing opportunities. My contact information is below should you have further questions.

Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6th Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** Marc Krueger <[fistale5@gmail.com](mailto:fistale5@gmail.com)>

**Sent:** Saturday, April 13, 2019 7:02 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:**

Keep area 7 open in August. Why are we the only area with new restrictions.

I wouldn't mind annual limits but let us fish.

Marc Krueger

Long time Anacortes fisherman

**From:** [4stringman@gmail.com](mailto:4stringman@gmail.com)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Shakers and mortality  
**Date:** Monday, April 1, 2019 10:20:53 PM

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Mr. Baltzell,

I attended the Mill Creek meeting and met you there.

I just started Blackmouth fishing this year after taking 40 years off from fishing.

This year I have caught a lot of shakers and only one legal size hatchery fish. It seems to me the mortality rate is pretty high on shakers. I have had two fish in my last trip out where the hook involved an eye. I've heard those fish usually die. It seems a waste to let them go. I know they enter the food chain but has WDFW ever considered a rule change to allow, or even require fish that have eye involvement or significant bleeding to be retained if they are hatchery fish? These fish are bigger than trout, bigger than kokanee all of which have huge followings of people fishing for them. They would make good eating and would take people off the water and reduce the number of other fish being injured.

I just thought I would ask the question. I am using a pinched down barbs and I have a nice dehooker so I am trying my best to keep them ticking.

All the best,

Mike Henderson  
Whidbey Island

**From:** [Mark Litzenberger](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Skokomish  
**Date:** Tuesday, April 16, 2019 12:44:13 PM

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So Mark,

It looks like the State gave in on the Skokomish again. Could you please let me know what the reason was? I really feel the state misled us on what happened last year. I am feel like this has gone on long enough and that no change is ever going to happen. If the sides can not come to a simple agreement in 4 years, why would we ever believe they will. It is not complicated. A clear view of the treaty and past court cases make it clear that the tribe does not have standing. I realize the state does not want a law suit, but this is ridiculous. Please give me a clear understanding of what the issue is that is holding up an agreement.

Mark Litzenberger

-----Original Message-----

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**To:** Mark.Baltzell <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Sent:** Mon, Apr 8, 2019 3:35 pm  
**Subject:** Re: Skokomish

Thanks Mark,

Like I said, some rumors were bouncing around. I figured it was best to just ask then to accept them at face value. I appreciate you taking time to respond. Good luck and I hope everything goes well.

Mark Litzenberger

-----Original Message-----

**From:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**To:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**Sent:** Mon, Apr 8, 2019 3:21 pm  
**Subject:** RE: Skokomish

Hi Mark.

Well if the tribes walked out that is news to me. I can say that so far things have been very difficult and at times I wondered which way things were going. I am hopeful headed to California that we can reach agreement and have fishing seasons in place for 2019-20. If you want to tune in, we have set up conference calls from California from Fri-Mon of next week to keep folks in the loop about what is going on. Info is on the website.

Cheers.

Mark

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**Sent:** Monday, April 8, 2019 11:43 AM

**To:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Subject:** Re: Skokomish

Mark,

I have been seeing rumors that the tribes walked out of NOF. Is this true and if so, is the department going to address this openly? I realize that some negotiations are probably going on, but if possible it would be nice to know what is happening and how it might effect the overall process. I would prefer that the State be open but any information you can give would be appreciated.

Thanks,

Mark Litzenberger

-----Original Message-----

From: Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
To: Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
Sent: Thu, Mar 7, 2019 10:31 am  
Subject: RE: Skokomish

Hi Mark,

Thanks for your note. The director and other policy representatives from the agency recently met with Skokomish tribal leadership. I was not present at the meeting, but my understanding is that it was a productive discussion and both sides are continuing to discuss the issues. I have not heard anything about the tribe proposing fees. I do not think I would be out of line to say that the state would not agree to anything that would support the tribal position of river ownership. As we move forward through the NOF process, we should gain a clearer picture of a potential river fishery for this year. I know the co-manager biological staff have also been in discussions for a potential river fishery.

Feel free to reach out and I'll do my best to provide as much information as I can.

Mark

**Mark Baltzell**

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>  
**Sent:** Thursday, March 7, 2019 9:50 AM  
**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Subject:** Fwd: Skokomish

Mark

As we are getting very close to the NOF meeting, I was wondering if any new information has come out about the Skokomish.

The rumor I have heard is that the Tribe is holding out for fees. The fact is, that the tribe could do this without the State's approval (Several tribes, including the Quinault, Makah and Colleville tribes charge and allow some type of fishing on Tribal land). I ask that the state does not agree to this, as it will likely be considered as agreeing to the Tribe's assertion that they own the land. Once this concession is given, it will be very hard to get back to not paying. The tribe, then, would be in control of the fee and access. If they want to be compensated for some type of joint cleaning and monitoring of the river that is reasonable, or asking for an increased enforcement personal, that would be acceptable, just as long as it is not able to be perceived as an acknowledgement of their claim of ownership.

Thanks

Mark Litzenberger

-----Original Message-----

From: Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

To: Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>

Cc: Downen, Mark R (DFW) <[Mark.Downen@dfw.wa.gov](mailto:Mark.Downen@dfw.wa.gov)>

Sent: Tue, Feb 19, 2019 8:34 am

Subject: RE: Skokomish

Hi Mark

At the risk of being too optimistic, I can tell you that our new Director has had 1 meeting with the Skokomish and is slated to have another this week. He has stated to them that fishing on the river was one of his priorities. We should have an answer to the question by mid-April when the North of Falcon meetings wrap up.

The state, the co-managers and NOAA have been working for the past several years on a new Chinook plan. There are just a couple of outstanding details to wrap up and I am confident that a new plan will be submitted by the summer.

Hope my brief answers help.

Mark

## **Mark E Baltzell**

Washington Dept of Fish and Wildlife

Puget Sound Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Office : 360-902-2807

Cell : 360-688-3410

Fax : 360-249-4628

Email: [mark.baltzell@dfw.w.gov](mailto:mark.baltzell@dfw.w.gov)

**From:** Mark Litzenberger <[lmarklitz@aol.com](mailto:lmarklitz@aol.com)>

**Sent:** Monday, February 18, 2019 7:59 PM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** Skokomish

Mark,

We are now into mid-February, so I am wondering if any headway has been made with the Skokomish Tribe in opening the river. Also, you mentioned in the past that the state was thinking about getting a long term Chinook management plan that is approved by NOAA fisheries. This first came up on 2016 and was discussed at that time, but apparently not pursued. That was almost 3 years ago, so I am wondering why there has been a delay. I realize it was limited and for a one time exemption, but the tribe was able to present a passable option in less a very short time. My guess is that it has not been a priority, but if not, then why.

Thanks

Mark Litzenberger  
253-279-6706

May 11, 2019

Kelly Susewind, Director, WDFW  
Ron Warren, Assistant Director, WDFW  
Craig Burley, Fish Management Division Leader, WDFW  
Jennifer Whitney, District 13 Fish Biologist

Dear Director Susewind, Assistant Director Warren, Fish Management Division Leader Burley, and District 13 Biologist Whitney,

I am writing to express my displeasure and disdain regarding the Department's management actions regarding fresh water recreational fishing seasons on the Stillaguamish River in north Puget Sound. Instead of being open to recreational fishing for the usual summer seasons for sea run cutthroat trout and summer run steelhead, the river remains closed until September 16, foreclosing three-and-one-half months of recreational stream fishing opportunity. The alleged reason is conservation of ESA-listed Stillaguamish River Chinook salmon. I say alleged because any informed person knows that the conservation benefit to Chinook salmon is entirely imaginary when your own Departmental analyses estimate impacts ranging from 1.4 to 4 salmon if the recent year closures hadn't occurred.

The conservation concern regarding Stillaguamish Chinook salmon is real. As a discreet stock these Chinook, referring to natural spawners here, have not been able to maintain a recruit per spawner of 1.0 or greater for decades. Lacking the efforts of the Stillaguamish Indian Tribe to culture this Chinook stock at the tribal hatchery for the last 40 years, they would more likely than not be extinct by now. The Stillaguamish watershed is in such poor condition, largely from forest practices on highly unstable slopes, that the natural habitat can no longer sustain its endemic Chinook salmon population. And the Oso landslide of five years ago, with its extreme sediment deposition, may have been the final nail in the coffin for Chinook productivity in the Stillaguamish basin.

Fishing, and especially the sea run cutthroat and summer steelhead fishing on the Stillaguamish River is not now, nor ever has been, the problem with this Chinook population. The legitimate conservation concern is impacts to wild (and hatchery) Chinook, which are extremely depressed (but are encountered in marine fisheries in vastly larger numbers than would ever be handled in the summer flyfishing season). Impacts to Stillaguamish Chinook in freshwater are already minimal with flyfishing only, single barbless hooks, and no bait requirements. If greater restrictions were actually necessary to further conserve Chinook, imposing regulations allowing only the use of floating fly lines and a small maximum barbless hook size, like size 6, would satisfy most anglers who participate in the fishery and decrease the odds of hooking a Chinook to nearly zero. Of course, use of gear restrictions to prevent the catch of Chinook in the fishery would only be "effective" if the actual goals of management were to simultaneously conserve Chinook as well as preserve the sport fishing seasons for gamefish. As it stands, a fishery with essentially no impacts to Chinook is being indefensibly sacrificed under false pretenses.

It should also be noted that Stillaguamish Chinook are threatened with extinction independent of any and all fishing in WA waters. The fly fishing anglers don't target Chinook, and the number incidentally hooked while sport fishing pales in comparison to the number poached each year by snaggers, spear guns, and dynamite (all of which I have witnessed in years gone by). Stillaguamish Chinook are in a world of hurt, but closing sport fishing makes zero measurable difference to the future of this salmon population.

Yet again WDFW has sold out recreational angling to appease treaty tribes in the North of Falcon negotiations (which are closed to public observation). Word on the street is that the WDFW negotiator(s) want to get along with the treaty tribes. Well, of course, most of us want to get along with the tribal co-managers and pretty much everyone. However, informed citizens are quite aware that if WDFW were to tell one of the treaty tribes how to manage its treaty fishery, the tribe would tell WDFW to “go pound sand.” Or words to that effect. Yet when a tribe demands that WDFW close a recreational fishery that has zero measurable effect of Chinook stock abundance, WDFW, you, the people I and other anglers hire with our state tax and license fee dollars to manage angling opportunity for us, decided to throw sport fishing under the bus for imaginary salmon conservation benefits, presumably so you can “get along with the tribes.” This is the third time in the most recent four seasons that WDFW has decided to bite the hand that feeds it for alleged and or imaginary salmon conservation benefits, at the direct expense of recreational fisheries that have zero or de minimus effects on salmon.

Let me be clear: I am not opposed to the treaty tribes exercise of their legal fishing rights. However I am very much opposed to the “tail wagging the dog,” where tribes dictate to the Department what recreational seasons may occur and when and how. That is not their bailiwick. The Department must advocate for its primary constituents, those of us who fund the Department’s very existence and keep the doors open at the NRB. So stop already with biting the hand that feeds you!

The only reasonable recourse and effective conservation action is for the tribal, state, and federal fishery agencies to support the continued operation of the Stillaguamish Tribe's hatchery effort to maintain the unique Stillaguamish Chinook stock, very much like the California condor hatchery effort. Meanwhile, even if you could stop all fisheries in the marine environment that might take a Stillaguamish Chinook salmon, the stock would remain imperiled for the reason I mentioned above.

WDFW leadership is driving the agency to the brink of anadromous sportfishing irrelevancy. WDFW sought recreational license and fee increases again in the latest legislative session, but was rebuffed due largely to push back by sportfishing groups. These are the same people who have supported WDFW funding in the Legislature for decades. The reversal in support is directly because WDFW has chosen not to support or advocate for various recreational fisheries. And that begets the logical question of why should anglers whose fisheries are unnecessarily closed continue to support WDFW? Much as I loathe Legislative meddling, it’s become

increasingly apparent that an overhaul of the Department from the outside may be preferable to the status quo. Washington's recreational anglers deserve a Departmental Fish Program that works for the people who pay for it. Wouldn't you agree?

Steve Fransen

Olympia, WA 98513  
360-790-8939

## Adicks, Kyle K (DFW)

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**From:** Assistant Director, Fish Program (DFW)  
**Sent:** Tuesday, May 28, 2019 11:44 AM  
**To:** Salmo\_g@hotmail.com  
**Cc:** Susewind, Kelly (DFW); Burley, Craig C (DFW); Whitney, Jennifer L (DFW)  
**Subject:** Stillaguamish River recreational fishing closure

Dear Mr. Fransen,

Thank you for your letter and for sharing your concerns about the loss of fresh water recreational fishing opportunity on the Stillaguamish River. Your input is valued and I would like to offer an explanation on how we got to the point of restricting Stillaguamish gamefish seasons to protect Chinook.

As you state, the conservation concern regarding Stillaguamish Chinook salmon is real. The status of wild Puget Sound Chinook salmon listed under the Endangered Species Act (ESA) has not improved in the 20 years since ESA listing, in spite of the huge efforts across multiple arenas to recover these populations. WDFW agrees with your thinking that until habitat is improved in the Stillaguamish watershed, maintaining and expanding the Chinook hatchery recovery programs for both summer and fall Chinook is a key component to the recovery of Stillaguamish Chinook stocks. The Stillaguamish Tribe and WDFW continue to work together on this recovery effort which involves three hatcheries, the two Stillaguamish tribal hatcheries and WDFW's Whitehorse Hatchery.

The Chinook forecast for the Stillaguamish River this year is estimated to be 943 fish (376 wild, 567 hatchery). This forecasted low abundance of Stillaguamish Chinook automatically restricts all fisheries to an 8% total exploitation rate on this stock. In contrast, the 2018 predicted abundance was approximately 1,500 Chinook, allowing a 13% exploitation rate. You may or may not be aware that in order for the co-managers to obtain a permit to fish under the ESA, all of our planned fisheries combined must meet the management objectives in any given year. At the beginning of the pre-season, last year's fisheries were entered into the planning model with this year's forecasted abundances. The exploitation rate for that scenario was almost 16%. It should not be surprising that constraints on fishing and impacts of fisheries grow tighter as ESA-listed populations fall to these critically low levels.

As you mention, fishing seasons in Puget Sound are not set unilaterally by decision of the Department of Fish and Wildlife; rather, they are the result of complex and dynamic negotiations with the tribal co-managers during the North of Falcon process. Not surprisingly, as abundances of salmon returning to individual watersheds continued to decline, the tribes in those watersheds have also faced significant decreases to their fisheries. While the economic impact and angler disappointment around sport fishery closures in various areas and months are undoubtedly large, they are weighed against treaty tribal fisheries that will not be able to harvest enough fish to meet the ceremonial or subsistence needs of the tribe. The final co-manager fishing package this year used all of the allowable impacts on Stillaguamish Chinook. Both Tribal fisheries and State fisheries were greatly curtailed for next year and the non-treaty sector ended up with more impacts (52%) on Stillaguamish Chinook than the tribes (48%). The Stillaguamish Tribe reduced their impacts to just 22 Chinook, 15 in directed ceremonial and subsistence fisheries and another 7 during their coho fisheries. While I agree that there is likely very little Chinook salmon mortality in a fly-fishing only, barbless hook, catch and release gamefish fishery such as the one we have historically had on the North Fork Stillaguamish, I don't think we can say that there is zero mortality. Combined Stillaguamish in-river sport gamefish fisheries had a modeled impact of three Chinook mortalities. We reserved those three fish impacts for gamefish all the way through the PFMC discussions until the last day. Ultimately those three fish were needed to meet the conservation objectives for

Stillaguamish Chinook. Your point about poachers and snaggers taking Chinook has not gone unnoticed by WDFW enforcement or tribal co-managers and is often used as an argument for why all sport fisheries should be closed when Chinook are present in the river. It is also difficult to conduct limited creel evaluations that could aid in our discussions while developing season structure without adequate funding to do so. Restricting Stillaguamish gamefish seasons once again this year was not a decision WDFW took lightly or without considering the impacts to anglers such as yourself.

Once again, thank you again for taking the time to share your thoughts and concerns. We recognize and appreciate recreational anglers' substantial contribution to the fishing-related economy of our state and their concern for the sustainability of our salmon runs for generations into the future.

If you should have any further questions, please contact Edward Eleazer at the WDFW Region 4 Mill Creek Office at (425) 775-1311 ext. 109 or via email at [Edward.eleazer@dfw.wa.gov](mailto:Edward.eleazer@dfw.wa.gov). We wish you the best of luck fishing this year.

## Adicks, Kyle K (DFW)

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**From:** Assistant Director, Fish Program (DFW)  
**Sent:** Tuesday, May 28, 2019 4:17 PM  
**To:** alpinequest08@yahoo.com  
**Cc:** Whitney, Jennifer L (DFW)  
**Subject:** FW: North of Falcon Decision on Nfk Stillaguamish River:

Dear Mr. McLeod,

Thank you for your letter and for sharing your concerns about the loss of gamefish opportunity on the Stillaguamish. The Washington Department of Fish & Wildlife deeply appreciates the work that you and your Grandfather have done. Not only in the preservation of fly-fishing traditions, but also demonstrating their important role that they play in conservation. Your input is greatly valued and I would like to offer an explanation on how we ended up restricting Stillaguamish gamefish seasons to protect Chinook.

As you know, the status of wild Puget Sound Chinook salmon listed under the Endangered Species Act (ESA) has not improved in the 20 years since ESA listing, in spite of the huge efforts across multiple arenas to recover these populations. It should not be surprising that constraints on fishing and impacts of fisheries grow tighter as ESA-listed populations fall to critically low levels, in spite of our efforts to boost fishing through hatcheries and mark-selective fisheries.

The Chinook forecast for the Stillaguamish River this year is just over 900 fish (376 wild, 567 hatchery). Stillaguamish Chinook were the most limiting stock for almost all Puget Sound fisheries this year. I know that you are aware that fishing seasons in Puget Sound are not set unilaterally by decision of the Department of Fish and Wildlife; rather, they are the result of complex and dynamic negotiations with the tribal co-managers during the North of Falcon Process. Not surprisingly, as abundances of salmon returning to individual watersheds have dwindled, the tribes in those watersheds have faced massive decreases to their fisheries. While the economic impact of sport fishery closures in various areas and months are undoubtedly large, they are weighed against treaty tribal fisheries that will not be able to harvest enough fish to meet the ceremonial or subsistence needs of the tribe. The final co-manager fishing package this year used all of the allowable impacts on Stillaguamish Chinook. Tribal fisheries were greatly curtailed along with sport fisheries and the non-treaty sector ended up with more impacts (52%) on Stillaguamish Chinook than the tribes (48%). The Stillaguamish Tribe reduced their impacts to just 22 Chinook, 15 in directed ceremonial and subsistence fisheries and another 7 in coho fisheries.

While I agree that there is likely very little Chinook salmon mortality in a fly-fishing only, barbless hook, catch and release gamefish fishery such as the one your Grandfather established, and WDFW hopes to restore to the North Fork Stillaguamish, I don't think we can say that there is zero mortality. Combined Stillaguamish in-river sport gamefish fisheries had a modeled impact of three Chinook mortality. We reserved that three fish impact for gamefish all the way through the PFMC discussions until the last day. Ultimately those three fish were needed to meet the conservation objectives for Stillaguamish Chinook. Restricting Stillaguamish gamefish seasons once again this year was not a decision WDFW took lightly or without considering the impacts to anglers such as yourself.

Thank you again for your thoughtful letter and comments on the 2019 North of Falcon process, and I look forward to your continued engagement on these difficult topics.

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**From:** "Ken j. Mcleod" <[alpinequest08@yahoo.com](mailto:alpinequest08@yahoo.com)>  
**Date:** May 8, 2019 at 6:30:35 PM PDT  
**To:** "[Ron.Warren@dfw.wa.gov](mailto:Ron.Warren@dfw.wa.gov)" <[Ron.Warren@dfw.wa.gov](mailto:Ron.Warren@dfw.wa.gov)>  
**Subject:** Fw: North of Falcon Decision on Nfk Stillaguamish River:  
**Reply-To:** "Ken j. Mcleod" <[alpinequest08@yahoo.com](mailto:alpinequest08@yahoo.com)>

On Wednesday, May 8, 2019 6:28 PM, Ken J. McLeod <[alpinequest08@yahoo.com](mailto:alpinequest08@yahoo.com)> wrote:

The North Fork and South Fork Stillaguamish Rivers have been North of Falcon (tribal co managers mandates) "emergency closed" to all fishing from May 25 to Sept 15th due to predicted low wild Chinook run of 2019. "Sigh." Once again there is little if any mortality rate on Chinook Salmon wherein an established fly fishing only, barbless hook, catch & release regulation is in effect as has been for decades in the North Fork. I am extremely disenchanted with the WDFW, for allowing this to happen, caving its charter as it relates to sport game fishing pertaining to trout & steelhead and catering to this North of Falcon decision making process. "Total loss of opportunity." Aside but related, I have little left of confidence in the WDFW to date primarily due to this decision. My family has owned property on the North Fork since 1928, my grandfather established the 1st fly fishing only river in the U.S.A, the Nfk Stilly, shame on the Dept. and powers to be for not standing firm for sports fishing opportunity herewith.

Sincerely,

Ken James McLeod

past pres. Steelhaed Trout Club of Wa. (5 terms)

Snohomish Sportsmen's Club member since 1990

past Trail Blazers Club member (alpine lakes fish stockers) 32 years

grandson of the founding father (Ken McLeod) of Washington Game Dept.

cc: Jennifer Whitney

Ron Warren



State of Washington  
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: P.O. Box 43200, Olympia, WA 98504-3200 • (360) 902-2200 • TDD (360) 902-2207  
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

May 16, 2019

George Harris  
President and CEO  
Northwest Marine Trade Association  
1900 N. Northlake Way, Suite 233  
Seattle, Washington 98103-9087

Dear Mr. Harris:

Thank you for your recent letter to the Fish and Wildlife Commission on the 2019 North of Falcon process, and for your interest in Puget Sound salmon fishing. Your views, concerns and input are valued, so I would like to offer some explanations and slightly different perspectives on several of the issues that you have raised.

As you know, the status of wild Puget Sound chinook salmon listed under the Endangered Species Act (ESA) has not improved in the 20 years since ESA listing, in spite of the huge efforts across multiple arenas to recover these populations, including all of the steps taken to limit the impact of fisheries, such as the implementation of mark-selective recreational fisheries throughout the Sound. I agree that mark-selective fishing is the backbone of Washington's salmon fishing industry, and is the only tool we have that allows us to continue salmon harvest in many areas of the state with ESA-listed salmon populations. While mark-selective fisheries can minimize the impact of harvest of hatchery fish on wild populations, they still result in mortality of wild fish. It should not be surprising that constraints on fishing and impacts of fisheries grow tighter as ESA-listed populations fall to critically low levels, in spite of our efforts to boost fishing through hatcheries and mark-selective fisheries.

Your letter states that "WDFW's decision to decrease mark-selective fishing opportunity... was not essential to conservation of wild chinook." You are probably aware that fishing seasons in Puget Sound are not set unilaterally by decision of the Department of Fish and Wildlife; rather, they are the result of complex and dynamic negotiations with the tribal co-managers during the North of Falcon process. Not surprisingly, as abundances of salmon returning to individual watersheds have dwindled, the tribes in those watersheds have faced massive decreases to their fisheries. While the economic impact of marine recreational fishery closures in various areas and months are undoubtedly large, they are weighed against treaty tribal fisheries that will not be able to harvest enough fish to meet the ceremonial or subsistence needs of the tribe. The final co-manager fishing package this year used all of the allowable impacts on at least two Puget Sound chinook stocks – Nooksack and Stillaguamish. Additional mark-selective fishing opportunity in times and areas that have impacts on either of these stocks would have required

reductions to other fisheries. While you may be unhappy with planned fisheries due to the allocation outcomes between state and tribal fisheries, or between various state fisheries, decreases to fisheries were necessary to meet conservation objectives for listed chinook this year.

You also express disappointment that WDFW partially justified the Puget Sound closures as conservation for southern resident killer whales (SRKW). WDFW described all of the fishery reductions as being made for chinook conservation, but as also likely providing some benefit to SRKW. It was unclear whether NMFS would ask for additional restrictions to fisheries to protect SRKW this year, as they did after the end of North of Falcon in 2018. While NMFS did not implement their draft framework for evaluating the effects of Puget Sound fisheries on SRKW prey, it was clear that they would be evaluating fishery effects. Ignoring the potential effects of the fishery reductions in 2019 to SRKW, rather than outlining their potential benefit to NOAA prior to NOAA's ESA review of Puget Sound fisheries, did not seem like a prudent approach given the increased scrutiny this year.

Finally, you claim that WDFW did not follow the Commission's North of Falcon policy C-3608 in three areas:

1. *Prioritize chinook harvest for recreational opportunity in Marine Catch Area 7.* WDFW planned 2019 recreational fisheries using a balanced approach across the different Puget Sound marine catch areas, which follows the Commission's 2019-2023 North of Falcon policy. Chinook harvest was prioritized for recreational opportunity throughout Puget Sound, and fishery reductions were made across diverse Puget Sound marine areas to reduce impacts on stocks of concern, while distributing meaningful fishing opportunities across the various marine catch areas. The recreational closure of Area 7 in August was proposed after careful consideration of the impacts of that fishery on critical stocks, and comparison to the number and size of closures that would have been needed in other areas to have a similar effect on critical stocks.
2. *Provide proper stakeholder input and transparency:* WDFW's annual efforts during the North of Falcon process to simultaneously negotiate fisheries with tribal co-managers while engaging stakeholders to receive and consider their input as we work to provide transparency is a struggle in any year, and was particularly a challenge in 2019 due to the dynamic and complex manner in which negotiations unfolded. Because of the emphasis placed on negotiations around chum salmon management, fishery models for chinook and coho were not available until much later in the process than normal. Department staff were clear with the public and advisors throughout the process that reduction to recreational fisheries in Puget Sound would be necessary in 2019, and sought input on how to prioritize reductions. In large part due to delays in having updated fishery models available, little constructive input was received prior to negotiations reaching the point where proposals needed to be made in the co-manager negotiations. This was frustrating for WDFW as it was for the public, but dissatisfaction with the decisions that were made does not indicate there was not opportunity for input leading up to the decisions.

George Harris  
May 16, 2019  
Page 3

3. *Use mark-selective fishing to maximize opportunity and protect depressed stocks:*  
Virtually all recreational chinook fishing planned in Puget Sound in 2019 will be mark-selective, and conservation objectives for all stocks are projected to be met. While you may be unhappy with the allocation outcomes between various state fisheries, or between state and tribal fisheries, this does not mean that the policy goal of using mark-selective fishing to maximize opportunity was not followed.

Finally, you commented on the lack of action to renegotiate a ten-year Chinook Management Plan for Puget Sound. As you know, the original plan submitted in December 2017 was deemed insufficient by NOAA, necessitating more work by the co-managers before a revised plan can be submitted. WDFW was also asked to take another look at several components of the plan and renegotiate them. WDFW has continued work on renegotiation and revision of the plan over the past year. Negotiating an ESA fishery management plan that covers 14 chinook management units with 16 tribal governments is obviously a complex and difficult task. While there have not been significant breakthroughs in negotiations to report, I will ensure that the Department communicates developments with the revised plan to the Commission and to the public.

Thank you again for your thoughtful letter and comments on the 2019 North of Falcon process, and I look forward to your continued engagement on these difficult topics.

Sincerely,



Kelly Susewind  
Director

cc: Fish and Wildlife Commission  
Ron Warren



April 19, 2019

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Seattle, WA 98103-9087

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Fish & Wildlife Commission  
600 Capitol Way North  
Olympia, WA 98501

Re: North of Falcon 2019 & Chinook Harvest Management Plan

Dear Commissioners:

I am writing to you today about my deep concern that WDFW's 20-year investment in Puget Sound mark-selective fisheries is in serious jeopardy.

Based on the recently concluded North of Falcon salmon season-setting process, I question WDFW's commitment to mark-selective fishing and priority use of hatchery chinook salmon for recreational fishing opportunity that is the back bone of Washington's \$6.9B recreational boating and fishing industry (attached), with recreational anglers providing nearly 40% of WDFW funding through license fee sales. Following are my specific areas of concern.

Massive Closures of Puget Sound Mark-Selective Fisheries

WDFW's decision, this past weekend, to decrease recreational mark-selective fishing opportunity in Puget Sound for the 2019-2020 seasons by 50% or more in some of the most popular fishing areas was not essential to conservation of wild chinook and will be devastating to our member businesses. WDFW reported that Puget Sound hatchery chinook returns in 2018 were up 24% over the 10-year average and a similar forecast was made for the 2019 season. With the status of Puget Sound wild chinook salmon remaining critical, benefits from the massive public investment in our hatcheries requires the Department's full employment of mark-selective fishing.

No Action by WDFW to renegotiate 10-year Chinook Management Plan

WDFW has been directed by the Commission to renegotiate the Puget Sound Chinook Harvest Management Plan (Management Plan) with the Puget Sound Tribes and to my knowledge WDFW has taken no meaningful steps to accomplish this. Attached is my December 28, 2017 letter to the Commission outlining my concerns with the Management Plan. Sadly, as we predicted the "devastation" of mark-selective recreational fishing in Puget Sound is taking place.

Fish and Wildlife Commission

April 19, 2019

Page 2

Southern Resident Killer Whale (SRKW) Conservation

I serve on Governor Inslee's SRKW Task Force and I am disappointed that WDFW partially justified the Puget Sound closures as SRKW conservation. The Task Force did not recommend recreational fishing closures for SRKW conservation for either prey availability or vessel disturbance. Additionally, NMFS has not directed WDFW to implement additional restrictions to Puget Sound recreational fisheries for SRKW conservation this year

WDFW is not following Commission Policy C-3608

In three areas WDFW did not follow commission policy during this year's North of Falcon.

1. Prioritize chinook harvest for recreational opportunity in Marine Catch Area 7
2. Provide proper stakeholder input and transparency
3. Use mark-selective fishing to maximize opportunity and protect depressed stocks

I would welcome the opportunity to meet with you in person to discuss these concerns more thoroughly.

Thank you for your service.

Sincerely and respectfully,



George Harris  
President & CEO

cc: Kelly Susewind, Director Washington Department of Fish & Wildlife



December 28, 2017

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Fish & Wildlife Commission  
600 Capitol Way North  
Olympia, WA 98501

Re: Puget Sound Chinook Harvest Management Plan

Dear Commissioners:

I am writing to you today about the most concerning issue to ever come across my desk as President/CEO of the Northwest Marine Trade Association (NMTA) – The Comprehensive Puget Sound Chinook Harvest Management Plan.

NMTA recently marked its 70th year of service, and is the nation's oldest and largest regional marine trade association with 725-member businesses and public ports, many of which are small, family-owned businesses. Our state has nearly 240,000 boats registered statewide and more than half of these boats are used for fishing. These boats are built, serviced, sold, outfitted and stored by our members. In 2014, Governor Inslee's Blue Ribbon Outdoor Recreation Task Force recognized that boating and fishing are the largest contribution – over \$3.2 billion (National Marine Manufacturers Association) - to Washington's outdoor recreation economy of \$21.6 billion (Recreation and Conservation Office's "Economic Analysis of Outdoor Recreation in Washington State").

The conservation of Puget Sound Chinook is of the utmost importance to NMTA. Since 2001, the state of Washington has removed the adipose fin of hatchery fish prior to their release, allowing Washington anglers to selectively harvest hatchery salmon and conserve wild salmon. In addition, this has allowed fishery managers to improve sampling and data collection. This Plan effectively ends our state's 20-year investment in Mark-Selective Fishing.

After careful review of the Plan immediately after it was released on December 1, 2017, NMTA and recreational fishing groups had two meetings with the Director and staff of the Washington Department of Fish and Wildlife (WDFW). We learned from information provided by WDFW that the Plan would devastate selective fishing in Puget Sound for the next 10 years, confirming our worst fears.

Fish and Wildlife Commission  
December 28, 2017  
Page 2

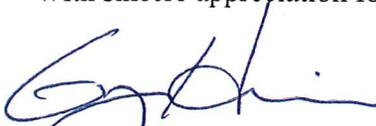
Equally troubling was the total lack of transparency in the development of the Plan. The public, businesses or anglers had no idea of what was in the Plan. In fact, it appears that not even the Fish and Wildlife Commission (Commission) was aware of what was in the Plan until after it was signed.

Finally, to make matters worse we learn that even with closing down selective fishing in Puget Sound, we still will not recover critical Chinook runs as described on page 167 of the Plan - "*due to the limited productivity of the existing habitat, it is unlikely that fishery actions alone can rebuild Stillaguamish Chinook to higher levels.*" NMTA would like to know why WDFW would support a Plan that closes Puget Sound selective fishing and provides no conservation benefit for doing so.

It is our understanding that the Commission sets policies, goals and objectives for WDFW and the Director and as stated on the WDFW website "*establishes the basic rules and regulations governing the time, place, manner and methods used to harvest or enjoy fish and wildlife.*" We recognize that there are tribal and federal requirements which the Commission must take into account when carrying out these responsibilities. But, these requirements validate the responsibility to inform the public about these matters. Especially when the consequences of attempting to fulfill those responsibilities are so serious.

We are asking that the Commission intervene in the implementation of the Plan before it is finalized. We are ready and willing to work with WDFW to develop a Plan that achieves appropriate selective fishing opportunities and conservation benefits.

With sincere appreciation for your public service,



George Harris  
President/CEO

cc: The Honorable Jay Inslee, Governor  
Jim Unsworth, Director Washington Department of Fish & Wildlife  
State of Washington Senate & House Members  
State of Washington Members of Congress  
Mike Grossman, Washington Attorney General's Office

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SOURCES: Unless otherwise noted, data is from the NMMA 2017 Recreational Boating Statistical Abstract, NMMA 2018 Boating Economic Impact Study, and NMMA's 2016 Recreational Boating Participation Study.

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Coho mark rates  
**Date:** Tuesday, March 5, 2019 11:37:59 AM

---

Mark,

Thanks for your time yesterday. I've given some thought to the discussion of coho seasons and would like to generate a starting proposal with support from the rec folks for the department to consider prior to our first public meeting (March 19).

As we discussed, mark-selective fishing in some key areas such as 8-2 and 9 may be necessary to ensure we don't get into a pinch, especially with Snohomish wild coho. I'm sure we will see the evidence of a challenge with respect to conservation objectives for that "over-fished" stock with the STT's modeling of ocean options with last year's inside fisheries. When FRAM is available for running alternative season proposals for state-managed fisheries, I think it would be helpful to see the effect of mark-selective rules in all fisheries from Area 5-9, not including 8-1. And the season structure for that model run would be as last year but with September restored in 8-1 & 8-2 (October as well?). For contrast, flip the switch to non-selective one area at a time, starting with those times known to have low mark rates such as September in Areas 5, 6, 7, 8-2 and 9. I suspect we'll see that isn't going to be possible, but the impact of non-selective - or the conservation effectiveness of mark-selective - needs to be demonstrated. This analysis will be helpful in turning back the tide of exuberance for non-selective fishing that you heard on Saturday's radio show.

I also think it would be helpful to have the actual mark rates from sampling those fisheries in recent years - say, 2016-18?

Thanks Mark, and let me know what you think.  
Pat

**From:** [Highliner Charters](#)  
**To:** [Susewind, Kelly \(DFW\)](#); [Larry Carpenter](#); [Baltzell, Mark E. \(DFW\)](#); [Warren, Ron R. \(DFW\)](#)  
**Cc:** [PL Pattillo](#); [George Harris](#); [mark riedesel](#)  
**Subject:** Director visit  
**Date:** Friday, April 19, 2019 8:05:35 AM

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Gentlemen,

It's no secret that I was deeply dissatisfied with not only the results of 2019 North of Falcon, but I was quite appalled at the process. I would, however, like to thank the Director and the other staff members for taking the time visit with those who were directly affected by the recent decisions. I hope that you would reach out to the Anacortes PSA chapter and schedule a similar type of meeting very soon. Should this meeting take place, **I would not attend** as I feel the need to look forward now. However, those who fish MA-7 most frequently need to hear from WDFW directly, and very soon.

My wife and I are scrambling to figure out if we can continue to operate our business, and if so what it will look like. One-third of our annual gross was erased by this one decision and that is devastating for a small business. At this point, it appears that unless the details within the Harvest Management Plan are reworked, my business may go under.

My wife Pattie and I have spent ten years and invested hundreds of thousands of dollars building Highliner and R&R Charters in Anacortes. To provide some perspective, I've given you a snapshot of our business operation, and we are just one of a dozen of small businesses potentially sunk by this Harvest Management Plan as it is currently written:

-In 2018 we served over 1100 customers, sold over 750 WDFW One-Day fishing licenses and paid over \$19,000 in state sales taxes.

-We own two boats, one purchased from Islands Marine Center on Lopez Island and the other from a broker here in Anacortes. I have purchased three \$18,500 engines from Master Marine in Mount Vernon in the last ten years.

-We spend over \$17,000 annually in dock and office rental fees at Skyline Marina in Anacortes. This past year we spent over \$22,000 in gasoline purchases.

-This year we spent over \$8000 in tackle and equipment purchases, much of it from Holiday Sports in Burlington, Outdoor Emporium, LFS, and West Marine.

-Many of our customers travel to Anacortes to enjoy its beauty and partake in all it has to offer, especially salmon fishing. A large number of these customers stay in hotels, eat at restaurants, and while here enjoy other local activities such as whale watching and sea kayaking.

-We also employ five captains whose families count on the summer income to help support their households. This past year we donated over \$15,000 to Christian-based charities. One of those organizations, located in Lynden, Washington, is a safe house for women who have been freed from the sex trafficking industry. We've been supporting charities through our business for the entire ten years we've been in operation.

All this to say we create a tremendous amount of economy for a small town like Anacortes. Under the current agreed to Management Plan, my business is destined to be another "unfortunate casualty" of hard but necessary decisions made in the name of conservation. However, I believe this to be avoidable as there are many alternatives. On behalf of the thousands of sport fisherman and hundreds marine & fishing related business owners of Puget Sound, I urge you to work towards a solution with less drastic consequences.

Brett

--

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**From:** [PL Pattillo](#)  
**To:** [Adicks, Kyle K \(DFW\)](#); [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Dapp, Derek R \(DFW\)](#)  
**Subject:** In-season management Puget Sound Sport winter  
**Date:** Monday, March 18, 2019 2:21:21 PM

---

Kyle and Mark,

I met this morning with Derek and Dan to discuss a proposal that I've been developing to consider a modification of the current approach to in-season management of sport mark-selective fisheries in Puget Sound. I think it is important to explore the technical basis for such a proposal ahead of a specific proposal. For any proposal to be effective, or implemented, it would ultimately need to be part of the annual North of Falcon agreement with the tribes. To get to that point, WDFW would need to explore the technical and policy issues of the proposal and determine if the proposal has merit for moving forward with the co-management process. So I'm beginning with an early step.

I think Derek has a good understanding of the concepts and the data or estimates (e.g., FRAM forecasts of ERs or encounters) that are key to development of this approach. I'll continue to work with them, understanding they have priorities and are quite busy, to evaluate the concepts and the viability or practicality of the proposal. I also understand how difficult it is to change the status quo for managing these fisheries by agreement and don't have a great expectation that such a proposal brought forward at this point in the North of Falcon process has a very good chance of arrival by mid-April.

I do think it is important to at least make progress with this issue - not a new issue of concern for the recreational fishing public - and still hope WDFW can find a way to make a first step over the next month.

I'll stay in touch,

Thanks. Pat

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Modeling Questions  
**Date:** Wednesday, April 10, 2019 12:14:50 PM

---

Mark,

I doubt that you'll have time today, but when you might have a few minutes could I speak with you about the modeling you shared with me? I see some odd impact results looking at Stilly and MHC and wonder about inputs. I might try to find Derek, assuming he did the modeling. From your explanation yesterday, I am assuming those runs all have the same PS sport fishery inputs (they have the same impacts) and that they reflect a closure of August (and September from last year) in Area 7, as well as a closure in January. That's a huge hit for that area.

Impacts certainly are reduced for each of those stocks. But why was such a drastic move made for just that area? Cutting 2/3 of the summer fishery there while leaving the other areas untouched? Was it all for Stillaguamish? Curiously, the impacts in Area 5 doubled compared with last year's final run for both stocks. And MHC impacts in Area 6 increased during the summer while zeroing out in the winter. What's going on there? Area 11 impacts increased for both stocks in the winter and summer, but that could simply be the reduced abundance of deep SS hatchery fish.

Anyway, I really think this needs more scrutiny. Knowing how these moves have been made in the past and reversals can be interpreted as bad faith negotiating by the Tribes, I hope that WDFW isn't committed to this drastic cut for A7. I thought Shawn Yanity requested WDFW reduce Stilly impacts to 4.0%.

I could have misinterpreted the runs.

Pat

**From:** [Frank Urabeck](#)  
**To:** [Warren, Ron R \(DFW\)](#)  
**Cc:** [Larry Carpenter](#); [Don McIsaac](#); [Barbra Baker FWC](#); [Susewind, Kelly \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Baltzell, Mark E \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Downen, Mark R \(DFW\)](#)  
**Subject:** Re: 2019 Skokomish River recreational salmon fisheries  
**Date:** Tuesday, March 19, 2019 6:43:27 AM

---

Ron:

Appreciate your response. It came while I was in Texas. Just got back. Sorry I had not seen your attached sport salmon fishery proposal before I left as your proposal continues the closure of the most important part of the river for sports angler: SR 106 to TP Power lines, accessed via Hunter Farms. The river from SR 106 to SR 101, first time restricted by the "Float Rule," will yield a lot less sport caught fish than in the past. Did Larry Phillips propose this? Your proposal, while disappointing, would provide some fishing opportunity by allowing some highly restricted sport salmon fishing and therefore acceptable as being better than nothing at this time, if it is being presented as an interim proposal until we resolve the land ownership issue. It is not acceptable as a long-term fishery regulation!! The proposal would result in only a token harvest by sports anglers and continue the huge imbalance in harvest of the Skokomish River Chinook unfairly favoring the Skokomish Tribe.

Let me know if we can talk tomorrow or later this week. I will be expecting a status report on the land ownership issue.

Thanks much.

Frank

**From:** Warren, Ron R (DFW)  
**Sent:** Thursday, March 7, 2019 4:52 AM  
**To:** Frank Urabeck  
**Cc:** Larry Carpenter ; Don McIsaac ; Barbra Baker FWC ; Susewind, Kelly (DFW) ; Adicks, Kyle K (DFW) ; Baltzell, Mark E (DFW) ; Hughes, Kirt M (DFW) ; Downen, Mark R (DFW)  
**Subject:** RE: 2019 Skokoomish River recreational salmon fisheries

Frank thanks for your continued patience on this matter. Attached is the fishery proposal that we sent to multiple levels of the tribal government. This will be made public at our next NOF meeting until then I hope this will remain limited to this small group (notice my distribution differs from yours). I realize, according to your requested date this is late – however I will continue to communicate in a timely manner based on my workload and schedule. I intentionally remain silent on your other items you requested and would be happy to talk with you about those upon your return. Safe travels.

Ron

Ron Warren  
WDFW, Fish Program  
360-791-3945 cell  
360-902-2799 office

---

**From:** Frank Urabeck <urabeck@comcast.net>  
**Sent:** Wednesday, March 6, 2019 3:28 AM  
**To:** Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>; Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>  
**Cc:** Larry Carpenter <lc3896@gmail.com>; Don McIsaac <DONALDMCISAAC@msn.com>; Barbra Baker FWC <bbakerwdfw@gmail.com>; Susewind, Kelly (DFW) <Kelly.Susewind@dfw.wa.gov>; Ron Garner <rgarner755@aol.com>; nello.picinich@ccapnw.org  
**Subject:** Re: 2019 Skokoomish River recreational salmon fisheries

Ron:

Disappointed did not hear back from you. Not consistent with our February 20 chat. If nothing by time I get back from Texas I will be considering comprehensive PDR.

Take care.

Frank

**From:** Frank Urabeck  
**Sent:** Sunday, March 3, 2019 7:19 PM  
**To:** Ron Warren ; Ron.Warren@dfw.wa.gov  
**Cc:** Larry Carpenter ; Don McIsaac ; Barbra Baker FWC ; Kelly Susewind ; Ron Garner ; nello.picinich@ccapnw.org  
**Subject:** 2019 Skokoomish River recreational salmon fisheries

Ron:

Based on our February 20 telephone chat and discussions last Wednesday, February 27, during the 2019 NOF pre-season run forecast meetings, I am under impression that there is fair chance of getting Skokoomish River Chinook and Coho sport fisheries reopened this year. Understand that the Skokoomish tribe is willing to consider a 2019 sport river fishery and will be responding to a proposal you promised to provide them by last Friday, March 1. Please share that proposal with me so you can have the benefit of someone who has enjoyed that fishery a lot and worked hard to get it reopened. Also, please keep me informed of the status of discussions with the tribe and the outlook for this proposal being part of the 2019 NOF package. In addition, please provide a status report on the progress being made by the AG.

Would appreciate hearing back from you by this Tuesday, March 5, as I leave for 10 days in

Texas early Wednesday morning. So glad the Commission made this a top priority for Kelly at it's January 11 meeting.

Thanks much.

Frank

**From:** [Gary](#)  
**To:** ["PL Pattillo"; Baltzell, Mark E \(DFW\)](#)  
**Subject:** RE: Coho Proposal  
**Date:** Saturday, March 9, 2019 4:45:40 AM

---

Pat and Mark:

I see this as a reasonable starting point for the 2019 Coho seasons

I do know that the folks in Area 9 would like to see more non selective Coho fishing opportunity. That change last year caused some confusion and bewilderment from lots of fishers who could not understand how the area 9 needed to be selective and Area 10 and 8.2 where non selective. We probably need to explain the rationale early and often to let the public know.

Gary Krein  
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**From:** PL Pattillo <pattillopl@gmail.com>  
**Sent:** Friday, March 08, 2019 8:57 AM  
**To:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Cc:** Gary Krein <gary@allstarfishing.com>  
**Subject:** Coho Proposal

Mark,

Here is the last version of the PS coho initial proposal for 2019 that is endorsed by CAPS representatives. I still plan on sending it along to the rest of my support group and to the advisory group membership before officially sending it to WDFW, but if you have the time to discuss it with me and Gary, as Gary suggested this morning, then I am available any time you see the opportunity.  
Pat

**From:** [Curt Kraemer](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Carl Nyman](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [Dave Knutzen](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Mark Riedesel](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#)  
**Cc:** [Steve Kesling](#); [Gary Krein](#); [Keith Robbins \(flymooch@aol.com\)](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Larry Carpenter \(lc3896@gmail.com\)](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 4:51:48 PM

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Mark -

Thanks for the update! Based on what we heard at Lynnwood the sport season matrix is about what I would have expected. It was indeed unfortunate that some discussion didn't take place on how to use the available impacts. Hopefully not much will be needed in regard to Stilly Chinook impacts though I'm not holding my breath. Finding another fish or two will be extremely painful.

A couple questions

The 75 Stilly Chinook C&S - Hopefully that is a total of 75 fish (the upper limit) including any C & S fish.

Given the forecasts I'm assuming that the 20% reduction for the in-river recreational fishery is directed towards coho and not pinks

Good luck!

Curt

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

**Sent:** Thursday, April 11, 2019 2:10 PM

**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney; Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com

**Cc:** Steve Kesling ; Gary Krein; Keith Robbins (flymooch@aol.com); Stormer, David G (DFW); Hughes, Kirt M (DFW); Adicks, Kyle K (DFW); Larry Carpenter (lc3896@gmail.com); Curt Kraemer

**Subject:** Comanager Model Runs

Hi Everyone,

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---

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## Mark Baltzell

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807

Cell: 360-688-3410

**From:** [Carl Nyman](mailto:Carl.Nyman)  
**To:** [markriedesel@hotmail.com](mailto:markriedesel@hotmail.com); [Baltzell, Mark E \(DFW\)](mailto:Baltzell, Mark E (DFW)); [andrew.marks@comcast.net](mailto:andrew.marks@comcast.net); [brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com); [Highliner\\_charters@gmail.com](mailto:Highliner_charters@gmail.com); [dcroonquist@gmail.com](mailto:dcroonquist@gmail.com); [dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com); [gmliller@farwestsports.com](mailto:gmliller@farwestsports.com); [Gage.little@gmail.com](mailto:Gage.little@gmail.com); [Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com); [Mark@nmta.net](mailto:Mark@nmta.net); [1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com); [pattillopl@gmail.com](mailto:pattillopl@gmail.com); [thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com); [tom@theoutdoorline.com](mailto:tom@theoutdoorline.com); [Artt@tacomaparks.com](mailto:Artt@tacomaparks.com); [dave.knutzen@nmt.us](mailto:dave.knutzen@nmt.us); [d\\_j\\_puki@hotmail.com](mailto:d_j_puki@hotmail.com); [freemans5@comcast.net](mailto:freemans5@comcast.net); [gregghwilliams@gmail.com](mailto:gregghwilliams@gmail.com); [mrian@microsoft.com](mailto:mrian@microsoft.com); [mikegilchrist@comcast.net](mailto:mikegilchrist@comcast.net); [troymckelvey3@gmail.com](mailto:troymckelvey3@gmail.com)  
**Cc:** [Steve Kesling](mailto:Steve.Kesling); [Gary Krein](mailto:Gary.Krein); [Capt. Keith](mailto:Capt.Keith); [Stormer, David G \(DFW\)](mailto:Stormer, David G (DFW)); [Hughes, Kirt M \(DFW\)](mailto:Hughes, Kirt M (DFW)); [Adicks, Kyle K \(DFW\)](mailto:Adicks, Kyle K (DFW)); [lc3896@gmail.com](mailto:lc3896@gmail.com); [Kraemerfam1@hotmail.com](mailto:Kraemerfam1@hotmail.com)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 4:02:04 PM

---

I need to agree with Mark R. that this seems bizarre that these "adjustments" are being made between NOF 2 and PFMC 2 with no time for public involvement. I understand the process was delayed significantly by negotiation challenges but this is unprecedented in my 20 years of involvement in this process.

Many of us are having a very difficult time understanding how this process became even worse this year.

Those of us in the south sound REALLY appreciate the June Coho remaining in the matrix and hope that it makes it through this storm. Thank you for your hard work in this challenging time.

<''))))><  
Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
[carl@fishingseattle.com](mailto:carl@fishingseattle.com)  
206-632-2611

On Thu, 11 Apr 2019 22:46:43 +0000, mark riedesel wrote:

Mark,  
I'm I reading this right? The department wants to close Area 7 to ALL recreational fishing for the month of August?!?!?! The entire heart of our summer season gone? We can't even get time on the water? The impacts to the Area 7 communities that rely on that portion of the summer season will be truly devastating. Seeing this goes well beyond being disappointed....

Mark Riedesel

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Sent:** Thursday, April 11, 2019 2:10 PM  
**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney;

Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com

**Cc:** Steve Kesling ; Gary Krein; Keith Robbins (flymooch@aol.com); Stormer, David G (DFW); Hughes, Kirt M (DFW); Adicks, Kyle K (DFW); Larry Carpenter (lc3896@gmail.com); Curt Kraemer

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## Mark Baltzell

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [mark riedesel](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Carl Nyman](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [Dave Knutzen](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#)  
**Cc:** [Steve Kesling](#); [Gary Krein](#); [Keith Robbins \(flymooch@aol.com\)](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Larry Carpenter \(lc3896@gmail.com\)](#); [Curt Kraemer](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:46:55 PM

---

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Mark Riedesel

---

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**Sent:** Thursday, April 11, 2019 2:10 PM  
**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney; Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com  
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Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [Captain Keith](#)  
**To:** [Baltzell, Mark E \(DFW\)](#); [andrew.marks@comcast.net](#); [brandon\\_jacob\\_mason@yahoo.com](#); [Highliner\\_charters@gmail.com](#); [carl@fishingseattle.com](#); [dcroonquist@gmail.com](#); [dlmccraney@hotmail.com](#); [gmiller@farwestsports.com](#); [Gage.little@gmail.com](#); [Pnwsalmonangler@gmail.com](#); [Mark@nmta.net](#); [1greatrhino@wavecable.com](#); [pattillopl@gmail.com](#); [thomas.a.drews@boeing.com](#); [tom@theoutdoorline.com](#); [Artt@tacomaparks.com](#); [dave.knutzen@nmt.us](#); [d\\_j\\_puki@hotmail.com](#); [freemans5@comcast.net](#); [gregghwilliams@gmail.com](#); [markriedesel@hotmail.com](#); [mrian@microsoft.com](#); [mikegilchrist@comcast.net](#); [troymckelvey3@gmail.com](#)  
**Cc:** [luckyblindsquirrel@yahoo.com](#); [gary@allstarfishing.com](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [lc3896@gmail.com](#); [Kraemerfam1@hotmail.com](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:43:32 PM

---

MARK,

Please again explain the justification for a non sale time Elliot Bay season and what are the dates? Couldn't we use those wild impacts somewhere else that will give us more time on the water?

thanks

Keith

-----Original Message-----

From: Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
To: Andy Marks <andrew.marks@comcast.net>; Brandon Mason <brandon\_jacob\_mason@yahoo.com>; Brett Rosson <Highliner.charters@gmail.com>; Carl Nyman <carl@fishingseattle.com>; Dave Croonquist <dcroonquist@gmail.com>; David McCraney <dlmccraney@hotmail.com>; Gabe Miller <gmiller@farwestsports.com>; Gage Little <Gage.little@gmail.com>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <Pnwsalmonangler@gmail.com>; Mark Yuasa <Mark@nmta.net>; Norm Reinhardt <1greatrhino@wavecable.com>; Pat Patillo (pattillopl@gmail.com) <pattillopl@gmail.com>; Thomas Drews <thomas.a.drews@boeing.com>; Thomas Nelson <tom@theoutdoorline.com>; Art Tachell <Artt@tacomaparks.com>; Dave Knutzen <dave.knutzen@nmt.us>; David Puki <d\_j\_puki@hotmail.com>; Don Freeman <freemans5@comcast.net>; Gregg Williams <gregghwilliams@gmail.com>; Mark Riedesel <markriedesel@hotmail.com>; Michael Rian <mrian@microsoft.com>; Mike Gilchrist <mikegilchrist@comcast.net>; troymckelvey3@gmail.com <troymckelvey3@gmail.com>  
Cc: Steve Kesling <luckyblindsquirrel@yahoo.com>; Gary Krein <gary@allstarfishing.com>; Keith Robbins (flymooch@aol.com) <flymooch@aol.com>; Stormer, David G (DFW) <David.Stormer@dfw.wa.gov>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Larry Carpenter (lc3896@gmail.com) <lc3896@gmail.com>; Curt Kraemer <Kraemerfam1@hotmail.com>  
Sent: Thu, Apr 11, 2019 2:11 pm  
Subject: Comanager Model Runs

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Mark Baltzell  
 Washington Dept of Fish and Wildlife  
 Puget Sound Salmon Fisheries Management  
 1111 Washington St SE  
 NRB 6th Floor  
 Olympia, WA 98501  
 Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)<mailto:[mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)>  
 Office: 360-902-2807  
 Cell: 360-688-3410

**From:** [Highliner Charters](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:13:39 PM

---

Mark, I can't believe what I think I'm reading here. Do you mean to tell me we will be shut out completely from Pinks and Coho in Aug? I read this as a round about way to get a no-go zone and it stinks to all hell. To me I'm miss reading this!

Highliner Charters  
360.770.0341  
[www.highlinercharters.com](http://www.highlinercharters.com)  
[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)

On Apr 11, 2019, at 14:10, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

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1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
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Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

<ModelComparison3\_Coho1917\_18\_19\_040819.xlsx>

<PSSportMatrix2019-20prop.pdf>

<ModelComparison3\_Chin1919\_2019\_2119\_11April2019.xlsx>

**From:** [Carl Nyman](#)  
**To:** [Steve Kesling](#); [andrew.marks@comcast.net](#); [brandon\\_jacob\\_mason@yahoo.com](#); [Highliner.charters@gmail.com](#); [dcroonquist@gmail.com](#); [dlmccraney@hotmail.com](#); [gmiller@farwestsports.com](#); [Gage.little@gmail.com](#); [Pnwsalmonangler@gmail.com](#); [Mark@nmta.net](#); [1greatrhino@wavecable.com](#); [pattillopl@gmail.com](#); [thomas.a.drews@boeing.com](#); [tom@theoutdoorline.com](#); [Artt@tacomaparks.com](#); [dave.knutzen@nmt.us](#); [d\\_j\\_puki@hotmail.com](#); [freemans5@comcast.net](#); [gregghwilliams@gmail.com](#); [markriedesel@hotmail.com](#); [mrian@microsoft.com](#); [mikegilchrist@comcast.net](#); [troymckelvey3@gmail.com](#); [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Gary Krein](#); [Capt. Keith](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [lc3896@gmail.com](#); [Kraemerfam1@hotmail.com](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 3:08:01 PM

---

On a similar note as Steve I'm curious about the encounter number plugged in for winter fisheries, specifically area 10. Is there a more realistic number that this winter was for area 10 winter season that might allow it to run it's course or most of it?

It's very disappointing to again see no opportunity for Salmon fishing in areas 9 or 10 Nov 16-Dec 30. I heard from many operators and also I know first hand that was a big loss during the holidays when there's a demand for family activities.

The value of Area 8-2 in late April is high for charters and it would make sense to split that winter Chinook season by closing it in February and/or March to assure an April full fishery, and I don't know what savings you might get from that but maybe it could add time back to another area?

<''))))><

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](#)  
[carl@fishingseattle.com](mailto:carl@fishingseattle.com)  
206-632-2611

On Thu, 11 Apr 2019 21:22:34 +0000 (UTC), "Steve K." wrote:

Hi Mark,

What numbers are area 9 & 10 at for Summer chinook in this model? Is there a pin for the conference call?

Thank you,  
Steve K.

On Thursday, April 11, 2019, 2:11:25 PM PDT, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone,

I wanted to get model runs and an update of where we are as soon as I was able. You will find 2

summaries of the 3 model runs attached to this email for both Chinook and Coho. I will provide some summary information and let folks know what moves we have already put on the table and how I think things may go from here. I have attached a PDF of the proposed seasons for Coho and Chinook in the matrix format we have used in recent years.

Here are the main changes so far that are reflected in the modeling

- Reduced time and area for Area 8-2 coho season
- A minter creek Chinook sport fishery
- Area 7 closed in August to recreational fishing (BhamBay open Aug 16)
- 12C Chinook Fishery
- Area 7 closed in January
- Area 9 closed in January
- Elliot Bay open
- Treaty Troll fishery at 4500
- Stilly at 75 fish C&S
- Stilly 20% reduction in pink fishery (has Chinook impacts)

Co-managers agreed this morning to propose being at the middle Ocean options for Chinook and Coho for both Non-treaty and Treaty troll fisheries. The model runs that will be done tonight will be the first council runs that reflect updated Puget Sound fisheries. I am sure there will be a lot of discussion tomorrow morning on our call. That call in information is below.

I am guessing that the co-managers will be expecting us to make another move on Chinook either tomorrow or sometime soon. It is my opinion that there is also likely continuing discussions on the tribal side regarding impact sharing. Likely why the tribal moves that were made were not large. My time to respond to questions will likely be limited, but I will do my best to respond as I can. Call in information for tomorrow is below. Call starts at 8:30. For advisors who are in Rohnert Park, I am tentatively scheduling a meeting place in the Oak Room on the 2<sup>nd</sup> floor of the Double Tree Hotel. It is up the stairs by the delegation room and hang a left.

---

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## Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** [David McCraney](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Comanager Model Runs  
**Date:** Thursday, April 11, 2019 2:26:10 PM

---

Mark;

The timely update is much appreciated. In some earlier meetings and conversations, there had been discussions of some enhanced opportunities in Area 11. Is that still a possibility.

I plan to be on the call tomorrow morning.

Thanks.

David Mc

*David L. McCraney*

1212 N. J. Street

Tacoma, WA 98403

Home--253/627-8748

Cell--253/341-0625

[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>

**Sent:** Thursday, April 11, 2019 2:10 PM

**To:** Andy Marks; Brandon Mason; Brett Rosson; Carl Nyman; Dave Croonquist; David McCraney; Gabe Miller; Gage Little; Kyle Sorenson (Pnwsalmonangler@gmail.com); Mark Yuasa; Norm Reinhardt; Pat Patillo (pattillopl@gmail.com); Thomas Drews; Thomas Nelson; Art Tachell; Dave Knutzen; David Puki; Don Freeman; Gregg Williams; Mark Riedesel; Michael Rian; Mike Gilchrist; troymckelvey3@gmail.com

**Cc:** Steve Kesling ; Gary Krein; Keith Robbins (flymooch@aol.com); Stormer, David G (DFW); Hughes, Kirt M (DFW); Adicks, Kyle K (DFW); Larry Carpenter (lc3896@gmail.com); Curt Kraemer

**Subject:** Comanager Model Runs

Hi Everyone,

I wanted to get model runs and an update of where we are as soon as I was able. You will find 2 summaries of the 3 model runs attached to this email for both Chinook and Coho. I will provide some summary information and let folks know what moves we have already put on the table and how I think things may go from here. I have attached a PDF of the proposed seasons for Coho and Chinook in the matrix format we have used in recent years.

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- 12C Chinook Fishery
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Conference ID: 3256017

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## Mark Baltzell

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Co-manager model runs  
**Date:** Monday, April 8, 2019 9:19:50 AM

---

Mark,

If you have any time before traveling to California, I would like to discuss some of the modeling and impact issues you described, including WDFW's view of the SRKW situation for 2019. I would also like to have your frank assessment of whether or not WDFW would entertain any changes to the in-season management of winter MSFs for next year. I certainly don't want to be pushing something that wastes valuable staff time this late in the game. It might be my new perspective as a member of the public, but the entire WDFW team looked pretty weary last Wednesday.

Let me know if I can visit, or I'll just see you in California (I'm coming down on Wednesday). Thanks, Pat

On Fri, Apr 5, 2019 at 2:57 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone

It appears that we may be getting closer to a co-manager model run for Chinook as early as today, but more likely, early next week before California. I thought it would be appropriate to communicate to all of you some of the fishery reductions WDFW are considering based on public comment, advisor input and commission guidance. As I expressed to those who were there or watching on Wednesday, there are any number of challenging dynamics in play which are exacerbated by many unknowns. In general, these are the approaches that we are taking:

- Structuring our Ocean package to maximize harvest and opportunity while minimizing impacts on Puget Sound stocks.
- Looking at the recreational fisheries with the highest impacts on Stillaguamish and Mid-Hood Canal
- Coupled with conservation moves, looking at what reductions would do to contribute to SRKW conservation
- Maximizing time and area opportunities that have minimal impacts on stocks of concern

Right now we are considering Summer reductions in Area 7, Adjusting Ocean sport and troll fisheries to reduce Mid-HC impacts, assessing the balance of winter and summer fisheries and eyeing potential reductions to spread out geographically, and reduced Coho opportunity in 82.

Everything is very fluid and dynamic right now. Hopeful that we can reach agreement on everything by the 15<sup>th</sup>.

We will communicate more as we figure things out and obviously will share model runs when we have them.

+++

Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** [Carl Nyman](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Adicks, Kyle K \(DFW\)](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Susewind, Kelly \(DFW\)](#)  
**Subject:** Re: Co-manager model runs  
**Date:** Friday, April 5, 2019 3:32:06 PM

---

Ron, Mark and WDFW staff,

After our Charter Association PS Meeting last night, I want to share the requests of our constituents.

Our members continue to stress that time on the water is the priority regardless if this means fishing for Coho, Chum or Chinook salmon and time on the water is valuable any time of year.

JUNE Coho opportunity in area 10 took the lead as a priority (assuming that 9 and/or 10 will be open in July and August for something)

It was expressed by multiple charter operators that Chum salmon IS a valuable opportunity, and if Chum is open commercially and/or tribally it seems fair to offer recreational Chum fishing as well.

I heard from our members that the loss of November and December was a big hit to the industry last year.

I was sent with the message that trying to have one of/either of the areas area 9 OR 10 (and to some extent 8-2) open as much as possible, going back to the "checkerboard" approach that we worked so hard to get over the last 15 years in order to provide some opportunity. And area 11 has some value to our industry.

We have seen a shift in that checkerboard approach and I understand that it may be necessary to meet conservation objectives, but our goal is to give some pushback on losing SOMEPLACE to go fishing for some salmon species AS MANY Days as possible!

Thank you for listening.

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
(206) 632-2611  
Sent from my phone.

On Apr 5, 2019, at 2:57 PM, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone

It appears that we may be getting closer to a co-manager model run for Chinook as early as today, but more likely, early next week before California. I thought it would be

appropriate to communicate to all of you some of the fishery reductions WDFW are considering based on public comment, advisor input and commission guidance. As I expressed to those who were there or watching on Wednesday, there are any number of challenging dynamics in play which are exacerbated by many unknowns. In general, these are the approaches that we are taking:

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Right now we are considering Summer reductions in Area 7, Adjusting Ocean sport and troll fisheries to reduce Mid-HC impacts, assessing the balance of winter and summer fisheries and eyeing potential reductions to spread out geographically, and reduced Coho opportunity in 82.

Everything is very fluid and dynamic right now. Hopeful that we can reach agreement on everything by the 15<sup>th</sup>.

We will communicate more as we figure things out and obviously will share model runs when we have them.

+++

## Mark Baltzell

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
NRB 6<sup>th</sup> Floor  
Olympia, WA 98501  
Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)  
Office: 360-902-2807  
Cell: 360-688-3410

**From:** [urabeck@comcast.net](mailto:urabeck@comcast.net)  
**To:** [Baltzell, Mark E \(DFW\)](mailto:Baltzell, Mark E (DFW))  
**Subject:** RE: Feb. 24 Marine Areas 6-10 Chinook encounters estimates  
**Date:** Friday, March 1, 2019 4:26:04 PM

---

Mark:

The success of NOF 2019 will be judged on how much public was able to vetifiably influence the outcome and gain meaningful fisheries, not on the opportunities for comments. We need much more meaningful fisheries than last year, including the Skokomish.

Share this with Ron and Kelly.

Thanks

Frank

Sent from Xfinity Connect Application

-----Original Message-----

**From:** Mark.Baltzell@dfw.wa.gov  
**To:** gage.little@gmail.com  
**Cc:** Vincent.Adicks@dfw.wa.gov, andrew.marks@comcast.net, Artt@tacomaparks.com, brandon\_jacob\_mason@yahoo.com, Highliner.charters@gmail.com, carl@fishingseattle.com, dcroonquist@gmail.com, dlmccraney@hotmail.com, urabeck@comcast.net, gmiller@farwestsports.com, gary@allstarfishing.com, Kirt.Hughes@dfw.wa.gov, flymooch@aol.com, Pnwsalmonangler@gmail.com, markriedesel@hotmail.com, Mark@nmta.net, 1greatrhino@wavecable.com, pattillopl@gmail.com, ryleyf@gmail.com, Ann.Stephenson@dfw.wa.gov, luckyblindsquirrel@yahoo.com, David.Stormer@dfw.wa.gov, thomas.a.drews@boeing.com, tom@theoutdoorline.com, dgstormer@gmail.com, rgarner755@aol.com  
**Sent:** 2019-03-01 2:37:33 PM  
**Subject:** RE: Feb. 24 Marine Areas 6-10 Chinook encounters estimates

The North of Falcon process is exactly the forum to make your opinions heard.

**From:** Gage Little <gage.little@gmail.com>  
**Sent:** Friday, March 1, 2019 2:05 PM  
**To:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Cc:** Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Andy Marks (andrew.marks@comcast.net) <andrew.marks@comcast.net>; Art Tachell (Artt@tacomaparks.com) <Artt@tacomaparks.com>; Brandon Mason (brandon\_jacob\_mason@yahoo.com) <brandon\_jacob\_mason@yahoo.com>; Brett Rosson (Highliner.charters@gmail.com) <Highliner.charters@gmail.com>; Carl Nyman (carl@fishingseattle.com) <carl@fishingseattle.com>; Dave Croonquist (dcroonquist@gmail.com) <dcroonquist@gmail.com>; David McCraney (dlmccraney@hotmail.com) <dlmccraney@hotmail.com>; Frank Urabeck (urabeck@comcast.net) <urabeck@comcast.net>;

Gabe Miller (gmiller@farwestsports.com) <gmiller@farwestsports.com>; Gary Krein (gary@allstarfishing.com) <gary@allstarfishing.com>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Keith Robbins (flymooch@aol.com) <flymooch@aol.com>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <Pnwsalmonangler@gmail.com>; Mark Riedesel (markriedesel@hotmail.com) <markriedesel@hotmail.com>; Mark Yuasa (Mark@nmta.net) <Mark@nmta.net>; Norm Reinhardt (1greatrhino@wavecable.com) <1greatrhino@wavecable.com>; Pat Patillo (pattillopl@gmail.com) <pattillopl@gmail.com>; Ryley Fee (ryleyf@gmail.com) <ryleyf@gmail.com>; Stephenson, Ann E (DFW) <Ann.Stephenson@dfw.wa.gov>; Steve Kesling (luckyblindsquirrel@yahoo.com) <luckyblindsquirrel@yahoo.com>; Stormer, David G (DFW) <David.Stormer@dfw.wa.gov>; Thomas Drews (thomas.a.drews@boeing.com) <thomas.a.drews@boeing.com>; Thomas Nelson (tom@theoutdoorline.com) <tom@theoutdoorline.com>; dgstormer@gmail.com; rgarner755 (rgarner755@aol.com) <rgarner755@aol.com>

**Subject:** Re: Feb. 24 Marine Areas 6-10 Chinook encounters estimates

Thanks for that Mark, my STR's wouldn't show any effort in MA6 as Weather has limited effort for me and when allowed I was unable to "double down" after retaining a fish in MA9 which is what my STR would show for area. Would like to clarify that there isn't any restriction for us to move MA6 back to a 2 fish limit after the derby.... have I mentioned I'm not a derby fan? really feel it important that the state find a way to manage/limit derbies.... or stop them entirely.

Gage

On Fri, Mar 1, 2019 at 1:56 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone,

This was our screw up from last year. The permanent regulations filed under last spring were 1 fish for Area 6 in the winter time period. 2 fish were printed in the pamphlet. There are 2 reasons we did not just let this one fly under the radar. So far, we have very low sample sizes of VTR's from area 6 and we have only been able to get 1 overflight so far this winter to assess effort, so the current estimates are likely biased low. A couple of VTR's with a number of fish on them could change the estimates dramatically (like double) with such low sample sizes. The other reason is knowing the that there is a very popular fishing derby about to take place with a high number of participants could very well put a huge dent in those encounters estimates. We have been hearing from you that more time on the water was more important than a high bag limit.

We will re-assess after the derby and discuss with the group at that point.

I am really sorry that this happened. I know that when we make a mistake like this it creates confusion, mistrust, angst, and several other things. It is always our goal to do better, and here is another example.

Mark

**From:** Gage Little <[gage.little@gmail.com](mailto:gage.little@gmail.com)>  
**Sent:** Friday, March 1, 2019 1:19 PM  
**To:** Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>  
**Cc:** Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Andy Marks (<[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)> <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>); Art Tachell (<[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)> <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>); Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>; Brandon Mason (<[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)> <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>); Brett Rosson (<[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)> <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>); Carl Nyman (<[carl@fishingseattle.com](mailto:carl@fishingseattle.com)> <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>); Dave Croonquist (<[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)> <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>); David McCraney (<[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)> <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>); Frank Urabeck (<[urabeck@comcast.net](mailto:urabeck@comcast.net)> <[urabeck@comcast.net](mailto:urabeck@comcast.net)>); Gabe Miller (<[gmillier@farwestsports.com](mailto:gmillier@farwestsports.com)> <[gmillier@farwestsports.com](mailto:gmillier@farwestsports.com)>); Gary Krein (<[gary@allstarfishing.com](mailto:gary@allstarfishing.com)> <[gary@allstarfishing.com](mailto:gary@allstarfishing.com)>); Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Keith Robbins (<[flymooch@aol.com](mailto:flymooch@aol.com)> <[flymooch@aol.com](mailto:flymooch@aol.com)>); Kyle Sorenson (<[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)> <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>); Mark Riedesel (<[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)> <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>); Mark Yuasa (<[Mark@nmta.net](mailto:Mark@nmta.net)> <[Mark@nmta.net](mailto:Mark@nmta.net)>); Norm Reinhardt (<[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)> <[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)>); Pat Patillo (<[pattillopl@gmail.com](mailto:pattillopl@gmail.com)> <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>); Ryley Fee (<[ryleyf@gmail.com](mailto:ryleyf@gmail.com)> <[ryleyf@gmail.com](mailto:ryleyf@gmail.com)>); Stephenson, Ann E (DFW) <[Ann.Stephenson@dfw.wa.gov](mailto:Ann.Stephenson@dfw.wa.gov)>; Steve Kesling (<[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)> <[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)>); Thomas Drews (<[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)> <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>); Thomas Nelson (<[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)> <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>); dgstormer (<[dgstormer@gmail.com](mailto:dgstormer@gmail.com)> <[dgstormer@gmail.com](mailto:dgstormer@gmail.com)>); rgarner755 (<[rgarner755@aol.com](mailto:rgarner755@aol.com)> <[rgarner755@aol.com](mailto:rgarner755@aol.com)>);  
**Subject:** Re: Feb. 24 Marine Areas 6-10 Chinook encounters estimates

David, Mark and all

I need some serious clarification and honesty regarding the emergency rule change for area 6. I looked back at my notes from last years NOF and from what I have the already reduced area 6 winter fishery was intended to be a 2 fish limit as indicated in the reg book! The fact that for two months it has been and fish checkers have been turning in data showing it leads me to believe there wasn't an error in the regulation book! Coupled with only being at 16% it's absurd to reduce this bag limit. All I can think of is that there has been recommendations or push to reduce the limit to one fish during the upcoming derby which I'm on board and support completely; if the case then why not just issue a rule change that says just that? We are supposed to be... and I certainly am, trying to provide the maximum opportunity for anglers to get on the water and catch fish! I'd like to suggest moving area 6 back to a two fish limit less the derby days.

Gage

On Thu, Feb 28, 2019 at 4:22 PM Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)> wrote:

Good afternoon all,

I am attaching the most recent estimates of Chinook encounters in areas 6 - 10. As of Feb. 24, 2019 we are at 16% of the total encounters guideline in area 6, 55% and 46% of the total and total unmarked encounters guideline respectively in area 7, 52% of the total encounters guideline in areas 8.1/8.2 and 43% of the total encounters guideline in area 9. FYI, there is an error in the 2018/19 rules pamphlet for Area 6 daily salmon limit. The salmon daily limit in Area 6 is one fish, not two as stated in the pamphlet. Here is a link to the WAC for reference (<https://apps.leg.wa.gov/wac/default.aspx?cite=220-313-060>). We just issued a fishing rule change to reflect this correction. Please let us know if you have any questions.

Cheers,  
David

David Stormer  
Puget Sound Recreational Fisheries Management Unit  
Washington Department of Fish and Wildlife  
[1111 Washington St SE](#)  
NRB 6th Floor  
Olympia, WA 98501  
Office : 360-902-0058  
Mobile: 360-280-3048  
Fax : 360-249-4628<[tel:\(360\)20249-4628](tel:(360)20249-4628)>  
Email: [David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)

**From:** [Carl Nyman](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Gage Little](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [Dave Knutzen](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Mark Riedesel](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#); [Stormer, David G \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Keith Robbins \(flymooch@aol.com\)](#); [Steve Kesling](#); [Gary Krein](#); [Adicks, Kyle K \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Peterson, Laurie L \(DFW\)](#); [Curt Kraemer](#)  
**Subject:** Re: latest Chinook Model Runs  
**Date:** Friday, April 12, 2019 7:42:09 AM

---

Mark,

I see part of the stilly impacts 1.8% on treaty troll and I'm wondering is that the Makah chinook troll fishery and what number is plugged into the model at this time for their chinook troll fisheries?

I'm just looking to see if we are at a point yet that the numbers we are plugging into the model reflect realistic numbers from fisheries that are likely to occur.

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
(206) 632-2611  
Sent from my phone.

On Apr 12, 2019, at 6:48 AM, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Everyone

Attached are the most recent model run for Chinook from the council from last night. We are at 1 Ocean option. We will go over it on the call this morning. There was an error on the NT side which put stilly at 4.1% NT. Much to talk about.

**Mark Baltzell**

Washington Dept of Fish and Wildlife  
Puget Sound Salmon Fisheries Management  
1111 Washington St SE  
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<2219.pdf>

<Table6NSLC-Chin2219.pdf>

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Cc:** [Dapp, Derek R \(DFW\)](#); [Stormer, David G \(DFW\)](#)  
**Subject:** Re: Model Runs  
**Date:** Tuesday, March 12, 2019 10:41:22 AM

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Mark, Derek and David,

As for coho, it looks like the Snohomish ER will need to be at about 12% to hit the 55,000 escapement target for 2019. Area 8-2 and the Snohomish River sport fisheries will obviously need to be much reduced from what was modeled.

Thompson @ 10% will likely require reductions in non-selective for both areas 5 and 7. And for chinook- the current options for both ocean and inside appear unrealistic for both mid-Hood Canal and Stillaguamish. Mark, you mentioned the MHC rate of last year was about 4.2%, but I believe it was actually 3.2% (Chin3218). The Treaty troll ER with 0819 looks like it is 4.4% compared with last year's 3.6%, so the ocean options appear to be putting on a tighter squeeze than last year on the system. For Stilly it is clear that the initial modeling of tribal fisheries isn't a match with the intention of the 8% as the average ER for 2009-14. So the dance begins eh?

Thanks for the early look at the estimates. I won't share these, but look forward to discussing things as soon as you come up for air.

Pat

On Mon, Mar 11, 2019 at 7:47 PM PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)> wrote:

Mark,

Thanks very much for this info and your inside insight. I'll look it over and get back to you tomorrow.

I have not made a connection with the PSSFAG on season proposals for Chinook or coho. The knowledgeable ones like Krein will understand the modeling results but other will require some more deft handling.

Talk or email soon

Pat

On Mon, Mar 11, 2019 at 6:58 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Pat

Thought I would share model runs with you since you are likely the only one I can think of that understands where we are. As has been in recent years, this PFMC 1 has been a brutal display of grandstanding and line drawing. I even got the Director to admit today that he missed wolf issues. I have played around with the proposals you sent as much as I could without having all of the inside treaty inputs, but given the rhetoric we heard this week, I think non-selective coho fisheries in the straits or even 8-2 may be dicey, just my perspective. Also we will be bumping up on Thompson depending on where we land in the Ocean on coho. Chinook wise. You'll see the Ocean ended up at about 3% On Mid-HC. I think last year's fisheries in there are at about 4.2% so it does not seem like we are that far away. Not enough Stilly in the Ocean .2% to do much with, so that will likely be more of a driver inside.

Let's plan on talking later this week before NOF#1 next week.

Let Derek or I know if you have questions.

Mark Baltzell

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**From:** [Gage Little](#)  
**To:** [Dave Knutzen](#)  
**Cc:** [Carl Nyman](#); [Baltzell, Mark E \(DFW\)](#); [Andy Marks](#); [Brandon Mason](#); [Brett Rosson](#); [Dave Croonquist](#); [David McCraney](#); [Gabe Miller](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Yuasa](#); [Norm Reinhardt](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [Thomas Drews](#); [Thomas Nelson](#); [Art Tachell](#); [David Puki](#); [Don Freeman](#); [Gregg Williams](#); [Mark Riedesel](#); [Michael Rian](#); [Mike Gilchrist](#); [troymckelvey3@gmail.com](#); [Stormer, David G \(DFW\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Tony Floor](#); [Peterson, Laurie L \(DFW\)](#)  
**Subject:** Re: NOF Update  
**Date:** Wednesday, March 27, 2019 6:05:20 PM

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Mark, does the data that wdfw have support the claim made by the tribes regarding MA10 and 5? i am aware how 10 can hold small fish but seems more early summer than winter, albeit i dont spend a lot of time in 10 winter. i continue to be opposed to a smaller fish size; its like watching the toilet water flush, smaller and smaller until nothing..... similar perhaps to gill netters catching all the big fish until catches are down so they reduce the net size and so on until all we have is lots of small fish! i think some solid ground when it comes to srkw is reminding the co managers that terminal fisheries hardly "dont steal from the mouths of the whales" because theyre at the rivers. those fish are the next wave of food, netting them prior to spawn is an absolute contributing factor. dont want to shoulder this burden purely on the the 1%

gage

On Wed, Mar 27, 2019 at 11:09 AM Dave Knutzen <[Dave.Knutzen@nmt.us](mailto:Dave.Knutzen@nmt.us)> wrote:

Thanks Mark – good to see a report and the follow-up emails.

I support Carl’s comments. The attack on Mark Selective Fisheries is ongoing and one I would hope the department continues to support and push on unwarranted criticism whether it is the tribes or the commission. It is our only option if we want to maintain our fisheries under ESA.

Yes, we should lower the size limit on hatchery Chinook and minimize the release mortality argument plus remove hatchery fish from the system.

Thanks everyone for working the issues

---

**From:** Carl Nyman <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>

**Sent:** Wednesday, March 27, 2019 10:17 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Cc:** Andy Marks <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>; Brandon Mason <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>; Brett Rosson <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>; Dave Croonquist <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>; David McCraney <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>; Gabe Miller <[gmillier@farwestsports.com](mailto:gmillier@farwestsports.com)>; Gage Little <[Gage.little@gmail.com](mailto:Gage.little@gmail.com)>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>; Mark Yuasa <[Mark@nmta.net](mailto:Mark@nmta.net)>; Norm Reinhardt <[lgreatrhino@wavecable.com](mailto:lgreatrhino@wavecable.com)>; Pat Patillo ([pattillopl@gmail.com](mailto:pattillopl@gmail.com)) <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>; Thomas Drews <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>; Thomas Nelson <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>; Art Tachell <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>; Dave Knutzen <[Dave.Knutzen@nmt.us](mailto:Dave.Knutzen@nmt.us)>; David Puki <[d\\_j\\_puki@hotmail.com](mailto:d_j_puki@hotmail.com)>; Don Freeman <[freemans5@comcast.net](mailto:freemans5@comcast.net)>; Gregg Williams <[gregghwilliams@gmail.com](mailto:gregghwilliams@gmail.com)>; Mark Riedesel <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>; Michael Rian <[mrrian@microsoft.com](mailto:mrrian@microsoft.com)>; Mike Gilchrist <[mikegilchrist@comcast.net](mailto:mikegilchrist@comcast.net)>; [troyckelvey3@gmail.com](mailto:troyckelvey3@gmail.com); Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>; Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Warren, Ron R (DFW) <[Ron.Warren@dfw.wa.gov](mailto:Ron.Warren@dfw.wa.gov)>; Tony Floor <[tony.truth.floor@gmail.com](mailto:tony.truth.floor@gmail.com)>; Peterson, Laurie L (DFW) <[Laurie.Peterson@dfw.wa.gov](mailto:Laurie.Peterson@dfw.wa.gov)>

**Subject:** Re: NOF Update

Mark,

So you're saying that the calculated estimate of mortality on released fish exceeded harvested fish in Marine area 10 in that three-week fishery and that's one if the sticky points with the tribes right now?

Being that was such a short fishery with a small number for total encounters it seems odd to focus on attacking our selective fisheries.

Also there were a lot of keepers and a high success rate so I'm surprised at that statement of more mortalities than kept fish.

I think most of know that reducing the minimum size limit would alleviate allot of release mortality concerns.

Could probably have a two fish bag during the whole winter fishery and far fewer releases while increasing access to hatchery origin chinook.

Thank you,

Carl Nyman

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Sent from my phone.

On Mar 26, 2019, at 3:15 PM, Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Good Afternoon Everyone,

I have been meaning to update everyone for several days, but each day seems to be full before it even starts... I'll do my best in this email to describe the events of the 1<sup>st</sup> PFMC meeting, the subsequent state and tribal meetings, where things stand today, and some things to expect next week in Lynwood.

The first PFMC meetings took place from March 6-12 in Vancouver, WA. The Ocean options that were developed capture a wide range of alternatives that will provide a lot of flexibility when crafting final seasons in the ocean this year. The tribes expressed great concern over the Columbia River Coho forecasts and how the recent year trends are towards over-predicting. The low option for Coho attempts to address some of these concerns by keeping last year's sub-area caps in place for the recreational and troll fisheries in Areas 2,3, and 4 and moves the remaining quota to Area 1. The Coho options are much better than previous years, while the Chinook options are very similar to last year. I have attached the modeling results from the meeting (Labeled Chin 1119-Middle option and Coho Options). Please remember that for both Chinook and Coho modeling thus far, what is modeled is this year's abundances and ocean options with LAST YEAR'S Puget Sound fisheries.

After our NOF Public Meeting on March 19 in Olympia, we had 2 days of tribal meetings in Lacey. Tribes continue to have concerns surrounding mark-selective fisheries. This year they have focused on fisheries where we have more mortalities due to releases than we have harvested catch. This is not a regular occurrence in most areas, but recent years in Area 5 in the summer and Area 10 in the winter were a focus. There was also a lot of consternation surrounding modeling and fishery proposals. As of today, there is not an agreed to co-manager joint model run with proposed 2019-20 fisheries. Unrelated to recreational opportunities but for your information, the tribes have also made Chum fisheries a major discussion item this spring, so staff have also devoted quite a bit of time to addressing those concerns.

The modeling results coming out of the PFMC meetings show that on several of our key Chinook stocks, we have a long way to go to meet our conservation and management objectives. It is difficult to know how little or how much we need

to move, due to the lack of agreement on initial modeling of this year's package. I know that I have been warning folks for a while that Stillaguamish and Mid-Hood Canal stocks would be the biggest drivers to our fisheries, but I also want to make sure that we are not losing sight of other concerning stocks like Nisqually and the Mid-Sound Aggregate (Lk WA, Green, Puyallup). Wherever we land on an Ocean option for Chinook, could have a big effect on how much or how little we need to shape fisheries. I have also attached the AEQ tables for the mid-ocean option and where the impacts are in sport fisheries. Lastly, I have attached a word document that we will be putting on the website soon that gives people the 3 main things we are considering when crafting seasons this year and then some of the fishery modifications we are considering this year.

I want to reiterate that no fishery proposals are set in stone yet. I am hopeful that by the time we gather together next Wednesday, we will have updated co-manager model runs that will provide us more clarity in our fishing package. There is also a planned plenary session for next Wednesday afternoon with the tribes. I also want to reiterate, that we have received direction from both our F&W Commission and NOAA that we need to be considering the needs of SRKW when crafting our fisheries this year. Once again, we are in a very dynamic situation with regards to recreational fisheries in the Sound and things will be very fluid going forward. David and I will do our best to communicate as much as we can as soon as we can.

Mark Baltzell

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<Chin1119.pdf>

<Coho\_Options\_PS\_2019.pdf>

<1119\_MidOceanOpt\_AEQ.pdf>

<Puget Sound Marine Recreational Seasons 2019.docx>

**From:** [Highliner Charters](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Pinks  
**Date:** Friday, March 22, 2019 7:37:42 AM

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Ok. Our regulations state that the bag limit is two fish, one of which can be a chinook. For the record, in coming years I'm for applying this (one of which can be a chinook) to Coho and Pinks as well. I know this is out of your purview, but I read recently about the increased bag limits on bottom fish on the coast and I shook my head. They cited the success of past rebuilding efforts as the reason. Alternatively, I feel giving anglers increased opportunity by way of actual days on the water rather than increased bag limits makes much more sense. Conservatively increasing the number of days we can fish, combined with very narrow bag limits keeps us on the water but constantly rebuilding stocks. The same logic could be applied when a certain stock is in a downward trend (like our Pinks and Coho), ie, keep the anglers on the water but restrict their daily bag limit.

b

On Thu, Mar 21, 2019 at 7:22 AM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Thanks Brett. Our plan for this year was to make pink retention in the marine areas part of the daily limit like it was in 2017.

**From:** Highliner Charters <[highliner.charters@gmail.com](mailto:highliner.charters@gmail.com)>  
**Sent:** Wednesday, March 20, 2019 6:37 PM  
**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>  
**Subject:** Pinks

Mark can we look at limiting the pinks to (1) this season, at least in Area 7. The last few runs have been dismal up here and after looking at the data I see no reason why we can't just include Pinks in the (2) fish bag limit. Given that Coho run about the same time up here there would still be a reasonable chance to put two fish in the box and yet we would be giving the pinks a chance to rebuild without having to close it down. I don't think this proposal would meet with too much opposition. What do you think?

b

--

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**From:** [PL Pattillo](#)  
**To:** [Carl Nyman](#)  
**Cc:** [Adicks, Kyle K \(DFW\)](#); [Andy Marks \(andrew.marks@comcast.net\)](#); [Art Tachell \(Artt@tacomaparks.com\)](#); [Baltzell, Mark E \(DFW\)](#); [Brandon Mason \(brandon\\_jacob\\_mason@yahoo.com\)](#); [Brett Rosson \(Highliner\\_charters@gmail.com\)](#); [Dave Croonquist \(dcroonquist@gmail.com\)](#); [David McCraney \(dlmccraney@hotmail.com\)](#); [Frank Urabeck \(urabeck@comcast.net\)](#); [Gabe Miller \(gmiller@farwestsports.com\)](#); [Gage Little \(Gage.little@gmail.com\)](#); [Gary Krein \(gary@allstarfishing.com\)](#); [Hughes, Kirt M \(DFW\)](#); [Keith Robbins \(flymooch@aol.com\)](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Mark Riedesel \(markriedesel@hotmail.com\)](#); [Mark Yuasa \(Mark@nmta.net\)](#); [Norm Reinhardt \(1greatrhino@wavecable.com\)](#); [Ryley Fee \(ryleyf@gmail.com\)](#); [Stephenson, Ann E \(DFW\)](#); [Steve Kesling \(luckyblindsquirrel@yahoo.com\)](#); [Stormer, David G \(DFW\)](#); [Thomas Drews \(thomas.a.drews@boeing.com\)](#); [Thomas Nelson \(tom@theoutdoorline.com\)](#); [dgstormer@gmail.com](#); [rgarner755 \(rgarner755@aol.com\)](#)  
**Subject:** Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019  
**Date:** Wednesday, April 24, 2019 2:39:17 PM

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All,

Adding to Carl's concern, it seems that WDFW has inserted additional conservatism for a fishery that is already managed well beyond any precautionary approach applied to other fisheries they manage. I think WDFW made a miscalculation by closing 8-2 in the midst of sensitive NoF negotiations. I don't see evidence that the move prevented negative outcomes. It's hard to believe that managing for the agreed total encounters of the LOAF commitment could have produced a worse outcome for our winter fisheries next year. To our knowledge the co-management process didn't even allow for discussion of in-season management.

Pat

On Wed, Apr 24, 2019 at 2:23 PM Carl Nyman <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)> wrote:

Thank you David,

It does not entirely answer my question. I have the understanding that these winter fisheries are managed to an objective of "total encounters" and not unmarked encounters.

I can see that to pass the red face test it might be wise to sometimes close when we grossly exceed unmarked encounters. but when mildly exceeding them I'm not sure it's a big red flag especially when other times and areas the encounters are significantly lower than forecasted on sub categories such as unmarked encounters.

Thank you,

Carl Nyman

Fish Finders Private Charters

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(206) 632-2611

Sent from my phone.

> On Apr 24, 2019, at 1:37 PM, Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)> wrote:

>

> Hi, Carl:

>

> If you recall the last preliminary draft report (03/31/2019) for 8.1/8.2; the total unmarked Chinook encounters estimate was 99% of FRAM modeled encounters and prompted the agency to close this area. We are at 101% of planned total unmarked encounters and almost two and a half times the legal unmarked encounters guideline as of the 4/15 estimate. WDFW felt it was prudent to maintain the closure since we have exceeded the planned "wild" impact. I hope this helps address your question.

>

> Cheers,

> David

>

> -----Original Message-----

> From: Carl Nyman <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>

> Sent: Wednesday, April 24, 2019 12:39 PM

> To: Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>

> Cc: Andy Marks ([andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)) <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>; Art Tachell ([Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)) <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>; Brandon Mason

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<[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>; Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>;

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<[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>

> Subject: Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019

>

> If 8-2 is at 89% why is it closed? Am I missing something?

>

> Thank you,

> Carl Nyman

> Fish Finders Private Charters

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> Sent from my phone.

>

>> On Apr 24, 2019, at 11:54 AM, Stormer, David G (DFW)

<[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)> wrote:

>>

>> Good afternoon all,

>>

>> I am attaching the most recent estimates of Chinook encounters in areas 6 - 10. As of April 15, 2019 we are at 68% of the total encounters guideline in area 6, 86% and 72% of the total and total unmarked encounters guideline respectively in area 7, 82% of the total encounters guideline in areas 8.1/8.2 and 89% of the total encounters guideline in area 9. Some of you have asked for the Puget Sound Fisheries section of the 2019\_20 LOAF. It

should be ready for dissemination soon and I will distribute it to you as soon as I get the final version. Please let us know if you have any questions.

>>

>> Cheers,

>> David

>>

>>

>> David Stormer

>> Puget Sound [Recreational Fisheries](#) Management Unit Washington

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>>

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>

>

**From:** [Carl Nyman](#)  
**To:** [Stormer, David G \(DFW\)](#)  
**Cc:** [Andy Marks \(andrew.marks@comcast.net\)](#); [Art Tachell \(Artt@tacomaparks.com\)](#); [Brandon Mason \(brandon\\_jacob\\_mason@yahoo.com\)](#); [Brett Rosson \(Highliner.charters@gmail.com\)](#); [Dave Croonquist \(dcroonquist@gmail.com\)](#); [David McCraney \(dlmccraney@hotmail.com\)](#); [dgstormer@gmail.com](#); [Frank Urabeck \(urabeck@comcast.net\)](#); [Gabe Miller \(gmiller@farwestsports.com\)](#); [Gage Little \(Gage.little@gmail.com\)](#); [Gary Krein \(gary@allstarfishing.com\)](#); [Keith Robbins \(flymooch@aol.com\)](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Kyle Sorenson \(Pnwsalmonangler@gmail.com\)](#); [Baltzell, Mark E \(DFW\)](#); [Mark Riedesel \(markriedesel@hotmail.com\)](#); [Mark Yuasa \(Mark@nmta.net\)](#); [Norm Reinhardt \(1greatrhino@wavecable.com\)](#); [Pat Patillo \(pattillopl@gmail.com\)](#); [rgarner755 \(rgarner755@aol.com\)](#); [Ryley Fee \(ryleyf@gmail.com\)](#); [Stephenson, Ann E \(DFW\)](#); [Steve Kesling \(luckyblindsquirrel@yahoo.com\)](#); [Thomas Drews \(thomas.a.drews@boeing.com\)](#); [Thomas Nelson \(tom@theoutdoorline.com\)](#)  
**Subject:** Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019  
**Date:** Wednesday, April 24, 2019 2:23:49 PM

---

Thank you David,

It does not entirely answer my question. I have the understanding that these winter fisheries are managed to an objective of "total encounters" and not unmarked encounters.

I can see that to pass the red face test it might be wise to sometimes close when we grossly exceed unmarked encounters. but when mildly exceeding them I'm not sure it's a big red flag especially when other times and areas the encounters are significantly lower than forecasted on sub categories such as unmarked encounters.

Thank you,  
Carl Nyman  
Fish Finders Private Charters  
[www.fishingseattle.com](http://www.fishingseattle.com)  
(206) 632-2611  
Sent from my phone.

> On Apr 24, 2019, at 1:37 PM, Stormer, David G (DFW) <David.Stormer@dfw.wa.gov> wrote:

>

> Hi, Carl:

>

> If you recall the last preliminary draft report (03/31/2019) for 8.1/8.2; the total unmarked Chinook encounters estimate was 99% of FRAM modeled encounters and prompted the agency to close this area. We are at 101% of planned total unmarked encounters and almost two and a half times the legal unmarked encounters guideline as of the 4/15 estimate. WDFW felt it was prudent to maintain the closure since we have exceeded the planned "wild" impact. I hope this helps address your question.

>

> Cheers,

> David

>

> -----Original Message-----

> From: Carl Nyman <carl@fishingseattle.com>

> Sent: Wednesday, April 24, 2019 12:39 PM

> To: Stormer, David G (DFW) <David.Stormer@dfw.wa.gov>

> Cc: Andy Marks (andrew.marks@comcast.net) <andrew.marks@comcast.net>; Art Tachell (Artt@tacomaparks.com) <Artt@tacomaparks.com>; Brandon Mason (brandon\_jacob\_mason@yahoo.com) <brandon\_jacob\_mason@yahoo.com>; Brett Rosson (Highliner.charters@gmail.com) <Highliner.charters@gmail.com>; Dave Croonquist (dcroonquist@gmail.com) <dcroonquist@gmail.com>; David McCraney (dlmccraney@hotmail.com) <dlmccraney@hotmail.com>; dgstormer@gmail.com; Frank Urabeck (urabeck@comcast.net) <urabeck@comcast.net>; Gabe Miller (gmiller@farwestsports.com) <gmiller@farwestsports.com>; Gage Little (Gage.little@gmail.com) <Gage.little@gmail.com>; Gary Krein (gary@allstarfishing.com) <gary@allstarfishing.com>; Keith Robbins (flymooch@aol.com) <flymooch@aol.com>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Kyle Sorenson (Pnwsalmonangler@gmail.com) <Pnwsalmonangler@gmail.com>; Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>; Mark Riedesel (markriedesel@hotmail.com) <markriedesel@hotmail.com>; Mark

Yuasa (Mark@nmta.net) <Mark@nmta.net>; Norm Reinhardt (lgreatrhino@wavecable.com) <lgreatrhino@wavecable.com>; Pat Patillo (pattillopl@gmail.com) <pattillopl@gmail.com>; rgarner755 (rgarner755@aol.com) <rgarner755@aol.com>; Ryley Fee (rileyf@gmail.com) <rileyf@gmail.com>; Stephenson, Ann E (DFW) <Ann.Stephenson@dfw.wa.gov>; Steve Kesling (luckyblindsquirrel@yahoo.com) <luckyblindsquirrel@yahoo.com>; Thomas Drews (thomas.a.drews@boeing.com) <thomas.a.drews@boeing.com>; Thomas Nelson (tom@theoutdoorline.com) <tom@theoutdoorline.com>

> Subject: Re: Preliminary 2018\_19 Puget Sound winter MSF estimates through 4\_15\_2019

>

> If 8-2 is at 89% why is it closed? Am I missing something?

>

> Thank you,

> Carl Nyman

> Fish Finders Private Charters

> www.fishingseattle.com

> (206) 632-2611

> Sent from my phone.

>

>> On Apr 24, 2019, at 11:54 AM, Stormer, David G (DFW) <David.Stormer@dfw.wa.gov> wrote:

>>

>> Good afternoon all,

>>

>> I am attaching the most recent estimates of Chinook encounters in areas 6 - 10. As of April 15, 2019 we are at 68% of the total encounters guideline in area 6, 86% and 72% of the total and total unmarked encounters guideline respectively in area 7, 82% of the total encounters guideline in areas 8.1/8.2 and 89% of the total encounters guideline in area 9. Some of you have asked for the Puget Sound Fisheries section of the 2019\_20 LOAF. It should be ready for dissemination soon and I will distribute it to you as soon as I get the final version. Please let us know if you have any questions.

>>

>> Cheers,

>> David

>>

>>

>> David Stormer

>> Puget Sound Recreational Fisheries Management Unit Washington

>> Department of Fish and Wildlife

>> 1111 Washington St SE

>> NRB 6th Floor

>> Olympia, WA 98501

>> Office : 360-902-0058

>> Mobile: 360-280-3048

>> Fax : 360-249-4628<tel:(360)%20249-4628>

>> Email: David.Stormer@dfw.wa.gov

>>

>> <winmail.dat>

>

>

**From:** [mark riedesel](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: SoundWatch 2018 report out  
**Date:** Tuesday, March 19, 2019 6:45:19 PM

---

Mark,

I've looked at some of this briefly. I have very serious concerns as to the accuracy of this document and how it could or would be used.

Thanks for sharing it with me!

Mark

---

**From:** Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>  
**Sent:** Tuesday, March 19, 2019 2:23 PM  
**To:** Mark Riedesel; Brett Rosson  
**Cc:** Pat Patillo (pattillopl@gmail.com)  
**Subject:** FW: SoundWatch 2018 report out

FYI

---

**From:** Becker, Penny A (DFW) <Penny.Becker@dfw.wa.gov>  
**Sent:** Tuesday, March 12, 2019 10:43 AM  
**To:** Warren, Ron R (DFW) <Ron.Warren@dfw.wa.gov>; Adicks, Kyle K (DFW) <Vincent.Adicks@dfw.wa.gov>; Hughes, Kirt M (DFW) <Kirt.Hughes@dfw.wa.gov>; Baltzell, Mark E (DFW) <Mark.Baltzell@dfw.wa.gov>; Peterson, Laurie L (DFW) <Laurie.Peterson@dfw.wa.gov>; Davis, Jeffrey P (DFW) <Jeffrey.Davis@dfw.wa.gov>; Gardner, Eric S (DFW) <Eric.Gardner@dfw.wa.gov>; Pamplin, Nathan (DFW) <Nathan.Pamplin@dfw.wa.gov>; Anderson, Hannah E (DFW) <Hannah.Anderson@dfw.wa.gov>; Culver, Michele K (DFW) <Michele.Culver@dfw.wa.gov>; Dunlop, Michelle K (DFW) <Michelle.Dunlop@dfw.wa.gov>; Myers, Alan A (DFW) <Alan.Myers@dfw.wa.gov>; Bear, Steve H (DFW) <Steve.Bear@dfw.wa.gov>; Windrope, Amy (DFW) <Amy.Windrope@dfw.wa.gov>; Susewind, Kelly (DFW) <Kelly.Susewind@dfw.wa.gov>; Bennett, Rebecca P (DFW) <Becky.Bennett@dfw.wa.gov>; Mullins, Russ K (DFW) <Russ.Mullins@dfw.wa.gov>; McCausland, Carrie A (DFW) <Carrie.McCausland@dfw.wa.gov>  
**Subject:** SoundWatch 2018 report out

Hello team mates,

FYI, our partner SoundWatch just released their annual report for education, outreach and monitoring of vessel activity around orcas (attached). For anyone interested, Page 53 has specific data about the voluntary no-go zone that we promoted last year.

This information will be helpful to us for the future for sure.

Regards

Penny

*Penny A. Becker, Ph.D.*  
*Washington Department of Fish and Wildlife*  
*600 Capital Way North*  
*Olympia WA 98501*  
*Office: 360-902-2694*

**From:** [PL Pattillo](#)  
**To:** [Andrew Marks](#)  
**Cc:** [Stormer, David G \(DFW\)](#); [Art Tachell](#); [Brandon Mason](#); [Brett Rosson](#); [Carl Nyman](#); [Dave Croonquist](#); [David McCraney](#); [David Stormer](#); [Frank Urabeck](#); [Gabe Miller](#); [Gage Little](#); [Gary Krein](#); [Keith Robbins](#); [Hughes, Kirt M \(DFW\)](#); [Adicks, Kyle K \(DFW\)](#); [Kyle Sorenson](#); [Baltzell, Mark E \(DFW\)](#); [Mark Riedesel](#); [Mark Yuasa](#); [Norm Reinhardt](#); [rgarner755](#); [Ryley Fee](#); [Stephenson, Ann E \(DFW\)](#); [Steve Kesling](#); [Thomas Drews](#); [Thomas Nelson](#)  
**Subject:** Re: updated chinook and coho sport seasons  
**Date:** Monday, April 15, 2019 10:50:52 AM  
**Attachments:** [Chin Matrix 2019 comparison.xlsx](#)

---

All,

I think the attached spreadsheet captures accurately the changes in Puget Sound marine areas chinook sport opportunity for this year's agreement compared to last year's agreement and, for longer term contrast, to 2014 seasons. Comparisons for Areas 9 and 10 summer seasons are difficult because they are likely much shorter than the matrix graphs depict.

I express some caution still with using these without more time for WDFW or advisors to triple check accuracy.

Pat

On Mon, Apr 15, 2019 at 9:57 AM <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)> wrote:

Dave, Thank you for the information.

Might you prepare a spreadsheet for us that contrasts PS Non-tribal fisheries this year versus the immediate past year for us? We need to be able to characterize the loss of opportunity as a result of this years NOF.

Thank you.

Andy

-----Original Message-----

**From:** Stormer, David G (DFW) <[David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)>  
**Sent:** Monday, April 15, 2019 9:51 AM  
**To:** Andy Marks ([andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)) <[andrew.marks@comcast.net](mailto:andrew.marks@comcast.net)>; Art Tachell ([Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)) <[Artt@tacomaparks.com](mailto:Artt@tacomaparks.com)>; Brandon Mason ([brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)) <[brandon\\_jacob\\_mason@yahoo.com](mailto:brandon_jacob_mason@yahoo.com)>; Brett Rosson ([Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)) <[Highliner.charters@gmail.com](mailto:Highliner.charters@gmail.com)>; Carl Nyman ([carl@fishingseattle.com](mailto:carl@fishingseattle.com)) <[carl@fishingseattle.com](mailto:carl@fishingseattle.com)>; Dave Croonquist ([dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)) <[dcroonquist@gmail.com](mailto:dcroonquist@gmail.com)>; David McCraney ([dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)) <[dlmccraney@hotmail.com](mailto:dlmccraney@hotmail.com)>; [dgstormer@gmail.com](mailto:dgstormer@gmail.com); Frank Urabeck ([urabeck@comcast.net](mailto:urabeck@comcast.net)) <[urabeck@comcast.net](mailto:urabeck@comcast.net)>; Gabe Miller ([gmiller@farwestsports.com](mailto:gmillier@farwestsports.com)) <[gmiller@farwestsports.com](mailto:gmillier@farwestsports.com)>; Gage Little ([Gage.little@gmail.com](mailto:Gage.little@gmail.com)) <[Gage.little@gmail.com](mailto:Gage.little@gmail.com)>; Gary Krein ([gary@allstarfishing.com](mailto:gary@allstarfishing.com)) <[gary@allstarfishing.com](mailto:gary@allstarfishing.com)>; Keith Robbins ([flymooch@aol.com](mailto:flymooch@aol.com)) <[flymooch@aol.com](mailto:flymooch@aol.com)>; Hughes, Kirt M (DFW) <[Kirt.Hughes@dfw.wa.gov](mailto:Kirt.Hughes@dfw.wa.gov)>; Adicks, Kyle K (DFW) <[Vincent.Adicks@dfw.wa.gov](mailto:Vincent.Adicks@dfw.wa.gov)>; Kyle Sorenson ([Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)) <[Pnwsalmonangler@gmail.com](mailto:Pnwsalmonangler@gmail.com)>; Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>; Mark Riedesel ([markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)) <[markriedesel@hotmail.com](mailto:markriedesel@hotmail.com)>; Mark Yuasa ([Mark@nmta.net](mailto:Mark@nmta.net)) <[Mark@nmta.net](mailto:Mark@nmta.net)>; Norm Reinhardt ([1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)) <[1greatrhino@wavecable.com](mailto:1greatrhino@wavecable.com)>; Pat Patillo ([pattillopl@gmail.com](mailto:pattillopl@gmail.com)) <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>; rgarner755 ([rgarner755@aol.com](mailto:rgarner755@aol.com))

<[rgarner755@aol.com](mailto:rgarner755@aol.com)>; Ryley Fee ([rileyf@gmail.com](mailto:rileyf@gmail.com)) <[rileyf@gmail.com](mailto:rileyf@gmail.com)>;  
Stephenson, Ann E (DFW) <[Ann.Stephenson@dfw.wa.gov](mailto:Ann.Stephenson@dfw.wa.gov)>; Steve Kesling  
([luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)) <[luckyblindsquirrel@yahoo.com](mailto:luckyblindsquirrel@yahoo.com)>; Thomas Drews  
([thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)) <[thomas.a.drews@boeing.com](mailto:thomas.a.drews@boeing.com)>; Thomas Nelson  
([tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)) <[tom@theoutdoorline.com](mailto:tom@theoutdoorline.com)>

Subject: updated chinook and coho sport seasons

Good morning, everyone:

Thanks for all your constructive comments, concerns and questions earlier this morning. I am attaching the latest revisions of the sport seasons for chinook and coho. Please let us know if you have any questions or comments.

Thanks!

David

David Stormer  
Puget Sound Recreational Fisheries Management Unit Washington Department of  
Fish and Wildlife  
1111 Washington St SE  
NRB 6th Floor  
Olympia, WA 98501  
Office : 360-902-0058  
Mobile: 360-280-3048  
Fax : 360-249-4628<tel:(360)%20249-4628>  
Email: [David.Stormer@dfw.wa.gov](mailto:David.Stormer@dfw.wa.gov)

**From:** [PL Pattillo](#)  
**To:** [Baltzell, Mark E \(DFW\)](#)  
**Subject:** Re: Winter Troll catch history  
**Date:** Monday, April 1, 2019 1:44:41 PM

---

Thanks Mark. Helpful. Not exactly encouraging, but it's something to work with and you're being straight with us. There isn't much optimism out there with the current NoF "non-process".

You and Kyle and Ron have probably thought of this argument, but the 8% management objective was developed originally by the Tribe to represent the average for 2009-14. I don't think WDFW should acknowledge that 4% is half of 8% because there is no requirement to share wild impacts on a 50% basis. The non-Indian impact for 2009-14 was 4.6% and the tribal impact was just 2.5%. So if WDFW agrees to 4%, then it is tantamount to agreeing to reduce the non-Indian impacts by 0.6% (-14%) from the average, while the tribes *increase* their fishery impact by 1.5% (+60%). WDFW might consider taking the high road of conservation with 4% - accept that for our fisheries, but request the tribes maintain their impact at the average of 2.5%. Force the tribes to live with the principle that they fought for in the Plan negotiation.

My 2 cents.

As for mid-Hood Canal, I hope WDFW is talking to NMFS about the ocean squeeze. I will not bring it up again given the blasting I got at PFMC 1 for suggesting this was an inside-outside allocation issue. Hasn't anyone thought about requesting some sort of flexibility for MHC given the clear fact that the status of that population will not be remedied by further fishery reductions. Request NMFS set up a post-North of Falcon working group to address this non-conservation issue with a real fix such as introducing a new stock to take the place of the current, non-existent management unit.

Pat

On Mon, Apr 1, 2019 at 1:03 PM Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Pat,

I called and left you a message and hopefully you and I can connect at some point before Wed. Things are not looking very favorable from my perspective. Not having any sort of indication as to what moves the tribes may make or not and not having agreed to co-manager modeling is really making the depth of the conservation problem a complete unknown. Stillaguamish has indicated that they would like to see NT impacts on stilly at 4% on UM and 6% on Marked Stilly. At least it is half! Ron has not agreed that we would land at 6% on Marked, but once again, I'm not sure it is going to matter because of Mid HC. I have attached a tool that Derek came up with that shows different modeling scenarios (Cuts) and what it would take to get to our objectives. The tool takes the middle ocean option and puts Winter troll at 3k. Since Derek developed the tool in a number of different model runs, I do not have exact T and NT splits on impacts, but I think Derek indicated that we were more that 2% higher than the tribes on Mid HC. The tool works by putting X's in "Chosen" column and adjusting as necessary. Our Chum meeting is just starting, so hopefully I will be able to touch base with you later today.

Cheers.

Mark

## Mark Baltzell

Washington Dept of Fish and Wildlife

Puget Sound Salmon Fisheries Management

1111 Washington St SE

NRB 6<sup>th</sup> Floor

Olympia, WA 98501

Email: [mark.baltzell@dfw.wa.gov](mailto:mark.baltzell@dfw.wa.gov)

Office: 360-902-2807

Cell: 360-688-3410

**From:** PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>

**Sent:** Saturday, March 30, 2019 8:44 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** Re: Winter Troll catch history

Mark,

I know you are busy but can I talk with you before you head to Lynnwood?

Pat

On Thu, Mar 28, 2019 at 2:32 PM PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)> wrote:

Mark,

Thanks.

I dredged it out of the TAMMs from the validation runs for 2009-16. Same average

(2108) for that period.

If the average catch was modeled, it would reduce impacts from Chin1119 as follows:

Mid Hood Canal - 0.7%

Stillaguamish - 2.6%

Nooksack Early - 1.5%

Lake Washington/Green/Puyallup - 1.9%

Again working with that middle PFMC option, with realistic modeling of that fishery we would not have a LW/Green/Puyallup problem, we wouldn't have a Nooksack problem and we'd be within one point of solving mid Hood Canal annual challenge.

When will Puget Sound sport fishery inputs be updated to reflect this year's abundances and expected harvest/encounter rates? The PFMC runs show nearly all Puget Sound areas with slightly higher rates using last year's inputs - nearly one full point increase on mid-Hood Canal. With lower south sound hatchery production down as predicted, and as compared to last year, surely the predicted catches will be lower as well. It seems to me that adjustment of those predicted catches/impacts with 2018 seasons would be an important step to take prior to next Wednesday.

It's going to come down to Stillaguamish and the Tribes will want WDFW to reduce to 8% proportionally from this first set of runs. Remember that song - "wipeout". That's where it is headed. Three weeks to go!

If you have time for a chat before next Wednesday, please let me know.

Pat

On Thu, Mar 28, 2019 at 1:45 PM Baltzell, Mark E (DFW)  
<[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)> wrote:

Hi Pat.

In a nutshell, it doesn't. I'm not sure I can share specific information, but it is something I have looked at. Remember there are rules about us sharing single tribe catch information. I went back to 2009 and looked at all of the winter catches until now. The low yearly catch was

472 and a high of 3780. Average over that time period is 2,109.

Hope that helps.

Mark

**From:** PL Pattillo <[pattillopl@gmail.com](mailto:pattillopl@gmail.com)>

**Sent:** Thursday, March 28, 2019 7:48 AM

**To:** Baltzell, Mark E (DFW) <[Mark.Baltzell@dfw.wa.gov](mailto:Mark.Baltzell@dfw.wa.gov)>

**Subject:** Winter Troll catch history

Mark,

Would you please point me to who has the catch history for the winter treaty troll fishery? I'd like to understand how that matches up with the 8,500 model number.

Thanks

Pat

**From:** Giulia C. <giuliavc06@gmail.com>  
**Sent:** Saturday, April 13, 2019 1:26 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** 2019 harvest allocation and the Southern Resident orcas

---

Hello there,

I am kindly asking you, that before you finalize your recommendations to the Secretary of Commerce Wilbur Ross, you will take the Southern Resident orcas into consideration when final salmon harvest allocations and management decisions are made. These beloved cetaceans are on the brink of extinction, and if there's anyone whose future truly depends on the salmon availability, and therefore deserves a fair and equitable share of the salmon harvest, is the critically endangered Southern Resident orca population.

My best regards.

Giulia C.

**From:** Giulia C. <giuliavc06@gmail.com>  
**Sent:** Friday, April 12, 2019 5:48 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** 2019 harvest allocation and the Southern Resident orcas

---

Hello there,

I hope that before you finalize your recommendations to the Secretary of Commerce Wilbur Ross, you will take the Southern Resident orcas into consideration when final harvest allocations and management decisions are made. These beloved cetaceans are on the brink of extinction, and if there's anyone whose future truly depends on the salmon availability, and therefore deserve a fair and equitable share of the salmon harvest, is the critically endangered Southern Resident orca population.

My best regards.

Giulia C.

**From:** Krestine <nopvoices@att.net>  
**Sent:** Friday, April 05, 2019 8:08 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** 2019 North of Falcon Process Comment

---

The Southern Resident Orcas deserve to have a seat at the table during the North of Cape Falcon process. The original species of the Pacific Northwest are entitled to a fisheries harvest allocation. During the 2019 North of Falcon allocation agreements, please consider Southern Resident Orcas when allocations and management decisions are made.

Thank you for your consideration.

Krestine Reed  
Carlsborg, Washington

**From:** Sue Berkstresser <suebruiz@yahoo.com>  
**Sent:** Sunday, April 07, 2019 11:48 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** A seat at the table for Southern Resident Orcas

---

Good morning,

I'm writing today to respectfully request that allocations of salmon for our southern resident orcas be considered in this year's discussions. It has been scientifically documented that our orcas are in dire need at this time of this primary food source for their survival as a species. Many believe it would be a devastating loss if they succumb to further losses in their population.

Thank you.  
Sue Berkstresser  
Snohomish, WA

Sent from my iPhone

**From:** Elizabeth Buchter <ebuchter@gmail.com>  
**Sent:** Saturday, April 06, 2019 6:07 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** A seat at the table

---

Hello,

I have been visiting the San Juan Islands for 30 years because the orcas come to forage there in the summer. I am heart broken to see the orcas starving to death. Please consider their needs prominently when making allocations of salmon. Thank you

Sent from my iPad

**From:** Whitney Neugebauer <whitney.neugebauer@gmail.com>  
**Sent:** Wednesday, April 03, 2019 10:20 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** All areas - comments

---

Hi

Please consider the impacts these fishing rules will have on endangered Southern Resident killer whales. These whales should be the first to have access to the fish and it is our responsibility to ensure they are given priority.

I realize that this has been mandated, however the whales continue to decline and so is like to urge this process to deeply consider what's at stake and take a precautionary approach that will in the end benefit all of us in the long-term.

Thank you

Whitney Neugebauer

**From:** Anne de Marcken <ademarcken@gmail.com>  
**Sent:** Wednesday, April 10, 2019 7:30 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocate salmon for orcas

---

A quick note to add my voice to those already asking that the resident orcas be factored into this year's North of Falcon salmon allocation. This is a crucial part of a more long term solution. Think ecologically. Keep our orcas from starving.

Anne de Marcken Forbes

**From:** Heather Nicholson <heatherfold@yahoo.com>  
**Sent:** Friday, April 05, 2019 3:11 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** allocate Southern Resident Orca their food

---

Members of North of Falcon,

As a resident of Washington State, of the United States and of this planet that is naturally interconnected beyond borders, I am very concerned about the health of all ecosystems and right now especially for the Southern Resident Orca.

It is regional and global knowledge the SRO are at the brink of extinction and that their fate is tied to ours. While I don't need reasons that specifically benefit humans in order to want them to thrive, some people look to those reasons. There are plenty and some are pretty scary in regard to the future of life. The fact of the matter is the Southern Residents are an integral part of the nature of this planet and humans have put them and the planet's ecosystems in jeopardy. EVERYONE wants the Southern Resident Orca to be ensured a thriving future. And everyone wants healthy ecosystems.

Please make sure to provide ample allocations of the Southern Resident's salmon for them. We don't need it to survive. Not on our plates or in our bank accounts.

I strongly question whether it's safe to continue with commercial and sport fishing. Aside from what yourselves and others may think of as realistic possibilities or desired possibilities, the time may be soon coming to eliminate it altogether and extend an invitation and incentives to Tribes to do the same. I understand the strange rule of thumb that our industry of fish 'take' is one of the things preventing us from annihilating the fish in other ways, however it's probably time we learn how to protect what we love, simply because we love it, not because we eat it or make money from it. If we don't think of the future, we are disregarding our children and all that provides a home for us to exist.

We know the number one thing the Southern Residents need immediately is the salmon they eat. It would be egregious on our part to allow them to continue starving and go extinct. Please make sure they receive an ample allocation of their salmon.

Thank you,  
Heather Nicholson

Friday Harbor, WA

**From:** Aimee Aguilar <aimeem.aguilar@gmail.com>  
**Sent:** Friday, April 05, 2019 7:06 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation Agreements

---

Hello,

I am emailing to request that orcas are given a seat at the table and are considered during allocation and management decisions.

**From:** Erin Casellas <erin.casellas@gmail.com>  
**Sent:** Monday, April 08, 2019 7:11 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation for the southern resident killer whales

---

Hello,

My name is Erin Casellas. Please let the southern resident killer whales be considered when allocation and management decision are made. They depend on salmon fisheries as their food resource, whereas we, as a society, have the means to get food elsewhere and are not dependent on one fragile, already depleted food source. Humans have already pushed these whales to the brink of extinction, and it is our responsibility to repair what our actions have caused. We must begin reversing the adverse effects that our development has had on the ecosystems which have existed on our planet far longer than we have. It has now become our responsibility, and preserving these salmon fisheries is one of the first steps we must take. Please help make a difference.

Sincerely,  
Erin Casellas

**From:** Gloria Pancrazi <gloria@coextinctionfilm.com>  
**Sent:** Monday, April 08, 2019 6:49 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation for the southern resident orcas

---

Hi there,

My name is Gloria. Please let the Southern Resident orcas be given a seat at the table and be taken into consideration when allocations and management decisions are made. They need salmon, we don't. We can't watch them die off one by one because of our lack of action to fix what we've broken. Please help make a difference.

Many thanks,  
Gloria Pancrazi

**From:** tiffainethomas.auriol@laposte.net  
**Sent:** Wednesday, April 10, 2019 12:30 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation for the southern resident orcas

---

Dear All,

My name is Tiffaine. Please let the Southern Resident orcas be given a seat at the table and be taken into consideration when allocations and management decisions are made.

They need salmon, we don't. We can't watch them die off one by one because of our lack of action to fix what we have broken.

Please help make a difference.

Thank you very much!

Best Regards,

Tiffaine Auriol

**From:** Diane Chantler <di\_plymouth@icloud.com>  
**Sent:** Friday, April 05, 2019 2:53 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation of fishing quotas

---

Please consider the Southern Resident Killer Whales in your allocations- they are in desperate need of salmon as this is their only source of food.

I have been following their plight for some time and have watched the traumatic loss of members of these close knit families through starvation, due to the catastrophic drop in the salmon population and competition for this vital food source.

I am writing from the UK, one of many overseas followers who are desperate to see them thrive, not die from starvation.

Thank you for your consideration.

Diane Chantler  
Plymouth, UK.

**From:** BONNIE GRETZ <bgwhaluv@comcast.net>  
**Sent:** Friday, April 05, 2019 4:57 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocation of salmon

---

I respectfully request that you the Southern Resident Killer Whales be given "a seat at the table" and that a decent portion of the estimated harvest be allotted to them. While humans have many choices of food, they do not. It is our responsibility, as guardians of the Salish Sea, to restore the habitat so they have a chance to survive and thrive.

Thank you so much for your consideration.

Bonnie Gretz

Coupeville, WA

**From:** Romina Y <romina.yamashiro84@gmail.com>  
**Sent:** Tuesday, April 09, 2019 10:08 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Allocations and management

---

To whom it may concern,

I hereby respectfully ask you that the Southern Resident orcas be "given a seat at the table" and taken into consideration when allocations and management decisions are made.

There is only 74 of these type of orcas left in the wild and their food is 95% made out of Salmon. They are starving into extinction.

Thank you for your consideration.

Sincerely,  
Romina Yamashiro

**From:** Starry Medicine <starrymedicine@gmail.com>  
**Sent:** Monday, April 15, 2019 4:30 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Allocations for the SRKW

---

To whom it may concern,

Please be a powerful voice for our Southern Resident Killer Whales and include their Chinook needs in your allocations. They are literally starving to death and they must have abundant Chinook for their survival. We do not need fish for our survival and it is time we learn to share with the life around us. Please, I wholeheartedly implore you to include them in our allocations. Your efforts on their behalf will mean so much to them and to all those who love them.

Thank you so much for your time and consideration.

Warmly,  
Bonnie Sharkey

**From:** Andrew Derksema <sjifishing@gmail.com>  
**Sent:** Sunday, April 14, 2019 6:33 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Area 7

---

I'm writing this email as a concerned charter operator of the San Juan Islands Area 7. Removing the entire month August for fishing will do nothing to improve the stillaguamish run of chinook salmon. The river health should be addressed before taking away opportunity. I encourage you to look at the cost benefit of shutting an area completely down over a river that could arguably be considered already extinct. If the decision is because of the whales, I encourage you to look at the recent data and check to see how often the SRKWs have actually been in area 7 during August over the last three years. The loss of August will economically impact a great deal of businesses from charters, boat sales, tackle shops to even hotels and restaurants in the islands. Some of these businesses barely get by as is with a continually reduced season. And what about the lost funds from reduced license sales? It is also an unfair burden to put on one area when areas west of seven have no proposed reductions. The area 7 salmon not only travel through strait of Georgia but straight of Juan de fuca as well. Would it not be more prudent to spread the pain through other areas?? Reduce smaller chunks of opportunity over a larger geographic area? OR reduce use similar to crab where the area is shut down two days a week instead of one entire month? It seems like management could be more creative and less economically painful. I encourage you to reconsider the area [7 August](#) closure. Sincerely, Andy Derksema

Sent from my iPhone

Sent from my iPhone

**From:** [Hal Beecher](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Area 13 minimum length for Chinook salmon harvest in late summer and early fall  
**Date:** Friday, March 22, 2019 9:56:59 AM

---

I support the proposed reduction in minimum length for sport harvest of hatchery Chinook salmon in Area 13 (south Puget Sound) during late summer and early fall months. I understand that there is currently a large surplus at the hatchery that is then sold for pet food. Reduction in minimum length to 18" would allow increased recreational harvest in south Puget Sound, probably increasing the value of that production without interfering with orca feeding as orcas rarely feed in south Puget Sound in late summer.

Hal Beecher

**From:** debra4stuff@gmail.com  
**Sent:** Tuesday, April 09, 2019 12:52 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** chinook salmon allotment for SRKWs

---

Please ensure that a sufficient allotment of chinook salmon is provided for the critically endangered Southern Resident Orcas. They require over 300 lbs of chinook per day, and do not have other options available to them, unlike humans who can fish for other species.

Orca scientists such as Ken Balcomb say that getting the Southern Resident Orca a lot more salmon this year is crucial to their reproductive success and ultimate survival.

Sincerely yours,  
Debra Ellers  
Port Townsend, WA

Sent from [Mail](#) for Windows 10

**From:** Garrett Moody <diehardfisherman215@gmail.com>  
**Sent:** Friday, March 29, 2019 5:50 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Coastal freshwater

---

Hello, I would like to comment on Grays harbor fishery options. I'm a life long angler of grays harbor and its tributaries. I would like to see option C seasons. The December late coho fishery is very important to many anglers In the area, as well as native coho retention (where available), in the mainstem chehalis.

Thanks  
Garrett Moody

Sent from my iPhone

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Wednesday, March 27, 2019 7:33 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Coastal freshwater

---

I'm in favor of Model C and I hope season makers can find a way to allow for Model C.

I would also support a 1 marked Chinook in the Humptulips as instead of a 2 fish bag. We have had a 1 Chinook limit for many years in the past and it's just fine. The guides book plenty of trips, many, many people come out to fish recreationally, and 1 Chinook is a realistic limit these days. Consider modifying Model C to reflect a 1 marked Chinook limit.

Side note, whether or not it has come up, I'm opposed to a 3 Coho limit in the harbor.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

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Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** [ARSC](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Coastal freshwater  
**Date:** Wednesday, March 27, 2019 7:33:39 PM

---

I'm in favor of Model C and I hope season makers can find a way to allow for Model C.

I would also support a 1 marked Chinook in the Humptulips as instead of a 2 fish bag. We have had a 1 Chinook limit for many years in the past and it's just fine. The guides book plenty of trips, many, many people come out to fish recreationally, and 1 Chinook is a realistic limit these days. Consider modifying Model C to reflect a 1 marked Chinook limit.

Side note, whether or not it has come up, I'm opposed to a 3 Coho limit in the harbor.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
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425-736-8920

-----  
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425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** pearsonfr@comcast.net  
**Sent:** Monday, March 25, 2019 10:26 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Columbia River and tributaries

---

The decision to continue the use of non-selective gear in the Columbia River is very disappointing. If this was a financial venue, it is tantamount to spending our capital (the ability to create value in the future) instead of living off the interest and growth of capital. No successful Wall Street investor would be so foolhardy.

The use of non-selective gear will result in unavoidable deadly bycatch.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

Home: 425.392.2571 (preferred)  
Cell: 425.922.9754

**From:** [Dave Riddle](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Columbia River and tributaries  
**Date:** Wednesday, March 20, 2019 7:33:52 PM

---

Hi...it seems almost impossible to imagine that there will be even a discussion about salmon or steelhead seasons for the Columbia and Snake rivers. Warmer water, increased fishing pressure, environmental challenges, and global warming are all impacting the runs. It's time for significant and radical changes.

I would like you to consider implementing a moratorium on all salmon and steelhead fishing in the Columbia and Snake river system for at least four years. Give the fish a break from the fishing pressure, hopefully some modulation on the environmental conditions, and an opportunity to regenerate the runs. If at the end of that four year period the runs seem to have stabilized then allow a fishery that limits sport anglers to no more than one fish per day until such time that the runs have stabilized.

If the Department does not take drastic action soon, the likelihood that our cherished salmon and steelhead will become one more item on a growing list of endangered or extinct species grows exponentially.

Thank you for the opportunity to provide my comments on this important topic.

Sincerely,

Dave Riddle  
Burbank, Wa.

**From:** [David Moskowitz](#)  
**To:** [Tucker Jones](#); [Tweit, William M \(DFW\)](#); [Lothrop, Ryan L \(DFW\)](#); [Sippel, Timothy J \(DFW\)](#); [John North](#); [Geoffrey Whisler](#); [Lefleur, Cindy \(DFW\)](#); [Warren, Ron R \(DFW\)](#); [Chris Kern](#)  
**Subject:** Comments on the 2019 Summer - Fall Fishery Recommendations  
**Date:** Thursday, May 16, 2019 10:10:45 AM  
**Attachments:** [CRC-NOF Summer-Fall Fishery Comments 2019 - TCA.pdf](#)

---

The Conservation Angler believes that 2019 Columbia River Fisheries need more stringent measures to protect low numbers of wild salmon and wild steelhead.

Our rationale is contained in the attached Memo.

Sincerely,

David Moskowitz

David A. Moskowitz  
Executive Director  
971-235-8953 (Direct)  
[www.theconservationangler.com](http://www.theconservationangler.com)



Conservation means fair and honest dealings with the future, usually at some cost to the immediate present. It is simply morality, with little to offset the glamour and quick material rewards of the North American deity, "Progress".  
Roderick Haig-Brown

**From:** Brittany Philbin <brittany.n.philbin@gmail.com>  
**Sent:** Tuesday, April 09, 2019 12:45 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Consider SRKW during North of Falcon

---

To whom it may concern:

I am writing to you regarding my great concern for our critically endangered Southern Resident Killer Whales (SRKWs) of the Salish Sea. As a resident of the State of Washington, I feel there is more we can do for the recovery of both the salmon population and the SRKWs. Although it appears the Orca Task Force, which was established in 2018, has been hard at work our beloved SRKWs will have to travel longer distances and forage in waters outside the Salish Sea unless we take immediate and drastic action.

These are my requests:

1. Please give the SRKWs a “seat at the table” during the North of Falcon allocation process when determining fishery allocations for Oregon and Washington ocean and freshwater commercial and sport fishing, specifically salmon and herring, as well as mandated allocation agreements between the states and treaty tribes.
2. Immediately place a moratorium on all salmon fishing (not including tribal rights) until the dams are breached and there are enough salmon to support the survival of the SRKWs. If we continue to harvest salmon at current rates the SRKWs will not have enough to sustain current population levels and eventually will disappear altogether.

We as humans have a duty to protect the environment we live in and to ensure that future generations can enjoy the same beauty and abundance as generations before us.

Thank you for your consideration.

Sincerely,  
The Philbin Family

**From:** Kelly Robbins <kellyrobbins89@gmail.com>  
**Sent:** Sunday, April 14, 2019 7:38 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Consider the Orcas

---

Hello,

I am writing on behalf of the southern resident orcas, who are starving due to lack of salmon cause by overfishing among other things. I ask that the Southern Residents be taken into consideration when allocations and management decisions are made.

Thank you,  
Kelly



## Memorandum

To: Columbia River Compact States  
Fr: The Conservation Angler  
Dt: May 15, 2019  
Re: 2019 Summer and Fall Fishery Conservation Measures

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The purpose of this Memorandum is to provide comments and recommendations for wild fish conservation measures for consideration in fishery regulation and implementation actions planned or taken during 2019.

### **I. Concerns with the Columbia River Compact and North of Falcon Methodologies**

The Conservation Angler believes that the data underlying the forecasting of salmon and steelhead returns to the Columbia River suffers from multiple flawed assumptions, unacceptable margin of error ranges, excessive application of professional judgement and statistically invalid observation and creel census effort used to implement modeling runs and to estimate harvest impacts and exploitation rates.

### **II. Specific Concerns During Authorized Fisheries**

1. There are no reports of interceptions of non-target species from the Select Area fisheries.
2. There is no consistent application of a statistically valid monitoring program for select area commercial fisheries, sport fisheries or mainstem drift net commercial fisheries which is essential to establish accurate and reliable mortality and encounter rate data.
3. Methods of estimating natural-origin spawning escapement are not consistently applied in rivers without counting stations.
4. There is no clear method of accounting for illegal harvest or catch and release mortality for the shore and boat sport fishery in the data that comprises the fishery summaries year-to-year.
5. Ocean and in-river harvest rates are too high on most salmon species to allow natural-origin escapement to result in the nutrient loading necessary to provide forage for emerging and rearing juvenile salmon. Any harvest rate over 20% fails to contribute the necessary nutrients for subsequent generational survival within natal rivers.<sup>1</sup>

### **III. Compact and North of Falcon Process Issues**

The public process for the Columbia River Compact continues to suffer from late notice of public hearings and even later delivery of factual data on the issues being discussed and decided.

There continues to be a lack of transparency with the data being used by agencies to make forecasts and conduct updates on the progress of salmon and steelhead runs to the Columbia and tributaries.

Because the US v. Oregon court case is over, TAC proceedings, data and models must become publicly available.

### **IV. Ocean, Marine and In-River Harvest Regimes:**

The region has institutionalized the Causes for Recovering and Restoring Columbia and Snake River Wild Salmon and Steelhead.

1. The Ocean and Lower Columbia River are non-selective, mix-stock fisheries that are preventing recovery of ESA-listed spring and fall chinook.

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<sup>1</sup> Knudsen, E. Eric, Eric W. Symmes and F. Joseph Margraf. 2003. Searching for a life history Approach to Salmon Escapement Management. In: Nutrients in Salmonid Ecosystems: Sustaining Production and Biodiversity. Editor, John Stockner. American Fisheries Society Symposium 34.



2. Monitoring for wild populations of ESA-listed and other wild unlisted salmon (mid-Columbia Spring, Summer and Fall Chinook as well as Upper Columbia sockeye salmon) is currently accomplished by management of aggregate populations that are counted as they cross dams.
3. Fishery Managers account for harvest with creel surveys and account for wild fish escapement with dam passage counts, not spawning ground surveys.
4. While there may be spawning escapement goals or targets – also based on aggregate salmon and steelhead passage for both wild and hatchery fish of a particular species – there are no River Specific Management (RSM) criteria for spawning populations of natural-origin species. Furthermore, there are no egg-deposition criteria by river and species.
5. Columbia River and ocean harvest rates above 20% do not account for the importance of the spawned carcasses that are essential for the ensuing generation of juvenile salmon and steelhead emerging from natal river gravels.<sup>2</sup>

## **V. Concerns About 2019 Lower Columbia River Spring and Summer Chinook**

While the closure of spring chinook sport fishing in the lower Columbia River was the right thing to do, it is shocking to learn that wild spring chinook numbers in the Cowlitz and Lewis have dropped to under triple digits. How and why did this happen?

Not enough is known about status of wild populations, particularly below Bonneville Dam. Where is data on spring chinook wild escapement by natal river? How low did the wild spring chinook runs on Cowlitz and Lewis Rivers get before Federal and State managers had to take such drastic with little if any warning?

Hatchery brood escapement and sport fishing creel surveys are no surrogate to wild escapement, abundance or productivity estimates that should be established and maintained based on spawning counts or carcass surveys.

The Joint Staff Reports on 2019 forecast numbers for Upriver Columbia Spring Chinook do not contain data from the Deschutes or John Day. While these runs are part of the Mid-Columbia Chinook ESU, the failure to maintain or publish the run data is dooming these rivers (particularly the Deschutes) to the same fate as the Cowlitz or Lewis Rivers.

As is clear from recent joint staff notices, the only management concern expressed is whether hatcheries will make their egg take requirements. There is no reporting on whether rivers will make their egg deposition requirements. Why? Because there are not egg deposition or spawner escapement requirements for rivers. Thus, it is little wonder why the wild salmon and steelhead runs are slipping into extinction. The fishery agencies do not have love for wild salmon.

## **VI. Concerns about Spring – Summer chinook data**

What is the formula to determine the conversion of springers entering Columbia River mouth and then making the run update based on Bonneville passage? How do the states calculate for predation, harvest, tributary turn-off, illegal harvest and wild escapement?

The management dates delineating spring chinook and summer chinook are arbitrary for the spring and summer chinook. Furthermore, this date is based on passage at Bonneville Dam, and does not account for the on-going entry of summer chinook into the lower Columbia and their rate of harvest in Select Areas and shore-based sport fisheries.

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<sup>2</sup> Knudsen, E. Eric, Eric W. Symmes, and F. Joseph Margraf. 2003. Searching for a life history approach to salmon escapement management. Pages 261-276 in J. G. Stockner, editor. Nutrients in salmonid ecosystems: sustaining production and biodiversity. American Fisheries Society, Symposium 34, Bethesda, Maryland.



Another major management problem for managing wild summer chinook to the Snake and Upper Columbia is that the mark rate is insufficient and leads to problems estimating wild abundance and harvest rate.

Is any sampling at AFF able to refine the ability to determine Spring chinook from Summer chinook? What tools do the state's use in determining the impacts of SAFE encounters and harvest, as well as the sport and tribal impacts in terms of wild Summer Chinook escapement? What is the confidence interval on estimating wild summer chinook spawning escapement abundance on Upper Columbia and tributaries?

## **VII. Concerns About Summer Steelhead and Fall Chinook**

The forecasts for Columbia River summer steelhead and fall chinook are both quite low – with 950 wild B-run steelhead predicted to return – which is 14% lower than the 2017 pre-season forecast of 1,100 wild B-runs.

What will be done with LCR fisheries (SAFE, non-treaty mainstem commercial, sport fisheries and below-Bonneville tribal fisheries to:

- a. Minimize impacts on ESA-listed winter and early summer wild steelhead?
- b. Minimize impacts on ESA listed wild UCR and MCR summer steelhead
- c. Eliminate impacts on ESA-listed wild SR B-run summer steelhead

## **VIII. Wild Fish Sanctuaries and Required Specific Angling Practices Can Reduce Lethal Encounters**

Low wild returns and warm Columbia River water require immediate conservation action.

All cool water refugia, no matter the size or volume of water, will attract migrating wild salmon and steelhead if the Columbia River is warmer. It is a natural life-history trait of salmon, trout and steelhead. Perhaps the most important cold-water refugia is at the Deschutes-Columbia confluence, where the Deschutes will start cooling down in August, just as Columbia heats up and as the up-river salmon and steelhead migration peaks. The mouth of the Deschutes will be an incredibly important sanctuary for wild steelhead and salmon when the Columbia River is warmer. Oregon should invoke an no fishing sanctuary very similar to what was established in 2018.

All cold water refugia (CWR) will be very important to the health and productivity of ESA-listed wild salmon and particularly, wild steelhead which are known to remain in the cool-water plumes for weeks and months.

Fishing, even catch and release fishing, has an inordinate impact on wild steelhead in these locations because they are caught and released multiple times.

Fishing in sanctuary areas during warm water episodes when wild fish run sizes are low should not be permitted.

We should learn how the 2018-2019 Deschutes River Wild Steelhead return turned out by end of June. The recent wild runs have been low and present a strong case for conservation measures aimed at reducing lethal encounters. Considering the amount of angling that takes place, it is not inconceivable that Deschutes River steelheaders could encounter every single wild fish – and some- more than once.

All of us have a responsibility to minimize our impacts on these wild fish:

1. Use barbless hooks which should be mandatory in any fishery where certain species must be released
2. Use appropriate gear to allow safe and efficient landing of your steelhead
3. Keep your fish in the water when landing and unhooking it.
4. Use care when handling, photographing and releasing your catch
5. Anglers should have to rack their rods once they have taken their daily bag limit.
6. Refrain from angling when the Deschutes is over 66f.
7. Handle juvenile trout carefully when trout fishing (they may be steelhead smolts).



## **Comments in Response to Oregon and Washington Fishing Regulations in the Columbia River**

The Conservation Angler appreciates the efforts that joint state staff have given to provide angling opportunity during the dismal forecasts of the coming 2019 Summer and Fall Fisheries in the Columbia and Snake Rivers.

However, given the poor run-sizes, the opportunity to fish and retain hatchery fish, particularly in the early steelhead fishing season, rides on the backs of wild steelhead.

### **Problems with the Early Summer Fishery: June 16 thru July 31**

For the early-summer season (June 16 thru July 31) from the Astoria Bridge to just downstream of the Snake River confluence, the only fish that can be retained by anglers in the mainstem Columbia are hatchery-origin steelhead, and the daily angler bag-limit is two hatchery steelhead through June 30, and one hatchery steelhead during July. Wild steelhead and all chinook and sockeye salmon must be released unharmed.

1. The Columbia River summer steelhead run has more wild fish in the early part of the run than it does after August 1.

Bonneville Dam Passage Data: June 1 thru July 31

2018: 14,265 wild steelhead pass BON during this period  
31,220 total steelhead pass BON during this period  
**Wild Steelhead comprise 46% of the steelhead present**

2017: 10,261 wild steelhead pass BON during this period  
19,559 total steelhead pass BON during this period  
**Wild Steelhead comprise 53% of the steelhead present**

2016: 22,026 wild steelhead pass BON during this period  
56,868 total steelhead pass BON during this period  
**Wild Steelhead comprise 40% of the steelhead present**

**Therefore, the focus on steelhead angling and retention of two hatchery fish will place undue burden on the early portion of the 2019 summer steelhead. Anglers will sort through many wild fish to catch their two-hatchery fish bag limit. The high percentage of wild steelhead in the early run puts those fish at risk of high encounter rates.**

2. To make matters worse, anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Anglers who take their limit should be required to rack their rods.
3. Anglers may use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
4. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.

### **Problems with the Summer – Fall Fishery: August 1 thru December 31**

The 2019 Forecast predicts a very small run of upriver summer steelhead.

#### **Upriver Summer Steelhead: July 1 – Oct 31: 2019 Forecast is 38% of the 10-Year Average**

These steelhead are bound for the Klickitat, Deschutes, John Day, Umatilla, and other rivers in the Upper Columbia and Snake Basins such as the Grand Ronde, Clearwater, Salmon and Imnaha.

2019 Forecast for Upriver Summer Steelhead:	118,200 total A and B-run adults
TYA of Upriver A & B-run summer steelhead:	315,202 A & B-run steelhead



## 2019 Upriver Summer Steelhead Predicted to Pass Bonneville Dam

2019 Upriver Summer Steelhead	2018 Forecast	2018 Return	2019 Forecast	Run Timing
<b>Total Upriver Steelhead</b>	190,350	100,483	126,950	to BON Dam
Early summer-run (H+W)	7,950	6,483	8,750	April - June
<i>(early summer wild)</i>	<b>3,000</b>	<b>2,595</b>	<b>3,200</b>	
A-Run (total H + W)	158,000	69,338	110,200	July - Oct
<i>(A-run wild)</i>	<b>44,800</b>	<b>21,725</b>	<b>33,900</b>	
B-Run (Total H + W)	24,400	24,662	8,000	July -Oct
<i>(B-run wild)</i>	<b>3,400</b>	<b>2,382</b>	<b>950</b>	July-June
<b>Total Wild Steelhead Past BON</b>	<b>51,200</b>	<b>26,699</b>	<b>38,050</b>	April - Oct

1. Anglers in a boat may continue fishing even if they have taken their limit as long as at least one angler in the party has not taken their limit. The “party-boat” rule encourages high encounter rates of wild fish. Therefore, anglers who take their limit should be required to rack their rods.
2. Anglers use bait to fish for salmon and steelhead which can increase hooking injuries compared to lures.
3. A retention closure is not a closure to fishing, but a prohibition to retaining fish that are landed.
4. Jack salmon (a smaller, younger but sexually mature salmon of either chinook or Coho species) limits are 5 fish per angler per day. These limits should be reduced because of the important role they play in spawning success.
5. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The Dalles Dam and John Day Dam should be extended to at least mid-October due to the presence of wild B-run steelhead in that region.
6. The “Retention Closure” for steelhead (requiring release of all wild and hatchery steelhead between The John Day Dam and McNary Dam should be extended to at least mid-November due to the presence of wild B-run steelhead in that region.

### Cold Water Sanctuaries Are Critical for Wild and Hatchery Fish migrating up the Columbia River

The US Environmental Protection Agency (EPA) has identified dozens of cold water refugia along the Columbia. We know that 13 of these areas are extremely important to migrating salmon and steelhead.

When the Columbia River water temperatures reach 66f, the importance of these areas increases, and when the mainstem water temperatures reach 68f, they become life-saving river reaches for salmon and steelhead. At 68.5f, they become refuges for salmon and steelhead in which fish linger for weeks and months.

Commercial fishing is already prohibited in river-mouth sanctuaries.

It is time for Oregon and Washington to create sanctuaries for migrating salmon and steelhead in these 13 CWR by prohibiting all angling in specific geographic areas created by the cold-water inputs for a specific period. The time period could be tailored by historic temperature data but could also be established based on blocks determined strictly by dates of known salmon and steelhead use – but at least three months (July thru September).

**From:** Tracie Sugo <koholakaiblog@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Fishery Allocations and the Southern Resident Orca

---

With the steady decline of the Southern Resident orca population due to diminishing salmon, please include the Southern Residents in fishery allocation and management decisions are made. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues!

Thank you,  
Tracie Sugo

**From:** Lisa Mintz Kavas <lmkavas@yahoo.com>  
**Sent:** Friday, April 05, 2019 4:52 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Give Orcas a seat at the Salmon Table!

---

Now is such a critical time for the Southern Resident Orca...if we don't start addressing the issues belaboring them they are doomed. It is time for those responsible and in a position to do so allocate a significant and appropriate portion of the annual salmon fisheries yield for these Orca. Getting them more food is the easiest of the items to help them. The spotlight is on the PNW to effect local action to this end, and this will also reflect locally in terms of tourist dollars into our region. Additionally, in alignment with the view of many of the indigenous tribes and Orca advocates, it is the right thing to do after human intervention first terrorized this population in the 70's, and how human over-fishing, dam building, and water/sound pollution had adversely affected this population. Personally I am very willing to eat less salmon myself (my favorite fish) in order to make sure there are enough for the Orca to thrive.

Thank you,

Lisa M. Mintz Kavas  
Lynnwood, WA

**From:** Bianca Tarleton <bianca.tarleton@gmail.com>  
**Sent:** Friday, April 05, 2019 2:16 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Give orcas a seat at the table

---

The SRKW population is dying; their reproducing females have one a few years left until menopause. Orcas are one of the few mammals that experience menopause; which strengthens the matrilineal line and allows the elder female to be a leader and caretaker for her younger family members.

Without salmon, orcas will slowly die of starvation. Without immediate action, any pregnancies that might occur in the next few years will continue to be unviable, such as the tortuous experience of Tahlequah and her calf last summer.

We can't bring them back after they are gone. They are a unique *tribe*, that cannot be replaced. The Salish Sea and PNW are icons in the world because of these beautiful creatures.

Bianca Tarleton

**From:** deb8209 <deb8209@cox.net>  
**Sent:** Tuesday, April 09, 2019 2:48 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Give Orcas a seat

---

Please give the Orcas a seat at the table?  
They NEED the salmon!  
We don't, we can wait for the numbers to return!

Thank you

Compassion is not just an emotion:  
It's a way of life...

**From:** Jill Bliss <jill@jillbliss.com>  
**Sent:** Friday, April 05, 2019 8:55 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Give the Orcas a seat!

---

Hello,

Please take the Southern Resident orcas into consideration when allocations and management decisions are made in the North of Falcon meetings.

Thank you!  
Jill

--

-:- -:- -:- -:- -:- -:- -:- -:- -:- -:-

Salish Sea Artist & Naturalist

-:- -:- -:- -:- -:- -:- -:- -:- -:- -:-

[jillbliss.com](http://jillbliss.com) -:- [instagram.com/jill\\_bliss](https://www.instagram.com/jill_bliss) -:- [twitter.com/jill\\_bliss](https://twitter.com/jill_bliss) -:- [facebook.com/Jill-Bliss-Artwork](https://www.facebook.com/Jill-Bliss-Artwork)

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If you appreciate or use my artwork found online, donations can be made to [venmo.com/jillbliss001](https://www.venmo.com/jillbliss001) or [paypal.me/jillbliss001](https://www.paypal.me/jillbliss001)

**From:** charlottelcumming <charlottelcumming@gmail.com>  
**Sent:** Thursday, April 04, 2019 5:28 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Help the Southern Resident Killer Whaled

---

Please be sure the Southern Resident orcas are given a seat at the table and taken into consideration when allocations and management decisions are made.

Sincerely,  
Charlotte Cumming

Sent via the Samsung Galaxy S8, an AT&T 5G Evolution capable smartphone

**From:** Stephanie Snopek <stephaniesnopek@gmail.com>  
**Sent:** Monday, April 08, 2019 12:38 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Include orcas in your salmon allocation discussion

---

Hello there,

I am a concerned citizen of the pacific northwest and request that you give the southern resident killer whales (orcas) a seat at the table in your discussion and decision-making process of establishing salmon allocations. Their survival depends on a thriving and accessible salmon population.

Thanks,  
Stephanie

**From:** Teresa Frazer Gravlin <ctr91625@centurytel.net>  
**Sent:** Tuesday, April 09, 2019 8:42 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Inquiry

---

I am writing to ask that you PLEASE give the SRKW a chance at survival and give them the ONLY seat at the Chinook Salmon table this year and for as many years as it takes to recover this particular pod of orca. We, the human race, have done these orca serious harm by stealing the only prey that matters to them --- the Chinook salmon. The times have changed, the world needs to change, and wouldn't it be wonderful if YOU were the first to show these whales some compassion? We watched J35 and her horrific tour of grief all the while watching beautiful little J50 - Scarlet - lose her battle to starvation. There is not one single reason in this world today why we should have marine life that is starving, other than the fact that the fault lies solely with humans. We contaminate their waters, we deafen and injure them with ship strikes and noise, and now we are virtually ripping food from their mouths - food that could help them survive long enough to maybe recover some of their numbers. We cannot afford to lose another SRKW. Please, please, please, put them at the table before humans.

Sincerely,  
Teresa K Gravlin  
1421 S. Van Dyke Rd.  
Marlette MI 48453

--  
Teresa

**From:** Ashlie McGuire <amcsuperstar@yahoo.com>  
**Sent:** Monday, April 08, 2019 10:30 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Let Orcas have a say

---

Aloha

I am Ashlie McGuire and I live in Hawaii.

Here our government may not be the best at protecting our wildlife either, but most civilian people here understand the delicate nature and balance of the ecosystem-especially the relationship between fresh water systems and the ocean.

I beg you to give Orcas a seat at the table, let their needs be met and heard. Without a steady supply of salmon to feed themselves and their young, you will be losing a key part of your ecosystem there and the repurchasing are of yet not fully known. Please take the time to protect these creatures. Find it within your hearts to ensure salmon be free for the Orcas for all time-at the very least the time we are here.

Mahalo.

Sent from my iPhone

**From:** [Don Freeman](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** MA 13 chinook jack Retention  
**Date:** Friday, March 22, 2019 5:41:06 PM

---

Fishing opportunities in Marine Area 13 are limited and there is an opportunity to allow some additional harvest of chinook jacks that are not needed for hatchery production. It makes sense to allow fishers to keep returning adult chinook jacks (18" to 22") that would otherwise return to the hatchery and be surplus, i.e., sold for dog food. My license fees in part go toward the production of hatchery fish, and recreational fishers should get the benefit of these fish, and not used for pet food.

Don Freeman  
Tumwater

**From:** [Alan Hortin](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Date:** Wednesday, March 20, 2019 5:36:21 PM

---

Wee are supporting the idea of increasing the take of jack salmon from 18" or larger, by sports fishermen,

during the months of July, August, and September starting this year.

Alan Hortin

Olympia, Washington

Sent from [Mail](#) for Windows 10

**From:** [Scott Gibson](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Marine area 13 regulation change proposal  
**Date:** Monday, March 25, 2019 12:42:35 PM

---

## Proposal:

I am writing to submit a proposed regulation change for Area 13.

We have observed that the average size of mature Chinook returning to the south Sound has decreased in recent years and it is not uncommon for us to catch 18" to 21" adipose-clipped maturing Chinook in the late summer/early fall. These are not blackmouth but are maturing fish destined for the Deschutes, Nisqually or Minter Creek hatcheries. The current regulations do not allow us to keep these fish.

We would like to propose a regulation change for Marine Area 13 for sport fishermen to retain Chinook >18" during the period July - September annually. This proposal has the support of the Olympia chapter of Puget Sound Anglers and other sport fishermen that we have reached out to.

Get [Outlook for Android](#)

**From:** [Net zero](#)  
**To:** [Lothrop, Ryan L \(DFW\)](#); [Tweit, William M \(DFW\)](#)  
**Subject:** NOF  
**Date:** Tuesday, March 12, 2019 9:50:46 AM

---

Ryan, Bill, I will be unable to attend the meeting on Mar 18 as I will be out of the State. I will try to find a substitute, but not sure if that will happen. I would like to provide a little input.

For summer chinook, it appears that due to the low run size that opportunity below Bonneville will be very limited or non existent. Due to continued under escapement to the spawning beds and the presence of too many hatchery fish on the spawning beds, we recommend that all fisheries above and below Bonneville be mark selective. The Group will probably discuss bag limits, and we recommend the limit that will provide maximum opportunity while still achieving the harvest quota.

For fall chinook, we prefer options that allow opportunity throughout the Columbia River.

With the large coho forecast, there will be lots of discussion regarding Buoy 10, the ocean, and the river. We do not have input for this item.

For summer steelhead, we recommend aggressively pursuing options that maximize opportunity in June, July, August and September since other fishing opportunities will be severely limited. Both B-Runs and summer chinook catch will be concerns. If a one fish limit extends opportunity, it should be considered as well as a schedule that reduces effort(days per week).

Have a great meeting, and the subject looks challenging.

Regards, Harry Barber

Sent from my iPhone

**From:** CerviPedic - INFO <info@cervipedic.com>  
**Sent:** Tuesday, April 09, 2019 10:09 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North Of Falcon - Allocation meeting

---

To whom it may concern,

I hereby respectfully ask you that the Southern Resident orcas be "given a seat at the table" and taken into consideration when allocations and management decisions are made.

There is only 74 of these type of orcas left in the wild and their food is 95% made out of Salmon. They are starving into extinction.

Thank you for your consideration.

Sincerely,  
Ed Tansingco

**From:** Jil Wells <jillijowells.jw@gmail.com>  
**Sent:** Monday, April 08, 2019 7:17 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon

---

Hello,

As a Washington State resident I request that the Southern Resident Orcas be given a seat at the table during the North of Falcon process.

Thank you,

Jillian Wells

**From:** Nadira Rivera <nadiramandy@yahoo.com>  
**Sent:** Tuesday, April 09, 2019 7:02 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon addressing Orcas

---

Hello,

I am requesting that the Orcas are given a seat at the table and taken into consideration when allocations and management decisions are made pertaining to ocean fisheries. It is clear that the depletion in the amount of reproduction of salmon is affecting us all. If we band together in figuring out how to cohesively live with nature, it will be abundant for all. Animals do not take more than what they need. I suggest we do the same.

The depletion of salmon and herring survival has now transitioned over to starvation and death to the larger species such as the Orcas. These are clear indications we, humans, are next. We still have time to make a difference before extinction of several species occur. Let's heed the signs that are clear for us at this time to change the way we have been doing things to a new and improved way of living.

Thank you for taking consideration for the Orcas in upcoming decisions. By helping them, it is creating a ripple effect of saving the lives of many. Including ourselves.

I also ask that we push for the lower four dams of the Snake River be breached to assist in reproduction and livelihood of the salmon.

In Gratitude,

Mandy Rivera  
Nadiramandy@yahoo.com  
434-466-9747

**From:** Romina Yamashiro <ryamashiro@cervipedic.com>  
**Sent:** Tuesday, April 09, 2019 10:09 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon allocation

---

To whom it may concern,

I hereby respectfully ask you that the Southern Resident orcas be "given a seat at the table" and taken into consideration when allocations and management decisions are made.

There is only 74 of these type of orcas left in the wild and their food is 95% made out of Salmon. They are starving into extinction.

Thank you for your consideration.

**Sincerely,**  
**Romina Yamashiro**  
*CerviPedic Neck-Relief*  
[www.Cervipedic.com](http://www.Cervipedic.com)  
[www.facebook.com/cervipedic](https://www.facebook.com/cervipedic)  
[www.instagram.com/cervipedic](https://www.instagram.com/cervipedic)  
[www.youtube.com/cervipedic](https://www.youtube.com/cervipedic)  
*Toll-Free: 888-788-1053*  
*Cell: 714-717-5962*

**From:** kelsie bowden <kelsiebowden@gmail.com>  
**Sent:** Monday, April 08, 2019 10:29 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon Process

---

Hello,

I am writing this email to voice my concerns regarding the Southern Resident Orcas.

As you are aware these Orcas are struggling to survive due to many man made issues, one of them being the deletion of food sources including Salmon.

I am urging you to please consider the well being and survive of these iconic creatures when discussing the recreational and commercial fisheries at this years North of Falcon process.

Please give the Orcas a seat at the table and be part of the solution in helping these magnificent animals survive.

Thanks you,

Kelsie Bowden

**From:** Julierabeau <julierabeau@aol.com>  
**Sent:** Thursday, April 11, 2019 10:54 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon process

---

Please consider the Southern Resident Killer Whales when allocating and management decisions are made in the 2019 fish quota. They must be included in fish quotas. Their salmon resource has been severely depleted and are at serious threat of distinction.

Respectfully

Julie Rabeau

5415 Crescent Beach Rd NW

Vaughn, Wa 98394

Sent from my iPhone

**From:** Sarah Graham <sarah.graham1327@gmail.com>  
**Sent:** Monday, April 08, 2019 9:46 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon

---

I am respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made. This is beyond important for them to be included.

Thank you.

Sent from Sarah G.

**From:** Chloe Read <chloe\_read@icloud.com>  
**Sent:** Monday, April 08, 2019 1:03 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon Seat Allocation

---

To whom it may concern,

Each year at North of Falcon, the wild salmon population is discussed amongst several interested parties to ensure the harmonious conduction of fishing between the tribal and commercial fishing of wild salmon, including but not limited to the chinook salmon species.

Given the current climate threats as well as pollution threats to our oceans, I simply ask that at this year's North of Falcon meeting the Southern Resident orcas be given a seat at the table and included in talks to ensure they have enough allocation to see their survival and eventual growth.

Each year their numbers decline and each year the threat to their future grows larger. You have the chance to change that. By giving the southern resident orcas, you hold the key to seeing these remarkable creatures thrive once again, whilst still meeting the needs of those also at the meeting.

Your actions at this year's North of Falcon could change the manmade fate of these incredible mammals; enable the Southern Resident orcas to have a voice.

Kindest Regards,  
Chloe Read

**From:** Elisabet Riya <elisabet.riya1414@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:16 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** North of Falcon

---

I respectfully ask that the Southern Resident orcas be given 'a seat at the table' and be given consideration when allocation and decision management is made. Don't let them go hungry, please.

Thank you and God bless.

**From:** drsurbeck@surbeckortho.com  
**Sent:** Friday, March 29, 2019 10:33 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas (Area 3 La Push Late Season Fishery)

---

To whom it may concern:

As a life long Washington resident and angler, of my favorite fishing opportunities, the Area 3 (La Push) Late Season fishery is at the very top. My family and I have enjoyed this fishery over the last 15 years, but it has been understandably closed for the last three years on account of the poor return of Coho to the Bogachiel.

In light of the improvement in the expected return of adult Coho, I would hope that regardless of the season option selected, that you will consider re-opening this fishery. Tax payer funding of the salmon hatcheries on Quillayute has provided salmon for harvest that we have not been able to access in this target specific terminal fishery. I have never once seen an Orca whale at the mouth of the Quillayute while participating in this fishery, and would think that this is exactly the type of fishery that should be highlighted.

Please strongly consider re-opening the Area 3 (La Push) Late Season fishery.

Respectfully,

Burleigh Surbeck

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Monday, April 08, 2019 9:37 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

Please consider that the SRKW need the chinook too when deciding allocations. Please don't let humans take all the salmon and leave none for the Southern Residents! They are dying from starvation, and the humans are not. They need them more! Thank you.

Cathleen Burns  
Friday Harbor, WA 98250

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Tuesday, April 09, 2019 3:44 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

The SRKW need approximately 550,000 chinook salmon/yr. to survive, so please stop all commercial and recreational fishing for chinook due to the Endangered Species Act, This Act requires we do all we can to prevent their extinction. Humans have many other options for food, the Southern Residents don't. This of course, excludes tribes, who are entitled to their salmon. The few salmon should only be taken by tribes and the SRKW.

Cathleen Burns  
98250

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Wednesday, March 27, 2019 7:34 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

I support option 1, starting as early as possible keeping conservation in mind.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

-----  
Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Wayne Clifford <wc.fishtales@gmail.com>  
**Sent:** Tuesday, April 16, 2019 9:41 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Ocean areas

---

I am disappointed to see no pink salmon retention included in the current season. That means that we will be hooking and releasing many pinks which only injures the fish and flies against our ethics as sportsmen. Unless I am mistaken, or hopefully there is an inadvertent omission from the season.

Wayne

Sent from my iPhone

**From:** [pearsonfr@comcast.net](mailto:pearsonfr@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Ocean areas  
**Date:** Monday, March 25, 2019 10:25:11 AM

---

The decision to continue the use of non-selective gear is very disappointing. If this was a financial venue, it is tantamount to spending our capital (the ability to create value in the future) instead of living off the interest and growth of capital. No successful Wall Street investor would be so foolhardy.

The use of non-selective gear will result in unavoidable deadly bycatch.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

Home: 425.392.2571 (preferred)

Cell: 425.922.9754

**From:** [ARSC](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Ocean areas  
**Date:** Wednesday, March 27, 2019 7:34:28 PM

---

I support option 1, starting as early as possible keeping conservation in mind.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

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Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Janet marx <janetmarx\_76@msn.com>  
**Sent:** Wednesday, April 10, 2019 11:52 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orca allocations

---

Do not continue to ignore the plight of our Southern Resident Orcas. Please allot them allocations before it is too late.

Thank You,  
Janet Marx  
112 Lockerbie PI  
Port Angeles, WA 98362



Virus-free. [www.avast.com](http://www.avast.com)

**From:** tjkkmargo@juno.com  
**Sent:** Friday, April 05, 2019 1:29 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas

---

I am asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

JoAnn Margo  
Duluth, MN

**From:** Becky <beckypat1843@gmail.com>  
**Sent:** Friday, April 05, 2019 2:08 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas Count Too

---

To Whom It May Concern,

I have always been a strong advocate of commercial and sport fishing, however, I strongly believe that times are changing in our precious waters and we need to look past the needs of humans and respect our mammals as well. Please allow the needs of our resident orcas to have a seat at the table while the allotments are being discussed. Their needs are are priority and I hope you will consider this during your discussions.

Respectfully,  
Becky Patterson  
6110 Parkside Drive  
Anacortes, WA 98221

**From:** Grace Wright <gjwright@sonic.net>  
**Sent:** Friday, April 05, 2019 7:05 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas deserve seat at the table

---

Please include the orcas when you allocate the chinook salmon. They deserve a seat at the table along with the rest. They are literally starving to death and need all the help we can muster. Thank you!

Grace Wright  
Port Townsend, WA

Sent from my iPad

**From:** Linda Park <lpark@rc.edu>  
**Sent:** Monday, April 08, 2019 6:51 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas

---

I have been a supporter of the southern resident killer whales for many years and had the supreme honor of seeing and interacting with them in 2015. These amazing animals must be saved if we are to call ourselves a civilized society. Therefore, I adamantly request your consideration when allocations and management decisions are made in the 2019 North of Falcon process.

Sincerely,  
Dr. Linda Park

Sent from my iPhone

**From:** Sara O'Connell <sarah0911@gmail.com>  
**Sent:** Sunday, April 07, 2019 10:33 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas need a seat at the table

---

Hello,

As a former kayak guide on the west side of San Juan and a resident of Friday Harbor, I plead with you to give SRKW (Orcas) an allocation of Chinook salmon sufficient enough to recover their population. This needs to happen NOW!!

With all due respect,  
Sierra O'Connell  
SJI Youth Conservation Corps Coordinator  
206-602-9185

**From:** Jill Hein <jillhein@comcast.net>  
**Sent:** Friday, April 05, 2019 9:35 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas need an allotment too

---

Please please allot a quota of chinook salmon to our SRKW's, they have no choice, all their food MUST come from the ocean. Humans at least have a choice.

Thank you.  
Jill Hein  
Coupeville, WA

**From:** Christina Mullee <christinamullee@icloud.com>  
**Sent:** Wednesday, April 10, 2019 3:52 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas need salmon too

---

Please allocate the proper amount of salmon for the orcas of the Salish Sea.

Thank you  
Chaliea Mullee

Sent from my iPad

**From:** Blaire Harrington <harringtonbe@gmail.com>  
**Sent:** Tuesday, April 09, 2019 1:14 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Orcas

---

Hi,

I stopped eating fish when I followed the story of Orca mom who pushed her dead calf for 17 days last year. Please give the starving SRKW a seat at the table when considering salmon allocations. I don't want the orcas to go extinct! Thank you for your help and assistance!

Very Respectfully,  
Blaire Harrington

Washington resident

Sent from my iPhone

**From:** Maren Custer <maren.custer@gmail.com>  
**Sent:** Tuesday, April 09, 2019 5:17 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Our resident orcas

---

Hi,

Please, in your discussions regarding northwest fisheries this year, include discussion of the plight our resident orcas are facing as they struggle to find food.

Thank you for your time,  
Maren Custer

**From:** Ed Chadd <edchadd@olympen.com>  
**Sent:** Saturday, April 06, 2019 10:40 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please allocate salmon for orcas

---

The orcas deserve a seat at the table when determining fishery allocations. Since they can't sit in the room with you all, someone will have to do their best to represent them.  
Sincerely, Ed Chadd, Port Angeles, WA

**From:** Steve Smith <alpinejustice@gmail.com>  
**Sent:** Friday, April 05, 2019 11:04 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please consider orcas in your salmon allocations

---

More than ever, the critically-endangered Southern Resident Killer Whales need all the help they can get, if future generations are going to continue to see them. The work it will take to recover these whales is widespread, but no single piece makes a bigger difference in the short-term than food availability.

By factoring orcas into the fishing allocations (especially, chinook salmon allocations), you have an opportunity to make a crucial difference.

Thanks for considering this piece of the ecosystem as you strive for a reasonable and sustainable balance between many factors that rely on salmon. No species relies on them more than the Southern Resident Killer Whales, however.

Steve Smith  
Seattle, WA

**From:** cindy@orcانetwork.org  
**Sent:** Wednesday, April 10, 2019 9:05 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please consider Southern Resident orcas in harvest allocations

---

Washington Department of Fish and Wildlife,

I was part of a small group that attended several of the North of Falcon, Pacific Fisheries Management Council, and Washington Fish and Wildlife Commission meetings, representing the Southern Resident orcas and their need for a salmon allocation. We are still learning and trying to understand how this process works and I want to thank all of the staff, particularly Penny Becker, for being so welcoming. I also want to thank you for including the Southern Resident orcas in the conversation and discussing the need to ensure that fisheries are not affecting them in a negative way. This was very encouraging to hear. I am hopeful that with ongoing salmon recovery efforts, it will be possible to make sure the Southern Residents get what they need while honoring tribal treaty rights and including commercial and recreational fishing in the quotas as well. I am not sure how to make that happen but I urge you to continue including this topic in the deliberations and giving the Southern Resident orcas a seat at the table this year and into the future.

Sincerely,  
Cindy Hansen

*Cindy Hansen*  
*Education and Events Coordinator, Orca Network*  
[www.orcanetwork.org](http://www.orcanetwork.org)



**From:** Arthur Rochester <arthurr@digitraxsound.com>  
**Sent:** Friday, April 05, 2019 2:13 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please Consider the Orcas

---

Dear North of Falcon,

To maintain a healthy and balanced ecosystem in the Salish Sea, it is most important to consider the Southern Population of Orcas. Since it does not look like the dams on the Lower Snake River will be breached anytime soon, we must closely ration the take of salmon.

Historically the orcas have not had a seat at the table during these talks or been given a harvest allocation. With the steady decline of the Southern Resident orca population due to diminishing prey abundance, fisheries managers have become aware of the need to include the Southern Residents in the dialogue. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues.

Sincerely,

Arthur Rochester  
4601 Lopez Ave.  
Port Townsend, WA 98368-2746  
[arthurr@digitraxsound.com](mailto:arthurr@digitraxsound.com)  
Text: (818) 402-9570  
Phone (360) 316-1650

**From:** TreefrogBeads <TreefrogBeads@gmail.com>  
**Sent:** Monday, April 08, 2019 7:39 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please consider the Southern Resident killer whales!

---

Hello,

I just read that the North of Falcon process oversees fishing in the Pacific Coast region, and allocates fishing quotas. The blog that I read explained that historically, the Southern Residents have not been incorporated during these talks or been given a harvest allocation.

I'm writing today to ask that the Southern Resident killer whales please be taken into consideration when allocations and management decisions are made. As you know, our resident orca whales are in grave danger of extinction, and the choices that we make today can have a profound impact on their survival. Please consider their needs as you make your decisions regarding 2019 fishing quotas.

Thanks and best wishes,

Andrea Adams  
Olympia, WA

**From:** John Boyd <jbfhpc@gmail.com>  
**Sent:** Sunday, April 07, 2019 6:42 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please Consider the SRKWs When Deciding Allocations

---

I just wanted to respectfully ask that when you sit down and divvy up the “allocation pie”, that one of the most important stakeholders should be the Southern Resident Killer Whales. As I’m sure you are very well aware, these amazing animals are starving to death. They have had one successful birth in the last 3 years. And the number one factor in determining survivability of the calves is a sustainable and large amount of salmon to eat for mom.

Contrast this birth trend with those of the Bigg’s Killer Whales, aka Mammal-feeding orcas. In the last 9 years, we have seen 75 new births! These calves are not only surviving, but thriving and it is directly attributable to the plentiful pinniped population found in our local waters. These whales are ahead on doing their own version of culling the seals and sea lions.

Shouldn’t SRKWs have the same opportunity to thrive as well? Please give them their allocation first before any other stakeholder so that we can ensure these amazing animals continue to live in our waters for generations to come.

Thank you for the opportunity to share my opinions.

Sincerely

John Boyd  
Friday Harbor, WA  
Certified Marine Naturalist  
Founding Member, Salish Sea Association of Marine Naturalists Founding Member, Salish Sea Ecosystem Advocates

**From:** Kelly Maeva hollier <whishka@hotmail.com>  
**Sent:** Monday, April 08, 2019 12:20 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give a seat to the table for southern resident Killer whales

---

Dear,

Please, give a place to the table for southern resident killer whales so that they are always taken into account when allocations and management decisions are made.

They need help, they need salmon to survive. Their future is in our hands, they deserve the right to be considered and protected. We love them with all our heart.

Cordially,

Kelly Maeva

Envoyé de mon iPhone

**From:** Las Vegas Climate Save <lasvegasclimatesave@gmail.com>  
**Sent:** Tuesday, April 09, 2019 2:45 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Orcas a Seat at the Table

---

- Historically, orcas have not had a seat at the table during harvest allocation talks, but with the steady decline of the Southern Resident orca population due to diminishing prey abundance, fisheries managers have become aware of the need to include the Southern Residents in the dialogue. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues. Please do everything you can to ensure the Southern Resident orcas are "given a seat at the table" and be taken into consideration when allocations and management decisions are made this season.

Thank you,  
Lauren Williamson  
Henderson, NV 89074

**From:** Daryth Morrissey <darythmorrissey@gmail.com>  
**Sent:** Sunday, April 07, 2019 6:58 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Orcas a seat at the table

---

When you know better, you do better. Please let representatives of the Southern Residents, who rely primarily on salmon for their survival have attend North of Falcon.  
Please make decisions at this meeting that benifit these sentiate beings. Don't deny them food based on man's greed. Please.

Daryth Morrissey

**From:** Tomoko Shimotomai <tshimotomai@accuray.com>  
**Sent:** Friday, April 05, 2019 3:48 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Southern Resident Killer Whales a seat at the table

---

Hello,

Please give Southern Resident Killer Whales a seat at the table when you talk about how to manage the Northwest's recreational and commercial salmon fisheries. My family and I visit San Juan Island every year, and we have been witnessing these highly endangered whales die one by one from starvation.

Please allocate enough salmon for Southern Resident Killer Whales to survive without going to extinction.

Sincerely,  
Tomoko Shimotomai  
Nicene Porter Shimotomai  
Ryuta Shimotomai  
22 Hatton Ave.,  
Watsonville, CA 95076

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**From:** Martha Rosas <mir2103@tc.columbia.edu>  
**Sent:** Wednesday, April 10, 2019 6:50 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give Southern Resident Orcas a seat at the table

---

To Whom It May Concern:

I am writing to respectfully ask that the Southern Residents Orcas be taken into consideration when allocations and management decisions are made. These animals are amazingly beautiful and intelligent and it would be very upsetting to watch them starve for lack of salmon. Furthermore, they have helped the San Juan Islands and Washington by increasing tourism. I myself am a native New Yorker who went to Washington for the first time a few years ago expressly to see the Southern Resident Killer Whales. As part of a research project, my daughter found the Whale Museum and adopted Cookie because he was born the same year my daughter was. It was beautiful to see them up close at Lime Kiln State Park and I have recommended that many people visit the San Juan Islands as a result of that trip and plan to return soon as well.

Please consider these Orcas and the livelihood of the people that live from the tourism that they generate in the San Juan Islands when allocating fishing quotas this year.

Respectfully yours,

Martha Rosas

**From:** Jennifer Kupsch <jenniferbooth1981@gmail.com>  
**Sent:** Tuesday, April 09, 2019 8:14 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give the orcas a seat at the table

---

To whom it may concern,

I respectfully ask you to please give the orcas a seat at the table! They desperately need our help.

Thank you

Jennifer Kupsch  
Delta BC

**From:** Debbie Hite <debbiejhite@gmail.com>  
**Sent:** Wednesday, April 10, 2019 4:20 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please Give the Orcas a Seat

---

Certainly hope you will give the Orcas a seat at the table! Heart felt thanks for caring! 🌟👉☆

Sent from my iPad

**From:** Amy Nesler <anesler3784@gmail.com>  
**Sent:** Saturday, April 06, 2019 11:04 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give the Southern Residents a seat at the table

---

To Whom It Concerns,

I'm writing to you today to ask that the Southern Resident community of orcas be given a seat at the table when fishery allocations are made. Columbia River salmon are a significant prey source for these pods, whose populations continue to decline due to a lack of food. We owe it to both these totems of the Northwest to make sure they have their best chance of survival and recovery. Thank you for your consideration in this matter.

Sincerely,

Amy Nesler

**From:** Serena Feller <serenat23@msn.com>  
**Sent:** Monday, April 08, 2019 9:41 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Please give the SRKWs a seat at the table

---

To whom it may concern,

I am a Canadian citizen writing with great concern regarding the precarious fate of the Southern Resident Orcas. I respectfully request that you please consider the southern resident orcas while considering your salmon allocation. I beg of you to consider the consequences of starving the SRKWs to extinction if we do not take action to help support them at this time. You are able to make the choices that allow them to survive or become extinct.... please use your voice for the betterment of the SRKWs.

Many thanks in advance for your dedication to the wellbeing of our shared ecosystems.

Kindest Regards,

Serena Feller

You must be the change you wish to see in the world.  
Mahatma Gandhi

**From:** hansonsarahliz@gmail.com  
**Sent:** Saturday, April 06, 2019 4:24 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Proper allocation of salmon

---

The Southern Resident Killer Whales need their weight in food allocated in order to have adequate chance for survival.  
Thank you, Sarah Hanson Friday Harbor resident

Sent from my iPhone

**From:** mz. Lynn <raidergal70@yahoo.com>  
**Sent:** Tuesday, April 09, 2019 9:15 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** protecting the southern resident killer whales

---

I understand that each year, Federal and tribal fishery managers gather to plan for the Northwest's recreational and commercial salmon fisheries. Known as the North of Falcon process, it oversees fishing in the Pacific Coast region & allocates fishing quotas. .

Historically, the Southern Residents have not been incorporated during these talks or been given a harvest allocation. This year, let's change that to help ensure the Southern Residents get the food they need to survive. I implore you to take into consideration a moratorium this year on chinook fishing to allow the population to replenish itself or in the very least to reduce the allotment given to sports fishing and tribal fishing.

We have all see the unbearable scenes of J35 carrying her decaying baby around for 17 days, the anguish is evident in this act of mourning. We all witnessed the "too late, too little" attempt by NOAA to save the starving J50 and we have all seen the images of the numerous starving Orcas out there, not to mention that there are a couple out there that are currently pregnant. They need food to survive, primarily Chinook salmon because of the high fat content to produce the milk to feed their babies and in general to increase fat storage so that they don't have to deplete their current fat storage which has PCB's in them...thanks to humans.

It is our duty to right the wrongs that we have done to them. It is a sad time, when the marine life that once flourished, has to depend on the one thing (Humans) that put them in this situation, to save them.

How many more are we going to let starve to death or how many more babies will die within hours, days, months of birth because mom can't provide enough milk for them. PLEASE DO THE RIGHT THING to save them from extinction....this world can live without salmon....they can't

Sincerely,

Meris Untalan

**From:** [Stephanie Buffum](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Public Comment: North of Falcon Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 11:33:00 AM  
**Attachments:** [image001.png](#)

---

Dear Members,

We are watching your livestream meeting of the North of Falcon process from the San Juans today.

On behalf of our 2,000 members, Friends of the San Juans commends the North of Falcon collaborative process. Chinook salmon are a priceless asset to our regional economy and culture. Especially to our Southern Resident orca whales who are starving. In the past 30 years the average King Salmon has become smaller. Southern Resident Orca need ~300 lbs. salmon per day to survive. If a Chinook salmon weighs 15 lbs. each SRKW need 20 salmon per day. (75 SRKW x 20 salmon) x 365 = 547,500 Chinook salmon per year.

We ask you to consider these factors in your decisions. Please give the Southern Resident Orca a seat at the allocation table.

Sincerely,

Stephanie Buffum, MPA, MURP  
Executive Director  
Friends of the San Juans  
P.O. Box 1344 | Friday Harbor, WA 98250  
Main: 360.378.2319 | Direct: 360.378.2324 | Cell: 360.4723.0404  
[www.sanjuans.org](http://www.sanjuans.org) | [donate](#) | [facebook](#) | [e-news](#)



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Register at [sanjuans.org/upcoming-events](http://sanjuans.org/upcoming-events)

**From:** [PT Person](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound Chinook  
**Date:** Saturday, March 23, 2019 9:41:47 AM

---

I strongly support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September.

Peter Epperson  
Lacey, WA

**From:** william pettibone <williampettibone@gmail.com>  
**Sent:** Friday, March 29, 2019 7:16 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Why do the salt fisherman get to reap all the benefits from this I don't own a boat I'm s solid river bank fisherman with no change yet I'm still paying the state to sit home this should be an all in one affair regardless of the taste of water this is just bias and the fresh water fishermen are as always losing

**From:** Jeff Christen <jthalibet@yahoo.com>  
**Sent:** Friday, April 05, 2019 5:29 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

The marine area 10 June coho fishery, is very important to me as a salmon fisherman. The fishery comes at a great time of the year , and is enjoyable.

Thanks, Jeff Christen 425 308 6928  
5108 80th ST NE Marysville WA 98270

[Sent from Yahoo Mail on Android](#)

**From:** william pettibone <williampettibone@gmail.com>  
**Sent:** Friday, March 29, 2019 7:16 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Why do the salt fisherman get to reap all the benefits from this I don't own a boat I'm s solid river bank fisherman with no change yet I'm still paying the state to sit home this should be an all in one affair regardless of the taste of water this is just bias and the fresh water fishermen are as always losing

**From:** Shaun Terry <oldbait805@gmail.com>  
**Sent:** Wednesday, April 03, 2019 10:55 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

To whom it may concern. I was not able to attend this morning's meeting due to my work schedule. However, it is important to submit a comment and have a voice in support of freshwater fisheries. I grew up in Snohomish and Skagit counties. My family has fished local rivers and area 8-1, 8-2 and 9 since the early 60's focusing our attention on fishing for Steelhead, chums, Coho, sockeye, kings and sturgeon until recent years. I reviewed your fish return run estimates and proposed upcoming 2019 fishing opportunities for both rivers and marine areas and find myself reminiscing about years past when Snohomish county held the largest coho derby on the west coast. Pink salmon and chum salmon were in an abundance. Steelhead, sockeye and king salmon returns supported fishing for all who pursued them and there was a sturgeon catch and keep season. What happened? 2015 and 2017 drought conditions existed and rivers were closed but perseiners were allowed to continue fishing Everett to Mukilteo and southington area 9. I counted 18 boats at a time over several weeks that had nets so full of salmon they were listing and we wonder why there are only 600,000 pinks estimated return. Or, blame it on poor ocean conditions. Pink salmon was the last consistant fishery our local rivers had before 2015. Chum salmon are depleted since a demand in grocery stores happened. The Snohomish, Skagit and Stilly rivers had a stellar chum return before that. We have noticed different eagle behavior on the Skagit river. This year and the last several years there have been less eagles in the upper river. This winter we saw the most eagles in the tributaries of the Skagit. Coho runs are down, sockeye on the Skagit are limited to a small area promoting combat fishing. King salmon on the Skagit and skykomish rivers are also confined to small areas of the river. Steelhead runs are at an all time low since 2013 after the outcone of lawsuits from WFC. The Steelhead is susposed to be our state fish. It is embarrassing when I have friends and family from other parts of the country ask when to come out and fish and I have to tell them that another year of low returns so the river is closed. Sea lion and cormorants population have to be at an all time high and nothing seems to be happening to control them. Pollution, water filtration I have not heard any updates in work on updating water filtration treatment plants to stop pharmaceutical and micro contaminants from being released into the sound. It is great you are buying up land and fixing culverts and plugged water ways but when are we going to see something done to increase actual fish runs and manage predation? I love fishing for Salmon, Steelhead and Sturgeon in Washington and would love to see future generations enjoy the experience I had growing up vs just going for a boat ride as one of my friends have said or explaining and keeping interest of my son during an outing on the river fishing. There is a saying just getting outside and enjoying time on the water and who you are with is what it is all about if you catch or don't catch anything. You can an only say that so many times. To sum it up, River fishing in Snohomish and Skagit county is at an all time low. If an angler doesn't have a boat to get out in Puget sound most likely they won't have much to look forward to locally. Low returns of fish affect everyone in the community and counties, tribal, anglers and commercial.

Thank you,  
Shaun Terry

**From:** twogoodsatpa <twogoodsatpa@olympen.com>  
**Sent:** Friday, April 05, 2019 8:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

WHY ARE RECREATIONAL FISHERMAN PENALIZED WITH LIMITED TIME TO FISH AND 1 FISH LIMITS BASED ON WILD FISH PROJECTED RETURNS WHEN WE CANT KEEP THE WILD STOCKS.

JOE TWOGOOD

Sent from my Galaxy Tab® A

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Friday, April 05, 2019 5:06 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

It's crucial to local fishing charters, residents, and tourist that Marine Area 10 is open for Coho salmon in June, whether it be catch and release, or catch and keep. Honestly, a catch and keep fishery would probably result in less impacts overall.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

-----  
Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Joey D <joeyoutdoorsman@gmail.com>  
**Sent:** Tuesday, April 02, 2019 12:29 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Samish river should be fly fishing only and baroness! Tired of fishing next to snaggers! Nooksack river should be 2 Wild+4 Hatchery Coho on the mainstem of river. Seriously, Samish River needs to be Fly Fishing Only.

**From:** Robert Dreyer <supertrain222@gmail.com>  
**Sent:** Friday, March 29, 2019 4:50 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Concerning the possibility of a spring chinook season on the Skagit river from the mouth to gilligan creek. Would like to see this but wouldn't it be better to open the river up to say concrete for those of us that live between concrete and seder woolley. On the sockeye side would like to see the same, but with maybe just a Friday afternoon to Sunday night if the upper Skagit tribe would agree. Think that this is not to much to ask for, seemed to work last year for silvers. Just a idea. Thank you for your time

**From:** shane.a.hunter@hotmail.com  
**Sent:** Sunday, March 31, 2019 2:27 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Open up the skokomish river to nontribal or shut down the hatchery and remove state funding.

Get [Outlook for Android](#)

**From:** Lowe, Larry <LGLowe@SNOPUD.com>  
**Sent:** Thursday, March 28, 2019 11:57 AM  
**To:** NorthofFalcon (DFW)  
**Cc:** McDonnell, Andrew; Binkley, Keith  
**Subject:** Puget Sound freshwater salmon seasons

---

**The proposed Skykomish River (mouth to Wallace River) fishery which is scheduled to open on June 1 has devastating effects on wild winter steelhead.** Approximately 10% of the winter steelhead in the area spawn after June 1 and the peak spawning month is May. Therefore returning steelhead that have not yet spawned are impacted by this fishery but more importantly is the impact on kelts. Skykomish/Snohomish winter steelhead escapement has been on a severe decline in recent years and the 2018 escapement was approximately half of the historic low.

Target species for this fishery are summer Chinook returning to the Wallace Hatchery and summer run steelhead returning to Reiter Ponds and fishing pressure is extremely high. WDFW has not done a creel census for many years. I have heard rumors that this fishery may open on May 25.

**Please delay the opening of this fishery to June 15 at the earliest in order to reduce the harmful impact it has on our winter steelhead.**

**From:** Brian Ingalls <briantingalls@gmail.com>  
**Sent:** Saturday, March 30, 2019 10:44 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

These proposed regulations discriminate against freshwater fisherman, such as myself, that do not have the means or equipment to fish saltwater. The ability to fish for salmon in Washington state should not depend on one's affluence. I would ask you to reconsider the draft regulations, particularly for the Snohomish river. It is grossly unfair to allocate the fishing opportunities to only saltwater anglers.

Thank you.

Brian Ingalls

**From:** Ben Ingalls <ben.c.ingalls@gmail.com>  
**Sent:** Sunday, March 31, 2019 8:29 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

Looking at the proposed seasons, it looks like river fisherman and bank anglers in the Snohomish river system are going to be getting the short end of the stick. The saltwater and river seasons should be set to give equal opportunity to us river anglers. Salmon fishing in this state has quickly become a rich person's privilege, and there are a lot of people who can't afford the equipment and travel cost associated with saltwater salmon fishing.

Please think about us river anglers when setting the seasons. I have lots of friends and family that will decide not to buy fishing licenses at all this year and into the future if we are to continue to be neglected.

-Ben Ingalls

**From:** Patti Ingalls <jus.moo2@gmail.com>  
**Sent:** Sunday, March 31, 2019 12:25 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

I am writing to voice my concerns with the proposed fishing guidelines for 2019. It appears, just like last year, that a disproportionate share of the Snohomish river coho salmon run will be allocated to saltwater anglers. Opening the river up for only the month of September effectively creates a one week season. Fish do not typically show up in fish-able numbers until the last week of that month.

Additionally, not all of us are blessed enough to be able to afford the necessary boat and equipment to safely fish in the saltwater. The proposed regulations unfairly penalize bank fishermen and those with craft too small for saltwater use.

I urge you to reconsider the proposed draft and devise a plan to equitably distribute the run among all the stakeholders. Fishing should not be a privilege enjoyed by only those with sufficient means. Simply purchasing a fishing license should be enough to ensure that we all have equal opportunity to chase these fish, regardless of run size.

Thank you.

**From:** Torrey Banes <cohoking@hotmail.com>  
**Sent:** Sunday, March 31, 2019 11:54 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound freshwater salmon seasons

---

On the behalf of myself and the group Stilly Valley Sport Fisherman. We would like to see the Stillaguamish river open to Coho salmon fishing this year.

Sent from [Mail](#) for Windows 10

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 9:00:30 AM

---

## Swan Creek park Juvenile fishing only

The end of swan creek has a large pond just before going under pioneer road and into the puyallup river.

Juvenile fishing should be allowed from Nov 1st - Dec. 30th for chum salmon

We see people fishing there every winter, but pretty sure it's illegal. It would be a perfect juvenile fishing pond.

Easy access, and hopes of a huge fish

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:24:54 AM

---

## Puyallup River

Closure of within 400 feet of clarks creek to be limited to bank angling only. Boats can access waters within 400 feet.

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:56:37 AM

---

## Make Flossing/Snagging illegal

Leader lengths should not exceed 36 inches. Make flossing illegal. Fish are being snagged outside the mouth at sunrise, and sunset in super high numbers as fish move up river.

**Snagging:** Take or attempting to take a fish with a hook and line by hooking the fish anywhere other than in the mouth or in a way that does not entice the fish to voluntarily take the hook inside it's mouth, includes flossing. Game fish hooked anywhere other than inside the mouth must be immediately released unharmed.

Below is a link describing what Oregon enforced on the Rogue River to end snagging/flossing

<http://mailtribune.com/oregon-outdoors/fishing-rule-changes-will-target-flossing->

J  
}<(((\*>  
ignorantfisherman@me.com

**From:** [Brian Stone](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Tuesday, March 26, 2019 3:43:16 PM  
**Attachments:** [image003.png](#)

---

Hello,

Thanks for taking the time to read my comments.

Here is what I'd like to see as far as Puget Sound salmon season go.

MA 8-1 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 8-2 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 9 – Open July 1<sup>st</sup> through October 31<sup>st</sup> for retention of two hatchery coho. Release wild coho and pinks.

If you are going to restrict MA 9 in October, make it shore fishing only during for the month of October. Two hatchery coho limit in October. Release wild coho in October.

Open MA 9 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Open MA 10 Open June 1st through October 31<sup>st</sup> for retention of two hatchery coho. Release wild coho.

Open MA 10 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Thank you,  
Brian Stone  
Seattle, WA

--

Brian Stone – Account Executive  
United Business Machines of WA. Inc.  
11050 118<sup>th</sup> Place NE Kirkland, WA. 98033  
425-897-4003 (Direct Line)  
425-827-2672 (Fax)



**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:29:23 AM

---

## Puyallup River

Sunday closure on Puyallup river should be down river where the white river enter the puyallup. Not entire river closure.

This will not interfere with the netting that occurs on sunday, monday tuesday from the white river to the mouth

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:31:02 AM

---

Puyallup River

Catch and release wild coho

J  
}<(((\*>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [David Hicks](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Sunday, March 17, 2019 8:27:11 AM

---

## Puyallup River

Flossing illegal. This form of fishing is wiping out the runs. Leaders not to exceed 36 inches. I used to participate, and now watch as fish are legally snagged outside the mouth. It's easy, and can produce easy fish without much effort.

J  
}<(((\*)>  
[ignorantfisherman@me.com](mailto:ignorantfisherman@me.com)

**From:** [pearsonfr@comcast.net](mailto:pearsonfr@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound freshwater salmon seasons  
**Date:** Monday, March 25, 2019 10:21:01 AM

---

The Endangered Species Act lists Puget Sound chinook as “Endangered”. Efforts to recover those fish have not made significant progress in the last decade. It is time to take immediate action that can make a difference: stop chinook harvest in Puget Sound, both commercial and recreational. Especially after the recent release of the dismal return estimates by the WDFW, it would be criminal to ignore those facts, and harvest the very few returning adults. It is time for radical action. I had personally given up fishing for salmon and steelhead last year. The entire economy must follow suit, or we will have no fish in the very near future.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

**From:** [gary guinotte](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area 13 salmon seasons  
**Date:** Wednesday, March 20, 2019 6:24:05 PM

---

I strongly support a change for minimum size on chinook in area 13 from 22 inches down to 18 or 16 inches during July, August, and September. These chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. adult jacks have to be release at this time in area 13.

A lot of those jacks use to be harvested in Capitol lake by sportsmen but that harvest was lost by the closure of the lake to fishing. I had fished the Lake for 25 years and caught lots of jacks in the 16 to 20 inch range on eggs.

WDFW In-Season Hatchery Escapement Report for

2018 TUMWATER FALLS HATCHERY Deschutes River Hatchery Stock- H jacks 3,806  
2017 - TUMWATER FALLS HATCHERY Deschutes River Hatchery Stock- H jacks 702

**From:** Hughes, Kirt M (DFW)  
**Sent:** Monday, April 08, 2019 1:50 PM  
**To:** NorthofFalcon (DFW)  
**Cc:** sbmathews38@yahoo.com  
**Subject:** Puget Sound marine area salmon seasons

---

Attention ALL STAFF:

In addition to their inclusion in our public input meetings for the North of Falcon process, I am posting the following proposals on behalf of Dr. Stephen B. Mathews, to our NOF comment page ensuring that they are part of the formal rule-making record.

WA FISH AND WILDLIFE COMMISSION TESTIMONY. Mar. 2, 2019. Steve Mathews. [sbmathews38@yahoo.com](mailto:sbmathews38@yahoo.com).

**The present fishing mortality regime on chinook salmon is unsustainable. The effort at times is too much; the seasons are too long; the gear is too powerful; the by-catch mortality of little ones is too great. If fishing were closed for 10 years and then re-set, a more rational chinook salmon fishing regime might look like this:**

NO YEAR ROUND FISHING- summers only on mature (end of life) chinook salmon.

NO CATCH AND RELEASE- for either sport or commercial; (chinook salmon are not trout in a stream).

Annual, individual sport catch quotas in numbers; enforced by electronic (I-phone) reporting.

Commercial quotas by gear type; 100% observer coverage; electronic, real-time monitoring.

NO MINIMUM-SIZE LIMITS- because throwbacks would be illegal.

NO SPAWNING GROUND FISHING- all stream spawning sections closed for the spawning season.

NO NATURAL BAITS- herring, shrimp, or salmon eggs; (dogfish, rockfish, sturgeon swallow these too).

NO TREBLE HOOKS- single barbless everywhere; (lures with three, barbed treble hooks are still legal).

NO FLASHERS, NO HOOTCHIES- only large plugs, spoons, jigs, spinners, etc.

NO UNLIMITED-DEPTH COMMERCIAL NETS- the redundant web in the water kills other marine life too.

NO NIGHTTIME GILLNETTING- chinooks come up at night; the other salmon can be caught all day long.

NO TOWING ON OPENED PURSE SEINES- target species can be caught without "trawling".

#### **WHAT ELSE WOULD GO AWAY?**

BY-CATCH- of small, immature chinook; that elephant in the room would tend to vanish.

WASTAGE- of small, dead but edible chinook salmon.

MASS MARKING- that expensive, suspect program needs evaluation by a blue ribbon science panel.

RECOVERY BOXES- that unnecessary plumbing is mostly for show.

CONTROVERSIAL "HOOKING MORTALITY" STUDIES- let's stop debating that problematic science.

SPECIAL RULES- like different sport landing rules for boats over and under 30 feet.

HATCHERY SURPLUSES- there would be none if carcasses above reproductive needs were distributed throughout each river for fertilization.

The current fishing regime is driven by **THE NEEDS OF THE FISHERMEN** not **THE NEEDS OF THE FISH**. The alternative would self-correct fishing abuses, and also provide better fishing mortality data.

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Tuesday, April 09, 2019 3:42 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

The SRKW need approximately 550,000 chinook salmon/yr. to survive, so please stop all commercial and recreational fishing for chinook due to the Endangered Species Act, This Act requires we do all we can to prevent their extinction. Humans have many other options for food, the Southern Residents don't. This of course, excludes tribes, who are entitled to their salmon. The few salmon should only be taken by tribes and the SRKW.

Cathleen Burns  
98250

**From:** Robert Reeder <antaresnavigation@gmail.com>  
**Sent:** Tuesday, April 09, 2019 10:05 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Please consider the needs of our Southern Resident Killer Whale population as you consider our fisheries generally. They are more dependent on the salmon runs than any of the rest of us.

Very respectfully,  
Captain Robert Reeder, USMM Master 1600 tons

**From:** Brian Stone <bstone@ubmofwa.com>  
**Sent:** Wednesday, March 27, 2019 11:32 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Hello,  
Thanks for taking the time to read my comments.  
Here is what I'd like to see as far as Puget Sound salmon season go.

MA 8-1 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

MA 8-2 – Open August 1st through September 30<sup>th</sup> for retention of two hatchery coho. Release wild coho and pinks.

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Open MA 10 on July 16<sup>th</sup> to retention of only one hatchery chinook to keep the season / quota going longer.

Thank you,  
Brian Stone  
Seattle, WA

--  
Brian Stone – Account Executive  
United Business Machines of WA. Inc.  
11050 118<sup>th</sup> Place NE Kirkland, WA. 98033  
425-897-4003 (Direct Line)  
425-827-2672 (Fax)



**From:** Bill Macaras <wmacaras@centurytel.net>  
**Sent:** Thursday, March 28, 2019 9:25 AM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

WDFW,

In 2017 a suggestion to open Area 11 to a two pole endorsement was submitted to WDFW. I very often fish by myself, probably about half the time I that I go out.

The response I received indicated that two pole endorsement was not approved in 2016 because of an expected low return of coho in 2016. Here is the response:

"I am not sure if you are aware, but WDFW did propose a two-pole endorsement in Area 11 during the 2016 NOF but the poor coho runs essentially nixed any expansion as you may have noticed we had several significant closures that year. If we can get out of the poor coho runs (hopefully we see more improvement this year), then we have a better shot of adding more 2 pole areas."

I am not sure what occurred during the 2017 and 2018 NOF negotiations, but I again submitted a suggestion in 2018 to add two-pole endorsement in Area 11. As I recall, in 2018 both the coho and hatchery chinook returns were expected to be good, but it appears there wasn't any discussion to open Area 11 to two-pole endorsement.

This year, the coho returns are expected to be very good. As indicated in the 2017 response from WDFW, it appears this would be a good year to again bring up the idea of opening Area 11 to a two pole endorsement during the negotiations. It also appears the hatchery chinook return for 2019 is greater than the most recent 10 year average. So, both coho and chinook returns are expected to be better, to much better than average.

In another email from WDFW in 2017, I received the following: "WDFW has taken the cautious approach of added two-poles to areas with relatively low effort or catch rates to allow staff to monitor and evaluate the effects of using two poles." This comment was 2 years ago. Has the department completed it's evaluation of using two poles? In that same email, it was stated that two pole increases encounters of wild chinook by 11%. On my boat, I believe that number to be relatively accurate, maybe a bit high. I will add, that every wild fish that was caught on my boat, was returned very healthy. A recent study indicates that most fish released survive. The same can not be said for gill netting.

I request that Area 11 be opened to two-pole endorsement for the following reasons:

Allows for the angler to experiment with lure, color, scent, depth, attractor, etc

Provides an opportunity to catch a fish (I rarely catch my limit when I fish). Like most recreational anglers, I am an occasional angler and not a professional and my catch rate and encounter is much lower than the test fishers.

There is value to the fishing community, angler and local businesses

Most of the members of a fishing club I am a member, want the two-pole endorsement

Fuel economy

Open Area 11 to two pole endorsement and study the impact. Adjust if necessary. If anything, allow two pole endorsement for the single angler in a boat.

Thank you,

Bill Macaras  
Lakebay, Wa.

**From:** ARSC <mark@allwashingtonfishing.com>  
**Sent:** Sunday, April 14, 2019 1:58 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Marine area 7.

We have have families, friends, and businesses that rely on sport fishing in the San Juan Islands and it is important that we can have a salmon fishery in August each year. Our seasons are already short enough and losing the biggest month of the year would be devastating.

Thank you,

Capt. Mark Coleman - Guide/Owner

All Rivers & Saltwater Charters  
[www.AllWashingtonFishing.com](http://www.AllWashingtonFishing.com)  
425-736-8920

-----  
Pelagic Pursuits Costa Rica  
[www.CatchFishCostaRica.com](http://www.CatchFishCostaRica.com)  
425-736-8920 (US)  
506-4001-8430 (CR)

31' Luhrs "Go Fish", Los Suenos Marina

\*Any mentioned availability does not ensure that another party is not currently working on reserving. Reservations are confirmed when deposits are made.

**From:** Cathleen Burns <commcomm2@gmail.com>  
**Sent:** Monday, April 08, 2019 9:36 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Please consider that the SRKW need the chinook too when deciding allocations. Please don't let humans take all the salmon and leave none for the Southern Residents! They are dying from starvation, and the humans are not. They need them more! Thank you.

Cathleen Burns  
Friday Harbor, WA 98250

**From:** CAPT St Luce <amystluce@gmail.com>  
**Sent:** Thursday, April 04, 2019 7:47 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

Area 10 is a very important marine area for the Kitsap Peninsula and for our business. Please continue to allow it to be an area that can be fished within appropriate limits and seasons and we welcome any new opportunities for fishing in the South Sound and Area 10. As anglers, we respect the environment and the need to protect it and the Orca's but we also make our living from the Sound and the Salmon which we fish. We believe there is a way to ensure the survival of the Orca's and provide an enjoyable fishing season for all.

Lawrence (CAPT Lorenzo) St Luce  
No Worries Fishing Charters

**From:** Bill Healy <dumpsterbill@hotmail.com>  
**Sent:** Wednesday, April 03, 2019 9:13 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons

---

My family and I are looking forward to salmon fishing in the summer in Puget Sound. Specifically off of Edmonds and north of Edmonds. We want to make sure we are able to fish this summer. We are looking forward to fishing. We hope that lots more hatchery salmon are released so there is enough salmon for sportsmen and for The Orcas. We are also supportive of killing off the sea lions that are killing the salmon.

Bill healy.  
Shoreline, WA.

**From:** [TONY JUDAH](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 21, 2019 11:22:05 AM

---

I enthusiastically support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September. The chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. I estimate this change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time.

Thanks for your consideration

Tony Judah

Lifetime Washington resident

**From:** [Brad Caldwell](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Wednesday, March 20, 2019 11:38:42 AM

---

I strongly support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September. These chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. I estimate this change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time.

Sent from my iPhone

**From:** [Curt Kraemer](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Wednesday, March 20, 2019 1:17:49 PM

---

I have several PS salmon season suggestions for consideration during the 2019 NOF process.

1. MAs 9 through 11 June through August mark selective for coho.

The last several years wild coho returns to key primary stocks have been an issue. Over the last 20 years I have seen quite variable unclipped coho contributing to the “resident coho fishery during the summer in central sound. Clearly some years those stocks of concern are contributing to that fishery. It would seem that conducting those summer fisheries as MSF would reduce the take of unclipped coho providing a potential buffer to the wild populations such as the Snohomish during years of low returns.

2. Annual limit of 10 Chinook from MAs 5 through 13

More and more often am hearing requests to stretch out our fisheries to provide additional recreation. In this era of ESA listed stocks providing additional fishing within the allowable impacts is difficult. It is now time to consider how best to use the allowable impacts over the entire population of potential anglers. An annual limit would allow more fish to be available to the more casual angler – a broader angler base. 10 Chinook should be more than adequate for personal use for most anglers. For larger families where 10 fish may not be enough there should be family members who could contribute additional fish to the family’s table.

3. Prioritize the use of limited allowable ESA impacts during summer seasons over winter seasons.

A review of the annual MSF WDFW reports consistently have shown that for a given level of impacts summer fisheries typically produce more angler trips and more hatchery adults harvested. In addition the summer period typical provides better weather and appeals to a broader group of anglers – increasing the angler base.

4. In at least one MA during the summer season require the use of “large profile lures”; that is a lure with 4 or 5 inch profile (without hooks) such as a plug.

A review of the co-manager 2017 draft co-manager plan indicated that for Stillaguamish Chinook approximately 2/3 of the recreational impacts occurred as “shaker mortality”. If method(s) can be found to reduce the numbers of shakers encountered longer recreational seasons with increased harvest of target hatchery fish could be achieved; see suggestion #3. My and other experienced anglers (including WDFW test fishers) have consistently noticed that for example fishing with plugs significantly reduce shaker encounters while still providing a reasonable opportunity for legal size fish. This suggestion is nothing more than the next iteration of selective fishing – that is adopting methods that maximize the harvest of target fish while minimizing the impacts on stocks of concerns.

Curt Kraemer  
Marysville, Washington  
Sent from [Mail](#) for Windows 10

**From:** [Tim Lewis](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 8:02:35 PM

---

Dear NOF Members,

I am a western Washington salmon angler. My recommendations for the 2019 season are as follows:

MA-9 Open for hatchery silver salmon July 15th to October 31st. Limit of 2 hatchery silver salmon. Release all wild silver salmon. Release all wild pink salmon. Release all wild chinook salmon.

MA-10 Open for hatchery silver salmon July 15th to October 31st. Limit of 2 hatchery silver salmon. Release all wild silver salmon. Release all wild pink salmon. Release all wild chinook salmon.

MA-8.2 Open for hatchery silver salmon August 15th to October 31st. Limit of 2 hatchery silver salmon. Release all wild silver salmon. Release all wild pink salmon. Release all wild chinook salmon.

Sincerely,

Tim Lewis  
Washington Resident Angler

**From:** [James Pacheco](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 26, 2019 5:35:01 PM

---

Greetings Commissioners

I strongly support the proposed change for minimum size on Chinook in area 13 from 22 inches down to 18 inches during July, August, and September. These are the months when many Chinook jacks head toward the Deschutes and Nisqually hatcheries. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. Currently we have to release these mature jacks which are mostly all surplus and sold for dog food. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. This rule change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time, providing a benefit to Washington anglers without affecting escapement goals. Please support this rule change.

Gratefully,  
James Pacheco  
orcafriend@yahoo.com

**From:** [Bill Macaras](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 28, 2019 9:25:36 AM

---

WDFW,

In 2017 a suggestion to open Area 11 to a two pole endorsement was submitted to WDFW. I very often fish by myself, probably about half the time I that I go out. The response I received indicated that two pole endorsement was not approved in 2016 because of an expected low return of coho in 2016. Here is the response:

"I am not sure if you are aware, but WDFW did propose a two-pole endorsement in Area 11 during the 2016 NOF but the poor coho runs essentially nixed any expansion as you may have noticed we had several significant closures that year. If we can get out of the poor coho runs (hopefully we see more improvement this year), then we have a better shot of adding more 2 pole areas."

I am not sure what occurred during the 2017 and 2018 NOF negotiations, but I again submitted a suggestion in 2018 to add two-pole endorsement in Area 11. As I recall, in 2018 both the coho and hatchery chinook returns were expected to be good, but it appears there wasn't any discussion to open Area 11 to two-pole endorsement.

This year, the coho returns are expected to be very good. As indicated in the 2017 response from WDFW, it appears this would be a good year to again bring up the idea of opening Area 11 to a two pole endorsement during the negotiations. It also appears the hatchery chinook return for 2019 is greater than the most recent 10 year average. So, both coho and chinook returns are expected to be better, to much better than average.

In another email from WDFW in 2017, I received the following: "WDFW has taken the cautious approach of added two-poles to areas with relatively low effort or catch rates to allow staff to monitor and evaluate the effects of using two poles." This comment was 2 years ago. Has the department completed it's evaluation of using two poles? In that same email, it was stated that two pole increases encounters of wild chinook by 11%. On my boat, I believe that number to be relatively accurate, maybe a bit high. I will add, that every wild fish that was caught on my boat, was returned very healthy. A recent study indicates that most fish released survive. The same can not be said for gill netting.

I request that Area 11 be opened to two-pole endorsement for the following reasons:

Allows for the angler to experiment with lure, color, scent, depth, attractor, etc  
Provides an opportunity to catch a fish (I rarely catch my limit when I fish). Like most recreational anglers, I am an occasional angler and not a professional and my catch rate and encounter is much lower than the test fishers.

There is value to the fishing community, angler and local businesses  
Most of the members of a fishing club I am a member, want the two-pole endorsement  
Fuel economy

Open Area 11 to two pole endorsement and study the impact. Adjust if necessary. If anything, allow two pole endorsement for the single angler in a boat.

Thank you,

Bill Macaras  
Lakebay, Wa.

**From:** [pearsonfr@comcast.net](mailto:pearsonfr@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Monday, March 25, 2019 10:21:28 AM

---

The Endangered Species Act lists Puget Sound chinook as “Endangered”. Efforts to recover those fish have not made significant progress in the last decade. It is time to take immediate action that can make a difference: stop chinook harvest in Puget Sound, both commercial and recreational. Especially after the recent release of the dismal return estimates by the WDFW, it would be criminal to ignore those facts, and harvest the very few returning adults. It is time for radical action. I had personally given up fishing for salmon and steelhead last year. The entire economy must follow suit, or we will have no fish in the very near future.

Larry Franks  
Issaquah, WA  
BS Fisheries (Salmonid Culture) UW 1979

**From:** [kaidius32@gmail.com](mailto:kaidius32@gmail.com)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 21, 2019 4:37:48 AM

---

With the increase in coho return I would love to see another season for 8-1 / 8-2 fisheries and at least a short pink season in the same areas. It really helps get kids out and interested in the fishing in Puget sound!

Sent from [Mail](#) for Windows 10



Virus-free. [www.avg.com](http://www.avg.com)

**From:** [M.Vekved](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 12:40:52 PM

---

The media and the scientists are making a compelling point. The orca are starving. Please give the orca the necessary salmon, the food they need to survive. If we are considering the sustainability of our Salish sea, our islands, our economy, and our community, the orcas should have an **allocation** just as the people do.

Thanks, Michel

**From:** [Jennifer Price](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Saturday, March 23, 2019 2:47:19 PM

---

Please do not open “catch and release” for charter boats. This is a waste of true fishing opportunities for other recreational boaters.

Please open catch and keep seasons, and those kept fish should be the only fish counted. Don't count the encounters.

Jennifer Price

**From:** [lanceye@comcast.net](mailto:lanceye@comcast.net)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Sunday, March 24, 2019 9:21:19 AM

---

Hi, I wanted to voice my disappointment over the way marine area 9 was managed last year. It opened on a Monday and then closed Sunday for an "evaluation" and then reopened the following Thursday through Sunday. How are people possibly supposed to plan for that? A lot of us plan our vacations around this fishery literally a year in advance because that's what you have to do to get accommodations. If it had closed because the quota was hit we would be fine with that, we know there aren't any guarantees. This fishery needs to be managed and updated in real time. Each day there should be a post on the website so that we know where we are with respect to the quota.

There was a group of people that showed up at their campsite on Friday who were booked until Wednesday. As they are setting up camp they get the email saying that their 5 day fishing trip is now only 2 days. And then on Tuesday they find out that it will open again the day after they leave. That is tough to take and doesn't need to happen.

I'm not asking for more fish or more time, all I'm asking is to let it run consecutive days until the quota is reached.

Thanks,  
Lance

**From:** [Jon Jennings](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Thursday, March 21, 2019 8:06:54 AM

---

I strongly support the proposed change for minimum size on chinook in area 13 from 22 inches down to 18 inches during July, August, and September. These chinook at this time at this size are mature adult chinook jacks that will be back into the Deschutes and Nisqually hatcheries within a week or two. Recent returns to these hatcheries have been on the order of 10,000 to 30,000 surplus chinook. The sport creel counts for July, August, and September total around 145 for the Luhr Beach, Zittels, and Boston Harbor boat launches combined. I estimate this change could allow the sport catch to double by allowing sport fishers to keep 100-200 adult jacks they have to release at this time. From what I have seen fishing, there are lots of disheartened and frustrated recreational fisherpersons. Because while opportunity technically exists due to the season being open, the reality is disappointing. Opening this area for jacks provides a reality where fishers are able to retain salmon when regulations are open. Thank you for your time.

Jon

**From:** [mglariviere@aol.com](mailto:mglariviere@aol.com)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Puget Sound marine area salmon seasons  
**Date:** Tuesday, March 19, 2019 1:25:02 PM

---

I am writing to submit a proposed regulation change for Area 13.

We have observed that the average size of mature Chinook returning to the south Sound has decreased in recent years and it is not uncommon for us to catch 18" to 21" adipose-clipped maturing Chinook in the late summer/early fall. These are not blackmouth but are maturing fish destined for the Deschutes, Nisqually or Minter Creek hatcheries. The current regulations do not allow us to keep these fish.

We would like to propose a regulation change for Marine Area 13 for sport fishermen to retain Chinook >18" during the period July - September annually. This proposal has the support of the Olympia chapter of Puget Sound Anglers and other sport fishermen that we have reached out to.

Mark LaRiviere  
Cell # (253) 381-9657

**From:** Elisabet Riya <elisabet.riya1414@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:17 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Re: North of Falcon

---

I respectfully ask that the Southern Resident orcas be given a seat at the table and be given consideration when allocation and decision management is made. Please don't let them go hungry.

Thank you and God bless.

On Tue, Apr 9, 2019, 9:15 PM Elisabet Riya <[elisabet.riya1414@gmail.com](mailto:elisabet.riya1414@gmail.com)> wrote:

I respectfully ask that the Southern Resident orcas be given 'a seat at the table' and be given consideration when allocation and decision management is made. Don't let them go hungry, please.

Thank you and God bless.

**From:** Jeanne Hyde <l41157@yahoo.com>  
**Sent:** Thursday, April 04, 2019 8:04 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** re: seat at the table for the Southern Resident Orcas

---

The Southern Resident orcas have inhabited these waters and fed on wild Chinook salmon for more years than anyone knows. Yet, when allocation for the fish began, the orcas did not have a say. No one has represented them.

For many years now, the Southern Resident orcas have been giving the humans the information regarding the lack of salmon, but evidently they were discounted or not even considered. However, they are a community that is part of this ecosystem and need to be 'listened to'.

Please, it's time for them to be included and have a 'seat at the table' when allocations and management decisions are made.

Sincerely,

Jeanne Hyde  
Friday Harbor, WA

**From:** Teresa Stokes <tlstokespoetry@gmail.com>  
**Sent:** Thursday, April 11, 2019 4:18 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Regarding Allocation of Salmon & Other Fish Resources

---

I grew up on Fox Island, in the south Puget Sound. Recently with the growing research and data on the critically endangered Southern Resident Orcas, and the endangered Chinook Salmon, I hope you will consider greatly reducing the number of fish allocated across the board. To fix a broken system, we need to help it rebalance and become abundant once more. We must not drain any fish resources at this time. We can all step back and allow nature to replenish itself. Please consider the starving orcas first, before any human allocation for now.

Thank you for considering my comments. May you make wise decisions that our children and our children's children will be proud you made.

Respectfully,

Teresa Stokes

**From:** Stacey Hansen <renegadefox@icloud.com>  
**Sent:** Friday, April 05, 2019 4:24 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Regarding the southern resident orcas

---

Please consider allowing more salmon for the southern resident orcas

Sent from my iPhone

**From:** Vera Wieland <glasslass50@gmail.com>  
**Sent:** Saturday, April 06, 2019 8:56 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Remember the Orcas!

---

Please make sure that the Southern Resident Orcas are "given a seat at the table" during the allocation process. They should NOT be ignored!!!! Thank you from Vera Wieland

**From:** Sandy Carlsen <clarysandy@gmail.com>  
**Sent:** Saturday, April 13, 2019 9:14 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Response

---

I would like to suggest that you divide area nine into an area 9a and 9b with the dividing line from Foul Weather Bluff across to Double Bluff, this would allow you to better manage numbers of Chinook and Coho going into Hood Cana and past this line around the lower end of Whidbey Island and towards the lower Sound. You could alternate openings in these two areas to allow fisherman to have a place to go and at the same time allow fish passage. Example 9a open for 1 or 2wks then 9b open for 1 or 2wks then back to 9a for a week then 9b for a week etc. I have never understood why this Puget Sound area that is so important for fish passage into the canal overlaps with passage beyond and is not divided.

Thank You Clary Carlsen

**From:** Michelle Secord <michellesecord@gmail.com>  
**Sent:** Monday, April 08, 2019 2:34 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon allocation

---

Please allow enough Chinook Salmon to be allocated to the Southern resident Orcas so they dont starve-to death ! Have mercy!

Sent from my iPhone

**From:** Pamela Lorca <pamelitalorca@hotmail.com>  
**Sent:** Monday, April 08, 2019 2:25 PM  
**To:** NorthhofFalcon (DFW)  
**Subject:** Salmon allocations

---

When allocations and management decisions are being made I ardently urge your team to consider the great Southern Resident orcas and give them a seat at the table. They rely on salmon as their main food source and these decisions determine their survivability. We have a responsibility to be stewards for our Earth and all living creatures.

Pamela Casanova Lorca

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**From:** Cyndie-Lea Wang <cyndielea@hotmail.com>  
**Sent:** Monday, April 08, 2019 8:47 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon for Orcas

---

To those involved in the North Falcon process I humbly ask that you please give Southern Resident orcas "a seat at the table" that they be taken into consideration when allocations and management decisions are made.

Thank you,  
Cyndie-Lea Wang

**From:** [OnBoard Tours](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Salmon for SRKW  
**Date:** Tuesday, March 26, 2019 6:51:51 PM

---

Please consider collaborating and addressing fisheries and management impacts on prey availability for endangered, species in the spotlight, starving Southern Resident killer whales (SRKW).

Please consider establishing terminal fishing, including tribal knowledge, for restoration, recovery, and sustainable commercial fisheries.

Chinook salmon are 80% of the diet of SRKW. In the past 30 years the average Chinook salmon has become smaller by all our human impacts. Southern Resident killer whales need ~300 lbs. of salmon per day to survive. If a Chinook salmon weighs 15 lbs., each SRKW need 20 salmon per day.  
 $SRKW\ 75 \times 20\ salmon \times 365 = 547,500\ salmon\ needed\ per\ year.$

NOAA has historically allocated prey for endangered species, such as salmon allocated for St Lawrence Beluga whales.

Southern Resident killer whales need a seat at the management table, they need a share of salmon to survive. Please allocate salmon for SRKW.

Thank you for your consideration, I hope sustainable changes actually happen.

Sincerely,  
Caroline Armon  
Marine Ecology Educator

[Sent from Yahoo Mail on Android](#)

**From:** Christine Balcom <beesnblossoms@live.com>  
**Sent:** Sunday, April 14, 2019 12:31 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon Harvest Allocation

---

Please consider and include our southern resident Orca's during the current allocation as they are directly impacted by these numbers and in dire need of our help.

Thank you,  
Christine Balcom

**From:** Shayna McCagg <shayna.mccagg@gmail.com>  
**Sent:** Monday, April 08, 2019 10:08 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Salmon

---

Hello,

Are we 100% positive that we are making the best decisions for our future food supply and ecosystems? As the people with this important responsibility, I have my confidence in you to make these informed decisions.

As a registered dietitian, I am faced with similar questions each day ie. what am I doing to improve things and make them right again?

As you know, there are many issues with our food system. Each a result of past decisions, perhaps influenced by various motives. Some will take decades to reverse. However, together we can change the norm, starting with our next decision.

Thank you for being the people to look at the bigger picture and make the right decision for the world.

Respectfully,

Shayna Huang, RD.

**From:** Katie Jones <orcan1281@yahoo.com>  
**Sent:** Friday, April 05, 2019 1:58 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer Whale Salmon Allocation

---

To Whom it May Concern:

I am writing on behalf of the endangered Southern Resident killer whale (SRKW) population. This very special population of orcas has graced the news a lot lately and not for good reasons. They are dying. Their population is very critically endangered and down to 75 individuals primarily because of a lack of their preferred prey: Chinook salmon. Chinook salmon make up about 80% of the SRKW diet.

I am respectfully asking that a salmon allocation be considered for Southern Resident killer whales. According to the Center for Whale Research, an adult SRKW can consume 200-450 pounds of salmon per day. Based on this estimate, they must catch 18-25 adult salmon per day (depending on the size of the salmon). This estimate works out to be approximately 1,400 salmon per day for the population (approximately 1/2 million salmon per year) for the population to maintain their current numbers. More than that would be needed for the population to grow.

Please help this iconic, invaluable species escape extinction - please consider a salmon allocation for Southern Resident killer whales.

Respectfully,  
Katie Jones

**From:** Jessica Huie <jlhuie9@gmail.com>  
**Sent:** Monday, April 08, 2019 12:32 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer Whales

---

On behalf of the Southern Resident Killer Whales, please give the starving SRKW a seat at the table when considering salmon allocations.

Thank you,  
Jessica Huie

**From:** Alison Engle <whalespirit@rockisland.com>  
**Sent:** Saturday, April 06, 2019 2:35 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer Whales Salmon Allocation

---

Dear North of Falcon representatives.

Please consider the Southern Resident Killer Whales when making your fish allocations and management decisions. This population of Orcas is on the brink of extinction and science shows that plentiful Salmon is what they need most. You can make a difference by giving them a seat at the table.

Thank you for your time and consideration.

Respectfully,  
Alison Engle

Alison Engle  
PO Box 3327  
Friday Harbor, WA 98250  
360-378-1840  
[whalespirit@rockisland.com](mailto:whalespirit@rockisland.com)

**From:** Kelly Shepard <kellyshepard82@gmail.com>  
**Sent:** Monday, April 08, 2019 9:35 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Killer whales

---

To whom it may concern:

Please give the southern resident Orcas a seat at your table when discussing purposed salmon fishing for 2019. The southern residents are starving to death and need every extra chinook salmon available to survive.

Thank you,  
Kelly Shepard

**From:** ojenna1 <ojenna1@gmail.com>  
**Sent:** Monday, April 08, 2019 7:28 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orca Salmon Allocations

---

I'm a Washington Resident who is politely asking for the numbers of salmon to the Southern Resident Orcas be increased.

These whales have been on my radar since I first saw them in the early 1990's. Things have changed for them and they desperately need our help. They do not have enough salmon and have been/are starving to death from malnutrition.

Please help them. They are unique pods of Orcas that are not found in this tight matriarchal group anywhere else in the world. We must do what we can to save them and increase their numbers.

Not doing so will be something we will regret. Let's please not let these pods go extinct.

Sincerely,

Jenna Flynn

Sent from my iPhone

**From:** Christina Mullee <christinamullee@icloud.com>  
**Sent:** Saturday, April 06, 2019 6:38 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern resident orcas

---

Please allocate the proper amount of fish for the starving southern resident orcas.  
We need to not let them go extinct, they are a very important part of the eco system.  
Thank you for your time.

Christina Mullee

Sent from my iPad

**From:** Mercedes benz <mercy2uandu@hotmail.com>  
**Sent:** Monday, April 08, 2019 3:06 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern resident orcas

---

To whom it may concern,  
I just wanted to send a quick message asking that the Southern resident orcas be taken into consideration when you are reviewing allocations and management decisions.  
Thankyou for your time,  
Peta Little

**From:** Stefan Roberts <stefanr@hotmail.co.uk>  
**Sent:** Tuesday, April 09, 2019 12:03 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Dear North Of Falcon,  
I hope you are well.

I understand that you are currently revisiting Northwests recreational and commercial salmon fisheries to make allocation arrangements.

Please, please, consider the impact this is having on Southern Resident Orcas. If there are no salmon left, they will simply just die out.

I am a resident of the UK, and I have visited Washington, stayed in Seattle and visited and spent time on the San Juan Islands. An area of natural beauty. I got to see these beautiful Orcas living in their natural environments, the way nature should be.

The number of salmon being caught for human consumption is too high, leaving little food for these Orcas. They need this, we don't.

I kindly ask that you please continue to consider this.

Thank you for your time.

Best wishes,  
Stefan Roberts

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**From:** C.McConnell <claudia27g@gmail.com>  
**Sent:** Tuesday, April 09, 2019 2:32 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas!

---

Please save our Southern Resident Orcas from extinction. This is the power you have and the legacy you will leave behind during your lifetime.

Sincerely,

Claudia McConnell  
1909 North Lake Ave  
Snohomish, Wa 98290

**From:** Iris deV <irisdevoogd@gmail.com>  
**Sent:** Monday, April 08, 2019 9:46 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern resident Orcas and salmon quota allocation

---

Dear Sir, Madam,

With an eye to the survival and thriving of the Southern Resident orcas, I respectfully ask that they be 'given a seat at the table' and their needs be taken into consideration as you allocate salmon fishing quotas in the North of Falcon process.

Respectfully yours,  
Iris de Voogd  
Amsterdam  
The Netherlands

**From:** Carla DeCrona <cdecrona@icloud.com>  
**Sent:** Monday, April 08, 2019 10:18 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

To the state, federal and tribal fishery managers at the North of Falcon meetings,

I am writing to ask that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made during the 2019 North of Falcon meetings, and during annual conversations of the North of Falcon process.

Thank you,

Carla Decrona  
11933 SW Cove Rd  
Vashon, WA 98070

**From:** Colleen Moore <colleenmoorewa@gmail.com>  
**Sent:** Friday, April 05, 2019 10:19 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Please give Southern Resident orcas "a seat at the table" and take them into consideration when allocations and management decisions are made.

Sincerely,  
Colleen Moore

**From:** Jenna Thornber <jennapcd@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:24 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas Deserve Fish Quota

---

Hello there,

I hope this message finds you well, I want to express that this is the year to finally include the Southern Resident Killer Whales in the dialogue of fish quotas so that they can survive and revive their population.

Please take the southern resident killer whales into consideration when allocations and management decisions are made during the North of Falcon Process.

Thank you,

Jenna Thornber

**From:** Donna <goldentd128@gmail.com>  
**Sent:** Monday, April 08, 2019 10:21 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

I am writing on behalf of the Southern Resident orcas that desperately need more salmon in order to survive and avoid extinction. Please limit the catch allotments so they will find enough food to survive. Human greed is sad thing and it's hurting our planet and it's beautiful wildlife everywhere. The orcas are loved worldwide and they are the absolute symbol of the Pacific NW. It would be a serious travesty to allow them to go extinct. Each of the Southern Resident orcas has a name and is personally known and loved. The balance of the ocean is seriously out of whack when there is not enough salmon to feed a handful - a mere 75 - whales. Thank you for listening.

Donna George

Sent from my iPhone

**From:** Tisa A <tisa.agloro@gmail.com>  
**Sent:** Friday, April 05, 2019 2:22 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Hello,

I recently became aware of the North of Falcon process and really think that the Southern Resident orcas be taken into consideration when allocations and management decisions are made. It is just too important of an issue right now while we potentially have a chance to fix. I have personally seen a lot of the impact that commercial, recreational, and tribal fishing has had on the salmon populations.

Thanks for your consideration,  
~ Tisa Agloro

**From:** cormierbernadette <cormierbernadette@yahoo.com>  
**Sent:** Wednesday, April 10, 2019 2:31 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Resident Orcas

---

Simply and respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

Thank you,

Bernadette Cormier

**From:** Monika Wieland <monika.wieland@gmail.com>  
**Sent:** Friday, April 05, 2019 2:49 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Residents and North of Falcon

---

To Whom It May Concern:

I'm writing to respectfully request that you consider the needs of the critically endangered Southern Resident killer whales when assigning fisheries allocations for the 2019 season and beyond. It is well known that the main issue facing these whales is lack of food, and one of the only things we can do that will have an immediate impact to benefit them is to leave more fish in the water and ensure they get a seat at the table when dividing up the fisheries management "pie". Fishermen and orcas have long co-existed, and it is my fervent wish that they will continue to do so for many generations to come.

Thanks for your consideration,

Monika Wieland Shields

President, Orca Behavior Institute

San Juan Island, Washington

**From:** jjohnstonrn@rockisland.com  
**Sent:** Monday, April 08, 2019 12:56 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Southern Residents

---

Please give our orcas a seat at the table this year. Thank you!

**From:** seversoningrid@gmail.com  
**Sent:** Monday, April 08, 2019 5:38 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW

---

Please allow the Southern Resident orca to have a seat at the table .

Thank you

Ingrid Severson

Sent from my iPad

**From:** Cy Scammell <cyscammell@yahoo.com>  
**Sent:** Saturday, April 06, 2019 12:45 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW Allocation

---

North of Falcon,

Please allocate at least 500K chinook salmon for our SRKW for 2019. It's the only way they will be able to survive.

Cy Scammell  
[www.pnwprotectors.com](http://www.pnwprotectors.com)

Sent from my iPhone

**From:** Teresa Brown <downtownteresa@gmail.com>  
**Sent:** Saturday, April 06, 2019 8:49 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW

---

Hello,

- I'm writing to you today to ask that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made in regard to chinook salmon as their lives depend on it. Thank you for your time,
- Teresa Young
- 801-420-7980

Sent from [Mail](#) for Windows 10

**From:** S Tuck <susantuck01@gmail.com>  
**Sent:** Tuesday, April 09, 2019 7:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKW

---

Good morning,

This letter is to ask and plead with you and your committee members to please learn and understand how much salmon each southern resident orca needs to thrive. We have driven this critically endangered species to a point of possible extinction. I have given up eating salmon as have my family. It means this much to me to give my portions to the southern resident killer whales. This is their lifeline. Please consider their needs and give them double seats at the table when considering allowed fishing amounts. I also would prefer if there was a guideline of no net fishing. Too much harm and bycatch is coming to marine life due to these nets. Short line and pole fishing is the desired form to catch fish as far as I am concerned. I pay the extra dollar or so a can for my tuna this way. The southern resident are a different type of killer whale. They are an icon. Let's help them stick around!!

Wholeheartedly,

Susan Tuck  
Of Georgia, us

**From:** Anne Dalrymple <darkover@me.com>  
**Sent:** Tuesday, April 09, 2019 11:23 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKWs and salmon - North of Falcon process and allocation

---

Hello -

I was a volunteer at People for Puget Sound in the early 2000 in order to work to protect our orcas. We have even fewer now.

They are starving and we are seeing the end of our J, K and L pods unless dramatic rescue action is taken.

Please give our Southern Resident orcas a "seat at the table" and be taken into consideration when allocations and management decisions are made re salmon.

Thank you - Anne Dalrymple

Seattle WA 98115

—  
What is North of Falcon?

Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational & commercial salmon fisheries. This series of meetings – involving representatives from federal, state and tribal governments & recreational & commercial fishing industries – is known as the North of Falcon process. This process is folded into the Pacific Fisheries Management Council, which oversees fishing in the Pacific Coast region.

The North of Falcon process integrates management of ocean fisheries between Cape Falcon (on the north Oregon coast) and the Canadian border, including fisheries in the Columbia River, Puget Sound, & inland Washington coastal waters. Columbia River fisheries are a significant component of the North of Falcon process.

In this public process, there are allocation agreements reached between Oregon and Washington ocean and freshwater commercial and sport fisheries, as well as mandated allocation agreements between the states and treaty Indian tribes.

Historically the orcas have not had a seat at the table during these talks or been given a harvest allocation. With the steady decline of the SRKW population due to diminishing prey abundance, fisheries managers have become aware of the need to include the SRKWs in the dialogue. The needs of the whales have been discussed on several occasions throughout the 2019 North of Falcon process, and it is vital to ensure this conversation continues.

◆ You can help by respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

**From:** Melissa Borden <inrpeas4meb@yahoo.com>  
**Sent:** Friday, April 05, 2019 6:07 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKWs given a seat at the table

---

Hello,

I am respectfully asking that the Southern Resident orcas be "given a seat at the table" and be taken into consideration when allocations and management decisions are made.

Thank You,  
Melissa Borden

**From:** Amy Eberling <anorman2@gmail.com>  
**Sent:** Friday, April 05, 2019 10:00 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** SRKWs

---

To Whom it May Concern,

The SRKWs deserve a seat at the table. I hope that the decision in mid-April will reflect this.

Thank you for looking out for a very special ecotype that deserves every last chance and fish it can find.

Best,

Amy Eberling

Include in NOF public  
comment

WA FISH AND WILDLIFE COMMISSION TESTIMONY. Mar. 2, 2019. Steve Mathews.  
[sbmathews38@yahoo.com](mailto:sbmathews38@yahoo.com).

**The present fishing mortality regime on chinook salmon is unsustainable. The effort at times is too much; the seasons are too long; the gear is too powerful; the by-catch mortality of little ones is too great. If fishing were closed for 10 years and then re-set, a more rational chinook salmon fishing regime might look like this:**

NO YEAR ROUND FISHING- summers only on mature (end of life) chinook salmon.

NO CATCH AND RELEASE- for either sport or commercial; (chinook salmon are not trout in a stream).

Annual, individual sport catch quotas in numbers; enforced by electronic (I-phone) reporting.

Commercial quotas by gear type; 100% observer coverage; electronic, real-time monitoring.

NO MINIMUM-SIZE LIMITS- because throwbacks would be illegal.

NO SPAWNING GROUND FISHING- all stream spawning sections closed for the spawning season.

NO NATURAL BAITS- herring, shrimp, or salmon eggs; (dogfish, rockfish, sturgeon swallow these too).

NO TREBLE HOOKS- single barbless everywhere; (lures with three, barbed treble hooks are still legal).

NO FLASHERS, NO HOOTCHIES- only large plugs, spoons, jigs, spinners, etc.

NO UNLIMITED-DEPTH COMMERCIAL NETS- the redundant web in the water kills other marine life too.

NO NIGHTTIME GILLNETTING- chinooks come up at night; the other salmon can be caught all day long.

NO TOWING ON OPENED PURSE SEINES- target species can be caught without "trawling".

#### **WHAT ELSE WOULD GO AWAY?**

BY-CATCH- of small, immature chinook; that elephant in the room would tend to vanish.

WASTAGE- of small, dead but edible chinook salmon.

MASS MARKING- that expensive, suspect program needs evaluation by a blue ribbon science panel.

RECOVERY BOXES- that unnecessary plumbing is mostly for show.

CONTROVERSIAL "HOOKING MORTALITY" STUDIES- let's stop debating that problematic science.

SPECIAL RULES- like different sport landing rules for boats over and under 30 feet.

HATCHERY SURPLUSES- there would be none if carcasses above reproductive needs were distributed throughout each river for fertilization.

**The current fishing regime is driven by THE NEEDS OF THE FISHERMEN not THE NEEDS OF THE FISH. The alternative would self-correct fishing abuses, and also provide better fishing mortality data.**

**From:** [george.ging](#)  
**To:** [NorthofFalcon \(DFW\)](#)  
**Subject:** Support for changing size limit of chinook salmon in Area 13 from 22" to 18" during July through September  
**Date:** Friday, March 22, 2019 11:40:32 AM

---

Fishing opportunities in Marine Area 13 are limited and there is an opportunity to allow some additional harvest of chinook jacks that are not needed for hatchery production. It makes sense to allow fishers to keep returning adult chinook jacks (18" to 22") that would otherwise return to the hatchery and be surplus, i.e., sold for dog food. My license fees in part go toward the production of hatchery fish, and recreational fishers should get the benefit of these fish, and not used for pet food.

Gwill Ging

**From:** Colleen Weiler <colleen.weiler@whales.org>  
**Sent:** Friday, April 12, 2019 1:28 PM  
**To:** NorthofFalcon (DFW)  
**Subject:** Puget Sound marine area salmon seasons  
**Attachments:** WDC North of Falcon letter April 2019.pdf

---

Please accept the attached letter from Whale and Dolphin Conservation (WDC) for input into planning the marine area salmon seasons in 2019.

Thank you,  
-Colleen

**Colleen Weiler**  
WDC Fellow, Rekos Fellowship for Orca Conservation

Telephone: +1 508 746 2522  
Mobile: +1 810 813 1643  
Skype: cmweiler

WDC, Whale and Dolphin Conservation  
7 Nelson Street  
Plymouth  
MA  
02360-4044  
United States  
[whales.org](http://whales.org)



***Sign our Pledge Never to Plunge with the forgotten whales and dolphins***

---

**Whale and Dolphin Conservation ("WDC"), Inc.** is an IRS recognized 501(c)3 non-profit organization. Your contributions are tax deductible to the fullest extent of the law.

**WDC**, 7 Nelson Street, Plymouth, MA 02360-4044 Tel: +1 (508) 746-2522

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Washington Department of Fish and Wildlife  
Director Kelly Susewind  
Natural Resources Building  
1111 Washington St. SE  
Olympia, WA 98501  
Submitted via email to: [NorthofFalcon@dfw.wa.gov](mailto:NorthofFalcon@dfw.wa.gov)

April 12, 2019

Dear Director Susewind,

Whale and Dolphin Conservation (WDC) is the leading global charity dedicated to the protection of whales and dolphins worldwide. On behalf of WDC and our thousands of supporters in Washington State, as well as many more across the United States and internationally who are concerned with the survival of the critically endangered Southern Resident orca community, we respectfully submit these comments regarding salmon management decisions for 2019.

We urge the Washington Department of Fish and Wildlife (WDFW) to incorporate additional protection for Southern Resident orca foraging opportunities into their decisions for the upcoming salmon season, and to explore ways in which management measures can protect both Southern Resident orcas and critical salmon stocks.

According to WDFW's pre-season forecasts, specific Chinook salmon runs returning to the Stillaguamish and Nooksack rivers, Hood Canal, and Lake Washington are the most critical stocks for 2019, and will be limiting factors for harvest and fishing activities in areas where these stocks have high rates of incidental catch. We encourage WDFW to combine management measures that protect these stocks with approaches that also maximize foraging opportunities for the Southern Resident orcas.

For example, Stillaguamish summer/fall Chinook have high catch rates in Marine Areas 5 and 7 in July through September, a time that Southern Resident orcas are likely to be around the San Juan Islands (Marine Area 7) and in and out of the Strait of Juan de Fuca (includes Marine Area 5). Closing or limiting fishing for Chinook salmon in these areas during this time period can protect returning Stillaguamish Chinook and leave more salmon available for Southern Resident orcas in their core summer habitat.

All the options considered by WDFW in its North of Falcon planning process, prior to the Pacific Fisheries Management Council (PFMC) meeting which is currently underway, failed to meet the Exploitation Rate (ER) ceiling established for Stillaguamish summer/fall Chinook, and additional actions will be necessary to protect this vulnerable stock. We urge WDFW to incorporate the potential presence of Southern Resident orcas into those management decisions to maximize the protection of both orcas and salmon.

Stillaguamish summer/fall Chinook are included in the Northern Puget Sound fall Chinook group of the National Marine Fisheries Service/WDFW Southern Resident orca priority Chinook stock list, and is in fact given the top rating, reflecting the importance of these salmon runs to the orcas. Other salmon stocks of special concern for 2019 are also in the top ten for orca priority stocks, including Southern Puget Sound (Hood Canal) and Northern Puget Sound spring Chinook (Nooksack).

Nooksack spring Chinook have high catch rates in Marine Area 7 in October-April. The Southern Residents historically start to return to this area in April, and J pod has already been seen around the San Juan Islands this spring. Management measures in Marine Area 7 during this early spring period could protect both at-risk Nooksack spring Chinook and maximize Southern Resident orca foraging opportunities as the orcas come back into the Salish Sea from their winter foraging grounds.

We recognize that salmon have declined throughout the Pacific Northwest due to a number of reasons, and we support efforts to rebuild depleted populations through habitat protection and restoration, reconnecting watersheds, and reducing contaminants. However, all of these actions take time to result in benefits to salmon and orcas. The most immediate action the agency can take to increase currently available prey for Southern Resident orcas is implementing fishery management measures that give the orcas the best chance to forage on available salmon throughout their range. Combining these actions with measures that protect critical salmon stocks



will maintain fishing opportunities while also allowing critical salmon runs a chance to rebuild and reducing direct competition with orcas in historic foraging areas – measures can serve a dual purpose of protecting both salmon and the Southern Residents.

Salmon returning to the Fraser River in British Columbia and to rivers throughout Puget Sound comprise the majority of the Southern Residents' diet when they are present in the Salish Sea region of their range – typically spring through fall or early winter. Many of these salmon runs are also declining or at-risk, and are in need of additional precautionary measures to ensure their survival in marine area harvest activities.

WDFW has an opportunity to protect both orcas and salmon with targeted, area-based management that reduces catch rates for critical wild salmon stocks and gives Southern Resident orcas an opportunity to find available salmon in historic foraging areas. We urge WDFW to take advantage of this opportunity and enact combined management measures in 2019 for the protection of both of these iconic species.

Thank you for the opportunity to provide comments on the North of Falcon process, and please do not hesitate to reach out with additional questions.

Regards,



Colleen Weiler  
Jessica Rekos Fellow  
Whale and Dolphin Conservation

WHALE AND  
DOLPHIN  
CONSERVATION



**From:** Lora Frost <frost.lora@gmail.com>  
**Sent:** Saturday, April 06, 2019 4:38 AM  
**To:** NorthofFalcon (DFW)  
**Subject:** Whales and fishing

---

Hello,

As you may be aware, the southern pod of Orcas are declining. One of the reasons is not being able to get enough salmon.

I am writing today to request that the food needs of the orcas be considered when you make the decision on fishing allocation and management.

Thank you for your consideration,

Lora Frost

SECTION 3 PUBLIC COMMENTS RULES COORDINATOR  
COMMENTS

This is a comment on the regulations from the 2019 North of Falcon (NOF) Rules-Recreational Fishing for the Stillaguamish river system, mainly the Main stem and the North Fork. These rules totally miss the requirement of a balanced share of the fishery for Native and Non-native fishers on the Stillaguamish system. The NOF policy C-3608 only addresses salmon. Nowhere does it mention trout or any gamefish. Protecting the salmon on the river is one thing but closing the river to other fisheries is wrong. I have fished the Stillaguamish system for over 40 years and have never caught a salmon unless targeting them. I am a fly fisher and on the North Fork fly fishing is only allowed and salmon fishing has always been closed. If I see anyone targeting salmon, I tell them that no salmon can be caught on the North Fork or I call the WDFW to report poaching. Other fly fishers I know do the same thing. The poaching people are usually the locals and they use any gear to take the salmon. Without fly fishers on the river until September 16, they will have a free hand to take all the salmon they want with no one to stop them. WDFW does not have enough people to cover the waters remote from highway 530. The regulations should return to the old dates, Saturday before Memorial day to November 30, with just restrictions on the taking or targeting of salmon or gear if required to protect the salmon.

I know the returns of salmon are forecast to be low this year, again. But nowhere have I seen the reason to keep fishers off the Stillaguamish. What is the harm that fishing for trout or gamefish is doing to the salmon? The impact on salmon populations by fishers has never been given.

I belong to the Everett Fly Fishing Club and the North Fork of the Stillaguamish we considered to be our home waters. We clean up the North Fork for litter and have a monument at Hazel to tell people about the river. We have also posted signs along the river reminding people about the fishing seasons. Our club and individual members have submitted proposed regulations and comments in 2017 and 2018 as to how the fishing season should be on the Stillaguamish system with no response in the regulations. We have just received platitudes from some WDFW staff. Below is part of the letter our club sent to WDFW.

#### Letter

We are as committed as you are to the restoration of endangered fish runs, such as the native Stillaguamish Chinook. What we find exasperating is that this closure does nothing to protect the Chinook run. Fly fisherman on the Stilly, using small barbless flies, are targeting steelhead in the Summer and cutthroat trout in the Fall. These are valued, high-quality fisheries. Steelhead and cutthroat typically hold in different parts of the river than salmon. Numerous studies and the best available science have shown that when a fish species (e.g. Chinook) is not targeted, the incidental catch is negligible. Fly fisherman in the EFFC, having multiple decades of experience fishing the NF Stilly in the Summer and Fall, report rarely having hooked a Chinook. The EFFC considers the NF Stillaguamish River as one of our "home waters" and has a long advocacy history for the river and its wild salmonids. That advocacy extends beyond just fishing; including annual river cleanup of trash, taking part in the Festival of the River, placing signage informing

anglers of the regulations, and taking part in a variety of other forums such as the Stillaguamish Watershed Council.

The Stillaguamish is no longer a healthy river due in large part to a variety of habitat issues. Until serious steps are taken to improve Stillaguamish River habitat, there will not be a significant increase in the river's Chinook run. Period. In a recent Marysville Globe article (Habitat Key for Salmon, Orcas), Lorraine Loomis, Chair of the Northwest Indian Fisheries Commission, points out: "we have cut salmon harvest 80-90% over the past 4 decades, but that hasn't solved the problem."

Clearly, this is a dire situation for the Chinook run in the Stilly. But, let's not make the situation even worse by unnecessarily eliminating an unrelated fishing opportunity. Of all user groups, it is fishermen who really appreciate the importance of protecting fish runs. If you continue with this ineffective river closure policy, you will alienate an important user group and lose its support.

Recent discussions between Stillaguamish Tribal staff and EFFC members focused on basin-wide habitat problems but also identified several enforcement concerns. Those concerns included a lack of enforcement of regulation compliance and poaching, especially "hardcore" poaching. We encourage WDFW, the Stillaguamish Tribe, and other regulatory agencies to work together jointly to achieve both compliance with existing rules and full prosecution of violations. We remain convinced that having fishermen on the river serving as "eyes and ears" are an important part of enforcement efforts and we are fully committed to assist with co-manager joint efforts to strength enforcement and prosecution.

In summary, we truly feel that this river closure policy does absolutely nothing to protect the Stilly Chinook run. The closure alienates fisherman, and could further jeopardize the survival of the run. We strongly encourage you to re-evaluate this misguided policy. While this letter is critical of your current policy, we assure you that we would like to be of help addressing this issue. How can we work together to achieve the common goal of returning to historical

Submitted by Ron Pera

**Lee, Jamie C (DFW)**

---

**From:** Rules Coordinator (DFW)  
**Subject:** FW: Fishing license

-----Original Message-----

From: Leslie Pederson <freespool7@gmail.com>  
Sent: Tuesday, June 11, 2019 12:20 PM  
To: Rules Coordinator (DFW) <Rules.Coordinator@dfw.wa.gov>  
Subject: Fishing license

Change it back to Jan 1st and and promote iPhone use of buying fishing license etc. and reporting fish catches online . This will give north of falcon process actual fish counts from the past year as now it's two years back - actually I think it's pretty damn stupid the way it is now period . Does anybody get it ? It's pretty stupid to have it on April 1st thanks

**Lee, Jamie C (DFW)**

---

**From:** Rules Coordinator (DFW)  
**Subject:** FW: North of Falcon decision to close NF Stillaquamish

**From:** james mallonee <malloneejs@gmail.com>  
**Sent:** Tuesday, June 4, 2019 4:36 PM

**To:** Rules Coordinator (DFW)  
<Rules.Coordinator@dfw.wa.gov>  
**Subject:** North of Falcon decision to close NF Stillaquamish

Enclosed is the letter previously sent regarding this issue by the Evergreen Fly Fishing Club

As A Board member of EFFC, I would urge you to review and reverse this recent decision for the reasons cited

Thank you for your further consideration

James Mallonee  
Vice President of Programs  
Evergreen Fly Fishing Club

February 21, 2019

WDFW Commissioners:

The Evergreen Fly Fishing Club (EFFC), and the organizations listed below, are **sending** this letter out of grave concern for the recent North of Falcon decision to close the NF Stillaguamish last Summer and Fall. This is the second consecutive year for such a fishing closure. We are very concerned that this situation will become the “new normal.” Once a river is closed for multiple years, it becomes more and more difficult to get it re-opened for fishing in future years.

We are as committed as you are to the restoration of endangered fish runs, such as the native Stillaguamish Chinook. What we find exasperating is that this closure does nothing to protect the Chinook run. Fly fisherman on the Stilly, using small barbless flies, are targeting steelhead in the Summer and cutthroat trout in the Fall. These are valued, high-quality fisheries. Steelhead and cutthroat typically hold in different parts of the river than salmon. Numerous studies and the best available science have shown that when a fish species (e.g. Chinook) is not targeted, the incidental catch is negligible. Fly fisherman in the EFFC, having multiple decades of experience fishing the NF Stilly in the Summer and Fall, report rarely having hooked a Chinook. The EFFC considers the NF Stillaguamish River as one of our “home waters” and has a long advocacy history for the river and its wild salmonids. That advocacy extends beyond just fishing; including annual river cleanup of trash, taking part in the Festival of the River, placing signage informing anglers of the regulations, and taking part in a variety of other forums such as the Stillaguamish Watershed Council.

The Stillaguamish is no longer a healthy river due in large part to a variety of habitat issues. Until serious steps are taken to improve Stillaguamish River habitat, there will not be a significant increase

in the river's Chinook run. Period. In a recent Marysville Globe article (Habitat Key for Salmon, Orcas), Lorraine Loomis, Chair of the Northwest Indian Fisheries Commission, points out: "we have cut salmon harvest 80-90% over the past 4 decades, but that hasn't solved the problem."

Clearly, this is a dire situation for the Chinook run in the Stilly. But, let's not make the situation even worse by unnecessarily eliminating an unrelated fishing opportunity. Of all user groups, it is fishermen who really appreciate the importance of protecting fish runs. If you continue with this ineffective river closure policy, you will alienate an important user group and lose its support.

Recent discussions between Stillaguamish Tribal staff and EFFC members focused on basin-wide habitat problems but also identified several enforcement concerns. Those concerns included a lack of enforcement of regulation compliance and poaching, especially "hardcore" poaching. We encourage [WDFW](#), the Stillaguamish Tribe, and other regulatory agencies to work together jointly to achieve both compliance with existing rules and full prosecution of violations. We remain convinced that having fishermen on the river serving as "eyes and ears" are an important part of enforcement efforts and we are fully committed to assist with co-manager joint efforts to strength enforcement and prosecution.

In summary, we truly feel that this river closure policy does absolutely nothing to protect the Stilly Chinook run. The closure alienates fisherman, and could further jeopardize the survival of the run. We strongly encourage you to re-evaluate this misguided policy. While this [letter](#) is critical of your current policy, we assure you that we would like to be of help addressing this issue. How can we work together to achieve the common goal of returning to historical gamefish seasons?

Sincerely,

Conservation Committee

The Evergreen Fly Fishing Club Supporting Organizations:

Stillaguamish Watershed Council

Federation of Fly Fishers International (FFI) Washington State Council Washington Fly Fishing Club  
Northwest Fly Anglers (Michael Olson president) Pacific Fly Fishers

Confluence Fly Shop

Addendum: Additional Supporting Information:

As part of the NOF process, the various in-river recreational fisheries including the game fish fisheries impact on the ESA listed Chinook are input into the model. Given the uncertainty around the game fish impacts, the co-managers have consistently agreed to impacts that we argue are too liberal; i.e. the impacts are over-estimated. We are fine with that approach as it places the burden on the fishers rather than the fish. However that approach is a dramatically [different](#) than most other fisheries (marine recreational and tribal) that are likely to affect the listed Chinook. In those other fisheries the co-managers have consistently made efforts to determine those model impacts are as accurate as possible. At the end of the day, closing game fish seasons on the Stillaguamish is not saving impacts but merely transferring those potential impacts to other fisheries thus saving no additional fish. In fact, closing this game fish season actually results in increased impacts on the total Chinook, since the "paper fish" portion of impacts associated with this game fish season are transferred to fisheries where the impacts are measured in "real fish".

This whole issue smacks of politics rather than biology. These actions appear to be little to no benefit to the resource and, at the same time, not only reduces recreational opportunities (and the other value associated with that fishing) as well, but also reduces the interaction of an advocacy group with the river and its fish. The co-managers recently paid significant lip service to all working together for the benefit of the resource. Obviously based on these closures, the co-managers do not believe that recreational freshwater fishers are part of the community to be tapped for broadly supported recovery efforts.

End of Addendum

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Women of Fly Fishing

May 29, 2019

Wild Rainbow Trout

May 2, 2019

Stilly River Clean Up

May 2, 2019

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IT IS UNREASONABLE TO EXPECT ALL THE FISH TRY TO EAT THE LURE...THEY ALSO STRIKE OUT OF INSTINCTUAL AND TERRITORIAL REASONS AND JUST BAT AT THE LURE AND GET HOOKED IN THE HEAD AS WELL.

IT IS EVEN HARDER TO REEL IN A FISH HOOKED IN THE HEAD AREA WHICH TIRES OUT THE FISH EVEN MORE...BY ALLOWING THE FISHERMAN TO KEEP A FISH HOOKED IN THE HEAD..

YOU HOOK LESS FISH...IT ALLOWS FISHERMAN TO KEEP A LIMIT OF FISH SOONER... AND ALLOW ANOTHER FISHERMAN ACCESS TO THAT FISHING SPOT...

FISHERMAN WILL BE ABLE TO CATCH MORE OF THE "EVIL HATCHERY FISH" WHICH IS THE INTENT OF RAISING HATCHERY FISH ANYWAY!!!! BEFORE THEY REACH THE HATCHERIES...

ALSO MAKE IT MANDATORY THAT THEY KEEP THE FISH THAT ARE LEGALLY HOOKED, AND BANKED OR NETTED AND LEAVE.... YOU CANNOT JUST KEEP FISHING!!!!!! IT IS TO HARD ON THE FISH...AND YOU HOG THE RIVER!!!! PLEASE FREE THE RIVER UP FOR THE NEXT FISHERMAN!!!!!!...

THIS IS REALLY PRETTY SIMPLE TO UNDERSTAND..I KNOW SOME PEOPLE WILL OBJECT SAYING WE HAVE TO KEEP DARK FISH, ETC, ETC...NO, I SAID ANY FISH YOU BANK OR NET. IF YOU DON'T WANT TO KEEP IT, BREAK OFF YOUR HOOK TO RELEASE THE FISH. DON'T WEAR IT OUT SO BAD IT IS LAYING ON IT'S SIDE BECAUSE YOU ARE TO LAZY TO RETIE. IF THE BOAT PEOPLE CRY AND DON'T WANT TO AGREE AND, THE GUIDES AND CHARTER BOATS SAY THEY HAVE TO GET FISH FOR THEIR CUSTOMERS (AND THEMSELVES AND THEIR EMPLOYEES!!!)...THEN JUST MAKE IT IN FRESH WATER ONLY... THANK YOU

Dennis Harman  
Reel River Fisher of Washington

On Tue, Jun 11, 2019 at 4:41 PM WDFW Public Affairs <[do.not.reply@dfw.wa.gov](mailto:do.not.reply@dfw.wa.gov)> wrote:

## **WDFW FISHING RULE CHANGE**

Washington Department of Fish and Wildlife  
600 Capitol Way North, Olympia, WA 98501-1091  
<http://wdfw.wa.gov>

June 11, 2019

### **Barbless hooks to become voluntary in portions of the Columbia River and tributaries**

**Action:** Revises the list of waters where barbless hooks are now voluntary for salmon and steelhead directed fisheries in the mainstem Columbia River from Buoy 10 to Chief Joseph Dam, and Columbia River tributaries from Buoy 10 to McNary Dam.

**Effective date:** June 11, 2019.

**Species affected:** Salmon and steelhead.

**Rule and Location:**

**A) Barbed hooks are allowed for salmon and steelhead in the following waters:**

- Blue Creek (Lewis County), from the mouth to Spencer Road
- Cispus River (Lewis County)
- Columbia River, from a true north/south line through Buoy 10 to Chief Joseph Dam
- Coweeman River and tributaries (Cowlitz County)
- Cowlitz Falls Reservoir (Lake Scanewa) (Lewis County)
- Cowlitz River (Cowlitz/Lewis County) Barbed hooks are also allowed for cutthroat trout in the Cowlitz River
- Drano Lake (Skamania County)
- Elochoman River (Wahkiakum County)
- Grays River (Wahkiakum County)
- Grays River, West Fork (Wahkiakum County)
- Kalama River (Cowlitz County)
- Klickitat River (Klickitat County)
- Lewis River (Clark County)
- Rock Creek (Skamania County)
- Salmon Creek (Clark County): From the mouth to 182nd Avenue Bridge.
- Tilton River (Lewis County)
- Toutle River (Cowlitz County)
- Toutle River, North Fork (Cowlitz County)
- Washougal River (Clark County)
- Washougal River, West (North) Fork (Clark/Skamania counties)
- White Salmon River (Klickitat/Skamania counties)

**B) Selective gear rules, except: barbed hooks are allowed in the following waters:**

- Abernathy Creek and tributaries (Cowlitz County)
- Cedar Creek and tributaries (tributary of N.F. Lewis) (Clark County)
- Coal Creek (Cowlitz County)
- Delameter Creek (Cowlitz County)
- Germany Creek (Cowlitz County) and all tributaries.
- Grays River (Wahkiakum County)
- Grays River, East Fork (Wahkiakum County)
- Grays River, South Fork (Wahkiakum County)
- Grays River, West Fork tributaries (Wahkiakum County)
- Green River (Cowlitz County)
- Hamilton Creek (Skamania County)
- Kalama River (Cowlitz County): From 1,000 feet above fishway at upper salmon hatchery to Summers Creek and from the intersection of 6000 and 6420 Rds. to 6600 Rd. bridge immediately downstream of Jacks Creek.
- Lacamas Creek (Clark County): From mouth to footbridge at lower falls.
- Lacamas Creek, tributary of Cowlitz River (Lewis County)
- Lewis River, East Fork (Clark/Skamania counties): From mouth to 400 feet below Horseshoe Falls.
- Little Washougal River (Clark County)
- Mill Creek (Cowlitz County)
- Mill Creek (Lewis County): From the mouth to the hatchery road crossing culvert.
- Olequa Creek (Lewis/Cowlitz counties)
- Outlet Creek (Silver Lake) (Cowlitz County)
- Salmon Creek (Lewis County)
- Skamokawa Creek (Wahkiakum County)
- Stillwater Creek (Lewis County)
- Toutle River, North Fork (Cowlitz County): From the mouth to the posted deadline below the fish collection facility.
- Wind River (Skamania County): from 100 feet above Shipherd Falls to Moore Bridge.
- White Salmon River (Klickitat/Skamania counties): From the county road bridge below the former location of the powerhouse upstream to Big Brother Falls (river mile 16).

**C) Fly fishing only, except: use of barbed hooks is allowed in the following waters:**

- Kalama River (Cowlitz County): From Summers Creek to the intersection of 6000 and 6420 Rds.

**Reason for action:** This fishing rule change implements the policy direction provided by the commission on March 2, 2019 to make the use of barbless hooks voluntary for salmon and steelhead fisheries in the Columbia River and its tributaries. WDFW is unable to enact this rule change at this time in some areas (reaches of the mainstem that share a border, tributaries upstream of McNary Dam, the Snake River, etc.), due to reciprocity with Idaho and ESA permitting with NOAA.

**Additional information:** This is a corrected Fishing Rule Change. All Selective Gear Rule requirements remain in place for Swift Reservoir, and barbed hooks are allowed for salmon and steelhead in Salmon Creek (Clark Co.), from the mouth to 182nd Avenue Bridge.

This rule change will become permanent for the 2019/2020 Sport Fishing Rules pamphlet year (which begins July 1, 2019).

Barbless hooks are still required when fishing for sturgeon.

**Information contact:** Region 5, Ridgefield Office, 360-696-6211; Region 3, Yakima Office, 509-575-2740.

Fishers must have a current Washington fishing license, appropriate to the fishery. Check the [WDFW "Fishing in Washington" rules pamphlet](#) for details on fishing seasons and regulations. Fishing rules are subject to change. Check the WDFW Fishing hotline for the latest rule information at (360) 902-2500, press 2 for recreational rules. For the Shellfish Rule Change hotline call (360)796-3215 or toll free 1-866-880-5431.

*Persons with disabilities who need to receive this information in an alternative format or who need reasonable accommodations to participate in WDFW-sponsored public meetings or other activities may contact Dolores Noyes by phone (360-902-2349), TTY (360-902-2207), or email ([dolores.noyes@dfw.wa.gov](mailto:dolores.noyes@dfw.wa.gov)). For more information, see [http://wdfw.wa.gov/accessibility/reasonable\\_request.html](http://wdfw.wa.gov/accessibility/reasonable_request.html).*

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This message has been sent to the WDFW All Information mailing list.

Visit the Emergency Fishing Rule Website at: <https://fortress.wa.gov/dfw/erules/efishrules/>

To **UNSUBSCRIBE** from this mailing list: <http://wdfw.wa.gov/lists/unsubscribe.html>

## SECTION 4 HEARING TRANSCRIPTS OR NOTES

## COLUMBIA RIVER FALL CHINOOK

### 2018 Forecast/Actual Returns and 2019 Preseason Forecasts

The forecasts shown here are estimates made in February in preparation for the North of Falcon season-setting process. Once the North of Falcon process is complete, these February forecasts will change slightly. Final forecasts will be available in mid-April.

Stock Group	2018		2019
	February Forecasts	Actual Returns	February Forecasts
Lower River Hatchery - LRH	62,400	50,400	54,500
Lower River Wild - LRW	7,600	8,300	13,700
Lower River Bright - LRB	3,700 <sup>2</sup>	14,200	8,000
Bonneville Pool Hatchery - BPH	50,100	28,900	46,000
Upriver Bright – URB	200,100	149,000	158,400
<i>Snake River Wild (SRW)<sup>1</sup></i>	<i>9,600</i>	<i>NA</i>	<i>NA</i>
Pool Upriver Bright - PUB	36,400	36,000	56,700
Select Area Bright - SAB	5,300	4,100	3,100
<b>Columbia River Total</b>	<b>365,600</b>	<b>290,900</b>	<b>340,400</b>

<sup>1</sup>Subset of URB

<sup>2</sup>First year for predicting LRB which was formerly a component of BUB stock.

### **2019 Forecasts**

- ❖ **LRH** – Similar to last year's actual return, about 60% of the 10-year average.
- ❖ **LRW** – Improved over 2018 actual return, 85% of the 10-year average.
- ❖ **LRB** – Forecast is more than twice the 10-year average.
- ❖ **BPH** – Improved over 2018 actual return, about half of the 10-year average.
- ❖ **URB** – Similar to last year's actual return.
- ❖ **PUB** – Improved over 2018 actual return, about two-thirds of the 10-year average.
- ❖ **SAB** – Forecast is 27% of the recent 10-year average.
- ❖ **Total Return** – Slight improvement over 2018 actual return. Several years of poor ocean conditions are likely contributing to the decreased returns.

February 14, 2019  
Washington Department of Fish and Wildlife  
U.S. v Oregon Technical Advisory Committee Sub-group

# NE of McNary Columbia River Salmon & Steelhead

- Welcome/Introductions
- Purpose of Meeting
- 2018 Returns & 2019 Forecasts
- Management Objectives & Fishery Options

Northeast of McNary Meetings – March 26–28, 2019  
Washington Department of Fish and Wildlife

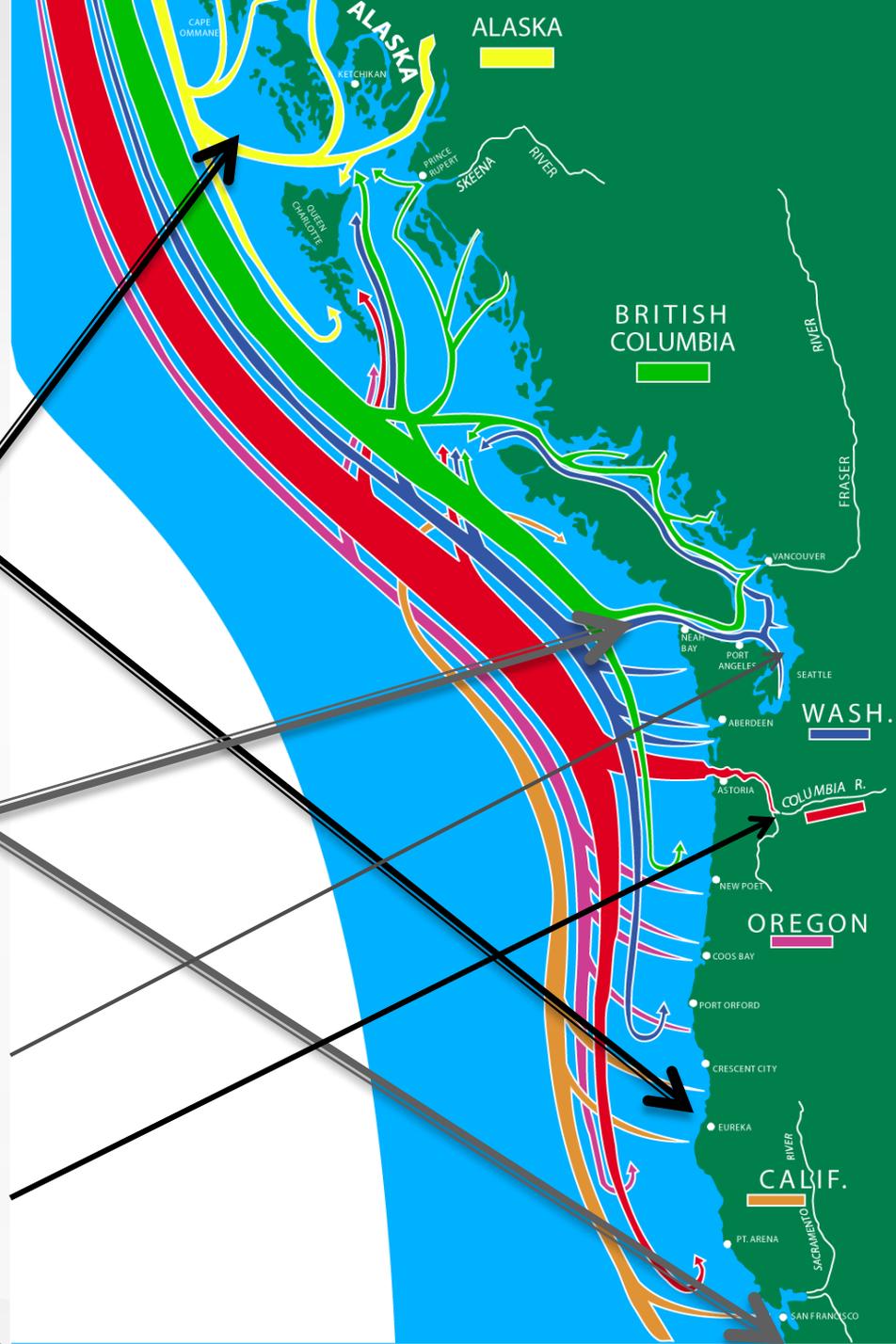
# Complex, multi-jurisdictional processes

Pacific Salmon Treaty

Pacific Fishery Management Council

U.S. v Washington

U.S. v Oregon



# 2019 PFMC/NOF Schedule

## East of McNary – Mid/Upper Columbia River, 6–8 pm

- ▶ March 26 – Wenatchee @ Douglas PUD
- ▶ March 27 – Kennewick @ Kennewick Irrigation District
- ▶ March 28 – Clarkston @ Walla Walla Community College

## Columbia River & Ocean

- ▶ April 2, 10 am – 3 pm
- ▶ Ridgefield WDFW

## Puget Sound

- ▶ April 3, 9:30 am – 5 pm (*live streamed*)
- ▶ Lynnwood Embassy Suites

## Pacific Fishery Management Council

- ▶ Final salmon seasons set
- ▶ April 11–15
- ▶ DoubleTree by Hilton Sonoma
- ▶ Rohnert Park, California

## Fishing & Shellfishing

[Fishing regulations](#)

[Shellfishing regulations](#)

[Fishing and stocking reports](#)

[Places to go fishing](#)

**[Managing fish populations](#)**

[Commercial fishing](#)

[Fishing & shellfishing basics](#)

[Tribal fishing](#)

[Fishing contests](#)

# North of Falcon

Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational and commercial salmon fisheries. This series of meetings – involving representatives from federal, state and tribal governments and recreational and commercial fishing industries – is known as the North of Falcon process.

### Public meeting schedule

Numerous public meetings are held throughout the North of Falcon process.

### State-tribal meeting schedule

These meetings are government-to-government negotiations and are closed to the public.

### [North of Falcon frequently asked questions](#)

Learn more about the North of Falcon process with this FAQ.

### Preseason forecasts

See the latest preseason forecasts for a variety of salmon species.

### Public input

Submit public comments on the North of Falcon salmon season proposals.

# Columbia River Salmon and Steelhead

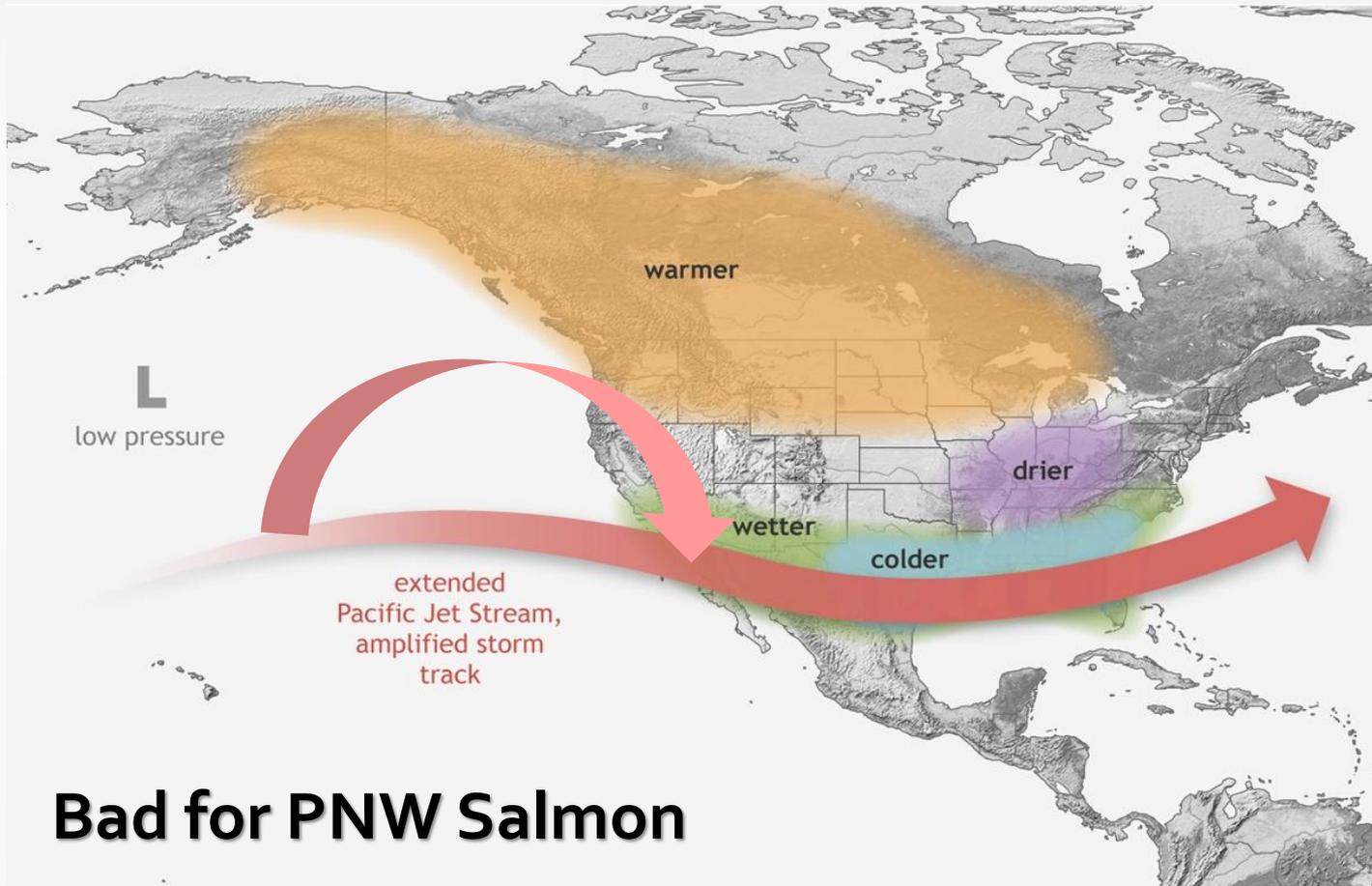
## 2018 Returns and 2019 Forecasts

Northeast of McNary Meetings – March 26 – 28, 2019  
Washington Department of Fish and Wildlife

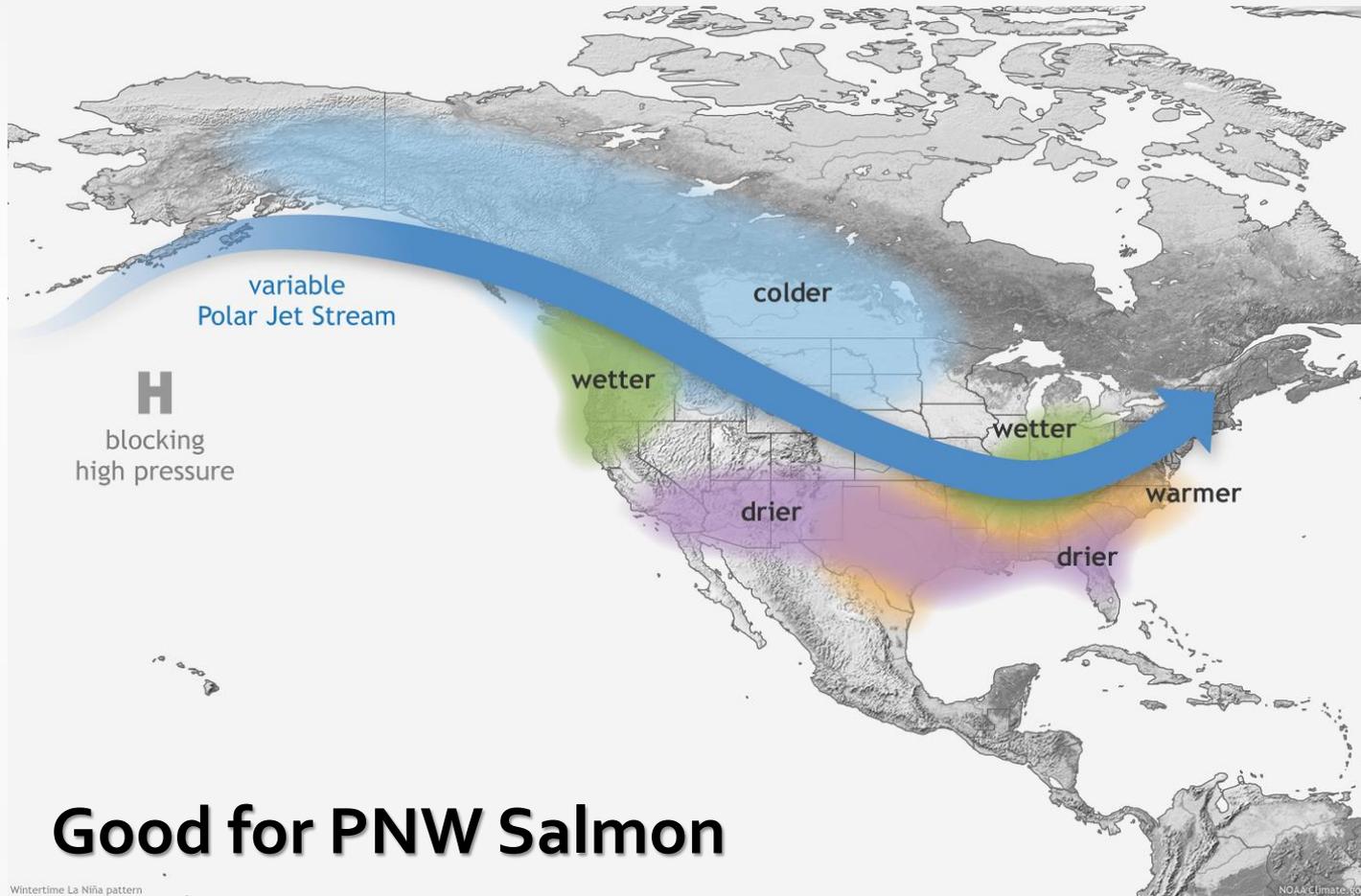
# Environment Conditions Affecting Returns

- Sea surface temperatures (SSTs) cooled following “The Blob”, ushering in weak La Niñas
- Return of warm SST anomalies to the North and South in Fall 2018
- Projections are for a weak El Niño through spring 2019
- Cooling in 2018 and return to “normal”ish conditions (upwelling/copepods) may lead to better survival

# Typical El Niño Pattern



# Typical La Niña Pattern



**Good for PNW Salmon**

# Salmon Indicators: **Bad** -> **Fair** -> **Good**

Basin-scale physical indices

Regional physical indices

Regional biological indices

Ecosystem Indicators	Year																				
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PDO (Sum Dec-March)	18	6	3	13	7	20	12	16	14	9	5	1	15	4	2	8	10	21	19	17	11
PDO (Sum May-Sept)	10	4	6	5	11	17	16	18	12	14	2	9	7	3	1	8	19	21	20	15	13
ONI (Average Jan-June)	20	1	1	7	14	16	15	17	9	12	3	11	18	4	6	8	10	19	21	13	5
46050 SST (°C; May-Sept)	16	9	3	4	1	8	21	15	5	17	2	10	7	11	12	13	14	20	18	6	19
Upper 20 m T (°C; Nov-Mar)	20	11	8	10	6	15	16	12	13	5	1	9	17	4	3	7	2	21	19	18	14
Upper 20 m T (°C; May-Sept)	17	12	14	4	1	3	21	19	7	8	2	5	13	10	6	18	20	9	15	11	16
Deep temperature (°C; May-Sept)	21	6	8	4	1	10	12	16	11	5	2	7	14	9	3	15	20	18	13	17	19
Deep salinity (May-Sept)	19	3	9	4	5	16	17	10	6	1	2	14	18	13	12	11	20	15	8	7	6
Copepod richness anom. (no. species; May-Sept)	19	2	1	7	6	14	13	18	15	10	8	9	17	4	5	3	11	20	21	16	12
N. copepod biomass anom. (mg C m <sup>-3</sup> ; May-Sept)	19	14	10	11	3	16	13	20	15	12	6	9	8	1	2	4	5	17	21	18	7
S. copepod biomass anom. (mg C m <sup>-3</sup> ; May-Sept)	21	2	5	4	3	14	15	20	13	10	1	7	16	9	8	6	11	18	19	17	12
Biological transition (day of year)	18	8	5	7	9	14	13	19	12	2	1	3	16	6	10	4	11	21	21	17	15
Ichthyoplankton biomass (mg C 1,000 m <sup>-3</sup> ; Jan-Mar)	21	12	3	8	10	19	18	15	17	16	2	13	5	14	11	9	20	6	7	1	4
Ichthyoplankton community index (PCO axis 1 scores; Jan-Mar)	10	13	2	7	5	11	20	18	3	12	1	14	15	8	4	6	9	19	21	17	16
Chinook salmon juvenile catches (no. km <sup>-1</sup> ; June)	19	4	5	16	8	12	17	20	11	9	1	6	7	15	3	2	10	13	18	21	14
Coho salmon juvenile catches (no. km <sup>-1</sup> ; June)	19	8	13	6	7	3	16	20	17	5	4	10	11	15	18	1	12	9	14	21	2
Mean of ranks	17.9	7.2	6.0	7.3	6.1	13.0	15.9	17.1	11.3	9.2	2.7	8.6	12.8	8.1	6.6	7.7	12.8	16.7	17.2	14.5	11.0
Rank of the mean rank	21	5	2	6	3	15	17	19	11	10	1	9	13	8	4	7	13	18	20	1	12

Ecosystem Indicators not included in the mean of ranks or statistical analyses

Physical Spring Trans. UI based (day of year)	3	7	20	17	4	13	15	21	13	1	6	2	8	11	18	9	19	10	5	16	11
Physical Spring Trans. Hydrographic (day of year)													18								
Upwelling Anomaly (April-May)													15								
Length of Upwelling Season UI based (days)													16								
SST NH-5 (°C; May-Sept)	9	6	5	4	1	3	21	16	10	18	2	19	11	7	14	13	15	12	17	8	20
Copepod Community Index (MDS axis 1 scores)	20	3	4	8	1	13	15	18	16	10	2	6	12	9	7	5	11	19	21	17	14
Coho Juv Catches (no. fish km <sup>-2</sup> ; Sept)	11	2	1	4	3	6	12	14	8	9	7	15	13	5	10	NA	NA	NA	NA	NA	NA

**1998 = Worst Score**

**2005 = 3<sup>rd</sup> Worst Score**

**2016 = 2<sup>nd</sup> Worst Score**

**2018 = improving**

Table SF-01. Ocean ecosystem indicators of the Northern California Current.

Colored squares indicate positive (green), neutral (yellow), or negative (red) conditions for salmon entering the ocean each year. In the two columns to the far right, colored dots indicate the forecast of adult returns based on ocean conditions in 2018 (coho salmon) and 2017 (Chinook salmon).

	Juvenile Migration Year				Adult Return Outlook	
	2015	2016	2017	2018	coho 2019	Chinook 2019
Large-scale ocean and atmospheric indicators						
<a href="#">PDO (May - Sept)</a>	■	■	■	■	●	●
<a href="#">ONI (Jan - Jun)</a>	■	■	■	■	●	●
Local and regional physical indicators						
<a href="#">Sea surface temperature</a>	■	■	■	■	●	●
<a href="#">Deep water temperature</a>	■	■	■	■	●	●
<a href="#">Deep water salinity</a>	■	■	■	■	●	●
Local biological indicators						
<a href="#">Copepod biodiversity</a>	■	■	■	■	●	●
<a href="#">Northern copepod anomalies</a>	■	■	■	■	●	●
<a href="#">Biological spring transition</a>	■	■	■	■	●	●
<a href="#">Winter ichthyoplankton biomass</a>	■	■	■	■	●	●
<a href="#">Winter ichthyoplankton community</a>	■	■	■	■	●	●
<a href="#">Juvenile Chinook salmon catch – June</a>	■	■	■	■	●	●
<a href="#">Juvenile coho salmon catch – June</a>	■	■	■	■	●	●
Key						
■ good conditions for salmon				● good returns expected		
■ intermediate conditions for salmon				● intermediate returns expected		
■ poor conditions for salmon				● poor returns expected		

# Predation

- Northern Pikeminnow/bird management
- Pinnipeds – Marine Mammal Protection Act (modification via S. 3119)
  - Increases state and tribal managers flexibility to proactively remove sea lions
    - Increases geographic area
      - Mouth to McNary Dam and tributaries
  - Adds Steller sea lions
  - Allows tribes to receive a permit
  - Allows lethal removal in Willamette River

# Stocks primarily originating upstream of Bonneville Dam

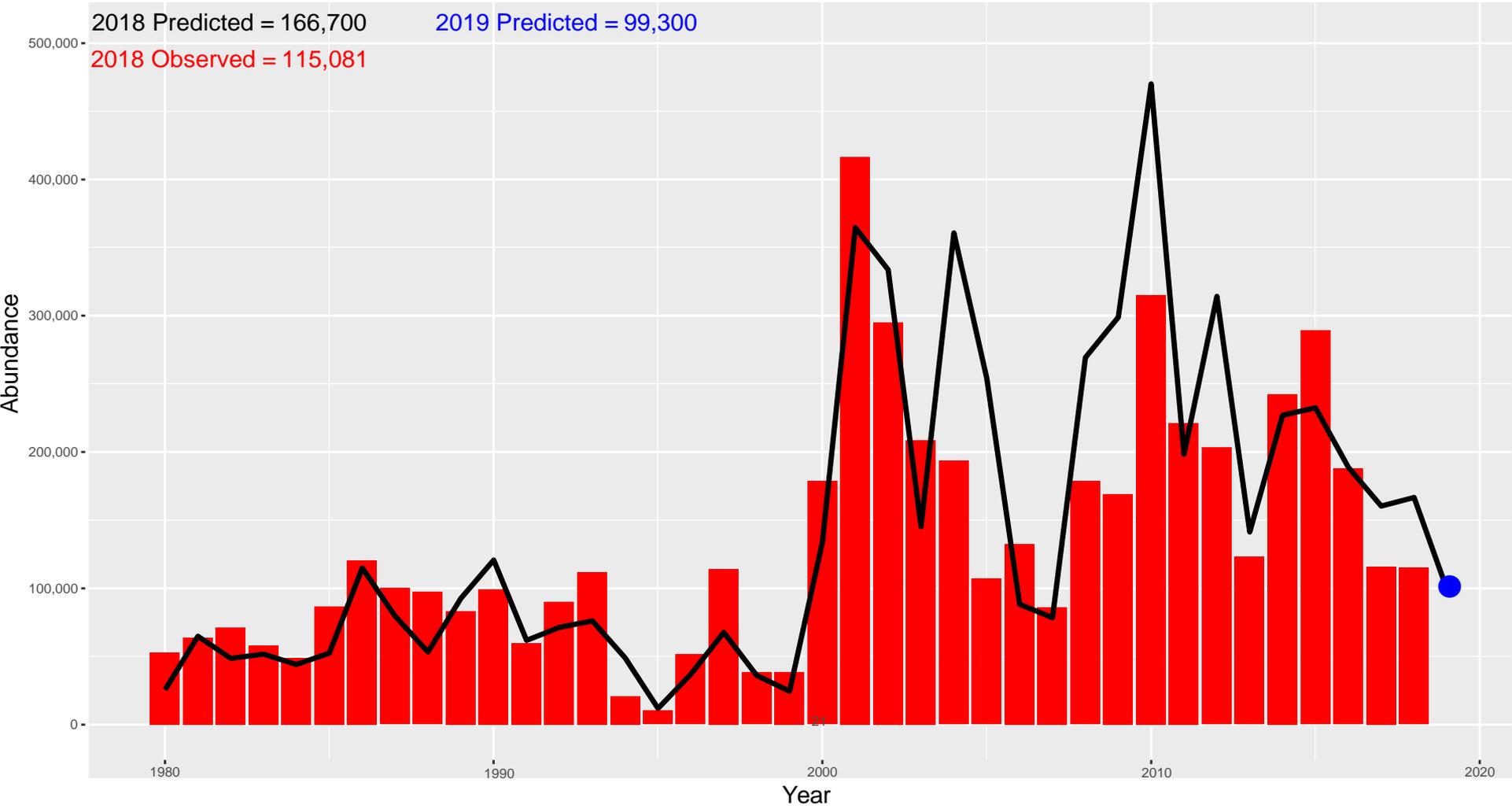


# Upriver Spring Chinook

2018 Predicted = 166,700

2019 Predicted = 99,300

2018 Observed = 115,081

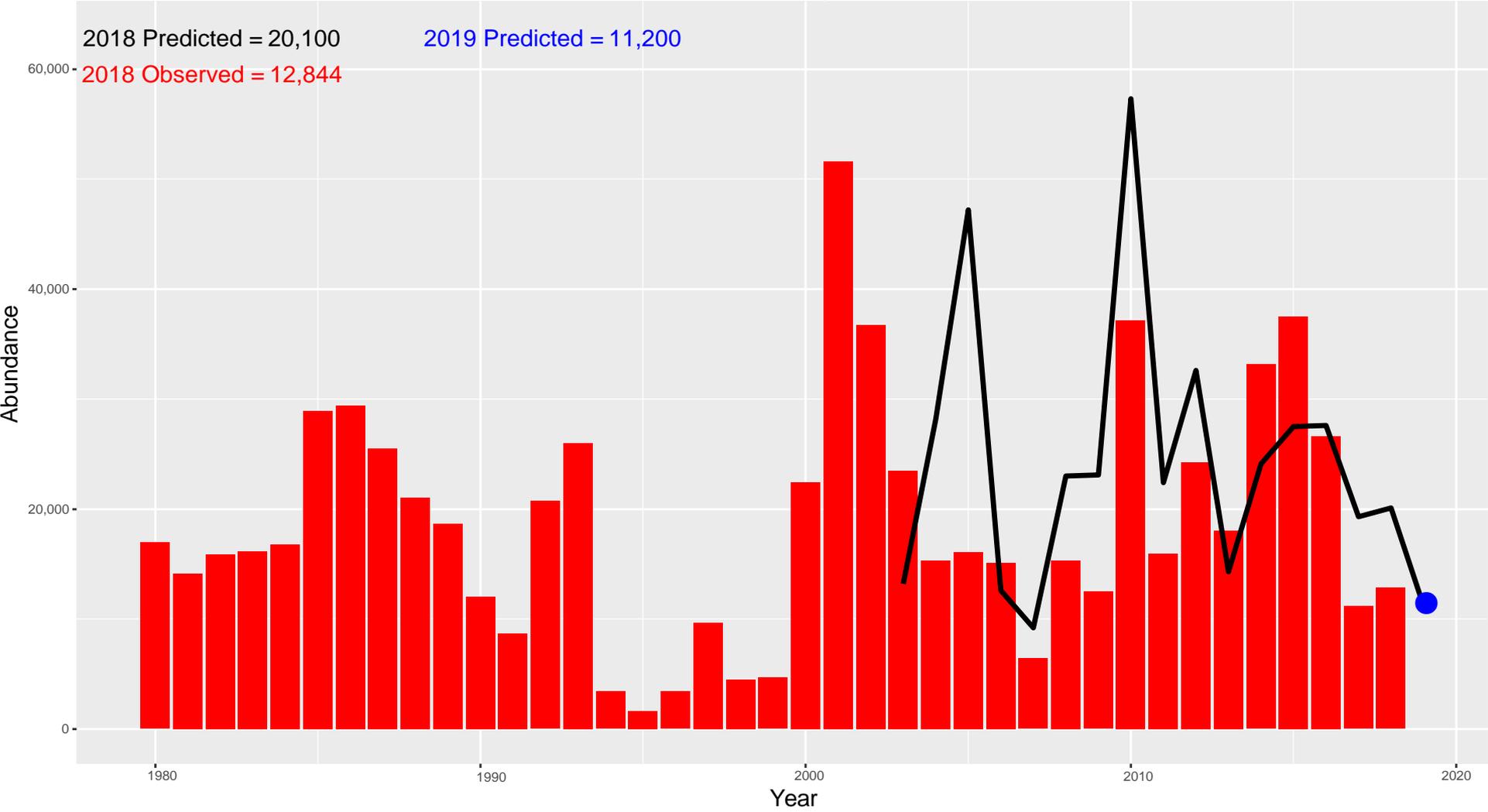


# Upper Columbia Spring Chinook

2018 Predicted = 20,100

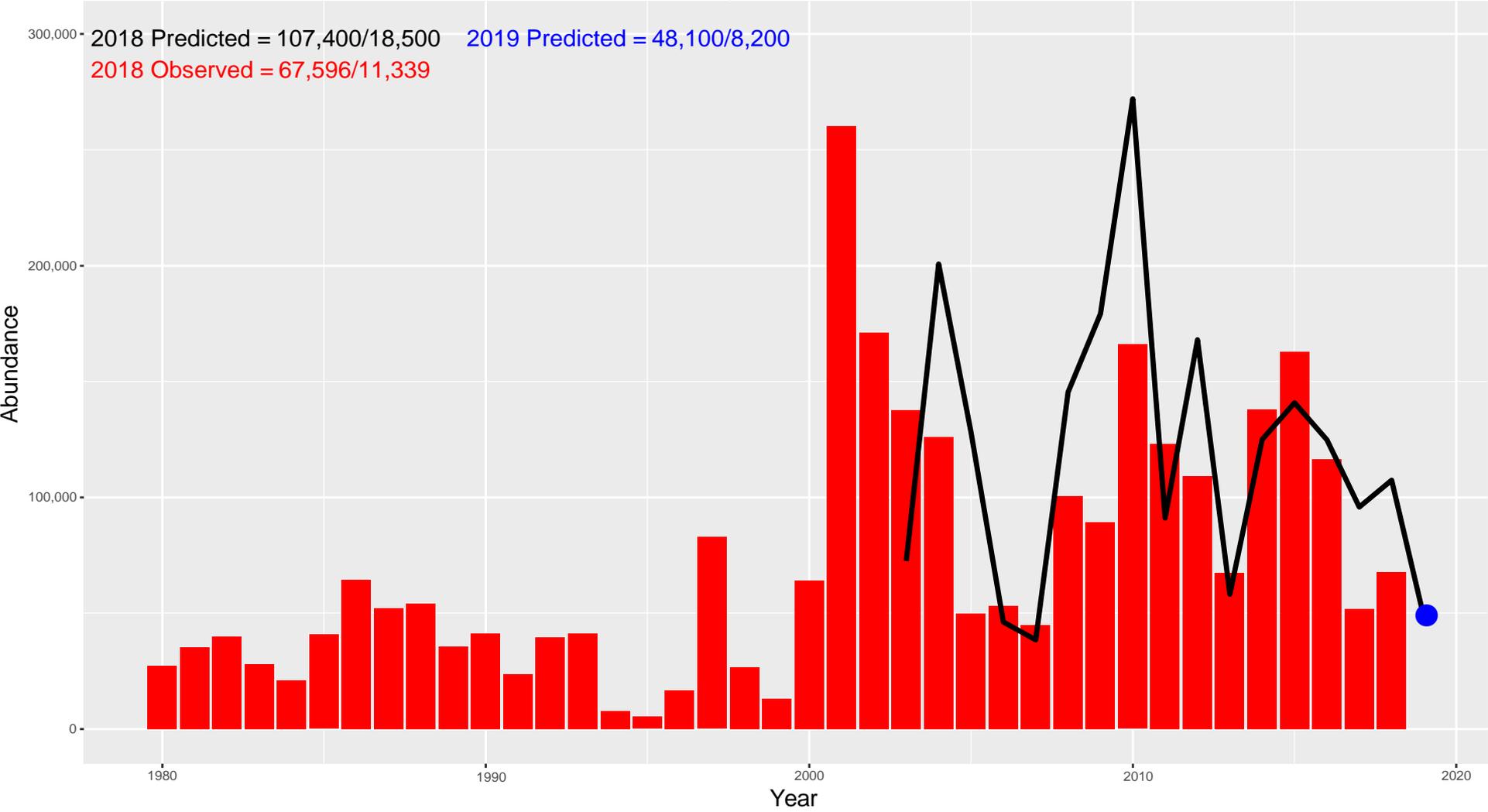
2019 Predicted = 11,200

2018 Observed = 12,844



### Snake River Spring Chinook (total/wild)

2018 Predicted = 107,400/18,500    2019 Predicted = 48,100/8,200  
2018 Observed = 67,596/11,339

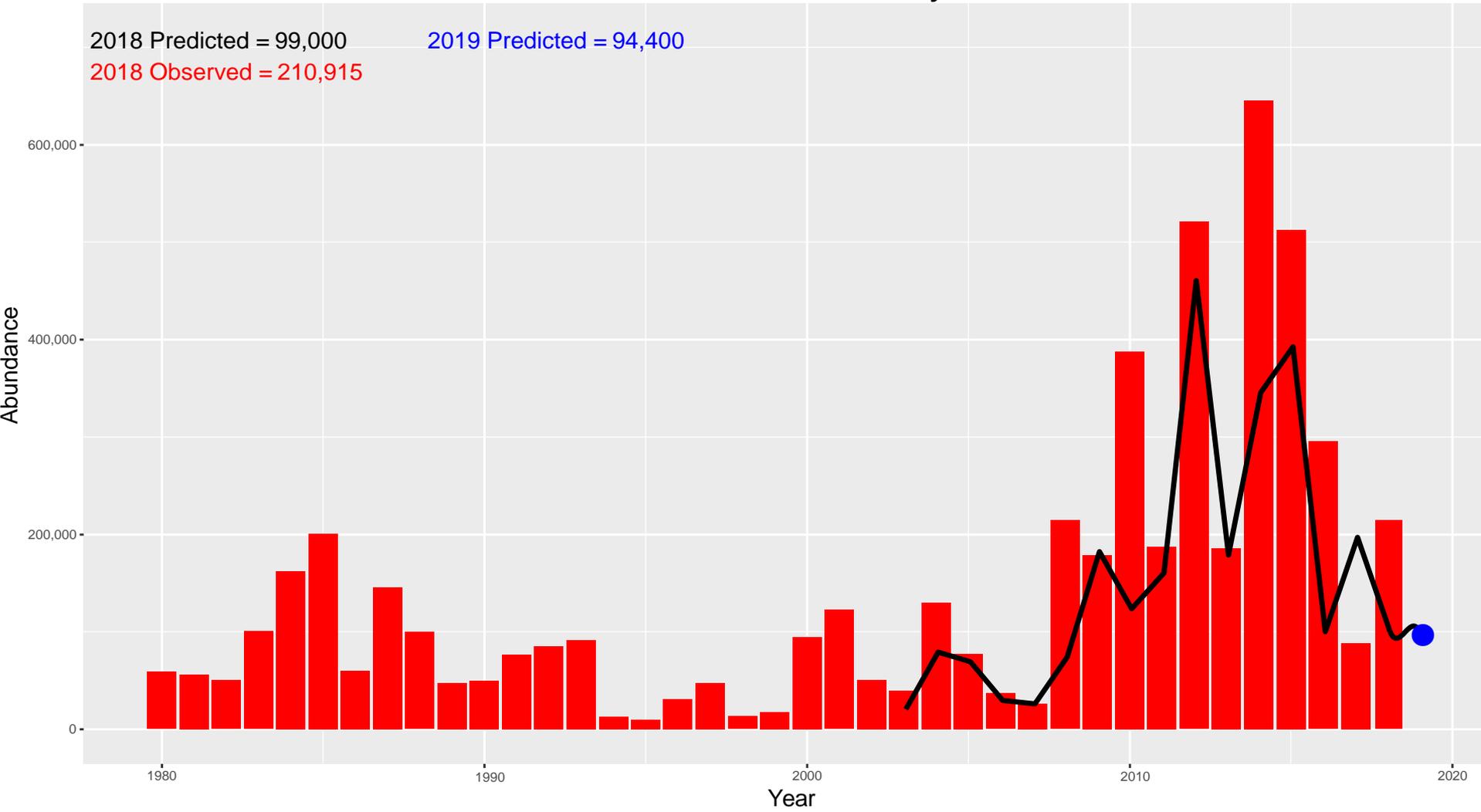


# Columbia River Sockeye

2018 Predicted = 99,000

2019 Predicted = 94,400

2018 Observed = 210,915

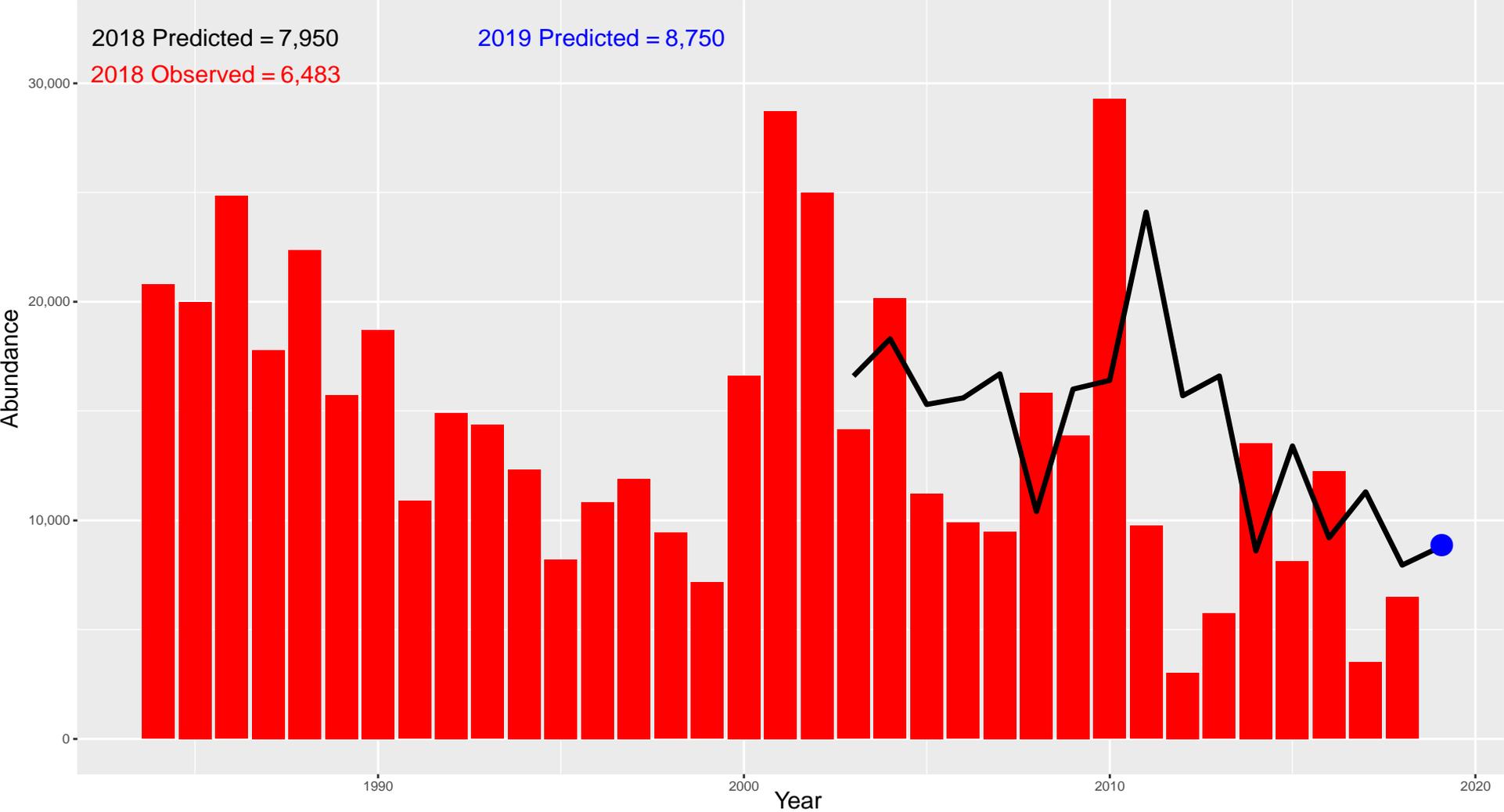


# Skamania Summer Steelhead

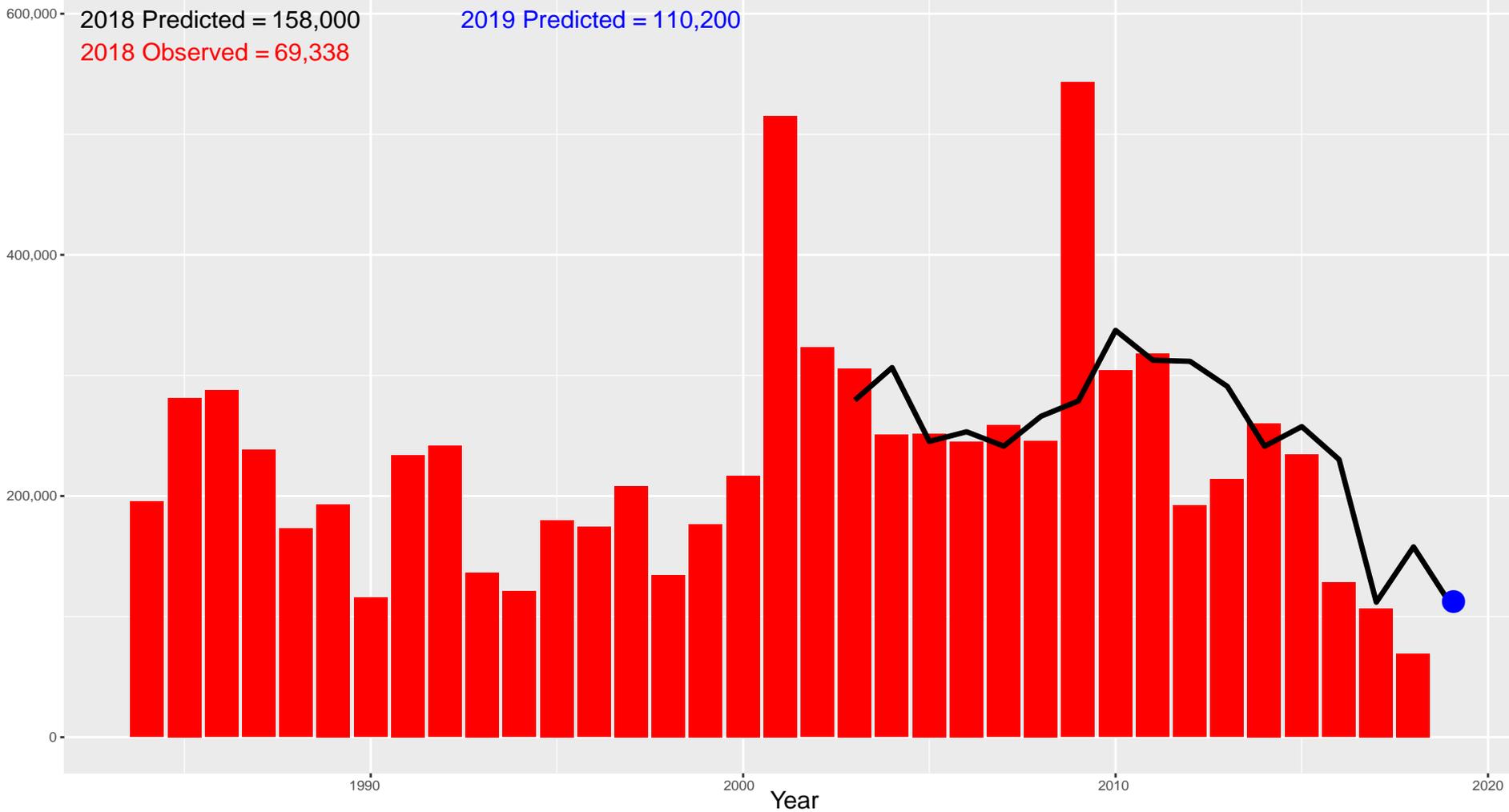
2018 Predicted = 7,950

2019 Predicted = 8,750

2018 Observed = 6,483



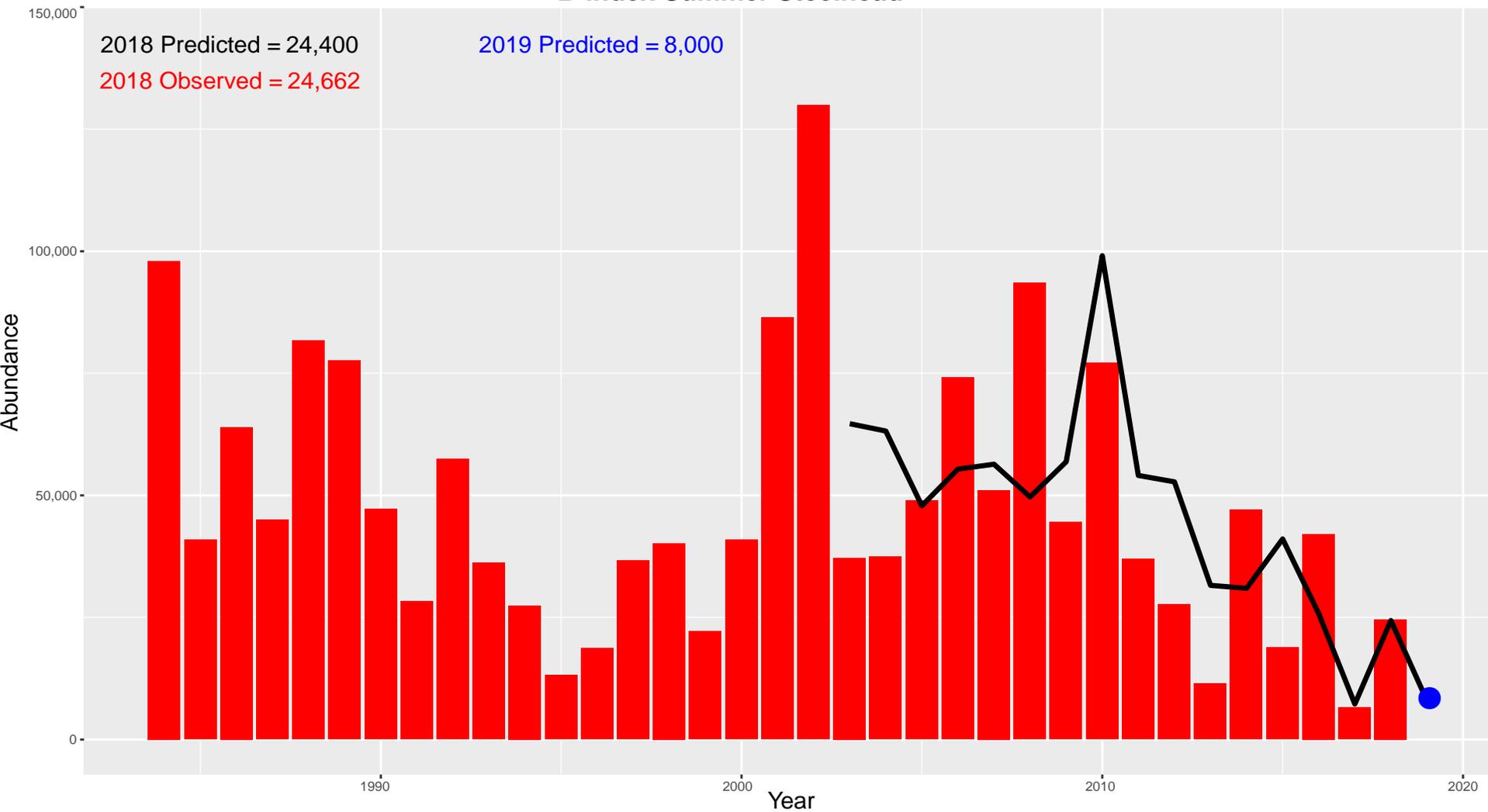
### A-index Summer Steelhead



# B-index Summer Steelhead

2018 Predicted = 24,400  
2018 Observed = 24,662

2019 Predicted = 8,000

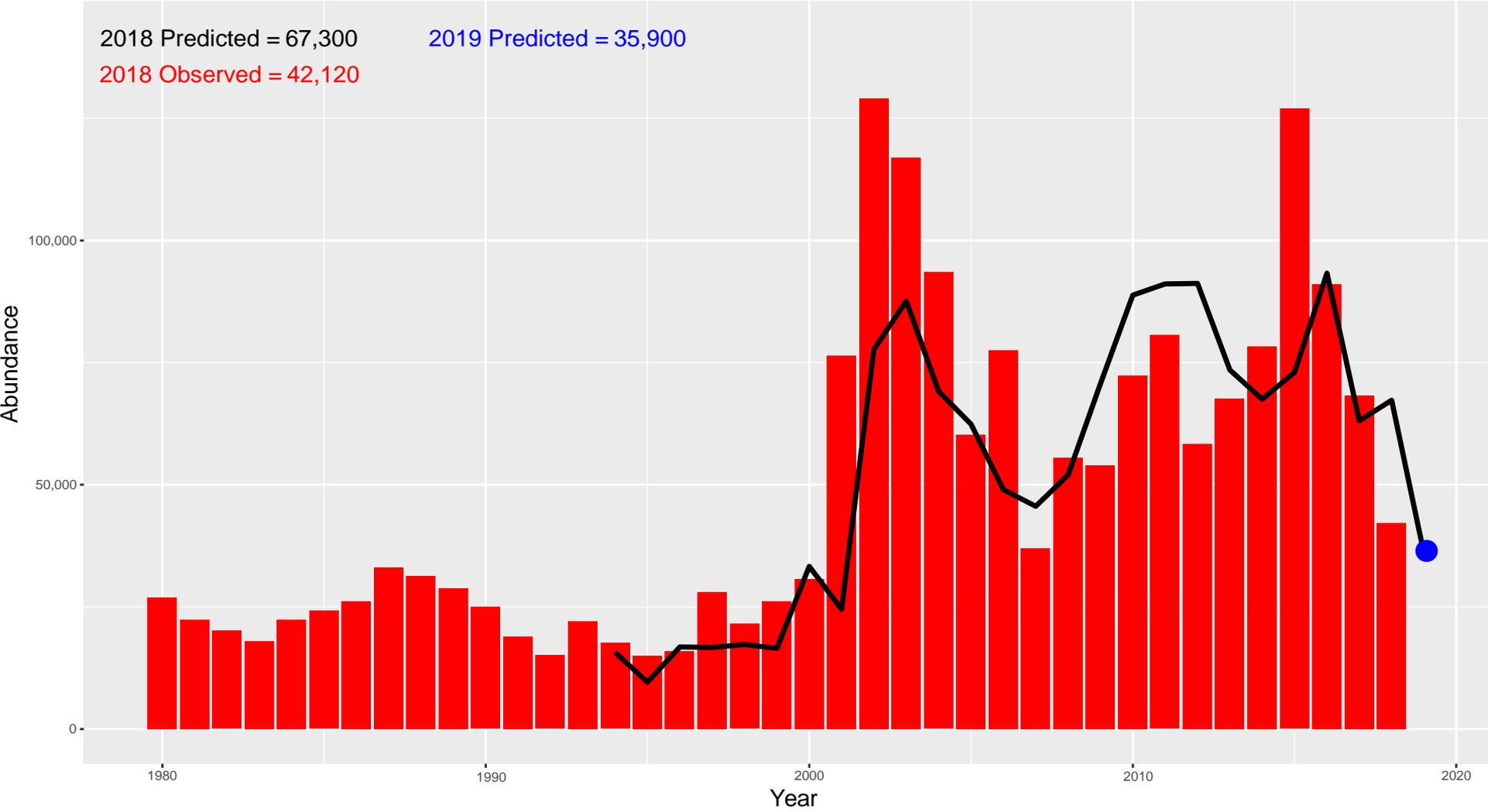


# Upper Columbia Summer Chinook

2018 Predicted = 67,300

2019 Predicted = 35,900

2018 Observed = 42,120

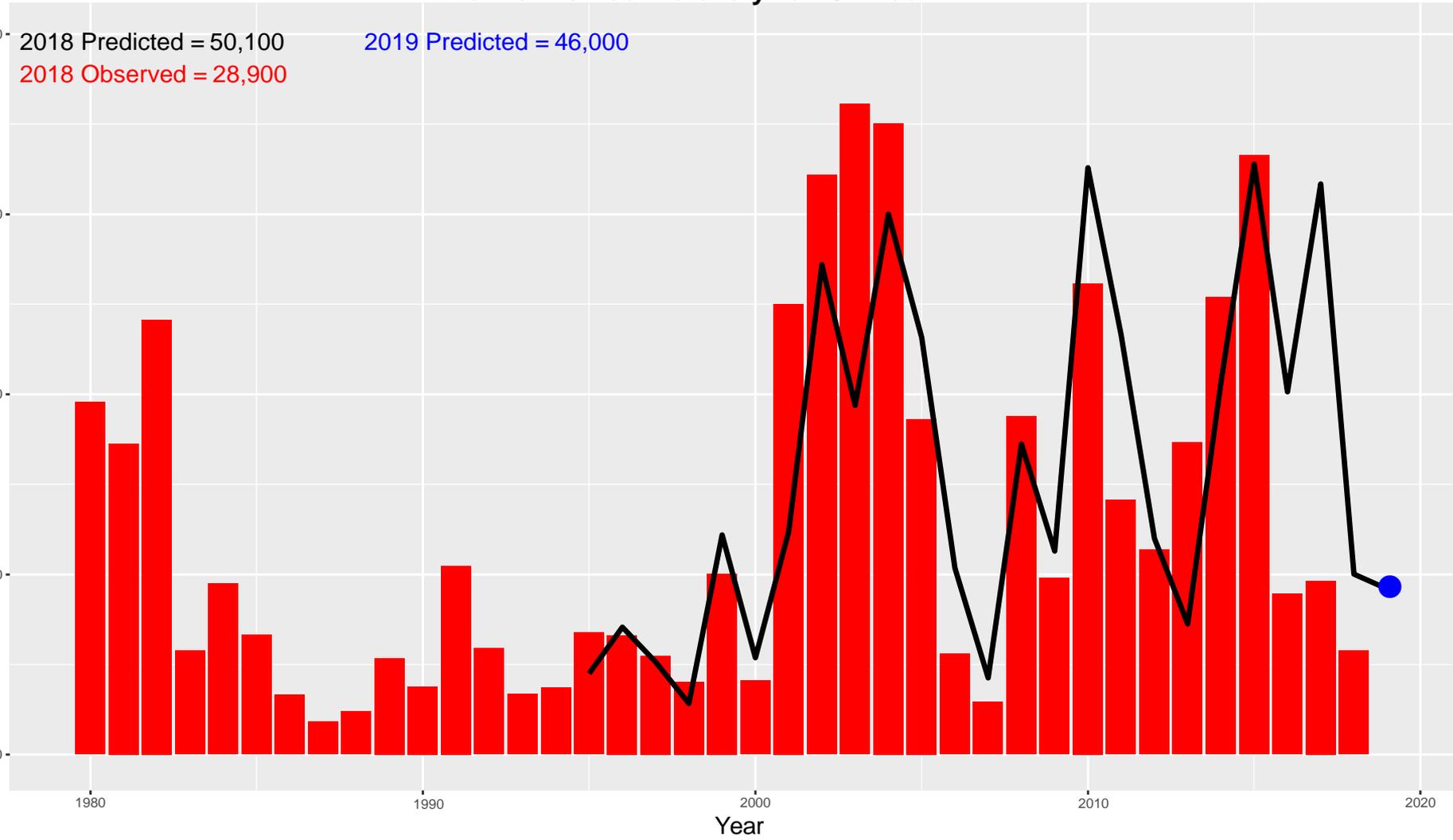


# Bonneville Pool Hatchery Fall Chinook

2018 Predicted = 50,100  
2018 Observed = 28,900

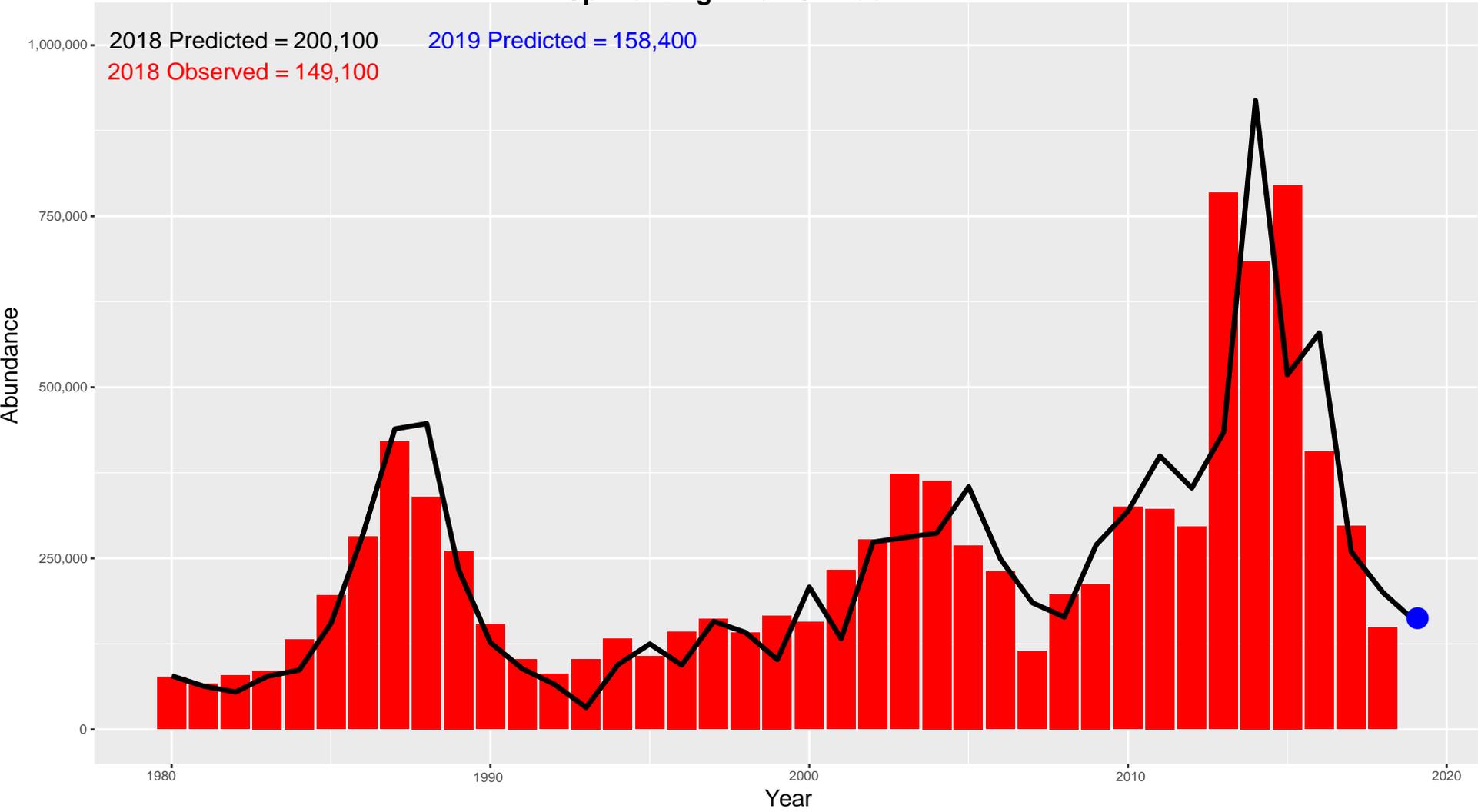
2019 Predicted = 46,000

Abundance



# Upriver Bright Fall Chinook

2018 Predicted = 200,100      2019 Predicted = 158,400  
2018 Observed = 149,100

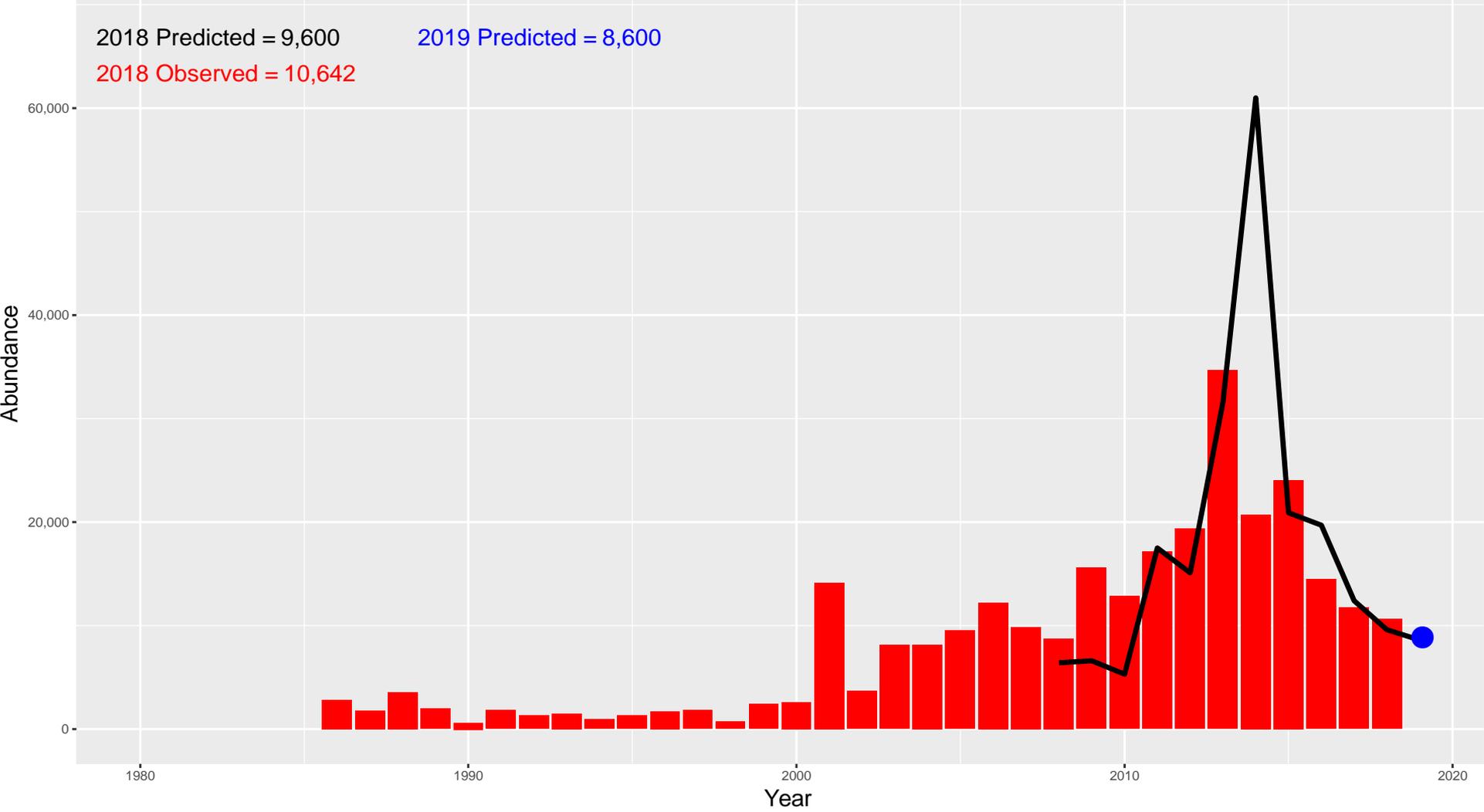


# Snake River Wild Fall Chinook

2018 Predicted = 9,600

2019 Predicted = 8,600

2018 Observed = 10,642

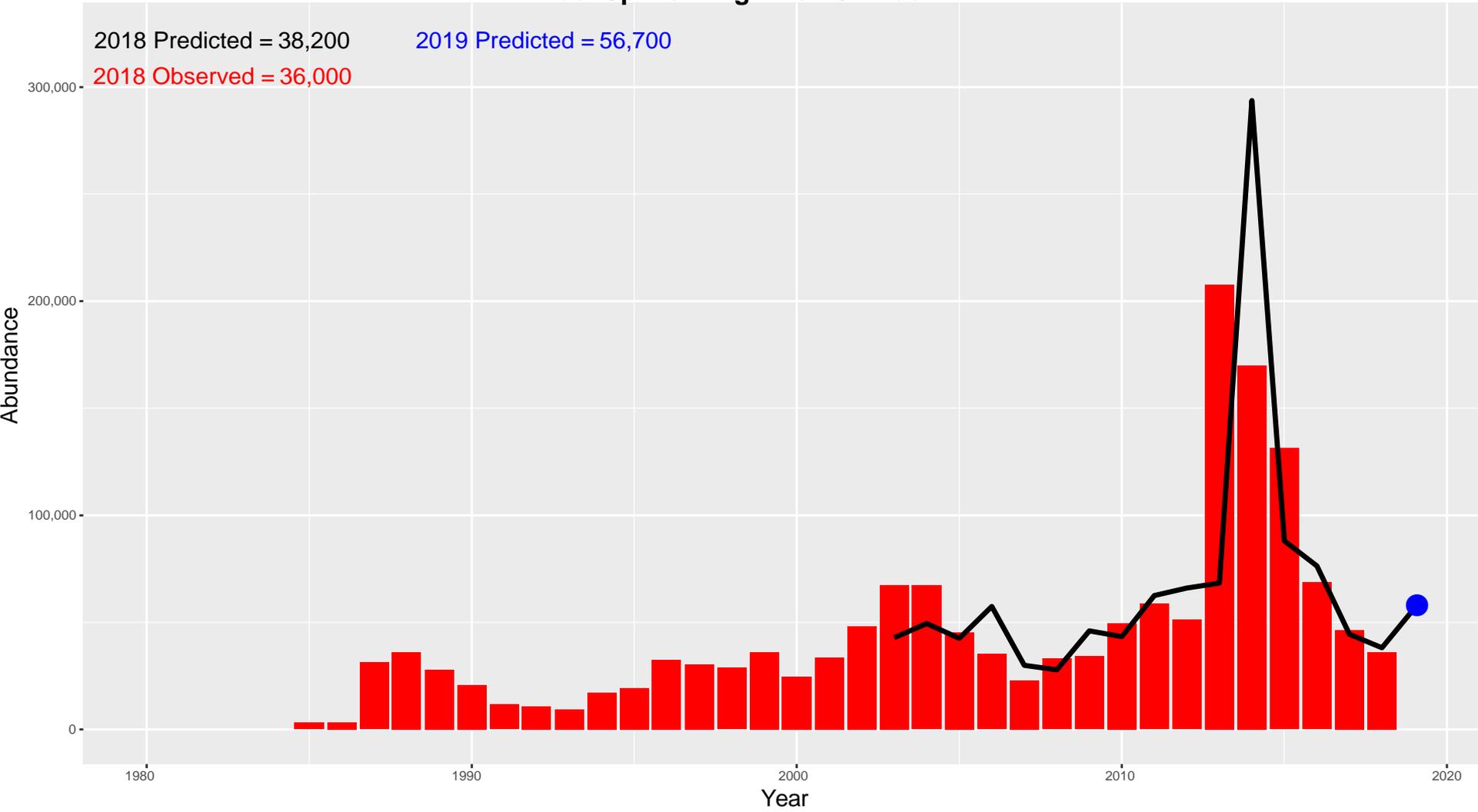


# Pool Upriver Bright Fall Chinook

2018 Predicted = 38,200

2019 Predicted = 56,700

2018 Observed = 36,000

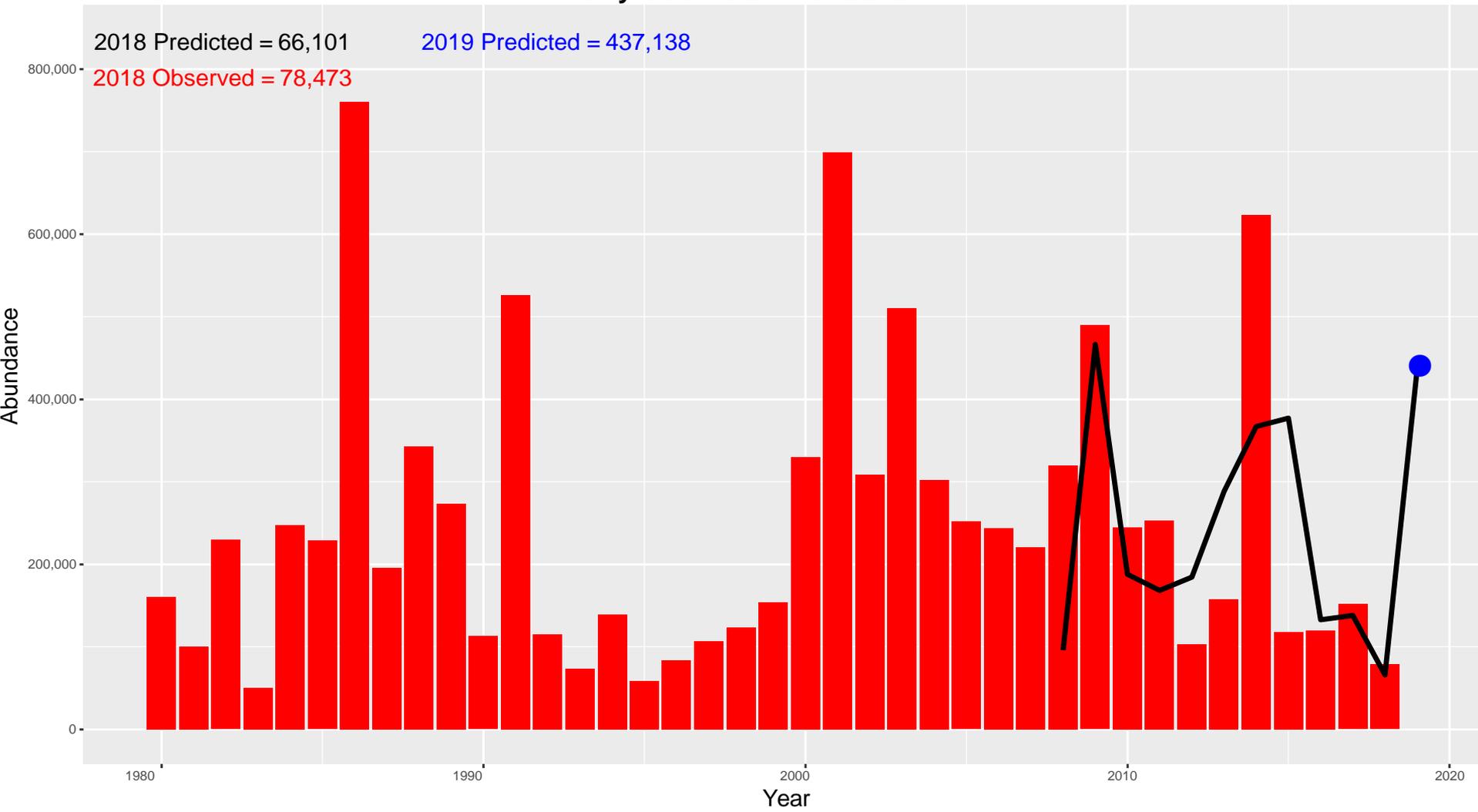


# Early Columbia River Coho

2018 Predicted = 66,101

2019 Predicted = 437,138

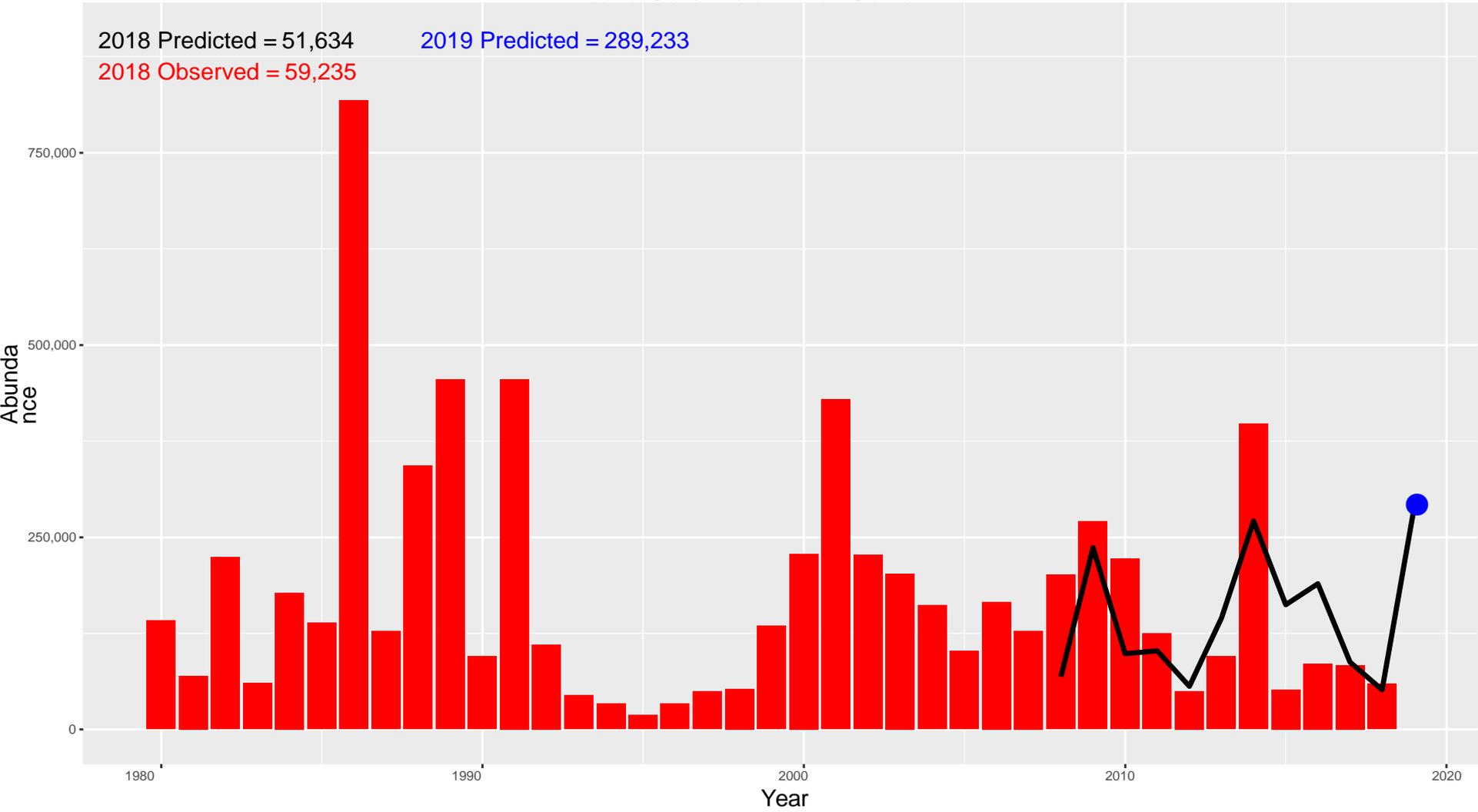
2018 Observed = 78,473



# Late Columbia River Coho

2018 Predicted = 51,634  
2018 Observed = 59,235

2019 Predicted = 289,233



# Fishery Management



# 2019 Upriver Spring Chinook Management Guidelines

- ▶ ***U.S. v Oregon (2018–2027) Management Agreement***
  - Preseason: 1.5% ESA impact limit (*2.0% in 2018*)
  - 30% buffer in place until run size update
  - Catch Balance more constraining than impacts
  
- ▶ **Commission Policy C–3620**
  - Sport and commercial buffers in place prior to run update
  - Sport/comm % impact-sharing at 80%/20%, unless run is >129% of forecast, then 70%/30%
  - 25% of the sport catch allocation above BON
    - 15% Snake and 10% Bonneville–OR/WA state line

# 2019 Spring Chinook Fisheries

## ▶ **Below Bonneville**

- Season: Jan 1 – Apr 10, closed below Warrior Rock line
- Catch allocation: 3,689 upriver (4,050 total) prior to a run update

## ▶ **Bonneville to WA/OR border above McNary**

- Season: April 1 – May 5, 1 chinook bag limit
- Catch allocation: 492 upriver prior to a run update

## ▶ **Yakima River, Snake River (357 upriver catch), & Icicle River**

- Addressed later in presentation

▶ *includes release mortalities*

# Snake River Fishery Structure

- Generally open in late April (late compared to downriver)
  - fisheries timed concurrent with increased Dam passage
- Fisheries really heat up in early May
  - Chinook abundance is reaching peak
- Limited areas open
  - this allows intensive monitoring, extends duration of fisheries & distributes opportunity (~18 miles if all four areas are open)

# 2018 Snake River Fishery

- Preseason forecast of 166,700
- Preseason impacts on buffered run of 116,690 of 920 (883 harvest and 37 release mortalities)
- Three sections open 2d/wk beginning Apr. 20
- Run was downgraded on 21 May to 116,500 near the buffered run.
- New impacts for 116,500 were 912 (886 harvest and 26 release mortalities)

# 2018 Snake River Fishery

- Fishery continued for two additional periods and then closed because of ESA impacts.
- Anglers harvested 742 adults and released 308 wild adults in 28,205 hours of effort.

# 2018 Snake River Fishery

FINAL 2018 Snake River Spring Chinook Expanded Effort and Catch Estimates

Dates open	Section	Angler Effort			Salmon Kept			Salmon Released					Ave Catch Rate (hrs/fish kept)		
		Peak # observed	Peak # observed	Total	H Adults	H Jacks	Total	W Adults	W Jacks	H Adults	H Jacks	Total	Shore	Boat	"Wall"
		Shore Anglers	boat anglers	Angler hrs											
Apr 20-21	<b>IHR 1</b> (Fri-Sat)	5	7	135.3	0	0	0	0	0	0	0	0	0.0	0.0	
Apr 27-28		10	4	56.1	0	0	0	0	0	0	0	0	0.0	0.0	
May 4-5		7	15	191.5	5	0	5	0	0	0	0	0	60.9	34.2	
May 11-12		53	69	2,074.1	39	2	41	8	0	0	0	8	29.4	185.6	
May 18-19		81	82	3,045.4	58	4	62	23	0	0	2	25	56.3	43.3	
May 25-26		56	83	2,083.6	20	3	23	2	0	0	0	2	652.1	43.5	
June 1-2		38	50	1,704.1	21	2	23	10	2	0	0	12	40.6	105.1	
June 8-9		69	61	2,798.4	57	8	65	35	2	0	0	37	30.3	258.7	
<b>Sum</b>				<b>12,088.5</b>	<b>200</b>	<b>19</b>	<b>219</b>	<b>78</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>84</b>			
Apr 22-23	<b>LGO 2</b> (Sun-Mon)	9	5	196.0	1	0	1	1	0	0	0	1	163.0	0.0	0.0
Apr 29-30		22	0	429.9	2	1	3	0	0	0	0	0	126.1	0.0	0.0
May 6-7		34	3	808.0	7	0	7	1	0	0	0	1	149.4	0.0	52.8
May 13-14		68	10	1,629.6	63	3	66	8	0	0	0	8	23.7	0.0	18.5
May 20-21		128	18	2,916.8	92	2	94	14	0	0	0	14	30.8	0.0	20.5
May 27-28		117	10	3,186.6	45	10	55	13	0	0	0	13	52.8	0.0	294.7
June 3-4		95	12	2,541.3	202	21	223	66	2	0	0	68	12.2	0.0	8.7
June 10-11		113	3	2,613.8	94	9	103	103	3	0	0	106	24.9	0.0	27.1
<b>Sum</b>				<b>14,322.0</b>	<b>506</b>	<b>46</b>	<b>552</b>	<b>206</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>211</b>			
Apr 22-23	<b>Clarkst 3</b> (Sun-Mon)	0	3	0.0	0	0	0	0	0	0	0	0	0.0	0.0	
Apr 29-30		0	0	30.8	0	0	0	0	0	0	0	0	0.0	0.0	
May 6-7		0	3	0.0	0	0	0	0	0	0	0	0	0.0	0.0	
May 13-14		0	12	100.1	0	0	0	0	0	0	0	0	0.0	0.0	
May 20-21		2	16	230.2	0	0	0	0	0	0	0	0	0.0	0.0	
May 27-28		0	11	225.4	4	0	4	0	0	0	0	0	0.0	57.0	
June 3-4		1	37	711.3	27	0	27	19	0	0	0	19	0.0	26.3	
June 10-11		1	39	496.9	5	0	5	5	0	0	0	5	0.0	105.7	
<b>Sum</b>				<b>1,794.6</b>	<b>36</b>	<b>0</b>	<b>36</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>			
<b>Snake R. Totals</b>				<b>28,205.1</b>	<b>742</b>	<b>65</b>	<b>807</b>	<b>308</b>	<b>9</b>	<b>0</b>	<b>2</b>	<b>319</b>			

# 2019 Snake River Fishery – expectations

- Preseason Impact Estimate = 357 (342 harvest and 15 release mortalities)
- Open Little Goose Saturday and Sunday
- Expected opening May 4
- Goal: Provide 2-4 fishing events
- Bag limit of **1 adult/day & 2 days/week**
- WDFW will monitor harvest & ESA impacts

# 2019 Snake River Fishery – expectations

	Thurs	Fri	Sat	Sun	Mon	Tues
IHR						
LGO						
LGR						
Clark						

# Grande Ronde River Fisheries

- 2019 Fishery
  - Low returns are forecasted for 2019 and there are currently no plans for a Grande Ronde spring Chinook fishery.

# Yakima River Spring Chinook

	<b>2018</b>		<b>2019</b>
	<b>Forecast</b>	<b>Actual</b>	<b>Forecast</b>
<b>Total Run</b>	<b>7,000</b>	<b>3,160</b>	<b>2,970</b>
Total Wild/Natural	4,460	1,520	1,250
Total CESRF	2,540	1,640	1,720
<b>Harvest</b>			
Yakama Nation		<b>225</b>	
Sport Fishery		<b>245</b>	

# 2019 Yakima Spring Chinook Fishery

- Lower river section from Hwy. 240 Bridge to SR 241 Bridge (Mabton–Sunnyside Rd)
- Upper river section from I-82 at Union Gap to Roza Dam
- Likely open in early to mid-May and run to late June
- Two-poles allowed with endorsement
- Fishing conditions will likely be poor at times because of above normal snowpack runoff

# Icicle River Spring Chinook

## 2018 Regulations:

- **Icicle:** Closed initially via emergency regulation due forecasted returns not high enough to meet hatchery broodstock needs.
- **Broodstock:** barely made egg take goals

- **2019 Regulations:**

**Icicle:** Currently in pamphlet (May 15–July 31)

**Note:** Forecasted abundance is same as 2018 (very low). *High likelihood the Icicle River fishery may close or open late.*

# 2019 Sockeye Forecast & Fisheries

- ▶ **Forecast:** 94,400
- ▶ **Tentative Proposal:** close sockeye recreational retention from mouth to Chief Joseph Dam (and tributaries)
  - Similar scenario as last year.
- ▶ **Conservation:** return as many sockeye to the spawning grounds as possible
  - Lake Wenatchee not forecasted to meet escapement needs
- ▶ **In-Season Updates:** if return improves (similar to 2018) fisheries will open via emergency regulation

# 2019 Summer Chinook

- ▶ Harvest Guidelines 3-tiered:
  - U.S. v Oregon Management Agreement: reserves spawning escapement/broodstock needs (29,000) & treaty/non-treaty allocation
  - Policy C-3620: allocates non-treaty share (e.g., above/below Priest Rapids Dam, below PRD recreational/commercial)
  - WDFW-CCT Harvest Share Agreement: allocates harvestable share between WDFW/CCT
    - At very low runs maintains CCT ceremonial & subsistence fishery

# 2019 Summer Chinook

- ▶ Columbia River mouth forecast: 35,900
- ▶ *U.S. v Oregon*: subtract spawning escapement/broodstock, treaty allocation, and ocean harvest
  - Pre-season in-river non-treaty share is 464
- ▶ C-3620: 90% (418) and 10% (46) to fisheries upstream and downstream of PRD, respectively
  - No WDFW in-river summer chinook fisheries.
  - Minimal incidental mortalities from steelhead fisheries
- ▶ WDFW/CCT Agreement: 293 (CCT), ~105 (WDFW), and ~20 Wanapum

# 2019 Summer Chinook

**CR Mouth to Chief Joseph Dam (including tributaries):**  
closed fishing

**Mouth to Hwy 395:** allocation used for non-retention mortalities during steelhead fisheries

**Hwy 395 to CJD:** evaluate run in-season and if possible open via emergency regulation

Potential for limited fishing in above PRD if run comes at or above forecast

Options: entire river (reduced time), select areas (e.g., Entiat, Chelan, Brewster), reduced daily limit (e.g., 1)

# 2019 Steelhead Fisheries – options

Columbia River mainstem – Low A and B–index steelhead forecasts will cause rolling block closures similar to 2017.

## ➤ **Bonneville Dam to The Dalles Dam**

- **through June:** Daily limit 2, when open
- **July:** Daily limit 1, closed to night fishing for salmon/steelhead
- **August:** Closed to retention, closed to night fishing for salmon/steelhead
- **September+:** Daily limit 1, closed to night fishing for salmon/steelhead

## ▶ **The Dalles Dam to John Day Dam**

- **through June:** Daily limit 2, when open
- **July–August:** Daily limit 1, closed to night fishing for salmon/steelhead
- **September:** Closed to retention, closed to night fishing for salmon/steelhead
- **October+:** Daily limit 1, closed to night fishing for salmon/steelhead

# 2019 Steelhead Fisheries – options

## ▶ John Day Dam to McNary Dam

- through June: Daily limit 2, when open
- July–August: Daily limit 1, closed to night fishing for salmon/steelhead
- September–October: Closed to retention, closed to night fishing for salmon/steelhead
- November+: Daily limit 1, closed to night fishing for salmon/steelhead

## ▶ McNary Dam to 395 Bridge in Pasco

- through June: Daily limit 2, when open
- July–September: Daily limit 1, closed to night fishing for salmon/steelhead
- October–November: Closed to retention, closed to night fishing for salmon/steelhead
- December+: Daily limit 1, closed to night fishing for salmon/steelhead

## ▶ 395 Bridge in Pasco upstream

- Ringold Area fishery under consideration

# 2019 Steelhead Fisheries – options

## Columbia River Below Bonneville Tributaries

- Cowlitz River (downstream of Lexington Drive/Sparks Road bridge)
- Lewis River (downstream of the confluence with the East Fork Lewis River)
  - **July:** Daily limit 1, closed to night fishing for salmon/steelhead
  - **August:** Closed to retention, closed to night fishing for salmon/steelhead
  - **September+:** Daily limit 1 or 2, closed to night fishing for salmon/steelhead

# 2019 Steelhead Fisheries – options

## Columbia River Above Bonneville Tributaries

- Wind River (downstream of Shipherd Falls)
- Drano Lake
- White Salmon River (downstream of the county road bridge)
- Klickitat River (downstream of Fisher Hill bridge)
  - **July:** Daily limit 1, closed to night fishing for salmon/steelhead
  - **August:** Closed to retention, closed to night fishing for salmon/steelhead
  - **September+:** Daily limit 1, closed to night fishing for salmon/steelhead, Drano closed to retention during September.

# 2019 Steelhead Fisheries – options

## Snake River

- ▶ **Mouth to Couse Creek boat ramp**
  - August 1–March 31: Daily limit 1, must be less than 28 inches in length.
- ▶ **Couse Creek boat ramp to WA/ID/OR state line**
  - August 1–March 31: Daily limit 1

# 2019 Steelhead Fisheries – options

## Other options

- ▶ Release all steelhead 28 inches in length or longer
- ▶ Closed to salmon/steelhead fishing in time/area instead of non-retention when salmon are not present
- ▶ Extend length and area of non-retention blocks
- ▶ Closed at night to all fishing

# 2019 Fall Chinook Fisheries

- ▶ **Policy guidance: no more than 70% sport/no less than 30% commercial.**
  - **Below Bonneville** – reduced fisheries to levels similar to 2018
    - 8.25% vs 15% harvest rate
    - Fisheries constrained by Snake River Wild Chinook and B-index steelhead
    - Reserve impacts for abundant coho return (liberal coho limits, i.e., in Buoy 10)
  - **Bonneville to Highway 395**
    - Fishery constrained by Snake River Wild Chinook and B-index steelhead
- ▶ **Priest Rapids Dam to Rock Island Dam** – Non-mark selective, September 1–October 15, daily limit 6 (no more than 2 adult chinook, release sockeye and coho)
- ▶ **Above Rock Island** – Evaluate in-season (unlikely given forecast)

# 2019 Snake River Fall Chinook Fisheries

- Opened all of Snake River beginning in 2011
- Will use CRC for harvest estimates
- Plan to open all areas again in 2019 (Mid August or first of September to October 31)
- Opened by emergency rule, expecting similar limits and restriction as in 2018
- Continuing work on a joint state Fall Chinook FMEP



# 2018–2019 Hanford Reach Fall Fishery

# 2018 Hanford Reach Fall Chinook Fishery

**September 13: Buoy 10 to Hwy 395 Closed to all fishing for salmon & steelhead**

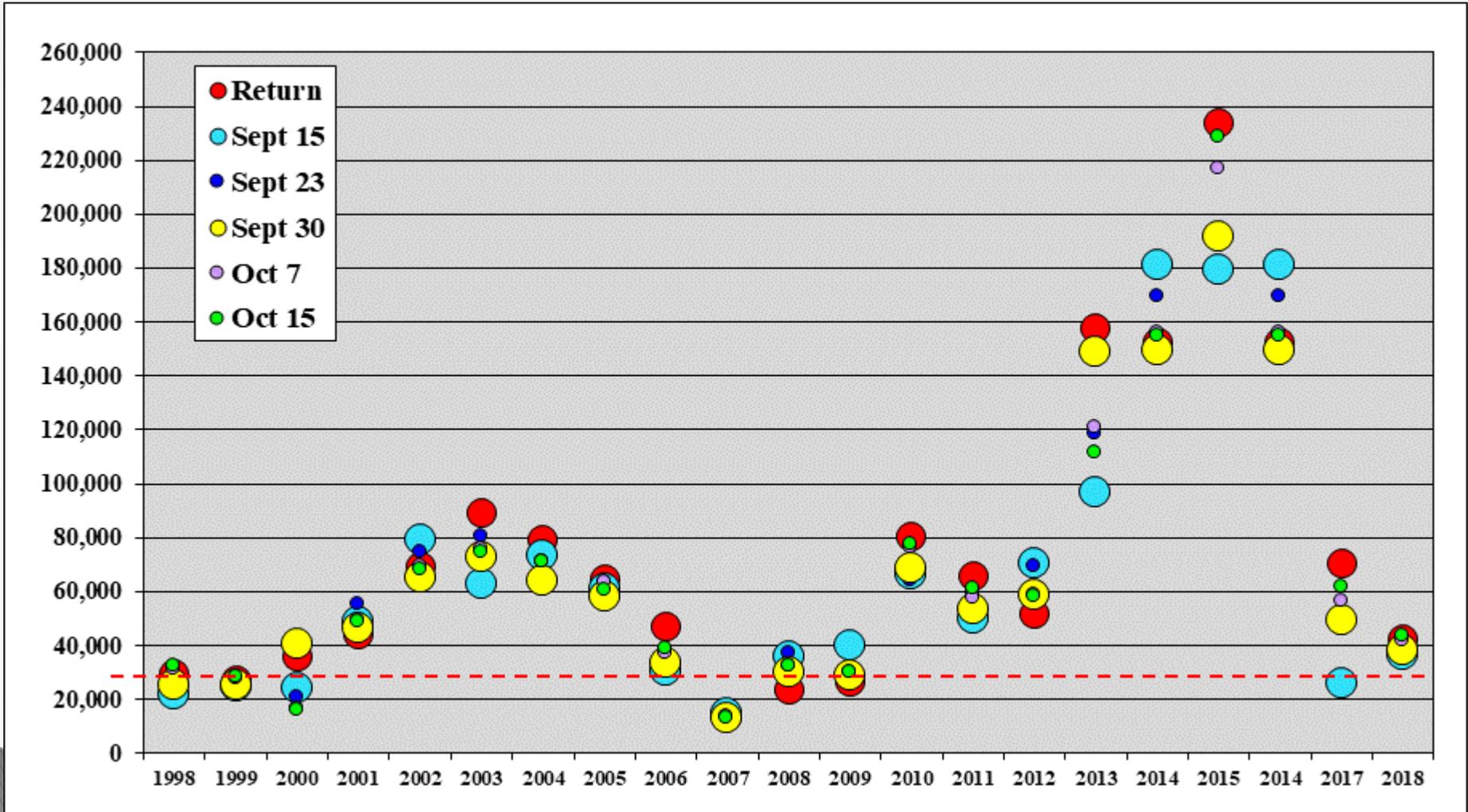
**September 15: In-season estimate = 36,779 / Quota = 5,740 adults  
E-rule: 1 adult limit in Hanford Reach**

**October 15: Closure of Hanford Reach fishery**

<b>In-season Natural Origin Return Estimate</b>					
<b>Date</b>	<b>Sep 15</b>	<b>Sep 23</b>	<b>Sep 30</b>	<b>Oct 07</b>	<b>Oct 15</b>
<b>In-season Return Estimate</b>	<b>36,779</b>	<b>37,105</b>	<b>38,326</b>	<b>41,686</b>	<b>43,758</b>
<b>Harvest allocation</b>	<b>5,740</b>	<b>5,903</b>	<b>6,513</b>	<b>8,193</b>	
<b>Harvest</b>	<b>1,097</b>	<b>2,368</b>	<b>4,411</b>	<b>6,703</b>	<b>8,488</b>
<b>Balance</b>	<b>4,643</b>	<b>3,535</b>	<b>2,102</b>	<b>1,490</b>	

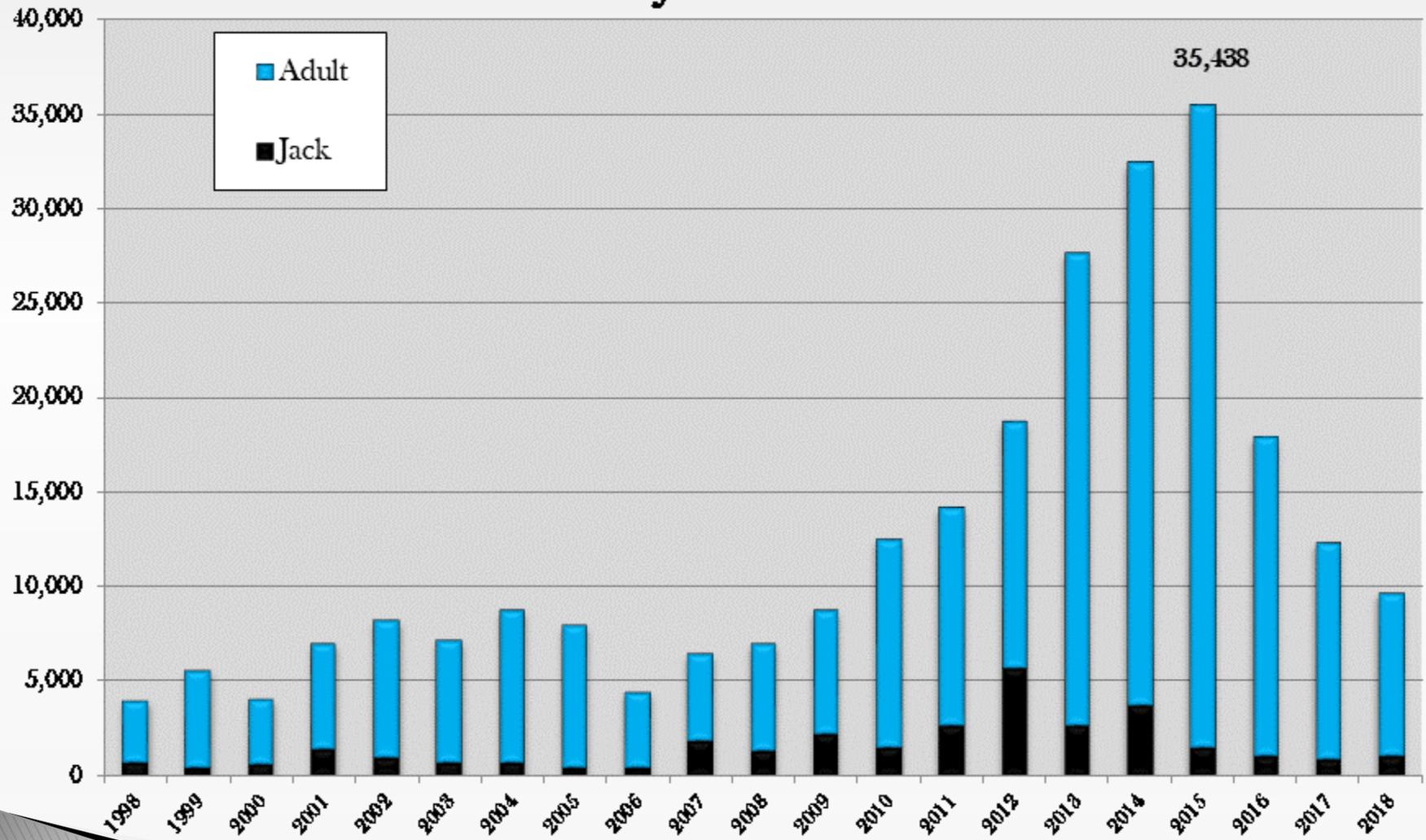
**Harvest = 8,672 adult & 1,072 jack**

# Hanford Reach Fall Chinook Harvest Management Plan

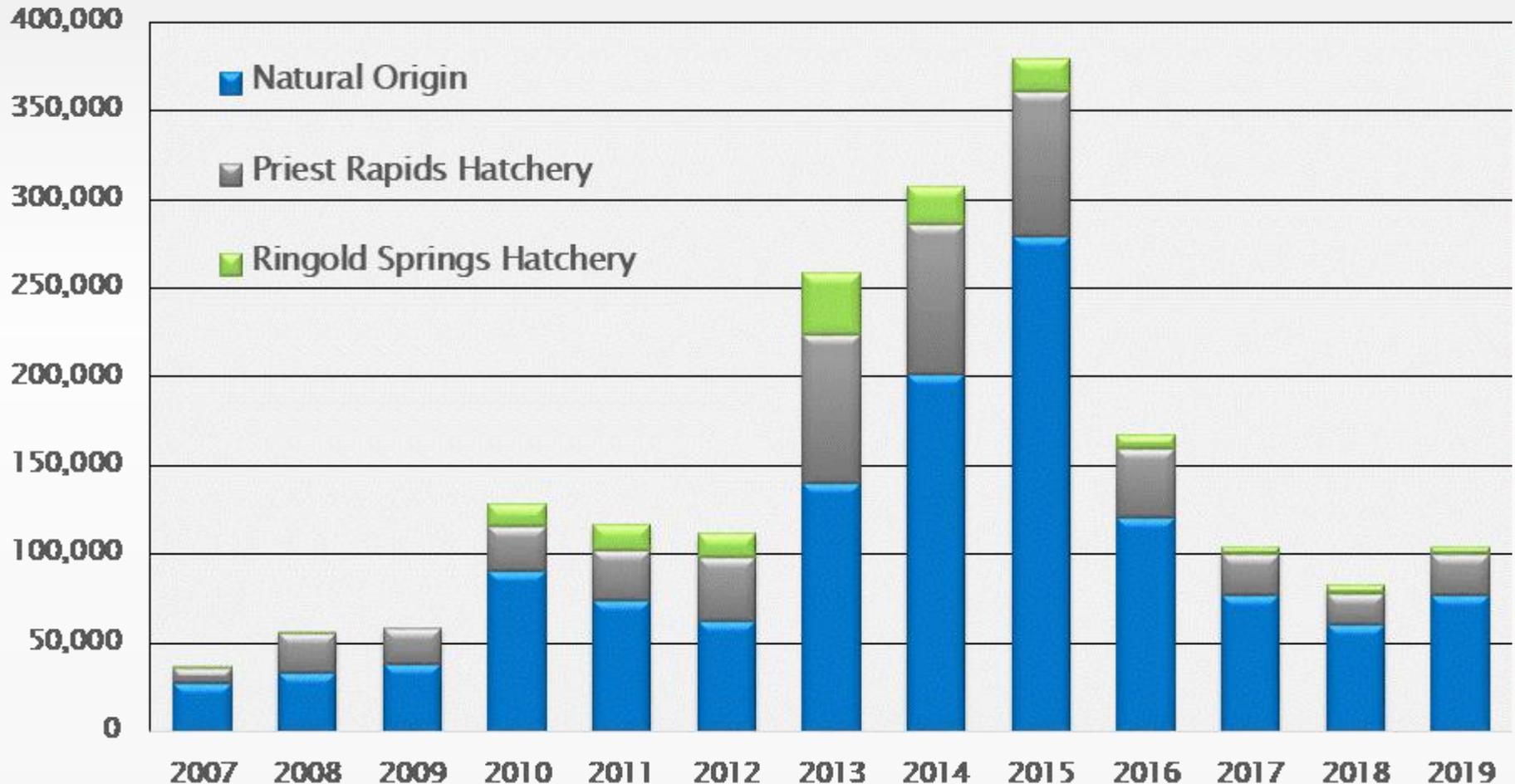


Escapement Goal = 31,110

# Hanford Reach Fall Chinook Sport Fishery Harvest



# 2019 Hanford Reach Fall Fishery



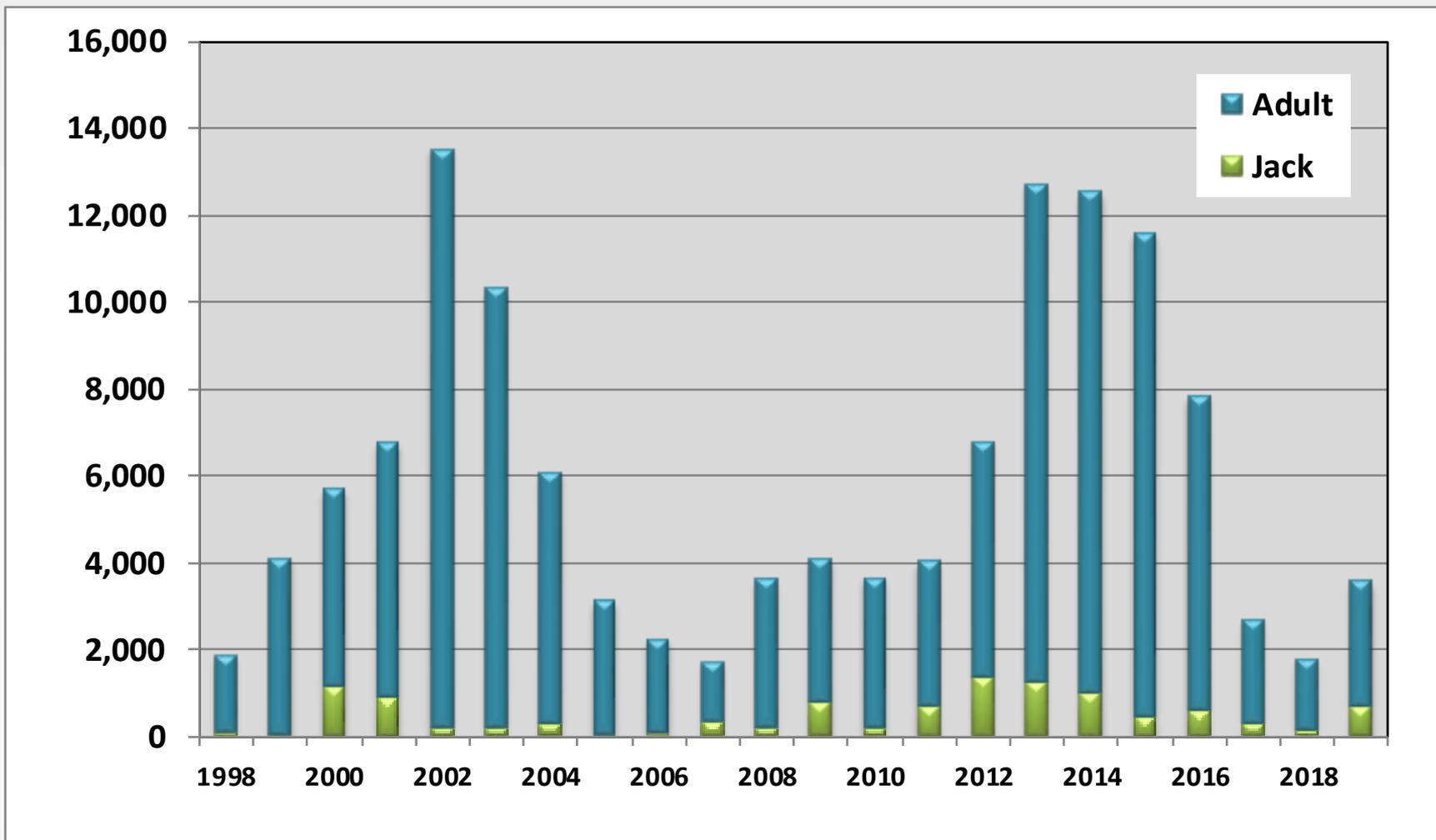
**2018 Return = 71,612**

**2019 Forecast = 98,170**

# 2019 Hanford Reach Fall Chinook Fishery

- ▶ Highway 395 bridge to Old Hanford townsite wooden powerline towers (534, 535)  
Aug. 16 - Oct. 31
- ▶ Old Hanford townsite wooden powerline towers to Priest Rapids Dam (536)
  - Aug. 16 - Oct. 15
- ▶ Daily limit 6. Up to 2 may be adults. Chinook or coho.
- ▶ Use of two poles permitted with endorsement.

# Yakima River Fall Chinook Forecast



Age	Age 2	Age 3	Age 4	Age 5	Age 6	Total	Adults
2019 Forecast	679	607	1,957	309	7	3,559	2,880

**Strong return of coho expected in 2019**

# 2019 Yakima River Fall Salmon Fishery Regulations

Highway 240 Bridge (Richland) to Grant Avenue Bridge  
(Prosser)

Sept 1 - Oct 31. Daily limit 6. Up to 2 may be adults.

Night closure

Use of two poles permitted with endorsement.

**Potential for Early Closure**

# Ringold Springs Hatchery Steelhead Returns



Population estimates are generated in mid-November from mark recapture of steelhead transported from RSH trap to Richland

# 2019–20 Ringold Springs Hatchery Summer Steelhead Regulations

October 1 – 31 Daily limit 2 hatchery steelhead with both adipose fin clipped and ventral fin clipped.

Nov. 1 – Mar 31 Daily limit 2 hatchery steelhead.

April 1 – 15, 2020 Ringold area bank fishery

# Recreational Rule Simplification

- Rationale
  - Concurrency with Idaho/Oregon
  - Consider implications at a population level versus individual fish level
  - Reduce complexity
  - Eliminate layered gear restrictions
  - Standardize season dates and daily limits
  - Decouple salmon and steelhead limits
  - Reason for a regulation is outdated
  - Enforceability

# Recreational Rule Simplification

- Can reduce (or increase) opportunities
- Tribal co-manager agreement
- Concurrent waters of the Columbia River requires discussion with other state managers.
  - ODFW/WDFW have initiated discussions.

# Recreational Rule Simplification

- Concurrency, fishery constraints, insufficient sampling (and resources) for inseason need: Salmon/steelhead night fishing closures from Buoy 10 to:
  - McNary Dam?
  - OR/WA state line, Hwy 395 at Pasco, or further?
- Commission guidance (C-3620 modification) for Columbia River basin: Rescind barbless hook rule with intention to make effective by no later than June 1:
  - Columbia River and tributaries to OR/WA state line
  - Upstream of OR/WA state line (and tributaries)
  - Potential exceptions where federal permits specify barbless hooks are required for ESA-coverage

Questions?



# NE of McNary Columbia River Salmon & Steelhead

- Welcome/Introductions
- Purpose of Meeting
- 2018 Returns & 2019 Forecasts
- Management Objectives & Fishery Options

Northeast of McNary Meetings – March 26–28, 2019  
Washington Department of Fish and Wildlife

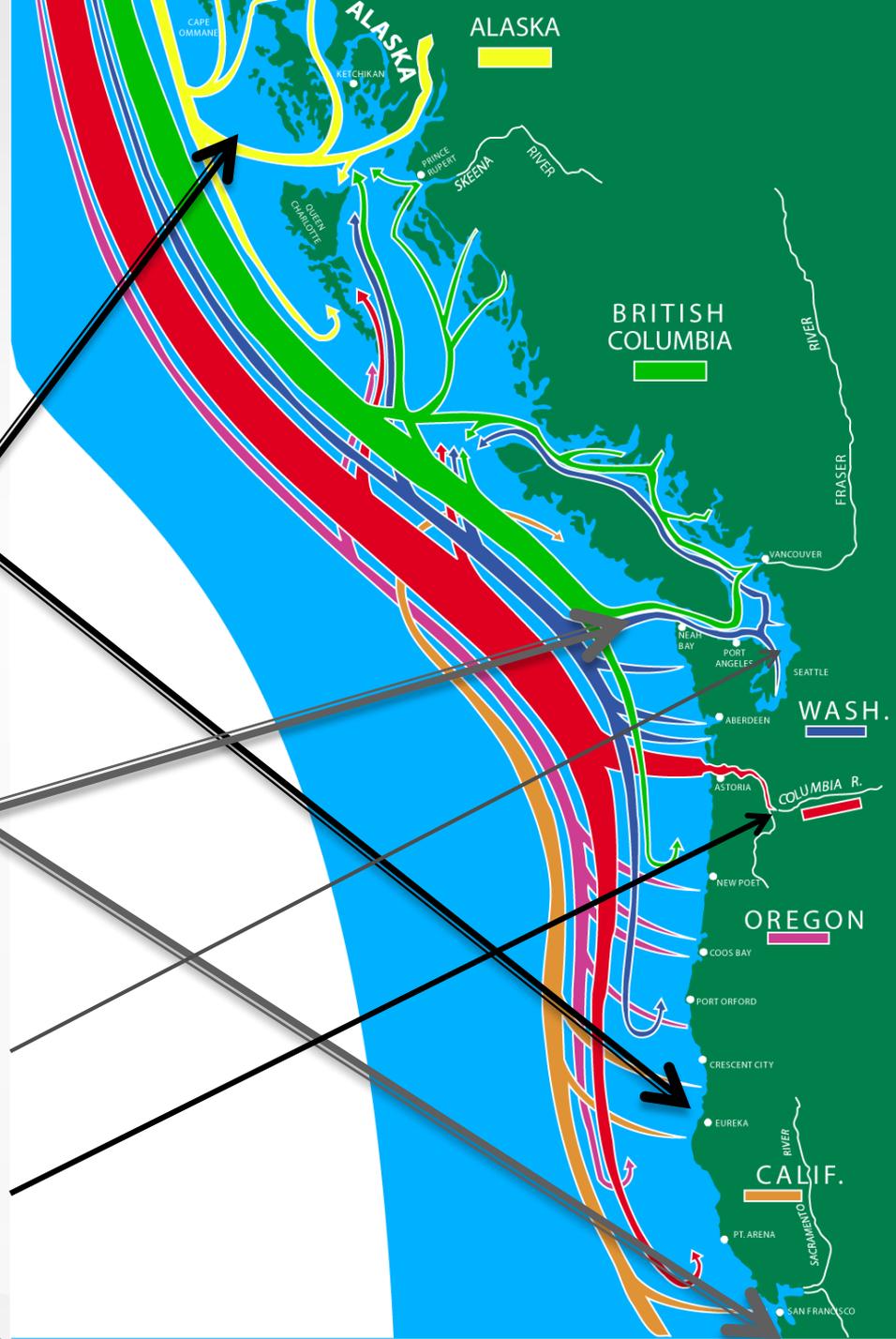
# Complex, multi-jurisdictional processes

Pacific Salmon Treaty

Pacific Fishery Management Council

U.S. v Washington

U.S. v Oregon



# 2019 PFMC/NOF Schedule

## East of McNary – Mid/Upper Columbia River, 6–8 pm

- ▶ March 26 – Wenatchee @ Douglas PUD
- ▶ March 27 – Kennewick @ Kennewick Irrigation District
- ▶ March 28 – Clarkston @ Walla Walla Community College

## Columbia River & Ocean

- ▶ April 2, 10 am – 3 pm
- ▶ Ridgefield WDFW

## Puget Sound

- ▶ April 3, 9:30 am – 5 pm (*live streamed*)
- ▶ Lynnwood Embassy Suites

## Pacific Fishery Management Council

- ▶ Final salmon seasons set
- ▶ April 11–15
- ▶ DoubleTree by Hilton Sonoma
- ▶ Rohnert Park, California

## Fishing & Shellfishing

# North of Falcon

[Fishing regulations](#)

[Shellfishing regulations](#)

[Fishing and stocking reports](#)

[Places to go fishing](#)

[Managing fish populations](#)

[Commercial fishing](#)

[Fishing & shellfishing basics](#)

[Tribal fishing](#)

[Fishing contests](#)

Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational and commercial salmon fisheries. This series of meetings – involving representatives from federal, state and tribal governments and recreational and commercial fishing industries – is known as the North of Falcon process.

### Public meeting schedule

Numerous public meetings are held throughout the North of Falcon process.

### State-tribal meeting schedule

These meetings are government-to-government negotiations and are closed to the public.

### North of Falcon frequently asked questions

Learn more about the North of Falcon process with this FAQ.

### Preseason forecasts

See the latest preseason forecasts for a variety of salmon species.

### Public input

Submit public comments on the North of Falcon salmon season proposals.

# Columbia River Salmon and Steelhead

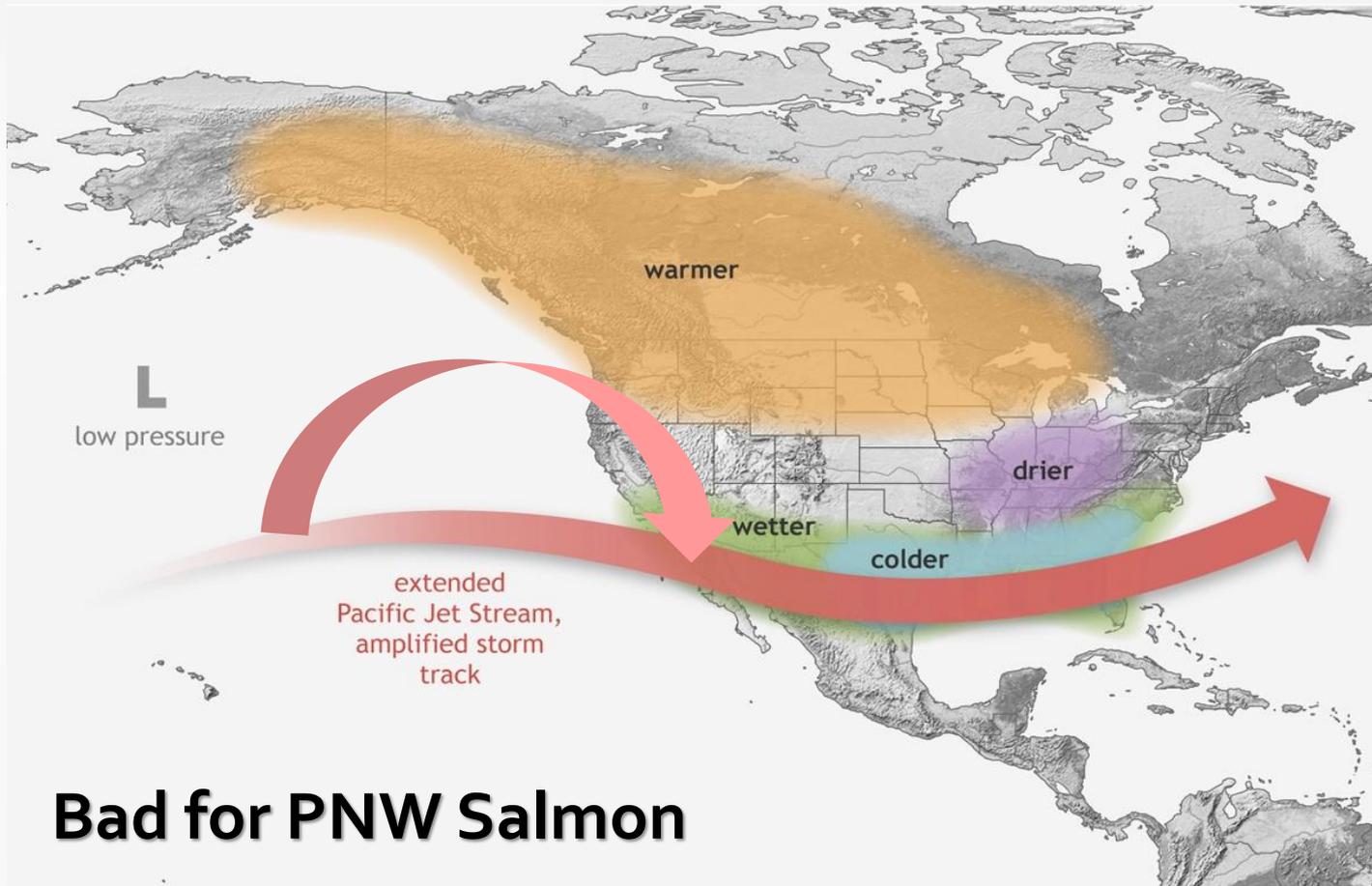
## 2018 Returns and 2019 Forecasts

Northeast of McNary Meetings – March 26 – 28, 2019  
Washington Department of Fish and Wildlife

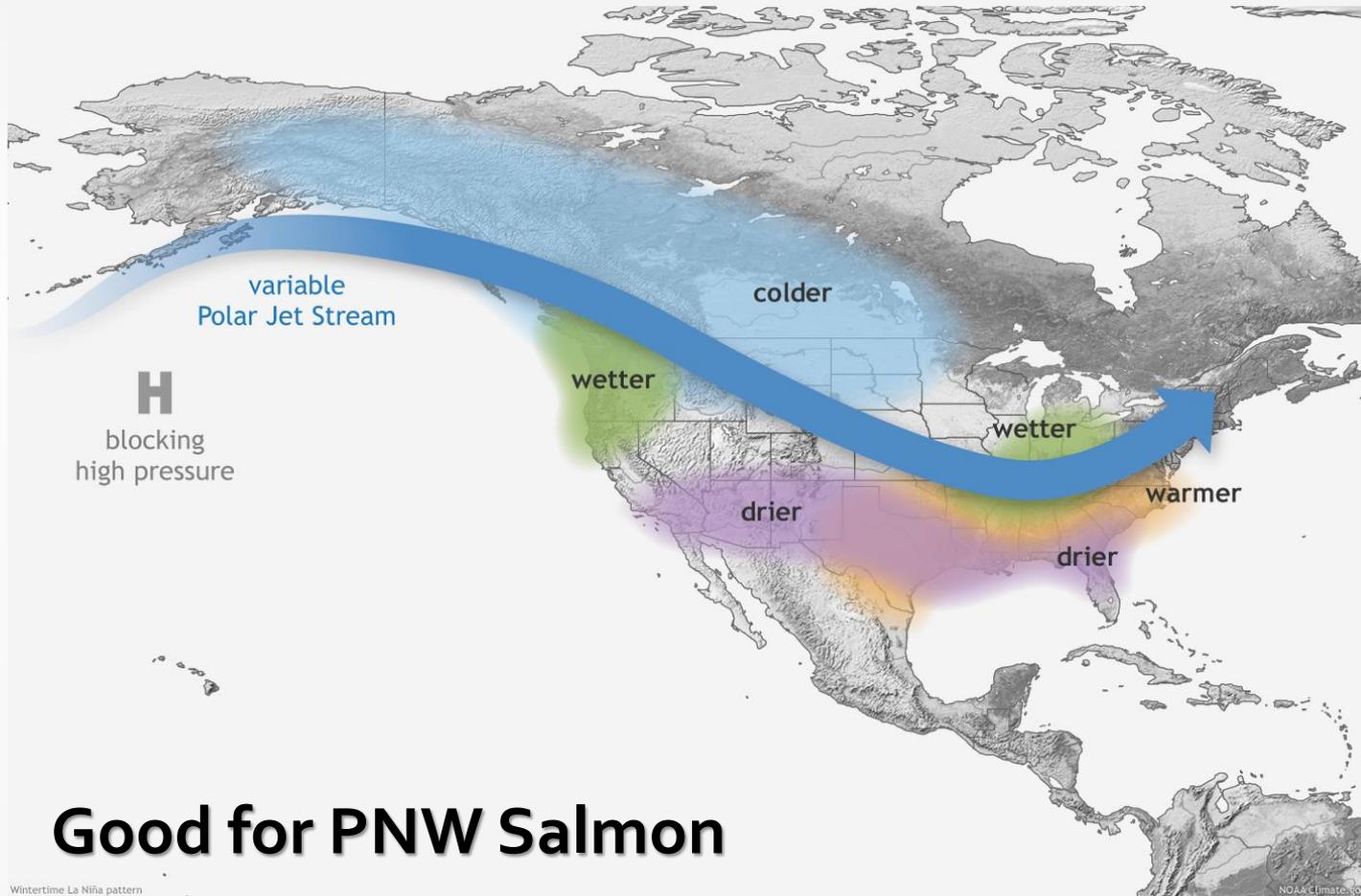
# Environment Conditions Affecting Returns

- Sea surface temperatures (SSTs) cooled following “The Blob”, ushering in weak La Niñas
- Return of warm SST anomalies to the North and South in Fall 2018
- Projections are for a weak El Niño through spring 2019
- Cooling in 2018 and return to “normal”ish conditions (upwelling/copepods) may lead to better survival

# Typical El Niño Pattern



# Typical La Niña Pattern



# Salmon Indicators: **Bad** -> **Fair** -> **Good**

Basin-scale physical indices

Regional physical indices

Regional biological indices

Ecosystem Indicators	Year																				
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PDO (Sum Dec-March)	18	6	3	13	7	20	12	16	14	9	5	1	15	4	2	8	10	21	19	17	11
PDO (Sum May-Sept)	10	4	6	5	11	17	16	18	12	14	2	9	7	3	1	8	19	21	20	15	13
ONI (Average Jan-June)	20	1	1	7	14	16	15	17	9	12	3	11	18	4	6	8	10	19	21	13	5
46050 SST (°C; May-Sept)	16	9	3	4	1	8	21	15	5	17	2	10	7	11	12	13	14	20	18	6	19
Upper 20 m T (°C; Nov-Mar)	20	11	8	10	6	15	16	12	13	5	1	9	17	4	3	7	2	21	19	18	14
Upper 20 m T (°C; May-Sept)	17	12	14	4	1	3	21	19	7	8	2	5	13	10	6	18	20	9	15	11	16
Deep temperature (°C; May-Sept)	21	6	8	4	1	10	12	16	11	5	2	7	14	9	3	15	20	18	13	17	19
Deep salinity (May-Sept)	19	3	9	4	5	16	17	10	6	1	2	14	18	13	12	11	20	15	8	7	6
Copepod richness anom. (no. species; May-Sept)	19	2	1	7	6	14	13	18	15	10	8	9	17	4	5	3	11	20	21	16	12
N. copepod biomass anom. (mg C m <sup>-3</sup> ; May-Sept)	19	14	10	11	3	16	13	20	15	12	6	9	8	1	2	4	5	17	21	18	7
S. copepod biomass anom. (mg C m <sup>-3</sup> ; May-Sept)	21	2	5	4	3	14	15	20	13	10	1	7	16	9	8	6	11	18	19	17	12
Biological transition (day of year)	18	8	5	7	9	14	13	19	12	2	1	3	16	6	10	4	11	21	21	17	15
Ichthyoplankton biomass (mg C 1,000 m <sup>-3</sup> ; Jan-Mar)	21	12	3	8	10	19	18	15	17	16	2	13	5	14	11	9	20	6	7	1	4
Ichthyoplankton community index (PCO axis 1 scores; Jan-Mar)	10	13	2	7	5	11	20	18	3	12	1	14	15	8	4	6	9	19	21	17	16
Chinook salmon juvenile catches (no. km <sup>-1</sup> ; June)	19	4	5	16	8	12	17	20	11	9	1	6	7	15	3	2	10	13	18	21	14
Coho salmon juvenile catches (no. km <sup>-1</sup> ; June)	19	8	13	6	7	3	16	20	17	5	4	10	11	15	18	1	12	9	14	21	2
Mean of ranks	17.9	7.2	6.0	7.3	6.1	13.0	15.9	17.1	11.3	9.2	2.7	8.6	12.8	8.1	6.6	7.7	12.8	16.7	17.2	14.5	11.0
Rank of the mean rank	21	5	2	6	3	15	17	19	11	10	1	9	13	8	4	7	13	18	20	1	12

Ecosystem Indicators not included in the mean of ranks or statistical analyses

Physical Spring Trans. UI based (day of year)	3	7	20	17	4	13	15	21	13	1	6	2	8	11	18	9	19	10	5	16	11
Physical Spring Trans. Hydrographic (day of year)	18	15	16	17	13	15	18	16	10	2	6	12	9	7	5	11	19	21	17	14	
Upwelling Anomaly (April-May)	15	16	17	13	15	18	16	10	2	6	12	9	7	5	11	19	21	17	14		
Length of Upwelling Season UI based (days)	16	17	13	15	18	16	10	2	6	12	9	7	5	11	19	21	17	14			
SST NH-5 (°C; May-Sept)	9	6	5	4	1	3	21	16	10	18	2	19	11	7	14	13	15	12	17	8	20
Copepod Community Index (MDS axis 1 scores)	20	3	4	8	1	13	15	18	16	10	2	6	12	9	7	5	11	19	21	17	14
Coho Juv Catches (no. fish km <sup>-2</sup> ; Sept)	11	2	1	4	3	6	12	14	8	9	7	15	13	5	10	NA	NA	NA	NA	NA	NA

**1998 = Worst Score**

**2005 = 3<sup>rd</sup> Worst Score**

**2016 = 2<sup>nd</sup> Worst Score**

**2018 = improving**

Table SF-01. Ocean ecosystem indicators of the Northern California Current.

Colored squares indicate positive (green), neutral (yellow), or negative (red) conditions for salmon entering the ocean each year. In the two columns to the far right, colored dots indicate the forecast of adult returns based on ocean conditions in 2018 (coho salmon) and 2017 (Chinook salmon).

	Juvenile Migration Year				Adult Return Outlook	
	2015	2016	2017	2018	coho 2019	Chinook 2019
Large-scale ocean and atmospheric indicators						
<a href="#">PDO (May - Sept)</a>	■	■	■	■	●	●
<a href="#">ONI (Jan - Jun)</a>	■	■	■	■	●	●
Local and regional physical indicators						
<a href="#">Sea surface temperature</a>	■	■	■	■	●	●
<a href="#">Deep water temperature</a>	■	■	■	■	●	●
<a href="#">Deep water salinity</a>	■	■	■	■	●	●
Local biological indicators						
<a href="#">Copepod biodiversity</a>	■	■	■	■	●	●
<a href="#">Northern copepod anomalies</a>	■	■	■	■	●	●
<a href="#">Biological spring transition</a>	■	■	■	■	●	●
<a href="#">Winter ichthyoplankton biomass</a>	■	■	■	■	●	●
<a href="#">Winter ichthyoplankton community</a>	■	■	■	■	●	●
<a href="#">Juvenile Chinook salmon catch – June</a>	■	■	■	■	●	●
<a href="#">Juvenile coho salmon catch – June</a>	■	■	■	■	●	●
Key						
■ good conditions for salmon	■	■	■	■	● good returns expected	
■ intermediate conditions for salmon	■	■	■	■	● intermediate returns expected	
■ poor conditions for salmon	■	■	■	■	● poor returns expected	

# Predation

- Northern Pikeminnow/bird management
- Pinnipeds – Marine Mammal Protection Act (modification via S. 3119)
  - Increases state and tribal managers flexibility to proactively remove sea lions
    - Increases geographic area
      - Mouth to McNary Dam and tributaries
  - Adds Steller sea lions
  - Allows tribes to receive a permit
  - Allows lethal removal in Willamette River

# Stocks primarily originating upstream of Bonneville Dam

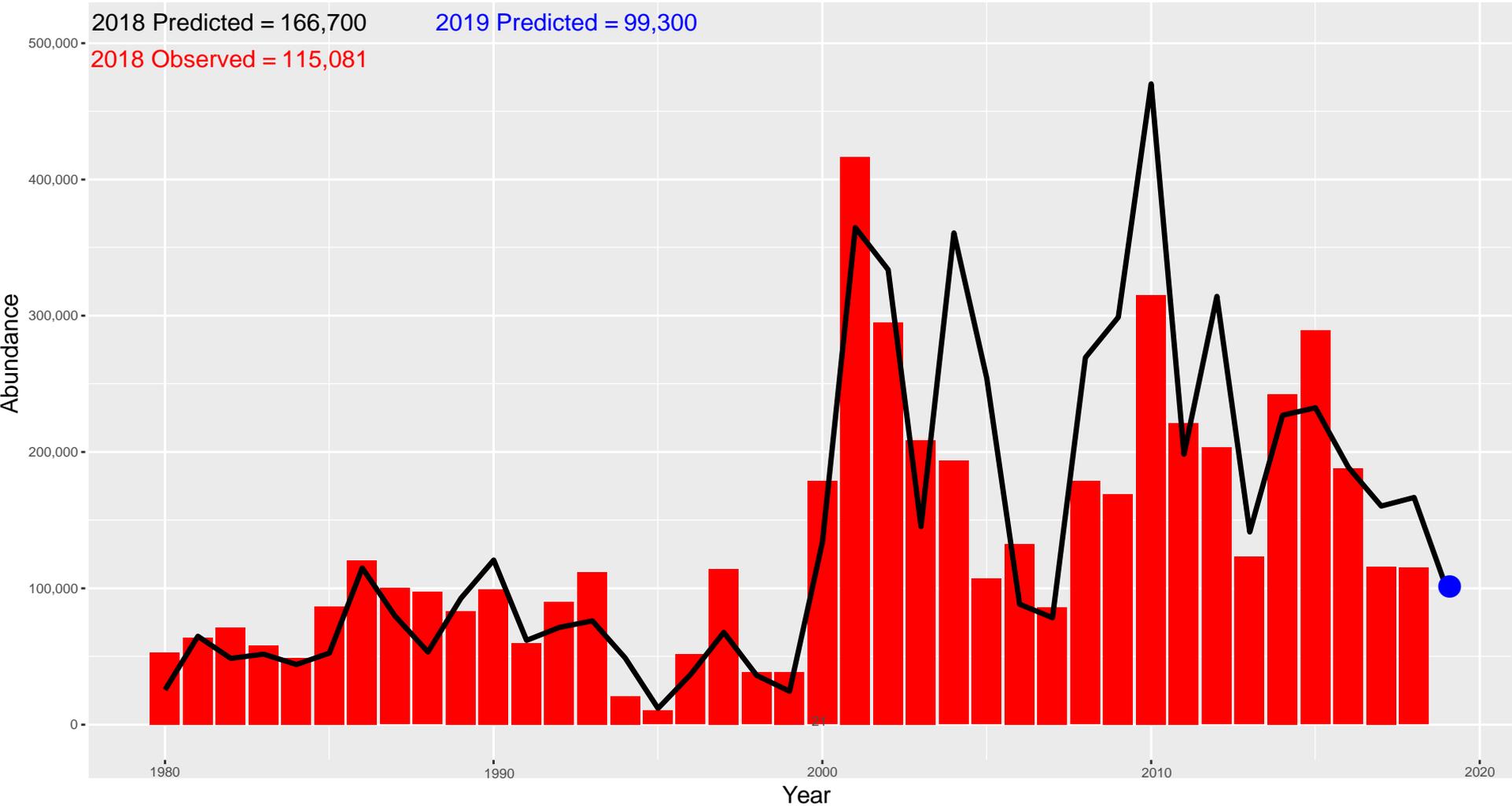


# Upriver Spring Chinook

2018 Predicted = 166,700

2019 Predicted = 99,300

2018 Observed = 115,081

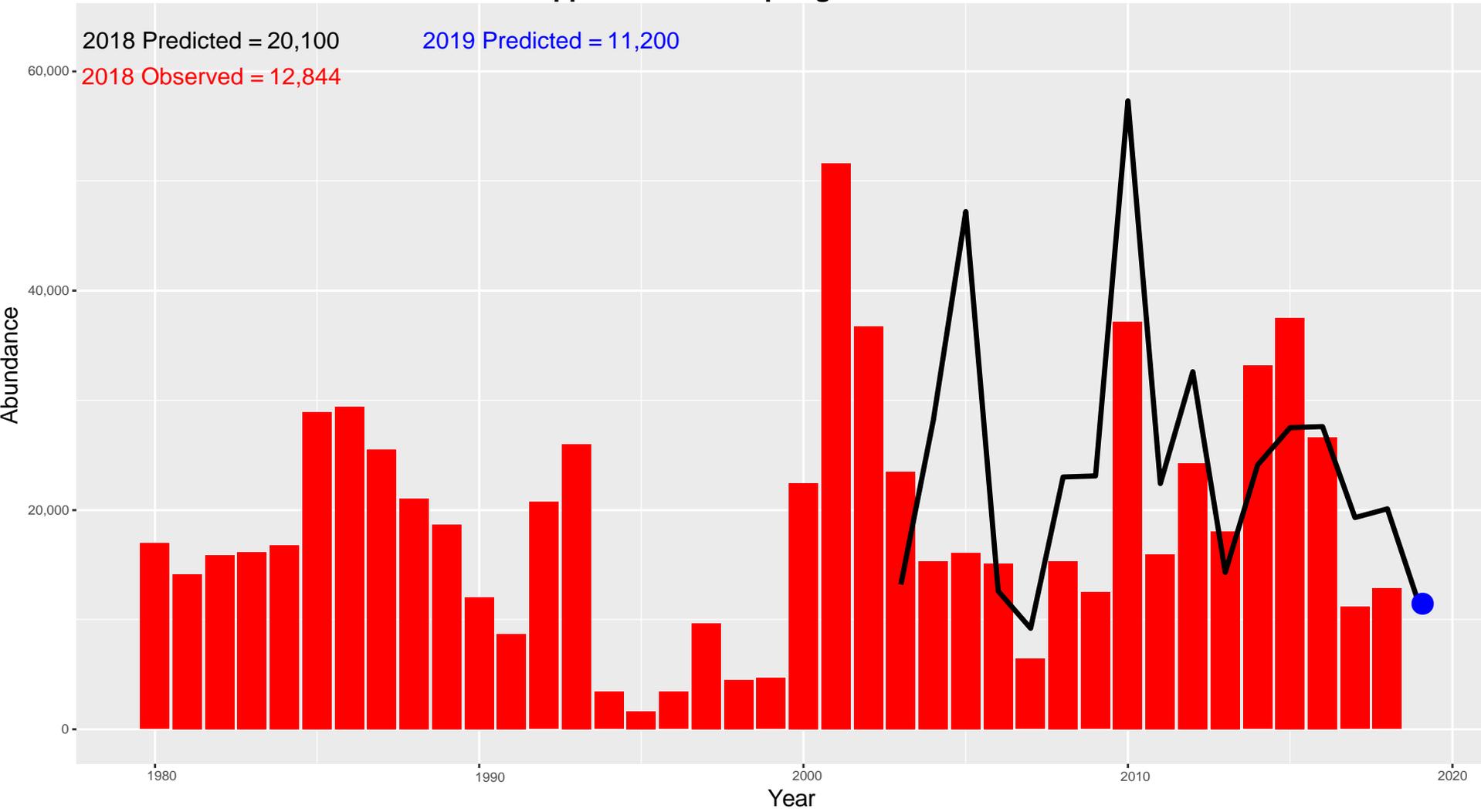


# Upper Columbia Spring Chinook

2018 Predicted = 20,100

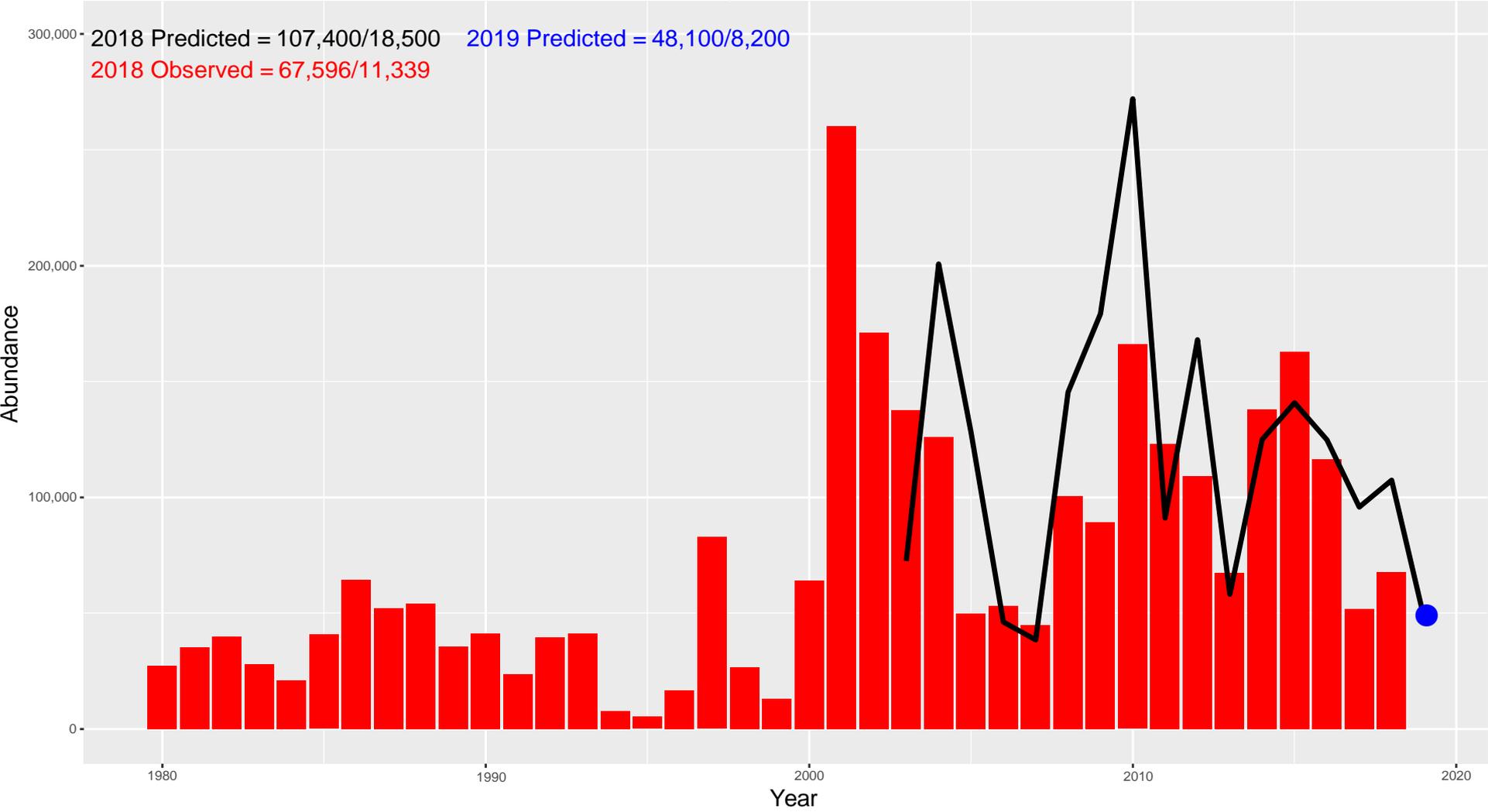
2019 Predicted = 11,200

2018 Observed = 12,844



### Snake River Spring Chinook (total/wild)

2018 Predicted = 107,400/18,500    2019 Predicted = 48,100/8,200  
2018 Observed = 67,596/11,339



# Columbia River Sockeye

2018 Predicted = 99,000

2019 Predicted = 94,400

2018 Observed = 210,915

Abundance

600,000

400,000

200,000

0

1980

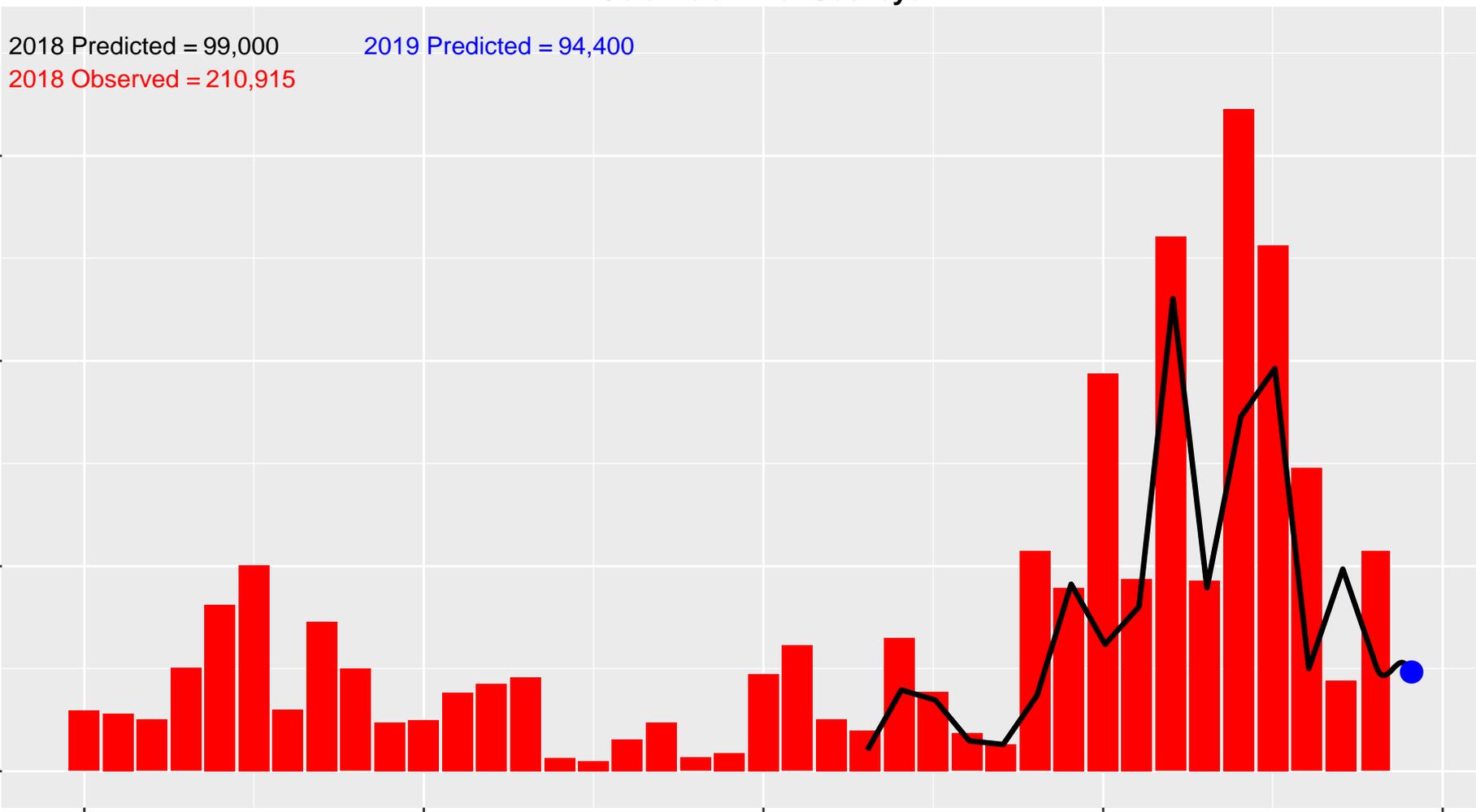
1990

2000

2010

2020

Year

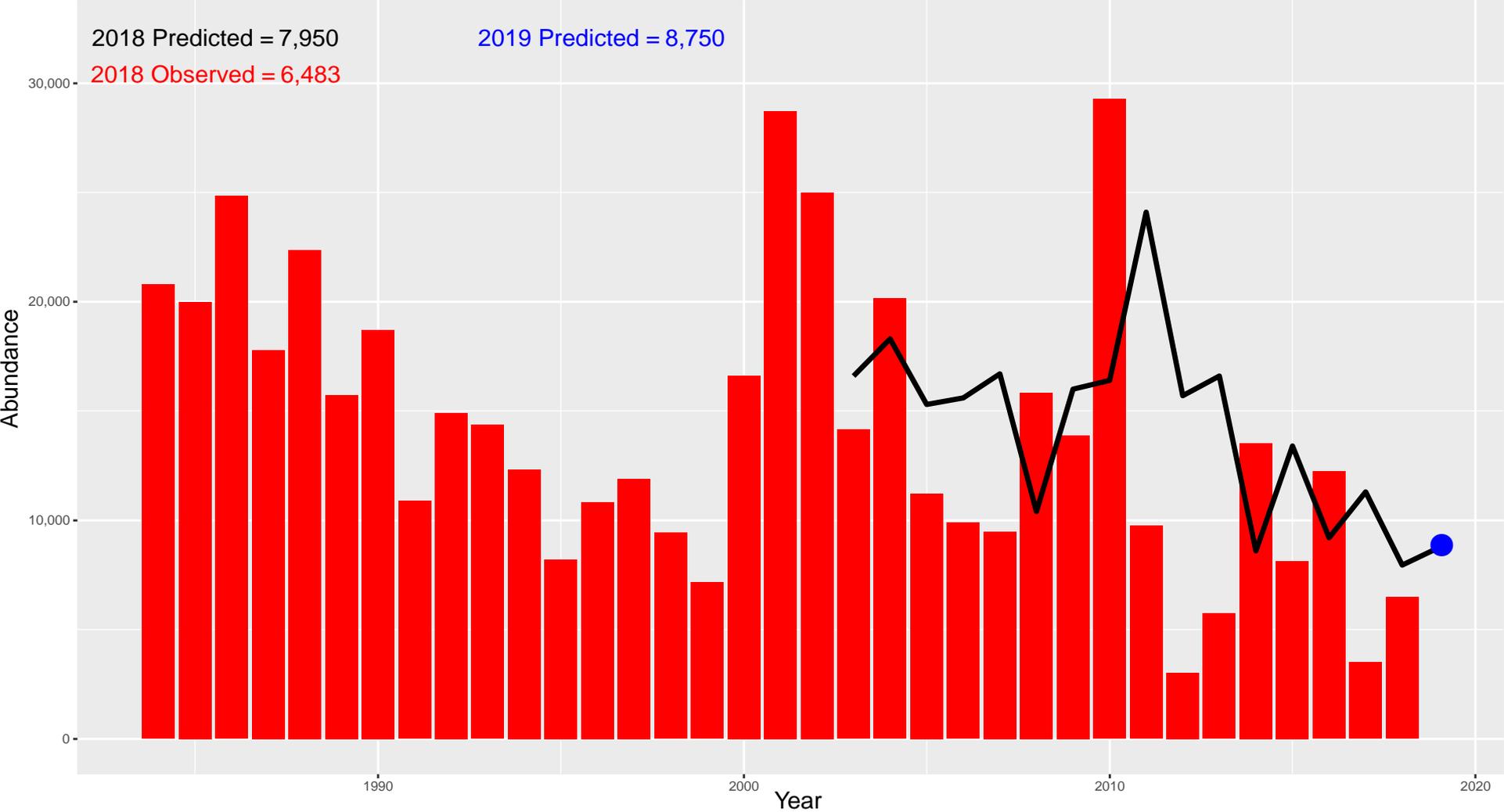


# Skamania Summer Steelhead

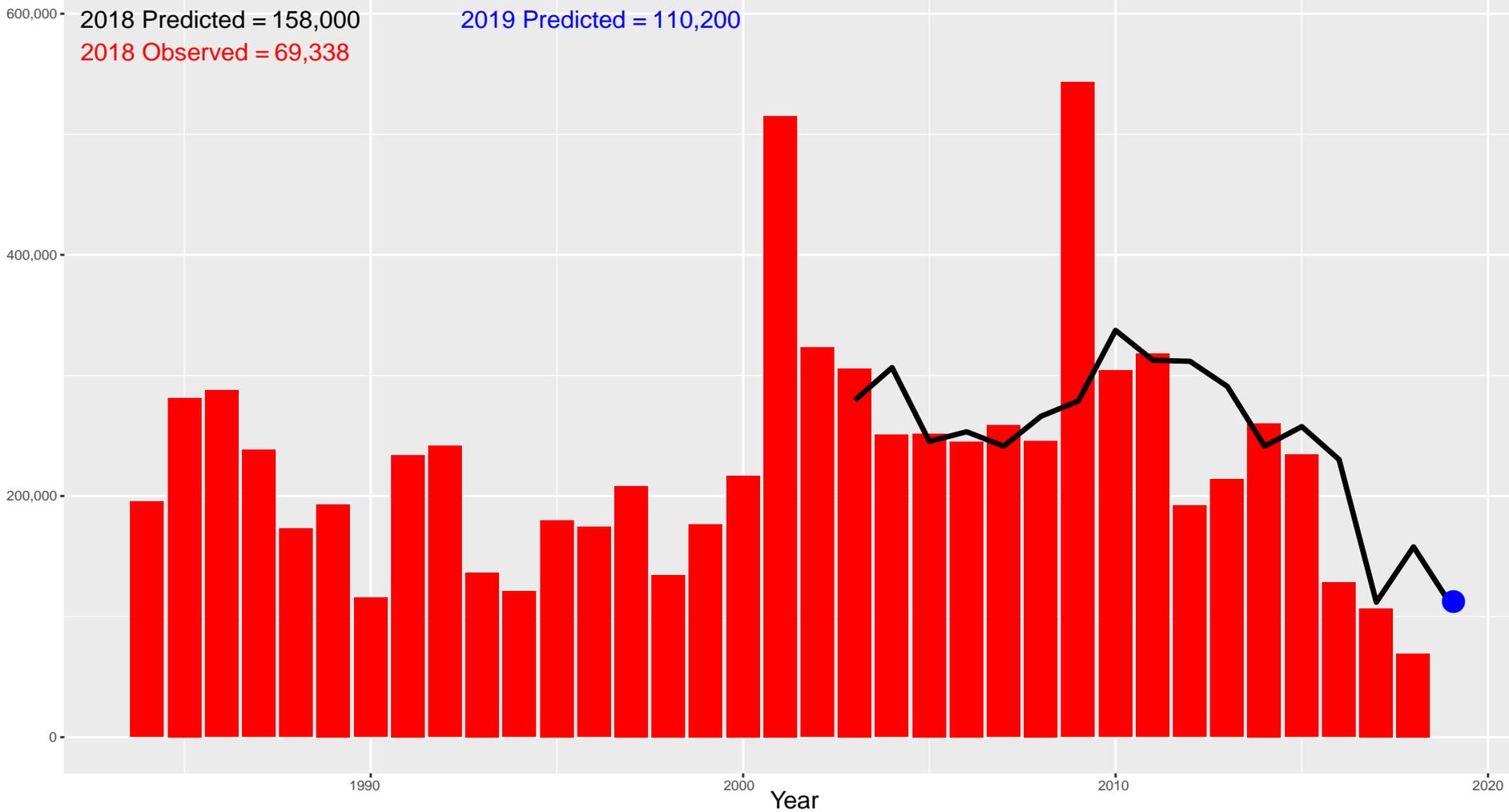
2018 Predicted = 7,950

2019 Predicted = 8,750

2018 Observed = 6,483



### A-index Summer Steelhead



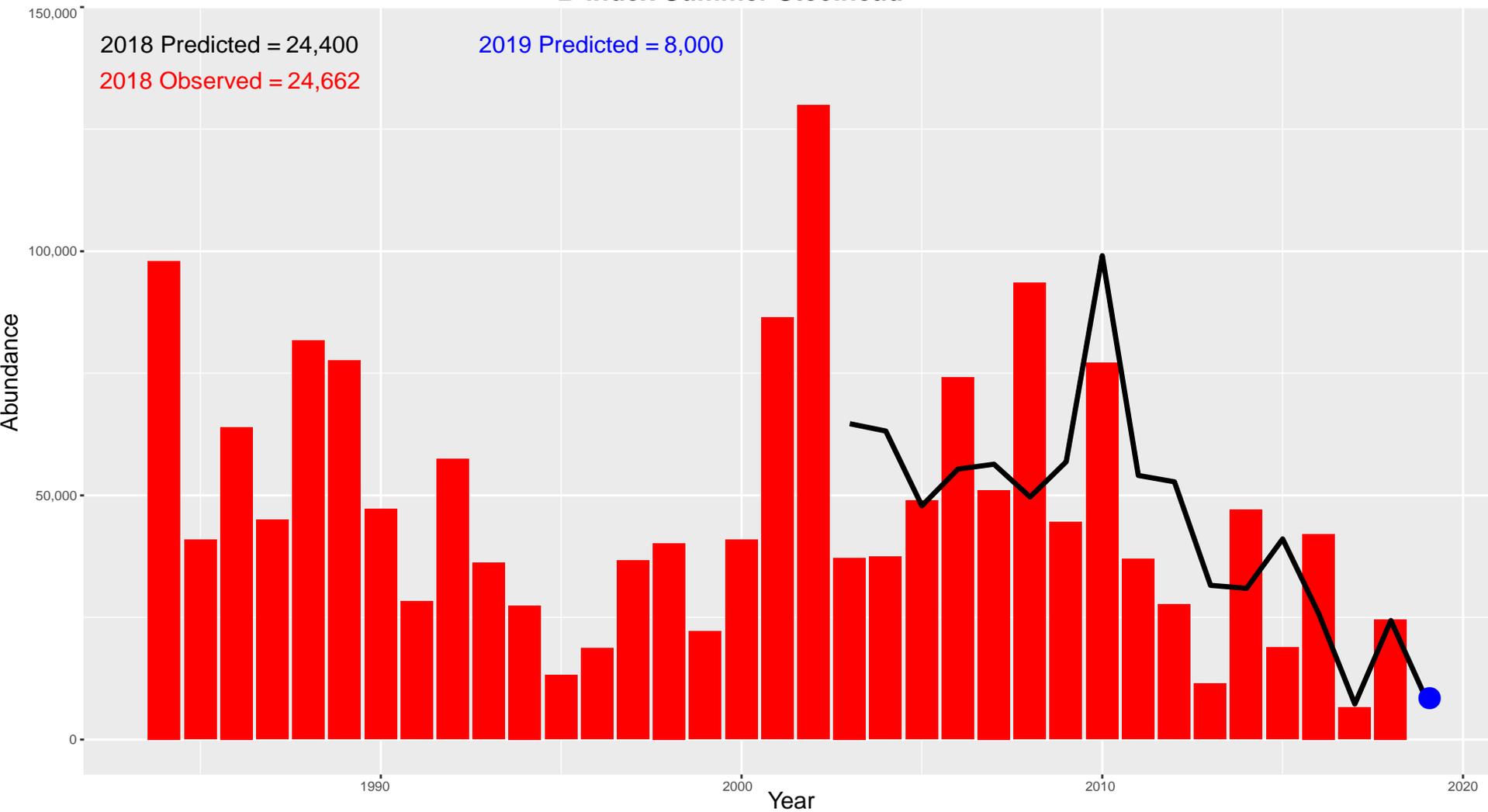
2018 Predicted = 158,000  
2018 Observed = 69,338

2019 Predicted = 110,200

# B-index Summer Steelhead

2018 Predicted = 24,400  
2018 Observed = 24,662

2019 Predicted = 8,000

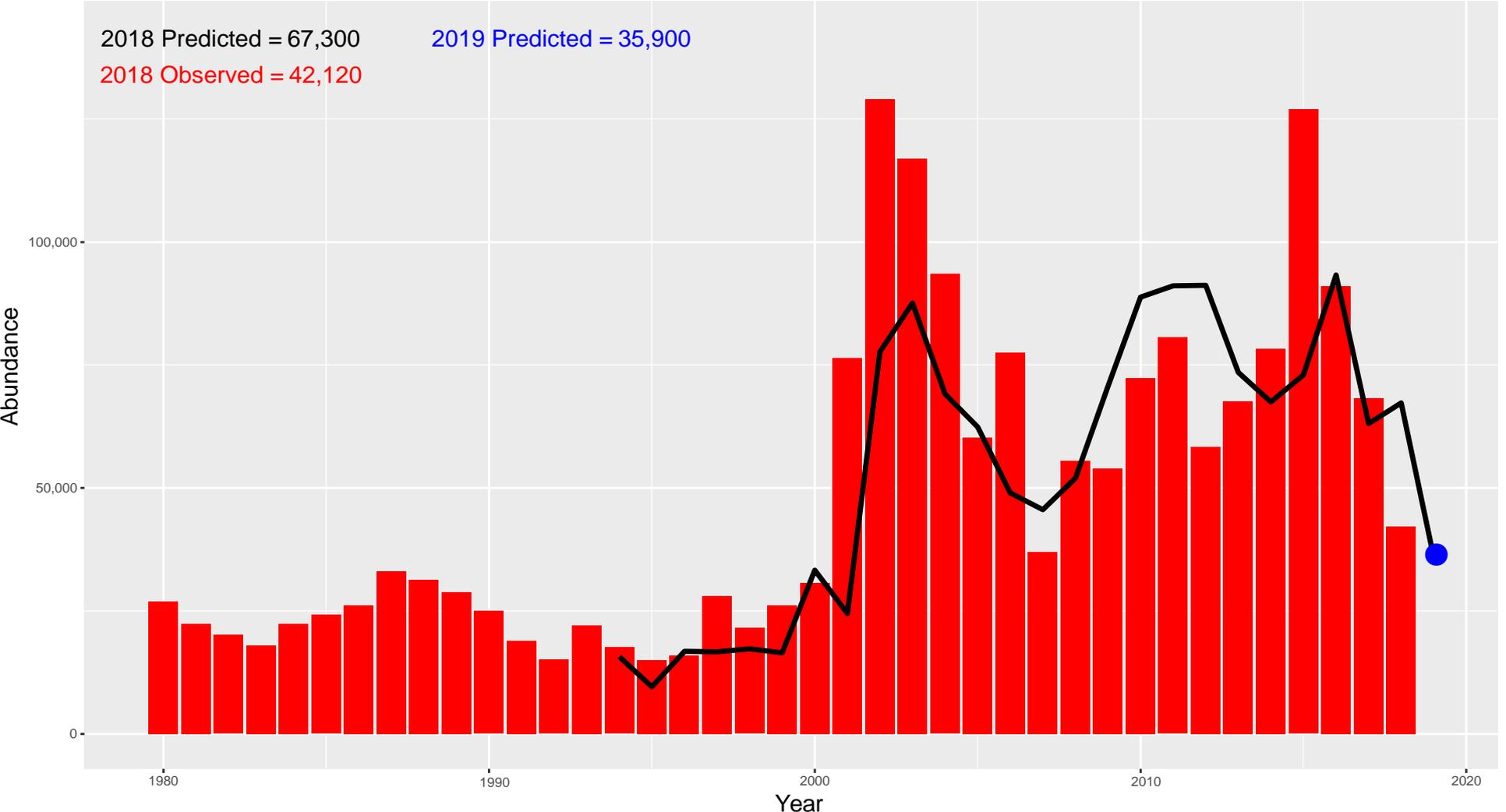


# Upper Columbia Summer Chinook

2018 Predicted = 67,300

2019 Predicted = 35,900

2018 Observed = 42,120

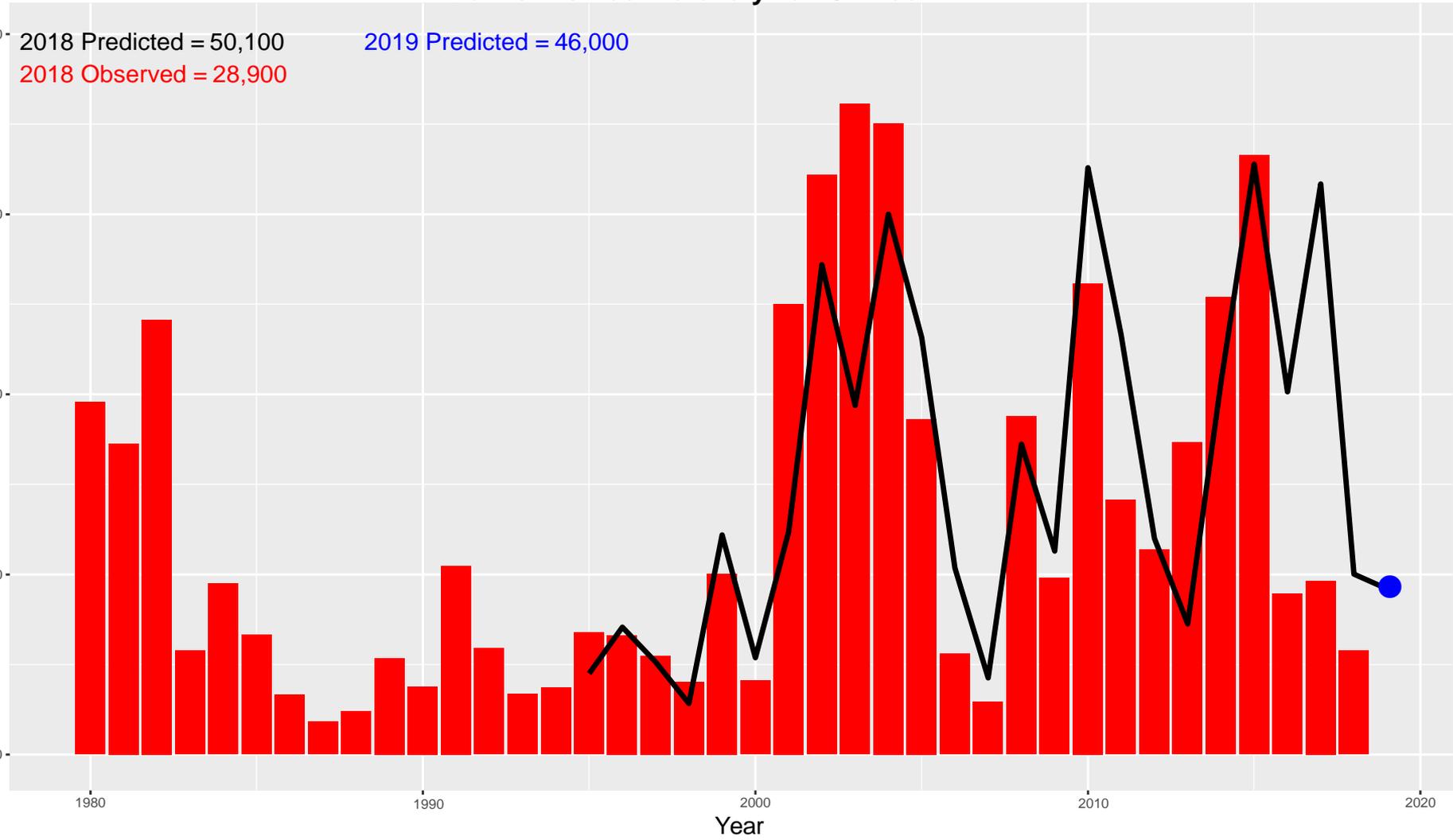


# Bonneville Pool Hatchery Fall Chinook

2018 Predicted = 50,100  
2018 Observed = 28,900

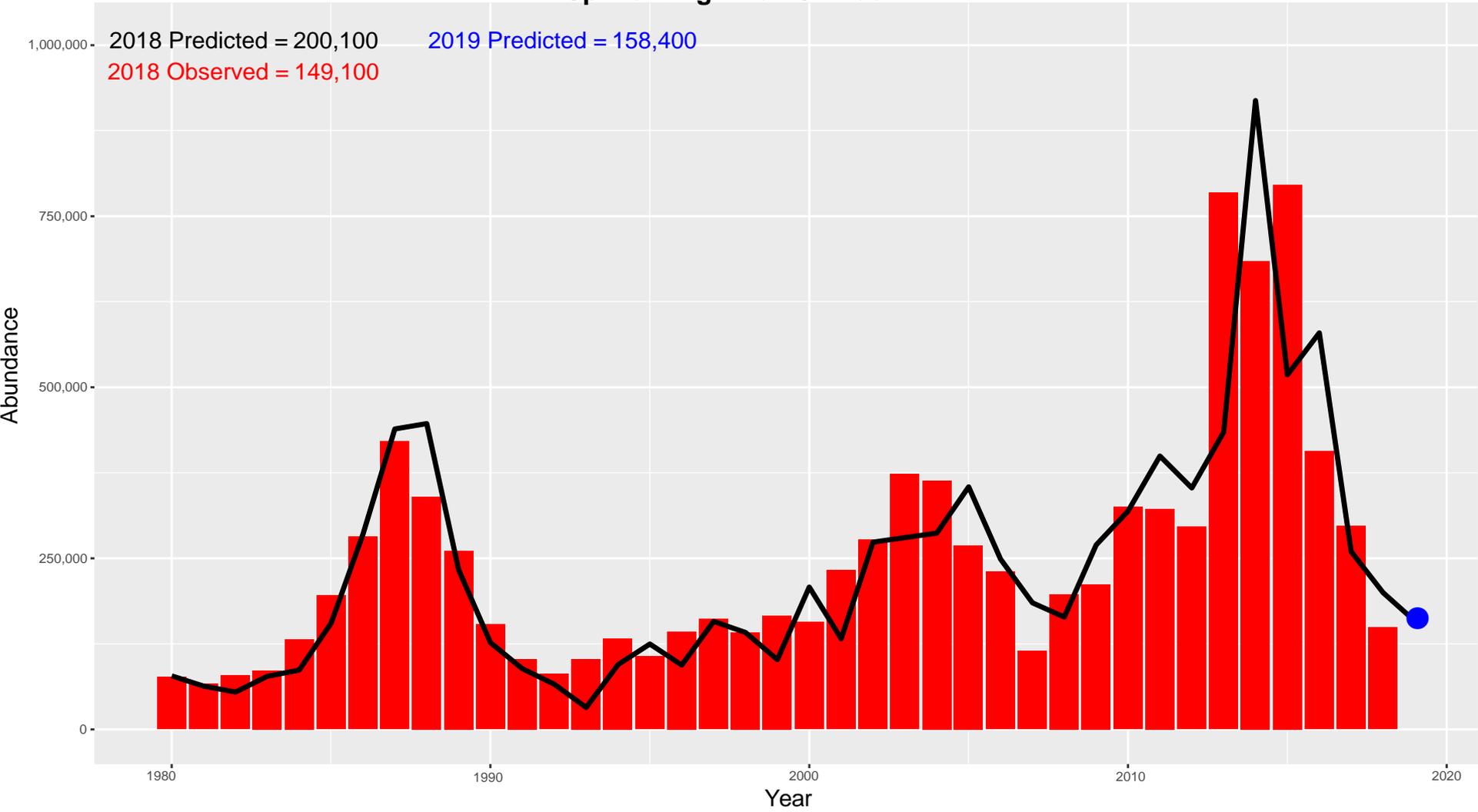
2019 Predicted = 46,000

Abundance



# Upriver Bright Fall Chinook

2018 Predicted = 200,100      2019 Predicted = 158,400  
2018 Observed = 149,100

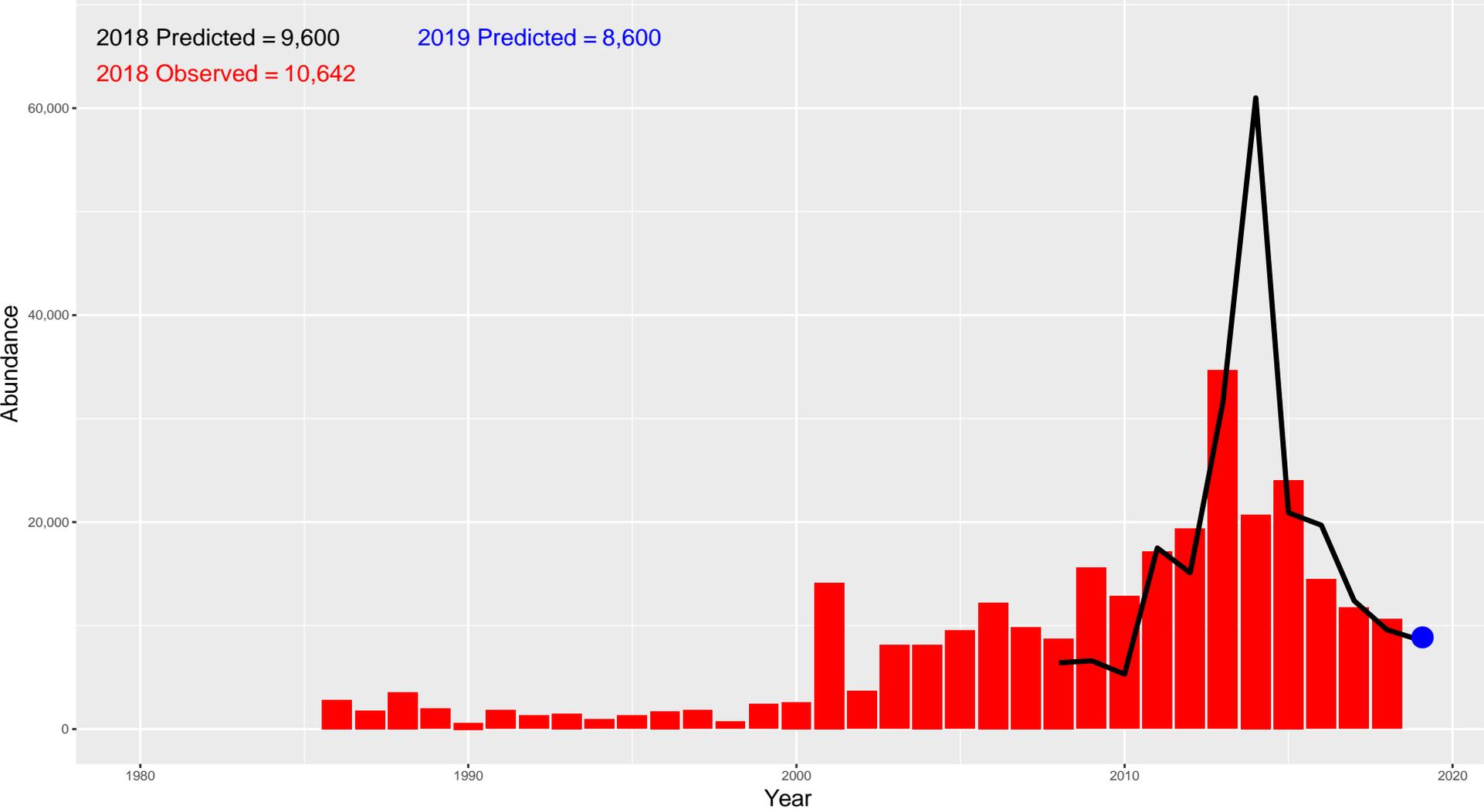


# Snake River Wild Fall Chinook

2018 Predicted = 9,600

2019 Predicted = 8,600

2018 Observed = 10,642

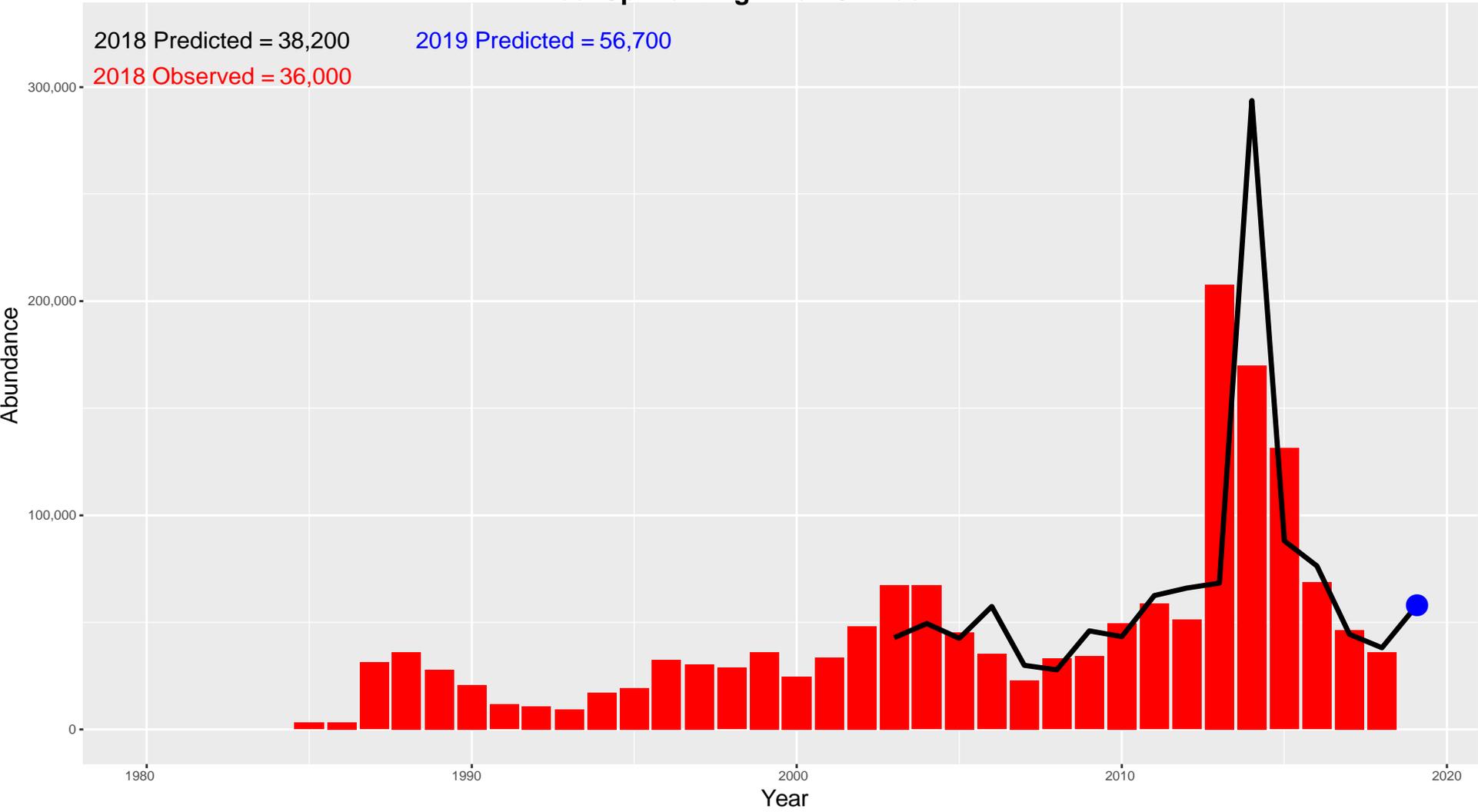


# Pool Upriver Bright Fall Chinook

2018 Predicted = 38,200

2019 Predicted = 56,700

2018 Observed = 36,000

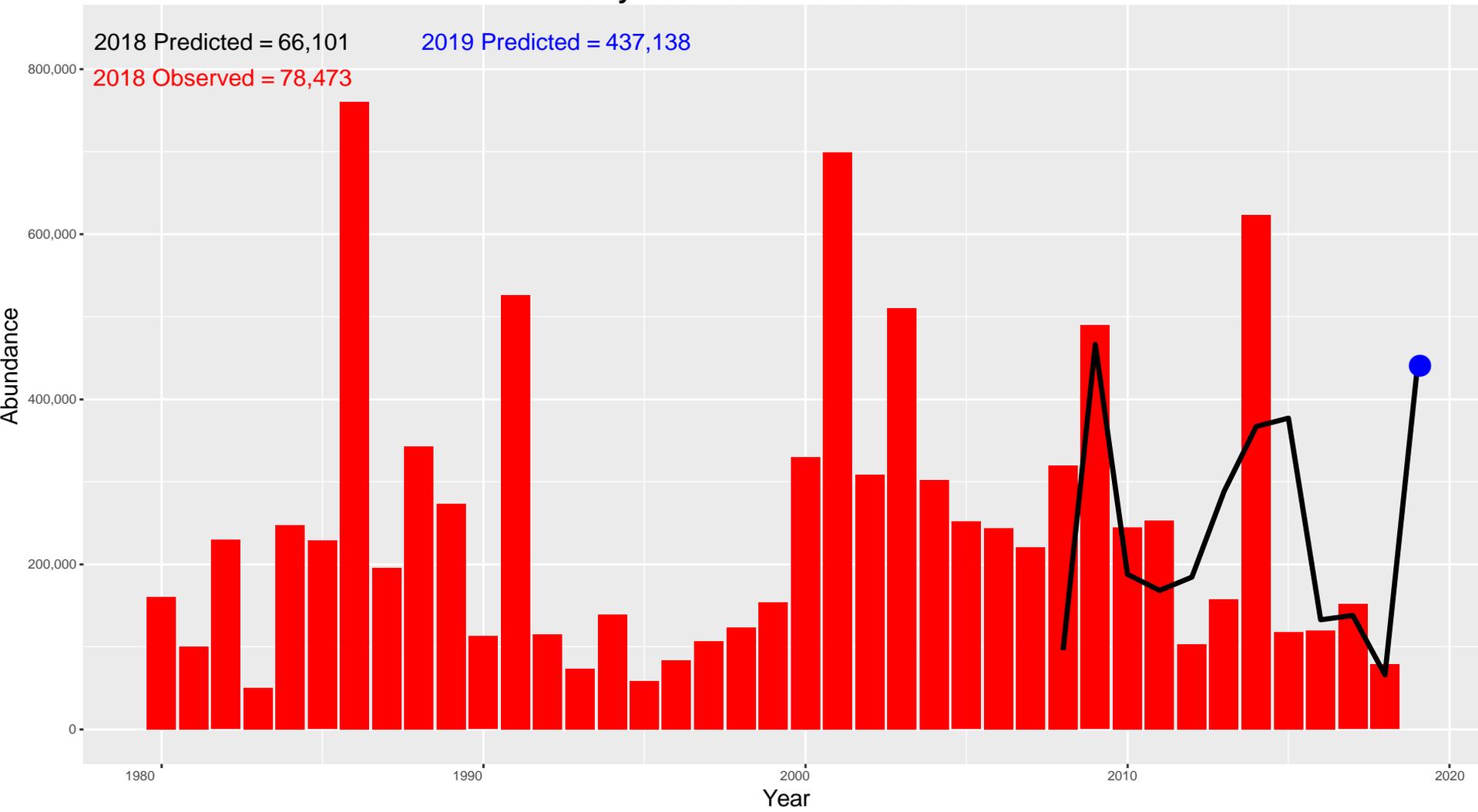


# Early Columbia River Coho

2018 Predicted = 66,101

2019 Predicted = 437,138

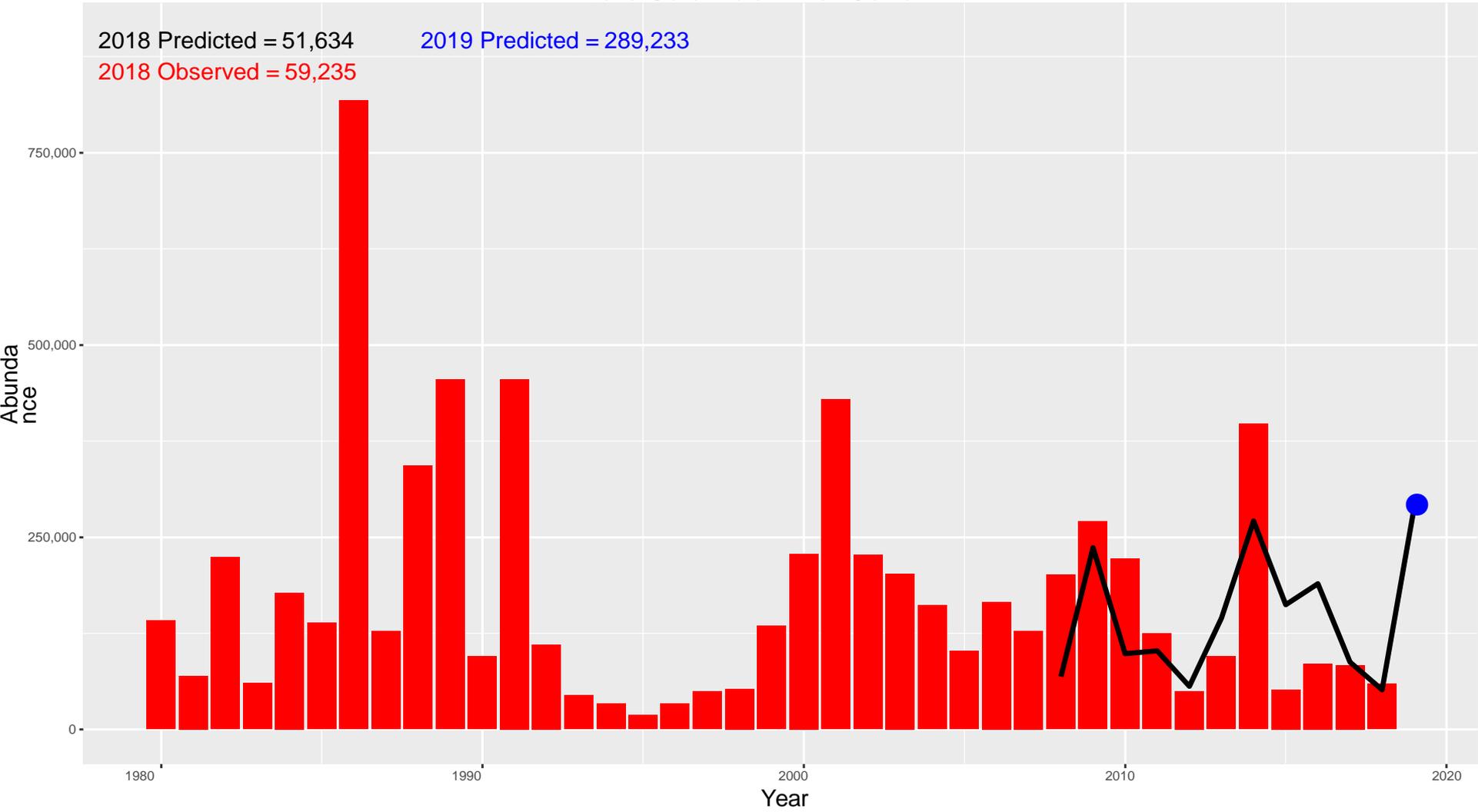
2018 Observed = 78,473



# Late Columbia River Coho

2018 Predicted = 51,634  
2018 Observed = 59,235

2019 Predicted = 289,233



# Fishery Management



# 2019 Upriver Spring Chinook Management Guidelines

- ▶ ***U.S. v Oregon (2018–2027) Management Agreement***
  - Preseason: 1.5% ESA impact limit (*2.0% in 2018*)
  - 30% buffer in place until run size update
  - Catch Balance more constraining than impacts
  
- ▶ **Commission Policy C–3620**
  - Sport and commercial buffers in place prior to run update
  - Sport/comm % impact-sharing at 80%/20%, unless run is >129% of forecast, then 70%/30%
  - 25% of the sport catch allocation above BON
    - 15% Snake and 10% Bonneville–OR/WA state line

# 2019 Spring Chinook Fisheries

## ▶ **Below Bonneville**

- Season: Jan 1 – Apr 10, closed below Warrior Rock line
- Catch allocation: 3,689 upriver (4,050 total) prior to a run update

## ▶ **Bonneville to WA/OR border above McNary**

- Season: April 1 – May 5, 1 chinook bag limit
- Catch allocation: 492 upriver prior to a run update

## ▶ **Yakima River, Snake River (357 upriver catch), & Icicle River**

- Addressed later in presentation

▶ *includes release mortalities*

# Snake River Fishery Structure

- Generally open in late April (late compared to downriver)
  - fisheries timed concurrent with increased Dam passage
- Fisheries really heat up in early May
  - Chinook abundance is reaching peak
- Limited areas open
  - this allows intensive monitoring, extends duration of fisheries & distributes opportunity (~18 miles if all four areas are open)

# 2018 Snake River Fishery

- Preseason forecast of 166,700
- Preseason impacts on buffered run of 116,690 of 920 (883 harvest and 37 release mortalities)
- Three sections open 2d/wk beginning Apr. 20
- Run was downgraded on 21 May to 116,500 near the buffered run.
- New impacts for 116,500 were 912 (886 harvest and 26 release mortalities)

# 2018 Snake River Fishery

- Fishery continued for two additional periods and then closed because of ESA impacts.
- Anglers harvested 742 adults and released 308 wild adults in 28,205 hours of effort.

# 2018 Snake River Fishery

FINAL 2018 Snake River Spring Chinook Expanded Effort and Catch Estimates

Dates open	Section	Angler Effort			Salmon Kept			Salmon Released					Ave Catch Rate (hrs/fish kept)		
		Peak # observed	Peak # observed	Total	H Adults	H Jacks	Total	W Adults	W Jacks	H Adults	H Jacks	Total	Shore	Boat	"Wall"
		Shore Anglers	boat anglers	Angler hrs											
Apr 20-21	<b>IHR 1</b> (Fri-Sat)	5	7	135.3	0	0	0	0	0	0	0	0	0.0	0.0	
Apr 27-28		10	4	56.1	0	0	0	0	0	0	0	0	0.0	0.0	
May 4-5		7	15	191.5	5	0	5	0	0	0	0	0	60.9	34.2	
May 11-12		53	69	2,074.1	39	2	41	8	0	0	0	8	29.4	185.6	
May 18-19		81	82	3,045.4	58	4	62	23	0	0	2	25	56.3	43.3	
May 25-26		56	83	2,083.6	20	3	23	2	0	0	0	2	652.1	43.5	
June 1-2		38	50	1,704.1	21	2	23	10	2	0	0	12	40.6	105.1	
June 8-9		69	61	2,798.4	57	8	65	35	2	0	0	37	30.3	258.7	
<b>Sum</b>				<b>12,088.5</b>	<b>200</b>	<b>19</b>	<b>219</b>	<b>78</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>84</b>			
Apr 22-23	<b>LGO 2</b> (Sun-Mon)	9	5	196.0	1	0	1	1	0	0	0	1	163.0	0.0	0.0
Apr 29-30		22	0	429.9	2	1	3	0	0	0	0	0	126.1	0.0	0.0
May 6-7		34	3	808.0	7	0	7	1	0	0	0	1	149.4	0.0	52.8
May 13-14		68	10	1,629.6	63	3	66	8	0	0	0	8	23.7	0.0	18.5
May 20-21		128	18	2,916.8	92	2	94	14	0	0	0	14	30.8	0.0	20.5
May 27-28		117	10	3,186.6	45	10	55	13	0	0	0	13	52.8	0.0	294.7
June 3-4		95	12	2,541.3	202	21	223	66	2	0	0	68	12.2	0.0	8.7
June 10-11		113	3	2,613.8	94	9	103	103	3	0	0	106	24.9	0.0	27.1
<b>Sum</b>				<b>14,322.0</b>	<b>506</b>	<b>46</b>	<b>552</b>	<b>206</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>211</b>			
Apr 22-23	<b>Clarkst 3</b> (Sun-Mon)	0	3	0.0	0	0	0	0	0	0	0	0	0.0	0.0	
Apr 29-30		0	0	30.8	0	0	0	0	0	0	0	0	0.0	0.0	
May 6-7		0	3	0.0	0	0	0	0	0	0	0	0	0.0	0.0	
May 13-14		0	12	100.1	0	0	0	0	0	0	0	0	0.0	0.0	
May 20-21		2	16	230.2	0	0	0	0	0	0	0	0	0.0	0.0	
May 27-28		0	11	225.4	4	0	4	0	0	0	0	0	0.0	57.0	
June 3-4		1	37	711.3	27	0	27	19	0	0	0	19	0.0	26.3	
June 10-11		1	39	496.9	5	0	5	5	0	0	0	5	0.0	105.7	
<b>Sum</b>				<b>1,794.6</b>	<b>36</b>	<b>0</b>	<b>36</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>			
<b>Snake R. Totals</b>				<b>28,205.1</b>	<b>742</b>	<b>65</b>	<b>807</b>	<b>308</b>	<b>9</b>	<b>0</b>	<b>2</b>	<b>319</b>			

# 2019 Snake River Fishery – expectations

- Preseason Impact Estimate = 357 (342 harvest and 15 release mortalities)
- Open Little Goose Saturday and Sunday
- Expected opening May 4
- Goal: Provide 2-4 fishing events
- Bag limit of **1 adult/day & 2 days/week**
- WDFW will monitor harvest & ESA impacts

# 2019 Snake River Fishery – expectations

	Thurs	Fri	Sat	Sun	Mon	Tues
IHR						
LGO						
LGR						
Clark						

# Grande Ronde River Fisheries

- 2019 Fishery
  - Low returns are forecasted for 2019 and there are currently no plans for a Grande Ronde spring Chinook fishery.

# Yakima River Spring Chinook

	<b>2018</b>		<b>2019</b>
	<b>Forecast</b>	<b>Actual</b>	<b>Forecast</b>
<b>Total Run</b>	<b>7,000</b>	<b>3,160</b>	<b>2,970</b>
Total Wild/Natural	4,460	1,520	1,250
Total CESRF	2,540	1,640	1,720
<b>Harvest</b>			
Yakama Nation		<b>225</b>	
Sport Fishery		<b>245</b>	

# 2019 Yakima Spring Chinook Fishery

- Lower river section from Hwy. 240 Bridge to SR 241 Bridge (Mabton–Sunnyside Rd)
- Upper river section from I-82 at Union Gap to Roza Dam
- Likely open in early to mid-May and run to late June
- Two-poles allowed with endorsement
- Fishing conditions will likely be poor at times because of above normal snowpack runoff

# Icicle River Spring Chinook

## 2018 Regulations:

- **Icicle:** Closed initially via emergency regulation due forecasted returns not high enough to meet hatchery broodstock needs.
- **Broodstock:** barely made egg take goals

- **2019 Regulations:**

**Icicle:** Currently in pamphlet (May 15–July 31)

**Note:** Forecasted abundance is same as 2018 (very low). *High likelihood the Icicle River fishery may close or open late.*

# 2019 Sockeye Forecast & Fisheries

- ▶ **Forecast:** 94,400
- ▶ **Tentative Proposal:** close sockeye recreational retention from mouth to Chief Joseph Dam (and tributaries)
  - Similar scenario as last year.
- ▶ **Conservation:** return as many sockeye to the spawning grounds as possible
  - Lake Wenatchee not forecasted to meet escapement needs
- ▶ **In-Season Updates:** if return improves (similar to 2018) fisheries will open via emergency regulation

# 2019 Summer Chinook

- ▶ Harvest Guidelines 3-tiered:
  - U.S. v Oregon Management Agreement: reserves spawning escapement/broodstock needs (29,000) & treaty/non-treaty allocation
  - Policy C-3620: allocates non-treaty share (e.g., above/below Priest Rapids Dam, below PRD recreational/commercial)
  - WDFW-CCT Harvest Share Agreement: allocates harvestable share between WDFW/CCT
    - At very low runs maintains CCT ceremonial & subsistence fishery

# 2019 Summer Chinook

- ▶ Columbia River mouth forecast: 35,900
- ▶ *U.S. v Oregon*: subtract spawning escapement/broodstock, treaty allocation, and ocean harvest
  - Pre-season in-river non-treaty share is 464
- ▶ C-3620: 90% (418) and 10% (46) to fisheries upstream and downstream of PRD, respectively
  - No WDFW in-river summer chinook fisheries.
  - Minimal incidental mortalities from steelhead fisheries
- ▶ WDFW/CCT Agreement: 293 (CCT), ~105 (WDFW), and ~20 Wanapum

# 2019 Summer Chinook

**CR Mouth to Chief Joseph Dam (including tributaries):**  
closed fishing

**Mouth to Hwy 395:** allocation used for non-retention mortalities during steelhead fisheries

**Hwy 395 to CJD:** evaluate run in-season and if possible open via emergency regulation

Potential for limited fishing in above PRD if run comes at or above forecast

Options: entire river (reduced time), select areas (e.g., Entiat, Chelan, Brewster), reduced daily limit (e.g., 1)

# 2019 Steelhead Fisheries – options

Columbia River mainstem – Low A and B–index steelhead forecasts will cause rolling block closures similar to 2017.

## ➤ **Bonneville Dam to The Dalles Dam**

- **through June:** Daily limit 2, when open
- **July:** Daily limit 1, closed to night fishing for salmon/steelhead
- **August:** Closed to retention, closed to night fishing for salmon/steelhead
- **September+:** Daily limit 1, closed to night fishing for salmon/steelhead

## ▶ **The Dalles Dam to John Day Dam**

- **through June:** Daily limit 2, when open
- **July–August:** Daily limit 1, closed to night fishing for salmon/steelhead
- **September:** Closed to retention, closed to night fishing for salmon/steelhead
- **October+:** Daily limit 1, closed to night fishing for salmon/steelhead

# 2019 Steelhead Fisheries – options

## ▶ John Day Dam to McNary Dam

- through June: Daily limit 2, when open
- July–August: Daily limit 1, closed to night fishing for salmon/steelhead
- September–October: Closed to retention, closed to night fishing for salmon/steelhead
- November+: Daily limit 1, closed to night fishing for salmon/steelhead

## ▶ McNary Dam to 395 Bridge in Pasco

- through June: Daily limit 2, when open
- July–September: Daily limit 1, closed to night fishing for salmon/steelhead
- October–November: Closed to retention, closed to night fishing for salmon/steelhead
- December+: Daily limit 1, closed to night fishing for salmon/steelhead

## ▶ 395 Bridge in Pasco upstream

- Ringold Area fishery under consideration

# 2019 Steelhead Fisheries – options

## Columbia River Below Bonneville Tributaries

- Cowlitz River (downstream of Lexington Drive/Sparks Road bridge)
- Lewis River (downstream of the confluence with the East Fork Lewis River)
  - **July:** Daily limit 1, closed to night fishing for salmon/steelhead
  - **August:** Closed to retention, closed to night fishing for salmon/steelhead
  - **September+:** Daily limit 1 or 2, closed to night fishing for salmon/steelhead

# 2019 Steelhead Fisheries – options

## Columbia River Above Bonneville Tributaries

- Wind River (downstream of Shipherd Falls)
- Drano Lake
- White Salmon River (downstream of the county road bridge)
- Klickitat River (downstream of Fisher Hill bridge)
  - **July:** Daily limit 1, closed to night fishing for salmon/steelhead
  - **August:** Closed to retention, closed to night fishing for salmon/steelhead
  - **September+:** Daily limit 1, closed to night fishing for salmon/steelhead, Drano closed to retention during September.

# 2019 Steelhead Fisheries – options

## Snake River

- ▶ **Mouth to Couse Creek boat ramp**
  - August 1–March 31: Daily limit 1, must be less than 28 inches in length.
- ▶ **Couse Creek boat ramp to WA/ID/OR state line**
  - August 1–March 31: Daily limit 1

# 2019 Steelhead Fisheries – options

## Other options

- ▶ Release all steelhead 28 inches in length or longer
- ▶ Closed to salmon/steelhead fishing in time/area instead of non-retention when salmon are not present
- ▶ Extend length and area of non-retention blocks
- ▶ Closed at night to all fishing

# 2019 Fall Chinook Fisheries

- ▶ **Policy guidance: no more than 70% sport/no less than 30% commercial.**
  - **Below Bonneville** – reduced fisheries to levels similar to 2018
    - 8.25% vs 15% harvest rate
    - Fisheries constrained by Snake River Wild Chinook and B-index steelhead
    - Reserve impacts for abundant coho return (liberal coho limits, i.e., in Buoy 10)
  - **Bonneville to Highway 395**
    - Fishery constrained by Snake River Wild Chinook and B-index steelhead
- ▶ **Priest Rapids Dam to Rock Island Dam** – Non-mark selective, September 1–October 15, daily limit 6 (no more than 2 adult chinook, release sockeye and coho)
- ▶ **Above Rock Island** – Evaluate in-season (unlikely given forecast)

# 2019 Snake River Fall Chinook Fisheries

- Opened all of Snake River beginning in 2011
- Will use CRC for harvest estimates
- Plan to open all areas again in 2019 (Mid August or first of September to October 31)
- Opened by emergency rule, expecting similar limits and restriction as in 2018
- Continuing work on a joint state Fall Chinook FMEP



# 2018–2019 Hanford Reach Fall Fishery

# 2018 Hanford Reach Fall Chinook Fishery

**September 13: Buoy 10 to Hwy 395 Closed to all fishing for salmon & steelhead**

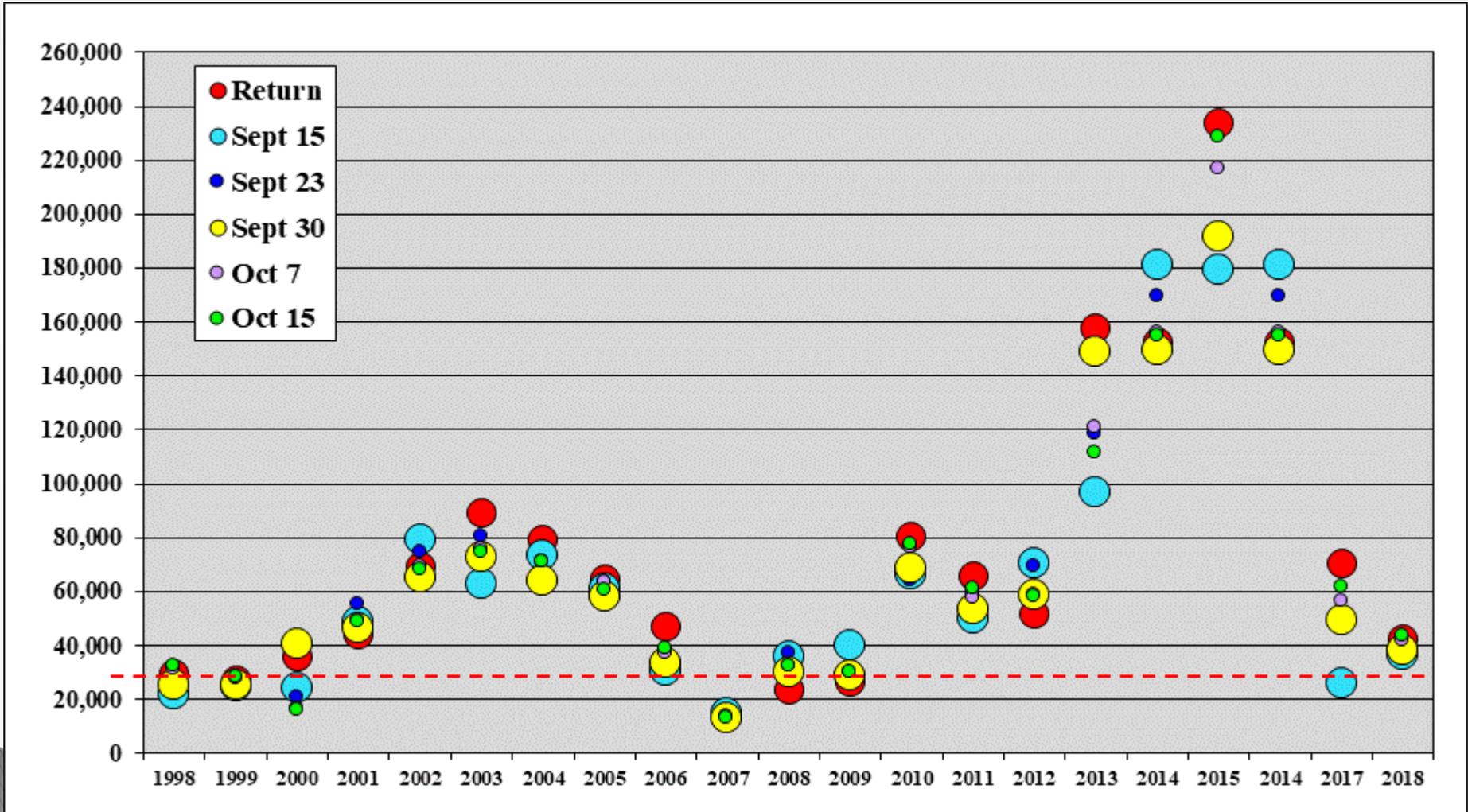
**September 15: In-season estimate = 36,779 / Quota = 5,740 adults  
E-rule: 1 adult limit in Hanford Reach**

**October 15: Closure of Hanford Reach fishery**

<b>In-season Natural Origin Return Estimate</b>					
<b>Date</b>	<b>Sep 15</b>	<b>Sep 23</b>	<b>Sep 30</b>	<b>Oct 07</b>	<b>Oct 15</b>
<b>In-season Return Estimate</b>	<b>36,779</b>	<b>37,105</b>	<b>38,326</b>	<b>41,686</b>	<b>43,758</b>
<b>Harvest allocation</b>	<b>5,740</b>	<b>5,903</b>	<b>6,513</b>	<b>8,193</b>	
<b>Harvest</b>	<b>1,097</b>	<b>2,368</b>	<b>4,411</b>	<b>6,703</b>	<b>8,488</b>
<b>Balance</b>	<b>4,643</b>	<b>3,535</b>	<b>2,102</b>	<b>1,490</b>	

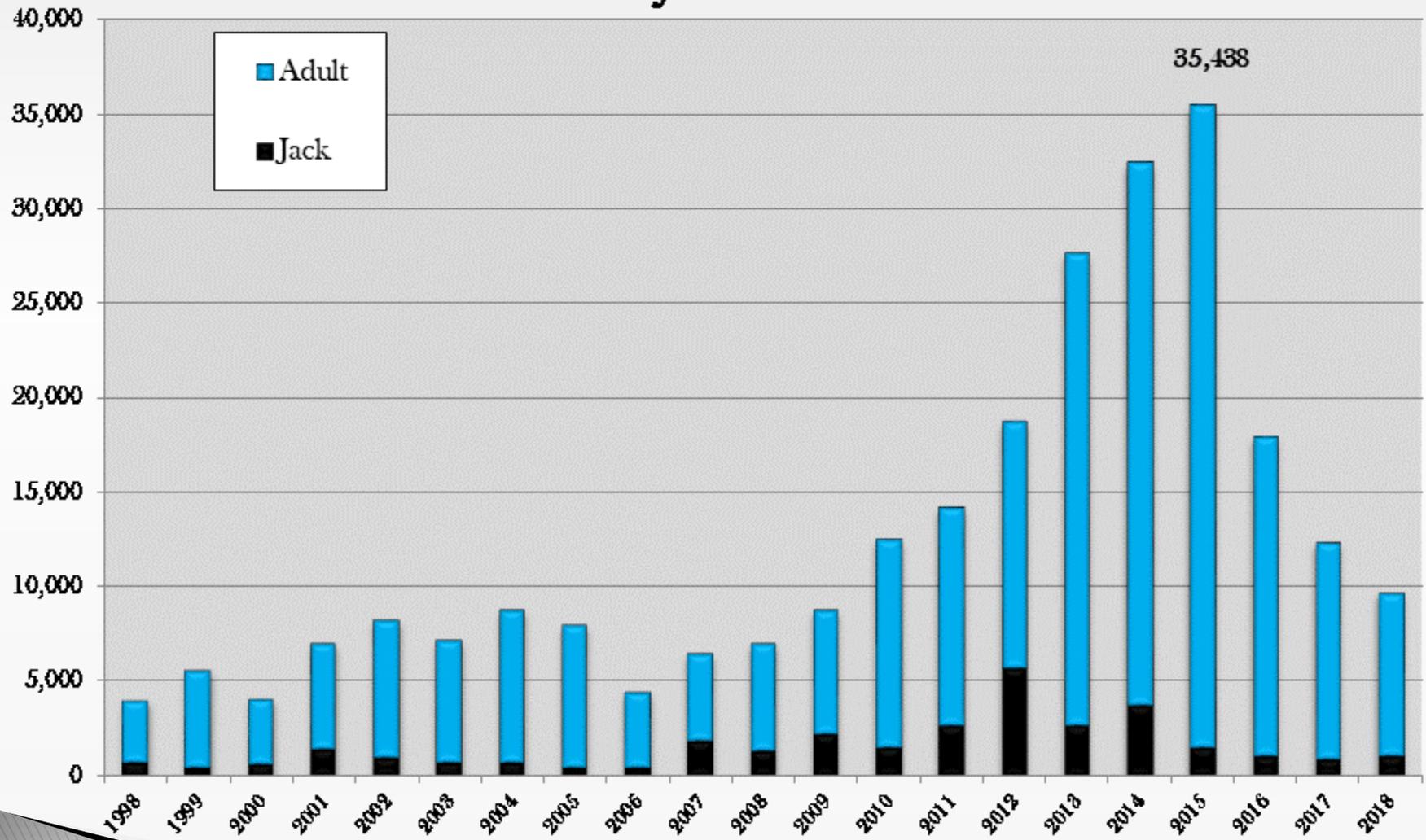
**Harvest = 8,672 adult & 1,072 jack**

# Hanford Reach Fall Chinook Harvest Management Plan

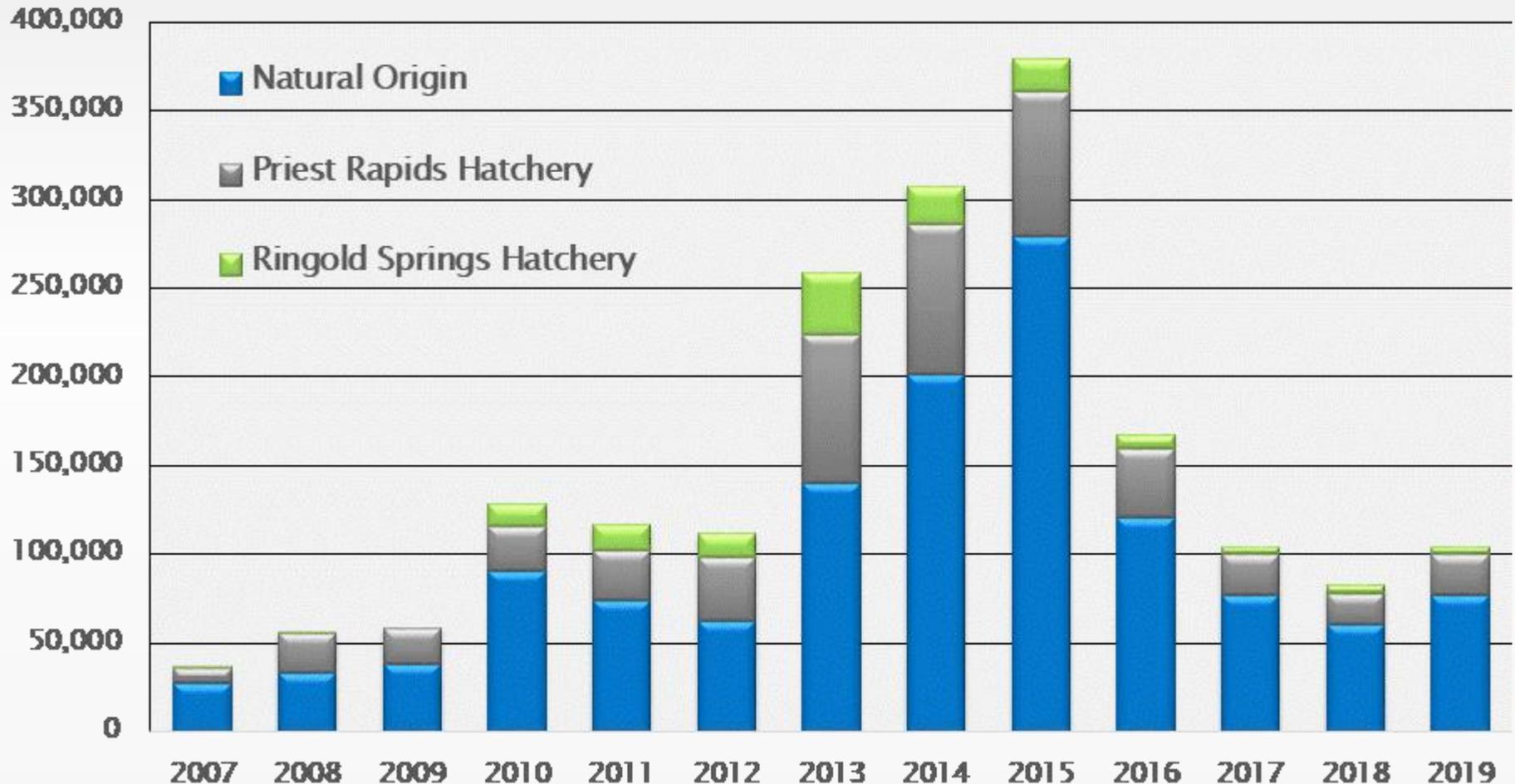


Escapement Goal = 31,110

# Hanford Reach Fall Chinook Sport Fishery Harvest



# 2019 Hanford Reach Fall Fishery



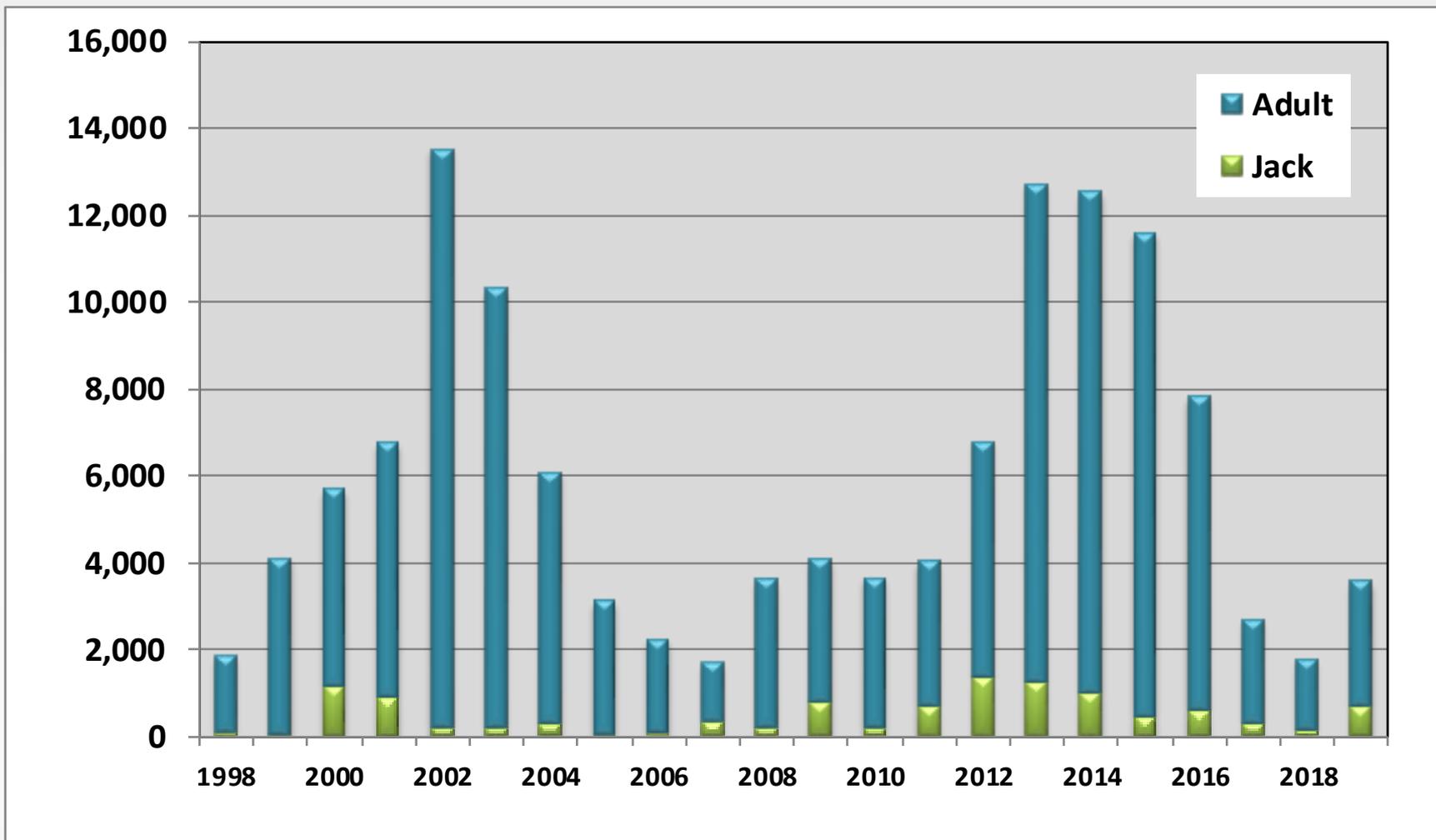
**2018 Return = 71,612**

**2019 Forecast = 98,170**

# 2019 Hanford Reach Fall Chinook Fishery

- ▶ Highway 395 bridge to Old Hanford townsite wooden powerline towers (534, 535)
  - Aug. 16 - Oct. 31
- ▶ Old Hanford townsite wooden powerline towers to Priest Rapids Dam (536)
  - Aug. 16 - Oct. 15
- ▶ Daily limit 6. Up to 2 may be adults. Chinook or coho.
- ▶ Use of two poles permitted with endorsement.

# Yakima River Fall Chinook Forecast



Age	Age 2	Age 3	Age 4	Age 5	Age 6	Total	Adults
2019 Forecast	679	607	1,957	309	7	3,559	2,880

**Strong return of coho expected in 2019**

# 2019 Yakima River Fall Salmon Fishery Regulations

Highway 240 Bridge (Richland) to Grant Avenue Bridge  
(Prosser)

Sept 1 - Oct 31. Daily limit 6. Up to 2 may be adults.

Night closure

Use of two poles permitted with endorsement.

**Potential for Early Closure**

# Ringold Springs Hatchery Steelhead Returns



Population estimates are generated in mid-November from mark recapture of steelhead transported from RSH trap to Richland

# 2019–20 Ringold Springs Hatchery Summer Steelhead Regulations

October 1 – 31 Daily limit 2 hatchery steelhead with both adipose fin clipped and ventral fin clipped.

Nov. 1 – Mar 31 Daily limit 2 hatchery steelhead.

April 1 – 15, 2020 Ringold area bank fishery

# Recreational Rule Simplification

- Rationale
  - Concurrency with Idaho/Oregon
  - Consider implications at a population level versus individual fish level
  - Reduce complexity
  - Eliminate layered gear restrictions
  - Standardize season dates and daily limits
  - Decouple salmon and steelhead limits
  - Reason for a regulation is outdated
  - Enforceability

# Recreational Rule Simplification

- Can reduce (or increase) opportunities
- Tribal co-manager agreement
- Concurrent waters of the Columbia River requires discussion with other state managers.
  - ODFW/WDFW have initiated discussions.

# Recreational Rule Simplification

- Concurrency, fishery constraints, insufficient sampling (and resources) for inseason need: Salmon/steelhead night fishing closures from Buoy 10 to:
  - McNary Dam?
  - OR/WA state line, Hwy 395 at Pasco, or further?
- Commission guidance (C-3620 modification) for Columbia River basin: Rescind barbless hook rule with intention to make effective by no later than June 1:
  - Columbia River and tributaries to OR/WA state line
  - Upstream of OR/WA state line (and tributaries)
  - Potential exceptions where federal permits specify barbless hooks are required for ESA-coverage

Questions?



<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
North of Cape Falcon	North of Cape Falcon	North of Cape Falcon
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
Model #: Coho-1911, Chinook 1019	Model #: Coho-1912, Chinook 1119	Model #: Coho-1913, Chinook 1219
<p>1. Overall non-Indian TAC: 65,000 Chinook and 205,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 32,500 Chinook and 32,800 marked coho.</p> <p>3. Trade: May be considered at the April Council meeting.</p> <p>4. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>	<p>1. Overall non-Indian TAC: 55,000 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 27,500 Chinook and 30,400 marked coho.</p> <p>3. Trade:</p> <p>4. Same as Alternative 1</p>	<p>1. Overall non-Indian TAC: 45,000 Chinook and 100,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 22,500 Chinook and 5,600 coho.</p> <p>3. Trade:</p> <p>4. Same as Alternative 1</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 30, or 21,700 Chinook. No more than 4,825 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,780 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River the landing and possession limit is 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between the Leadbetter Pt. and Cape Falcon the landing and possession limit is 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>All salmon, except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>When it is projected that approximately 75% of the overall Chinook guideline has been landed, approximately 75% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 75% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 28, or 16,500 Chinook. No more than 5,200 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 4,400 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between the Leadbetter Pt. and Cape Falcon landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Same as Alternative 1</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 25, or 11,300 Chinook. No more than 3,550 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,000 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open five days per week (Fri.-Tues.) (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 40 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between the Queets River and Leadbetter Pt. a landing and possession limit of 200 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon the landing and possession limit is 40 Chinook per vessel per open period (C.1, C.6).</p> <p>Same as Alternative 1</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 30, or 10,800 Chinook or 32,800 coho (C.8).</li> </ul> <p>Open seven days per week. All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 60 Chinook per vessel per landing week (Thurs.-Wed.) will be in place (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon landing and possession limit of 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Landing and possession limit of 150 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 24, or 11,000 Chinook or 30,400 coho; no more than 5,200 Chinook may be caught in the area between the U.S./Canada border and the Queets River (C.8).</li> </ul> <p>Same as Alternative 1</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) will be in place (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Landing and possession limit of 100 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 24, or 11,200 Chinook or 5,600 coho; no more than 5,300 Chinook may be caught in the area between the U.S./Canada border and the Queets River, and no more than 1,325 Chinook may be caught in the area between Leadbetter Point and Cape Falcon (C.8).</li> <li>Open July 1-2 then;</li> <li>July 5-September 24; open five days per week (Fri. - Tues.) (C.1).</li> </ul> <p>All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 40 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between the Queets River and Leadbetter Pt. a landing and possession limit of 100 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon a landing and possession limit of 40 Chinook per vessel per open period (C.1, C.6).</p> <p>Landing and possession limit of 10 marked coho per vessel per open period (C.1).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish in a Washington port and must possess a Washington troll license. For delivery to Washington ports south of Leadbetter Point, vessels must notify the Washington Department of Fish and Wildlife at 360-249-1215 prior to crossing the Leadbetter Point line with area fished, total Chinook, coho and halibut catch aboard, and destination with approximate time of delivery. During any single trip, only one side of the Leadbetter line may be fished (C.11).</p>	<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point (C.11).</p>	<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point (C.11).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Mandatory closed areas include: Salmon troll Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 12, Grays Harbor Control Zone (C.5). Vessels must land and deliver their salmon within 24 hours of any closure of this fishery. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver all species of fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land all species of fish in Garibaldi, Oregon. Under state law, vessels must report their catch on a state fish receiving ticket. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon to notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 ext. 271 or sending notification via e-mail to <a href="mailto:nfalcon.trollreport@state.or.us">nfalcon.trollreport@state.or.us</a>. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. (C.11).</p>		

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
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North of Cape Falcon	North of Cape Falcon	North of Cape Falcon
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<p>1. Overall non-Indian TAC: 65,000 Chinook and 205,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 32,500 Chinook and 172,200 marked coho; all retained coho must be marked.</p> <p>3. A trade with commercial troll may be considered in April.</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens August 1 with an expected landed catch of 40,000 marked coho in August and September.</p> <p>6. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>	<p>1. Overall non-Indian TAC: 55,000 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 27,500 Chinook and 159,600 marked coho; all retained coho must be marked.</p> <p>3. Trade:</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens August 1 with an expected landed catch of 45,000 marked coho in August and September.</p> <p>6. Same as Alternative I</p>	<p>Overall non-Indian TAC: 45,000 Chinook and 100,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 22,500 Chinook and 94,400 marked coho; all retained coho must be marked.</p> <p>3. Trade:</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens August 1 with an expected landed catch of 50,000 marked coho in August and September.</p> <p>6. Same as Alternative I</p>
<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 15 through earlier of September 30, or 17,910 marked coho subarea quota, with a subarea guideline of 6,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 22 through earlier of September 30, or 16,600 marked coho subarea quota, with a subarea guideline of 5,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>	<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 29 through earlier of September 15, or 4,370 marked coho subarea quota, with a subarea guideline of 4,400 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>

**A. SEASON ALTERNATIVE DESCRIPTIONS**

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 15 through earlier of September 22, or 4,380 marked coho subarea quota, with a subarea guideline of 1,400 Chinook (C.5)</li> <li>• September 28 through earlier of October 13, or 100 marked coho quota, or 100 Chinook quota (C.5) in the area north of 47°50'00" N. lat. and south of 48°00'00" N. lat.</li> </ul> <p>Open seven days per week. All salmon, two salmon per day. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 4,150 marked coho subarea quota, with a subarea guideline of 1,300 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 15, or 1,090 marked coho subarea quota, with a subarea guideline of 1,100 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (see C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Same as Alternative 1</p>
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 63,710 marked coho subarea quota, with a subarea guideline of 15,700 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 12 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 22, or 59,050 marked coho subarea quota, with a subarea guideline of 13,300 Chinook (C.5)</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 16 through earlier of September 15, or 15,540 marked coho subarea quota, with a subarea guideline of 10,900 Chinook (C.5).</li> </ul> <p>Open five days per week (Sunday through Thursday). All salmon; two salmon per day no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 86,100 marked coho subarea quota, with a subarea guideline of 8,800 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 79,800 marked coho subarea quota, with a subarea guideline of 7,400 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p>	<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 30, or 73,400 marked coho subarea quota, with a subarea guideline of 6,100 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p>

Table 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery Alternatives\_STT analyzed.<sup>a/</sup> (Page 1 of 2)

Key Stock/Criteria	PROJECTED			2019
	Alt I	Alt II	Alt III	Criteria
<b>CHINOOK</b>		<b>CHINOOK</b>		<b>CHINOOK</b>
Columbia Upriver Brights	160.7	163.4	165.1	74.0 Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest. The management goal has been increased to 60.0 by Columbia River managers.
Mid-Columbia Brights	65.6	66.7	67.4	14.9 Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	53.9	55.2	56.2	25.0 Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules <sup>c/</sup> (threatened)	<b>39.2%</b>	36.7%	34.8%	≤ 38.0% Total adult equivalent fishery exploitation rate (2019 NMFS ESA guidance).
Columbia Lower River Wild <sup>d/</sup> (threatened)	14.0	14.2	14.4	6.9 Minimum ocean escapement to attain MSY spawner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	46.0	48.1	49.5	8.2 Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Upper Columbia River Summer	35.1	36.0	36.7	29.0 Aggregate escapement to mouth of Columbia River (2019 NMFS guidance).
Snake River Fall (threatened) SRFI	67.1%	59.7%	53.7%	≤ 70.0% Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Klamath River Fall	46.4	46.1	46.4	≥ 40.7 2019 minimum natural area adult escapement (FMP control rule).
Federally recognized tribal harvest	50.0%	50.0%	50.0%	50.0% Equals 28.8, 29.0, and 29.1 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spawner reduction) rate	47.3%	47.6%	47.3%	≤ 53.7% FMP control rule.
Adult river mouth return	98.2	98.1	98.5	NA Total adults in thousands.
Age-4 ocean harvest rate	15.9%	16.0%	15.3%	≤ 16.0% NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	6.9%	6.9%	7.0%	NA Includes 0.0 (thousand) adult fish impacted in the KMZ sport fishery during fall (Sept.-Dec.) 2018.
River recreational fishery share	15.0%	15.0%	15.0%	NA Equals 4.3, 4.4, and 4.4 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	15.7%	15.6%	13.5%	≤ 15.7% Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: <u>Recreational</u> - Pt. Arena to Pigeon Pt. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. <u>Commercial</u> - Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2019 ESA Guidance).
Sacramento River Fall	152.3	163.9	--	≥ 151.0 Alternatives I & II: 2019 minimum hatchery and natural area adult escapement (Council guidance).
	--	--	180.1	≥ 180.0 Alternative III: 2019 minimum hatchery and natural area adult escapement (Council guidance).
Sacramento Index Exploitation Rate	59.9%	56.8%	52.6%	≤ 67.9% FMP control rule.
Ocean commercial impacts	149.6	136.1	121.0	Includes fall (Sept-Dec) 2018 impacts (6.2 thousand SRFC).
Ocean recreational impacts	50.9	50.7	46.8	Includes fall 2018 impacts (7.7 thousand SRFC).
River recreational impacts	26.9	28.9	31.8	NA Equals 11.8%, 13.4%, and 15.9% of the total allowable harvest.

Table 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery Alternatives\_STT analyzed.<sup>a/</sup> (Page 2 of 2)

Key Stock/Criteria	PROJECTED			2019	
	Alt I	Alt II	Alt III	Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>
<b>COHO</b>	<b>COHO</b>			<b>COHO</b>	
Interior Fraser (Thompson River)	<b>11.0%(6.3%)</b>	<b>10.1%(5.4%)</b>	7.7%(3.0%)	≤ 10.0%	2019 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	33.8%(5.7%)	33.2%(4.9%)	31.4%(2.7%)	≤ 35.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Stillaguamish	32.5%(4.1%)	31.9%(3.4%)	30.5%(1.9%)	≤ 50.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Snohomish	33.7%(4.1%)	33.1%(3.4%)	31.6%(1.9%)	≤ 40.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Hood Canal	<b>48.8%(6.3%)</b>	<b>48.2%(5.4%)</b>	<b>46.8%(2.9%)</b>	≤ 45.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Strait of Juan de Fuca	9.6%(5.0%)	8.9%(4.3%)	7.0%(2.4%)	≤ 20.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Quillayute Fall	13.6	13.7	14.1	6.3	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Hoh	5.6	5.8	6.2	2.0	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Queets Wild	8.9	9.1	9.7	5.8	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Grays Harbor	65.3	66.1	68.1	24.4	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Willapa Bay Natural	55.5	56.3	58.5	17.2	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Low er Columbia River Natural (threatened)	15.3%	13.4%	9.3%	≤ 23.0%	Total marine and mainstem Columbia R. fishery exploitation rate (2018 NMFS ESA guidance). Value depicted is marine ER before Buoy 10.
Upper Columbia <sup>e/</sup>	≥ 50%	≥ 50%	≥ 50%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	337.2	351.0	372.0	77.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.7 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	204.9	217.4	250.6	9.7	Minimum ocean escapement to attain hatchery egg-take goal of 6.4 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural	14.6%	13.0%	10.4%	≤ 15.0%	Marine and freshw ater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)	5.8%	5.8%	6.2%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

a/ Projections in the table assume 2018 post season fishing effort scalars for coho in Canadian fisheries. Model results for Chinook in this table used 2018 preseason catches and fishing effort scalars, and are updated with 2018 post season data if available. Assumptions for these fisheries will be changed prior to the April meeting as new information becomes available.

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshw ater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spaw ner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for LCN coho include marine impacts only. Exploitation rates for OCN coho represent marine and freshw ater impacts. Values reported for Klamath River fall Chinook are natural area adult spaw ners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spaw ners.

c/ Includes projected impacts of inriver fisheries that have not yet been shaped.

d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. It is anticipated that fishery management will be adjusted by state and tribal comanagers during the preseason planning process to comply with stock management objectives.

e/ Includes minor contributions from East Fork Lewis River and Sandy River.

Columbia River North of Falcon Meeting  
March 18, 2019 – 10AM – 3:00 PM  
WDFW Region 5 Office – Ridgefield, WA

**Agenda**

- ❖ Introductions, Schedule and Process (10:00 – 10:15 AM) – Ryan Lothrop/John North

<b>North of Falcon (NOF) and Pacific Fishery Management Council (PFMC) schedules</b>			
<b>Meeting</b>	<b>Date</b>	<b>Topic</b>	<b>Location</b>
Columbia River NOF #1	March 18	Columbia River fisheries	Ridgefield, WA
NOF #1	March 19	Puget Sound, WA coast, ocean	Olympia, WA
Upper Columbia	March 26	Upper Columbia sport	Wenatchee, WA
Mid-Columbia	March 27	Mid-Columbia sport	Kennewick, WA
Snake River	March 28	Snake River sport	Clarkston, WA
Columbia River NOF #2	April 2	Columbia River fisheries	Ridgefield, WA
NOF #2	April 3	Puget Sound, WA coast, ocean	Lynnwood, WA
PFMC #2	April 11-15	Final ocean fisheries	Rohnert Park, CA

- ❖ Review of 2018 (10:15 – 10:45 AM) (handout) – Ryan Lothrop/John North
  - Returns and conservation objectives
  - Fishery guidance
  - 2018 Fisheries review
    - Catch and impact sharing (tables)
- ❖ Outlook for 2019/Issues for Columbia (10:45 – 11:30 AM) (handout) – John North/Ryan Lothrop
  - Conservation objectives and policy guidance
  - Summer Chinook
  - Upriver summer steelhead
  - Fall Chinook: Lower Columbia natural (LCR) tules, Upriver Bright (Snake River wild)
  - Lower Columbia natural (LCN) Coho
  - Ocean/in-river sharing – Kyle Adicks
- ❖ Break (11:30 AM – 12:30 PM)
- ❖ Sport/Commercial break-out sessions (12:30 PM – 2:30 PM)
  - Sport
    - Buoy 10 fishery, LCR Chinook fishery
    - Washington tributary fisheries
  - Commercial
    - Coho tangle net, Zone 4-5
- ❖ Discussion (2:30 PM – 3:00PM)
  - Summary of break-out sessions and next steps

# 2019 Ridgefield North of Falcon

## 2018 COLUMBIA RIVER SUMMER/FALL FISHERIES AND RUN SIZES 2019 PRESEASON FORECASTS

*All data preliminary and subject to change*

**March 18, 2019**

### 2018 RETURNS AND CONSERVATION OBJECTIVES

#### Upper Columbia Summer Chinook

- Pre-season forecast was 67,300 fish.
- Actual return was about 42,100 fish (63% of forecast).

#### Snake River Wild (SRW)/Upriver Bright (URB)

- Preseason
  - URB run size = 205,100
  - Snake River wild (SRW) run size = 9,600
  - Total allowable URB harvest rate (HR) = 45%
  - Since the URB forecast barely exceeded the 200,000 breakpoint for URB harvest rates, the states managed fisheries for a run size of less than 200,000 (8.25% HR rather than 15% HR)
  - Non-Treaty fisheries HR expectation = 8.24%
  - Treaty Indian fisheries HR expectation = 30%
- Actual
  - URB run size = 149,000 (73% of forecast)
  - SRW run size = 10,600 (111% of forecast)
  - Total URB HR = 29.58% (31.25% allowed)
  - Non-Treaty fisheries URB HR = 9.35% (8.25% allowed)
  - Treaty Indian fisheries URB HR = 20.22% (23.0% allowed)

#### Lower Columbia River Tules (LCR)

- Preseason
  - Lower River Hatchery tule (LRH) run size = 63,900
  - Total allowable ocean and Columbia River exploitation rate (ER) = 38%
  - Total ocean and Columbia River ER expectation = 36.3%
  - Columbia River ER expectation = 9.0%
- Actual
  - LRH run size = 53,000 (83% of forecast)
  - Total ocean and Columbia River ER = 34.5%
  - Columbia River ER = 8.9%

### Lower River Natural Coho (LCN)

- Preseason
  - Columbia River Coho run size = 213,600 (127,200 early stock, 86,400 late stock)
  - Total allowable ocean and Columbia River ER = 18%
  - Total ocean and Columbia River ER expectation = 15.3%
  - Columbia River ER (including Buoy 10) expectation = 5.4%
- Actual
  - Columbia River Coho run size = 147,300 (69% of forecast; 82,700 early stock, 64,600 late stock)
  - Preliminary estimates total 11.1% ER for ocean and in-river fisheries.
  - Columbia River ER (including Buoy 10) = 1.7%

### Upriver Summer Steelhead

- Preseason
  - Bonneville Dam passage (July – October) = 190,400 (3,400 wild B-Index)
  - Non-Treaty ESA impact limit = 2.0% wild A-index and 2.0% wild B-Index
- Actual
  - Bonneville Dam passage (July – October) = 100,500 (53% of forecast), return included 2,380 wild B-Index (70% of forecast)
  - Non-Treaty ESA impact = <1% wild A-Index; <1% wild B-Index (both preliminary)

## **2018 FISHERY GUIDANCE**

Columbia River fisheries were managed to meet the following guidelines and objectives:

### Federal/State Endangered Species Act

- Sockeye, steelhead, Chinook, Coho, Chum

### US v OR Management Agreement (MA)

- New 2018-2027 MA in effect

### OFWC/WFWC Guidance

- Impact/Allocation sharing
  - Summer Chinook: harvestable surplus available to in-river fisheries <PRD allocated 80% to recreational, 20% to commercial
  - Sockeye: ~80% of allowable Snake River ESA impacts to recreational, balance to commercial for incidental harvest in Chinook-directed fisheries.
  - Fall Chinook (LRH and SRW)
    - No more than 70% of allowable ESA impacts on the most constraining Chinook stock to recreational, no less than 30% to commercial.

### WDFW/Colville Tribe Upper Columbia Management Agreement

- Upper Columbia summer Chinook

## 2018 NON-TREATY FISHERIES REVIEW

### Recreational Fisheries:

- The summer Chinook recreational fishery downstream of Bonneville Dam was scheduled to be open for hatchery Chinook retention from June 22 through July 4. The daily bag limit was two fish/two hatchery Chinook. The actual Chinook retention season was open June 22-30; sockeye retention was allowed from July 1-31.
  - Total catch estimates include 1,021 Chinook kept (356 released), 451 hatchery steelhead kept (291 steelhead released) from 9,636 angler trips during the Chinook retention season. The number of kept Chinook was the lowest since 2001. Total Chinook mortalities (1,140) during the summer management period were 367% of the post-season allocation for this area.
- The summer Chinook recreational fishery between Bonneville and McNary dams was open for hatchery Chinook retention from June 22 through July 6. The Chinook recreational fishery between McNary and Priest Rapids dams was open for hatchery Chinook retention through July 16. Sockeye retention was allowed beginning July 1 in both areas. The daily bag limit was two fish/two hatchery Chinook.
  - Season total catch estimates include 120 hatchery Chinook kept and 92 released. Anglers in this area harvested 244% of the summer Chinook allocation, using 134 of the available 55 Chinook mortalities.
- The Buoy 10 sport fishery opened August 1 with a daily bag limit of one adult salmonid. Chinook retention did not include any mark-selective periods. The fishery was scheduled to close to Chinook retention after August 24 but continue for Coho and steelhead retention with a two hatchery adult salmonid (no more than one steelhead) daily bag limit through December 31. Preseason harvest expectations (kept plus release mortalities) included 15,400 Chinook (3.7% LCR Chinook ER and 1.7% SRW harvest rate) and 27,500 Coho.
  - The Chinook-retention portion of the fishery occurred as expected. Due to lower than expected returns, steelhead retention was prohibited effective August 27; further, due to an in-season downgrade of the expected URB return, all angling for salmonids was closed effective September 13.
  - Season total catch estimates include 11,620 kept Chinook (5,039 released), 6,761 Coho kept (5,890 released), and 50 steelhead kept (42 released) from 67,318 angler trips.
  - Chinook catches were lower than expected, but consistent with the actual Chinook return which was 78% of preseason expectations. Coho catches were much lower than expected, and even less than what was expected based on the actual return which was 69% of the preseason forecast.
- The fall LCR sport fishery opened August 1; similar to past years, the fishery was split into two major sections (upstream/downstream of the Lewis River/Warrior Rock line). A daily bag limit of one adult salmonid was planned for the area downstream of Warrior Rock through September 2. Beginning September 3, Chinook retention would close while Coho and steelhead retention was to continue with a two hatchery adult salmonid (no

more than one steelhead) daily bag limit through December 31. For the area upstream of Warrior Rock, the pre-season plan included Chinook retention from August 1 – September 14 with a one adult salmonid daily bag limit; after Chinook retention closed, Coho and steelhead retention would continue with a two hatchery adult salmonid (no more than one steelhead) daily bag limit through December 31. Preseason harvest expectations (kept plus release mortalities) included 10,100 Chinook (0.9% LCR Chinook ER and 3.5% SRW harvest rate) and 1,600 Coho for all areas combined.

- The Chinook retention season in the area downstream of Warrior Rock occurred as planned; however, as in the rest of the mainstem, steelhead retention was prohibited effective August 27 then all angling for salmonids was closed effective September 13.
  - Season total catch estimates include 9,802 kept Chinook (877 released), 650 Coho kept (417 released), and 1,104 steelhead kept (861 released) from 69,629 angler trips.
  - The total and bright-stock Chinook catches were similar to expectations, but the season was shorter and run size smaller than expected.
  - “Party Fishing” regulations were in effect all season which allow each legal angler aboard a vessel to continue fishing until the daily limit for all anglers aboard was achieved.
- The recreational fishery from Bonneville Dam upstream to the Highway 395 Bridge near Pasco, Washington was planned to open August 1 and be managed based on in-season harvest estimates and run-size updates. Regulations included Chinook retention open August 1 – December 31 with a two adult fish daily bag limit, except Chinook and steelhead retention were both limited to one fish/day. In-season regulations mirrored those adopted for the rest of the river, with steelhead retention prohibited effective August 27 then all angling for salmonids closed effective September 13.
    - Season total catch estimates include 958 kept Chinook (97 released), 12 Coho kept (6 released), and 39 steelhead kept (4 released) from 5,659 angler trips.
    - “Party Fishing” regulations were in effect all season.

#### Commercial Fisheries:

- A commercial summer Chinook fishery did not occur. Current WA and OR Commission guidance requires the use of gear other than traditional gillnets for this fishery. Based on results of recent gear evaluations, and the limited commercial sockeye allocation, there are few alternative gears available to access the commercial share of summer Chinook, especially in an open-competitive fishery.
- The preseason plan for the Early Fall commercial drift net fishery was for six 9-hour fishing periods in Zones 4-5 during the last three weeks of August. The actual August season consisted of four periods between 7 and 9 hours in duration in Zones 4-5 with a 9-inch minimum mesh restriction. The actual catch of 8,320 Chinook was less than the preseason expectation of 10,000. Coho landings were also low at 380 fish. Deliveries ranged from 58–84 each period. Ex-vessel value averaged \$2.91/lb for Chinook and \$1.86/lb for Coho. The average weight for Chinook was 15.43 lbs/fish. Limited on-board

observation occurred throughout the fishery to evaluate steelhead handle. A Coho-directed fishery using tangle net gear during the month of October was planned pre-season but did not occur because URB/SRW impacts were not available due to the in-season run downgrade.

<b>2018 Non-Treaty Summer Chinook Fisheries Summary</b> <i>(All data preliminary and includes kept + release mortalities)</i>				
	<b>Preseason</b>		<b>Postseason</b>	
<b>Runsize</b>	67,300		42,120	
Harvest allocated Fishery	Allowed Pre	Post	Actual Take	Actual/ Allowed
PFMC Ocean Fisheries	9,696	3,983	3,983	100%
Below Priest Rapids Dam (PRD)	32.4%	10.0%	21.6%	
Commercial below BON	708	91	24	26%
Recreational Below Bonneville	2,408	311	1,140	367%
Recreational BON to PRD	425	55	134	244%
Below PRD Total	3,541	457	1,298	284%
Above Priest Rapids Dam (PRD)	67.6%	90.0%	78.4%	
Wanapum Tribal	120	68	68	100%
Colville Tribal	3,693	2,878	1,268	44%
Recreational above PRD	3,573	1,165	3,385	290%
Above PRD Total	7,387	4,112	4,721	115%
<b>Non-Treaty Total</b>	<b>20,624</b>	<b>8,552</b>	<b>10,002</b>	<b>117%</b>

2018 Fall Chinook Non-Treaty Catch Sharing - Preseason						
SRW - IMPACTS				Brights - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	5.73%	70%		Sport	18,000	76%
Comm	2.51%	30%		Comm	5,600	24%
LRH - Impacts				Chinook - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	4.58%	73%		Sport	27,100	72%
Comm	1.73%	27%		Comm	10,700	28%

Non-Treaty Catch Sharing - Postseason						
SRW - IMPACTS				Brights - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	7.11%	76%		Sport	15,200	80%
Comm	2.24%	24%		Comm	3,900	20%
LRH - Impacts				Chinook - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	6.70%	75%		Sport	24,200	77%
Comm	2.17%	25%		Comm	7,400	23%

Columbia River Fall Chinook Fishery Model Summary				11-Apr-18 12:21 PM		MR2018-Final Preseason									
Ocean Option:	April 8 PFMC Ocean Option 2														
Columbia River Model Option:	Model	MR2018-Final Preseason													
Average URB % by Fishery (Sport) Time Blocks															
				2018 Fall Chinook Non-Treaty Catch Sharing - Preseason											
<b>Management Guidelines</b>		<b>Goal/Guideline</b>	<b>SRW</b>	<b>Total URB</b>	<b>SRW - IMPACTS</b>			<b>Brights - Mainstem</b>							
Harvest Rate	38.25%	38.24%	38.24%		Impact	Percent	Mortalities	Percent	Harvest						
Non-Treaty	8.25%	8.24%	8.24%		Sport	5.73%	70%	Sport	18,000	76%	17,600				
Treaty	30.0%	30.0%	30.0%		Comm	2.51%	30%	Comm	5,600	24%	5,600				
% of Harvestable Surplus		<b>Total</b>			<b>LRH - Impacts</b>			<b>Chinook - Mainstem</b>							
Non-Treaty	50%	29%			Impact	Percent	Mortalities	Percent	Harvest						
Treaty	50%	41%			Sport	4.58%	73%	Sport	27,100	72%	26,600				
McNary Escapement	60,000	116,900			Comm	1.73%	27%	Comm	10,700	28%	10,700				
LRH Ocean/Inriver Exp. Rate	38%	36.3%													
Non-Treaty Wild B Index Steelhead	2%	1.8%													
Treaty Total B Index Steelhead	15%	15%													
Upriver Coho to Bonneville Dam	50%	65%													
Lower Columbia Chum	5%	0.03%													
				<b>Total</b>	<b>LRH</b>	<b>LRW</b>	<b>BPH</b>	<b>URB</b>	<b>BUB</b>	<b>LRB</b>	<b>PUB</b>	<b>SAB</b>	<b>SRW</b>	<b>LRH</b>	<b>SRW</b>
<b>Ocean Harvest</b>				55,770	11,530	2,600	14,890	22,130	0	400	4,210			ER	HR
<b>Columbia River Run</b>				375,520	63,910	7,860	51,420	205,060	0	3,760	38,200	5,300	9,600	6.3%	7.8%
<b>Harvest Below Bonneville</b>				<b>Fishery Description</b>											
Zone 4-5 Wk 33			2 days	2,540	370	0	950	1,050	0	0	160	0	50	0.3%	0.5%
Zone 4-5 Wk 34			3 days	3,810	560	0	1,420	1,580	0	10	240	0	70	0.5%	0.8%
Zone 4-5 Wk 35			1 day	3,630	440	10	1,280	1,590	0	20	280	10	70	0.4%	0.8%
Oct Coho Tanglenet		October	Coho target	730	100	30	10	520	0	0	70	0	20	0.1%	0.3%
Select Areas			Full Season	8,880	5,320	0	270	410	0	0	60	2,810	20	0.4%	0.2%
Buoy 10 Kept + Morts	1 salmonid	Non MSF	Aug 1 - 24	15,400	3,380	140	3,460	3,570	0	70	750	2,880	170	3.7%	1.7%
TP to Lewis	1 salmonid	Non MSF	Aug 1 - Sept 2	4,260	540	140	140	2,770	0	50	620	20	130	0.6%	1.3%
Lewis to Bonn	1 salmonid	Non MSF	Aug 1 - Sept 14	5,790	230	0	160	4,430	0	100	870	0	210	0.3%	2.2%
Tributary Sport	MSF		Full season	4,100	3,250	850	0	0	0	0	0	0	0	0.0%	0.0%
<b>Lower River Total</b>				<b>49,130</b>	<b>14,200</b>	<b>1,170</b>	<b>7,700</b>	<b>15,920</b>	<b>0</b>	<b>240</b>	<b>3,050</b>	<b>5,710</b>	<b>750</b>	<b>6.3%</b>	<b>7.76%</b>
Bonneville Dam Passage				253,090			40,280	189,140	0		23,660		8,850		
<b>Harvest Above Bonneville</b>															
Zone 6 - Bonn to Hwy 395	1 Chinook		Manage Inseason	1,630				980	0		650		50		0.5%
Treaty Comm. and C&S			Average season	91,470			21,280	60,450	0		9,730		2,830		29.5%
Hanford Reach Sport			Average season	7,790				7,790					0		
McNary Dam Passage				116,880				116,880							
Lower Granite Dam Passage															



<b>2018 Preseason Expectations and Post-season Actual Coho Harvest and Exploitation Rates</b>		
Harvest Summary (kept + release mortalities)		
	<b>Total Harvest Mortalities</b>	
Fishery	Preseason	Post-season
Mainstem Commercial (all gears)	13,583	380
Select Area Commercial	36,141	12,111
B10 Sport	27,468	7,206
LCR Sport	1,576	1,071
Ocean Fisheries	76,890	43,025
<b>Total Harvest/Mortalities</b>	<b>155,658</b>	<b>63,793</b>
	<b>Exploitation Rate</b>	
Fishery	Preseason	Post-season
Mainstem Commercial (all gears)	1.90%	0.34%
Select Area Commercial	0.28%	0.10%
B10 Sport	3.16%	1.12%
LCR Sport	0.09%	0.16%
Ocean Fisheries	9.90%	9.41%
<b>Total Exploitation Rate</b>	<b>15.32%</b>	<b>11.14%</b>

## **2019 FORECASTS, CONSERVATION OBJECTIVES, AND POLICY GUIDANCE**

### Upper Columbia Summer Chinook

- Forecast = 35,900
- Below Priest Rapids Dam available harvest allocations TBD. WFWC currently allocates 70% sport and 30% commercial; OFWC currently allocates 80% sport and 20% commercial
- No directed commercial or sport retention fisheries below Priest Rapids Dam given expected ocean harvest and sharing allocations within the Upper Columbia Management Plan.
- Reserve impacts to prosecute Select Areas and recreational summer steelhead fishery.

### Upriver Summer Steelhead

- Forecast = 127,000 (Skamania + A-Index + B-Index)
  - A-Index = 110,000 (34,000 wild)
  - B-Index = 8,000 (950 wild)
- Non-treaty fisheries allowed 2% impact rate on both wild A-Index and wild B-Index.
- Given the poor expected return for upriver summer steelhead, fishery restrictions similar to those enacted in 2017 may likely be considered, for example:
  - Daily bag limit may not include more than one hatchery steelhead
  - Night fishing closures
  - Rolling 1-2 month steelhead retention closures for mainstem and some tributary recreational fisheries
    - August: Buoy 10 to The Dalles Dam
    - September: The Dalles Dam to John Day Dam
    - September and October: John Day Dam to McNary Dam
    - October and November: McNary Dam to Hwy 395 Bridge (Pasco)

### Lower Columbia River (LCR) Tule Fall Chinook

- Total ocean and Columbia River ER limit = 38%
- Columbia River ER = currently assumed to be ~11%
- Not likely to be a constraint in 2019

### Snake River Wild/Upriver Bright (URB) Fall Chinook

- Non-treaty harvest rate is 8.25%
- Non-treaty exceeded its ESA share in 2017 and 2018, but the overall ESA limit (Non-treaty + Treaty) has not been exceeded

### Columbia River Coho

- Harvest matrix in place since 2015
- Pre-NOF ocean abundance forecast = 905,600
  - 545,000 early stock, 360,600 late stock
- Total ocean and Columbia River ER limit = 23% on Lower River Natural (LCN) Coho

### Commission Guidance

- Summer
  - Harvest allocations TBD. WFWC policy is 70% recreational 30% commercial. OFWC is currently 80% recreational and 20% commercial. Gillnets allowed under current WA Policy.
- Fall
  - Recreational no more than 70% and commercial not less than 30% for most constraining fall Chinook stock (URB in 2019).
  - LCN Coho impacts prioritized to Select Area fisheries and mainstem commercial Chinook fisheries, followed by recreational fisheries, and then Coho-directed mainstem commercial fisheries. Current OFWC guidance includes commercial hatchery Coho fisheries in first tier.
  - Gillnets allowed in the mainstem – Chinook (OR and WA Policy) and Coho (WA Policy)
- Other
  - Rescind barbless hook regulation in Columbia River by June 1, 2019 (WA Policy)

<b>Columbia River Fall Chinook Returns</b>			
	<b>2018</b>		<b>2019</b>
<b>Stock</b>	<b>Forecast</b>	<b>Return</b>	<b>Forecast</b>
Lower River Hatchery - LRH	63,900	53,000	54,500
Lower River Wild - LRW	7,900	8,300	13,700
Lower River Bright - LRB	3,800	14,200	8,000
Bonneville Pool Hatchery - BPH	51,400	28,900	46,000
Upriver Bright – URB	205,100	149,000	158,400
<i>Snake River Wild (SRW)<sup>1</sup></i>	9,600	10,600	8,600
Pool Upriver Bright - PUB	38,200	36,000	56,700
Select Area Bright - SAB	5,300	4,000	3,100
<b>Lower River Total</b>	<b>80,800</b>	<b>79,500</b>	<b>79,300</b>
<b>Upriver Total</b>	<b>294,700</b>	<b>213,900</b>	<b>261,100</b>
<b>Columbia River Total</b>	<b>375,500</b>	<b>293,400</b>	<b>340,400</b>
<i>2018 forecast is post-NOF; 2019 is pre-NOF</i>			
<i>SRW sub-component of URB</i>			

**CONSIDERATIONS FOR 2019 FISHERIES**

- Non-treaty fisheries exceeded the SRW impact rate allowance in 2017 and 2018.

<b>2017-2018 SRW Fall Chinook Impacts by Fishery</b>					
Fishery	2017		2018		Average % Post/Pre
	Pre	Post	Pre	Post	
Aug Z 4-5	4.1%	4.0%	2.1%	2.2%	101.5%
Coho Tangle net	0.0%	0.0%	0.3%	0.0%	0%
Select Areas	0.2%	0.3%	0.2%	0.0%	93.4%
Buoy 10	1.6%	4.1%	1.7%	2.0%	185.2%
TP to Lewis	2.2%	2.0%	1.3%	2.9%	154.1%
Lewis to Bonneville	3.2%	4.8%	2.2%	2.1%	123.4%
Bonneville to Hwy 395	0.7%	0.9%	0.5%	0.1%	67.5%
<b>Total</b>	<b>12.01%</b>	<b>16.00%</b>	<b>8.24%</b>	<b>9.35%</b>	<b>123.3%</b>
Commercial	4.3%	4.3%	2.5%	2.2%	94.1%
Sport	7.7%	11.7%	5.7%	7.1%	138.3%

- The LCR fall sport fishery has seen an increase in angler effort over time, averaging 41,000 trips per year in the 1980’s, 54,000 angler trips in the 1990’s, 94,000 trips in the 2000’s, and 125,000 trips since 2010
  - Annual fall Chinook catch has also increased, averaging 2,300 during the 1980s, 5,000 during 1990’s, 14,700 during the 2000’s, and 25,400 since 2010.
  - Buoy 10 angler effort fluctuates with annual salmon returns but average effort has remained relatively stable when compared to years prior to 2010. However, Chinook harvest rates have been increasing in recent years.
- Collectively, it is becoming harder to maintain season length, particularly in years when URB/SRW Chinook are the limiting stock (i.e. 8.25%).
- Due to overages for SRW impact rates in recent years, staff is taking a conservative approach for planning 2019 fall Chinook fisheries. Therefore, staff does not recommend fully allocating all available SRW impacts prior to the run update.
- Preliminary modelling for recreational fisheries based on an approximate 10% SRW/URB impact buffer are presented below:

Preliminary 2019 Fall Recreational Fishery Modelling					
	BUOY 10			LCR	
	1	2	3	TP-WR	WR-BONN
Chinook/August Season	Aug 1-15 nMSF; Aug 16-31 MSF	Aug 1-15 MSF; Aug 16-24 (9d) nMSF;	Aug 1-22 nMSF	Aug 1 - Aug 25	Aug 1 -Sept 10
Bag	2 fish/1 CHF	1 Salmonid	1 Salmonid	1 Salmonid	1 Salmonid
Sept-Oct Season	Sept 1-Oct 31	Aug 25-Oct 31	Aug 23-Oct 31	Aug 26-Oct 31	Sept 11-Oct 31
Bag	2-3 fish/ 0 CHF	2-3 fish/ 0 CHF	2-3 fish/ 0 CHF	2 fish/ 0 CHF	2 fish/ 0 CHF
Additional		Area from TP line to west Puget Isl. closed to CHF retention effective Aug 25	Area from TP line to west Puget Isl. closed to CHF retention effective Aug 23		

- **All options are preliminary.** Staff will complete additional review of all scenarios.
  - All Buoy 10 options include a URB Chinook set-aside (release mortalities) for Coho-directed opportunity.
  - To help avoid the substantial SRW impact overage that occurred in the TP-Warrior Rock area in 2018 (which partially resulted from effort shift from Buoy 10 to above the Tongue Point line), staff modelled several fishery options that included Chinook retention closing in the area from Tongue Point/Rocky Point line upstream to the west end of Puget Island, when Buoy 10 closes to Chinook retention.
  - Sub-allocations of the recreational URB harvest share for Buoy 10 and the TP-Warrior Rock were revised slightly from 2018.
  - Recreational fall Chinook fisheries from Bonneville to McNary Dam will open August 1 and be managed in-season based on an 8.3% URB sub-allocation and the URB run size.
  - Staff was asked to provide a model for fisheries below Longview with a provision that guides would only fish 5 days per week. This will be included for the next meeting.
- Mainstem commercial fisheries will be limited by available SRW impacts. Available impacts for wild B-Index steelhead may also be constraining.
  - Preliminary modelling indicates the early fall fishery would be 4-5 days in duration (similar to 2017 and 2018) with an expected catch of approximately 8,500 adult Chinook.
  - Preliminary planning anticipates Coho tangle net opportunity throughout October.
  - Additional late-fall opportunity will be contingent upon in-season updates for URB/SRW Chinook and wild B-Index steelhead.

*Oregon/Washington Departments of Fish and Wildlife  
March 18, 2019*

Columbia River North of Falcon Meeting  
March 18, 2019 – 10AM – 3:00 PM  
WDFW Region 5 Office – Ridgefield, WA

**Agenda**

- ❖ Introductions, Schedule and Process (10:00 – 10:15 AM) – Ryan Lothrop/John North

<b>North of Falcon (NOF) and Pacific Fishery Management Council (PFMC) schedules</b>			
<b>Meeting</b>	<b>Date</b>	<b>Topic</b>	<b>Location</b>
Columbia River NOF #1	March 18	Columbia River fisheries	Ridgefield, WA
NOF #1	March 19	Puget Sound, WA coast, ocean	Olympia, WA
Upper Columbia	March 26	Upper Columbia sport	Wenatchee, WA
Mid-Columbia	March 27	Mid-Columbia sport	Kennewick, WA
Snake River	March 28	Snake River sport	Clarkston, WA
Columbia River NOF #2	April 2	Columbia River fisheries	Ridgefield, WA
NOF #2	April 3	Puget Sound, WA coast, ocean	Lynnwood, WA
PFMC #2	April 11-15	Final ocean fisheries	Rohnert Park, CA

- ❖ Review of 2018 (10:15 – 10:45 AM) (handout) – Ryan Lothrop/John North
  - Returns and conservation objectives
  - Fishery guidance
  - 2018 Fisheries review
    - Catch and impact sharing (tables)
- ❖ Outlook for 2019/Issues for Columbia (10:45 – 11:30 AM) (handout) – John North/Ryan Lothrop
  - Conservation objectives and policy guidance
  - Summer Chinook
  - Upriver summer steelhead
  - Fall Chinook: Lower Columbia natural (LCR) tules, Upriver Bright (Snake River wild)
  - Lower Columbia natural (LCN) Coho
  - Ocean/in-river sharing – Kyle Adicks
- ❖ Break (11:30 AM – 12:30 PM)
- ❖ Sport/Commercial break-out sessions (12:30 PM – 2:30 PM)
  - Sport
    - Buoy 10 fishery, LCR Chinook fishery
    - Washington tributary fisheries
  - Commercial
    - Coho tangle net, Zone 4-5
- ❖ Discussion (2:30 PM – 3:00PM)
  - Summary of break-out sessions and next steps

# 2019 Ridgefield North of Falcon

## 2018 COLUMBIA RIVER SUMMER/FALL FISHERIES AND RUN SIZES

### 2019 PRESEASON FORECASTS

*All data preliminary and subject to change*

**March 18, 2019**

#### 2018 RETURNS AND CONSERVATION OBJECTIVES

##### Upper Columbia Summer Chinook

- Pre-season forecast was 67,300 fish.
- Actual return was about 42,100 fish (63% of forecast).

##### Snake River Wild (SRW)/Upriver Bright (URB)

- Preseason
  - URB run size = 205,100
  - Snake River wild (SRW) run size = 9,600
  - Total allowable URB harvest rate (HR) = 45%
  - Since the URB forecast barely exceeded the 200,000 breakpoint for URB harvest rates, the states managed fisheries for a run size of less than 200,000 (8.25% HR rather than 15% HR)
  - Non-Treaty fisheries HR expectation = 8.24%
  - Treaty Indian fisheries HR expectation = 30%
- Actual
  - URB run size = 149,000 (73% of forecast)
  - SRW run size = 10,600 (111% of forecast)
  - Total URB HR = 29.58% (31.25% allowed)
  - Non-Treaty fisheries URB HR = 9.35% (8.25% allowed)
  - Treaty Indian fisheries URB HR = 20.22% (23.0% allowed)

##### Lower Columbia River Tules (LCR)

- Preseason
  - Lower River Hatchery tule (LRH) run size = 63,900
  - Total allowable ocean and Columbia River exploitation rate (ER) = 38%
  - Total ocean and Columbia River ER expectation = 36.3%
  - Columbia River ER expectation = 9.0%
- Actual
  - LRH run size = 53,000 (83% of forecast)
  - Total ocean and Columbia River ER = 34.5%
  - Columbia River ER = 8.9%

### Lower River Natural Coho (LCN)

- Preseason
  - Columbia River Coho run size = 213,600 (127,200 early stock, 86,400 late stock)
  - Total allowable ocean and Columbia River ER = 18%
  - Total ocean and Columbia River ER expectation = 15.3%
  - Columbia River ER (including Buoy 10) expectation = 5.4%
- Actual
  - Columbia River Coho run size = 147,300 (69% of forecast; 82,700 early stock, 64,600 late stock)
  - Preliminary estimates total 11.1% ER for ocean and in-river fisheries.
  - Columbia River ER (including Buoy 10) = 1.7%

### Upriver Summer Steelhead

- Preseason
  - Bonneville Dam passage (July – October) = 190,400 (3,400 wild B-Index)
  - Non-Treaty ESA impact limit = 2.0% wild A-index and 2.0% wild B-Index
- Actual
  - Bonneville Dam passage (July – October) = 100,500 (53% of forecast), return included 2,380 wild B-Index (70% of forecast)
  - Non-Treaty ESA impact = <1% wild A-Index; <1% wild B-Index (both preliminary)

## **2018 FISHERY GUIDANCE**

Columbia River fisheries were managed to meet the following guidelines and objectives:

### Federal/State Endangered Species Act

- Sockeye, steelhead, Chinook, Coho, Chum

### US v OR Management Agreement (MA)

- New 2018-2027 MA in effect

### OFWC/WFWC Guidance

- Impact/Allocation sharing
  - Summer Chinook: harvestable surplus available to in-river fisheries <PRD allocated 80% to recreational, 20% to commercial
  - Sockeye: ~80% of allowable Snake River ESA impacts to recreational, balance to commercial for incidental harvest in Chinook-directed fisheries.
  - Fall Chinook (LRH and SRW)
    - No more than 70% of allowable ESA impacts on the most constraining Chinook stock to recreational, no less than 30% to commercial.

### WDFW/Colville Tribe Upper Columbia Management Agreement

- Upper Columbia summer Chinook

## 2018 NON-TREATY FISHERIES REVIEW

### Recreational Fisheries:

- The summer Chinook recreational fishery downstream of Bonneville Dam was scheduled to be open for hatchery Chinook retention from June 22 through July 4. The daily bag limit was two fish/two hatchery Chinook. The actual Chinook retention season was open June 22-30; sockeye retention was allowed from July 1-31.
  - Total catch estimates include 1,021 Chinook kept (356 released), 451 hatchery steelhead kept (291 steelhead released) from 9,636 angler trips during the Chinook retention season. The number of kept Chinook was the lowest since 2001. Total Chinook mortalities (1,140) during the summer management period were 367% of the post-season allocation for this area.
- The summer Chinook recreational fishery between Bonneville and McNary dams was open for hatchery Chinook retention from June 22 through July 6. The Chinook recreational fishery between McNary and Priest Rapids dams was open for hatchery Chinook retention through July 16. Sockeye retention was allowed beginning July 1 in both areas. The daily bag limit was two fish/two hatchery Chinook.
  - Season total catch estimates include 120 hatchery Chinook kept and 92 released. Anglers in this area harvested 244% of the summer Chinook allocation, using 134 of the available 55 Chinook mortalities.
- The Buoy 10 sport fishery opened August 1 with a daily bag limit of one adult salmonid. Chinook retention did not include any mark-selective periods. The fishery was scheduled to close to Chinook retention after August 24 but continue for Coho and steelhead retention with a two hatchery adult salmonid (no more than one steelhead) daily bag limit through December 31. Preseason harvest expectations (kept plus release mortalities) included 15,400 Chinook (3.7% LCR Chinook ER and 1.7% SRW harvest rate) and 27,500 Coho.
  - The Chinook-retention portion of the fishery occurred as expected. Due to lower than expected returns, steelhead retention was prohibited effective August 27; further, due to an in-season downgrade of the expected URB return, all angling for salmonids was closed effective September 13.
  - Season total catch estimates include 11,620 kept Chinook (5,039 released), 6,761 Coho kept (5,890 released), and 50 steelhead kept (42 released) from 67,318 angler trips.
  - Chinook catches were lower than expected, but consistent with the actual Chinook return which was 78% of preseason expectations. Coho catches were much lower than expected, and even less than what was expected based on the actual return which was 69% of the preseason forecast.
- The fall LCR sport fishery opened August 1; similar to past years, the fishery was split into two major sections (upstream/downstream of the Lewis River/Warrior Rock line). A daily bag limit of one adult salmonid was planned for the area downstream of Warrior Rock through September 2. Beginning September 3, Chinook retention would close while Coho and steelhead retention was to continue with a two hatchery adult salmonid (no

more than one steelhead) daily bag limit through December 31. For the area upstream of Warrior Rock, the pre-season plan included Chinook retention from August 1 – September 14 with a one adult salmonid daily bag limit; after Chinook retention closed, Coho and steelhead retention would continue with a two hatchery adult salmonid (no more than one steelhead) daily bag limit through December 31. Preseason harvest expectations (kept plus release mortalities) included 10,100 Chinook (0.9% LCR Chinook ER and 3.5% SRW harvest rate) and 1,600 Coho for all areas combined.

- The Chinook retention season in the area downstream of Warrior Rock occurred as planned; however, as in the rest of the mainstem, steelhead retention was prohibited effective August 27 then all angling for salmonids was closed effective September 13.
  - Season total catch estimates include 9,802 kept Chinook (877 released), 650 Coho kept (417 released), and 1,104 steelhead kept (861 released) from 69,629 angler trips.
  - The total and bright-stock Chinook catches were similar to expectations, but the season was shorter and run size smaller than expected.
  - “Party Fishing” regulations were in effect all season which allow each legal angler aboard a vessel to continue fishing until the daily limit for all anglers aboard was achieved.
- The recreational fishery from Bonneville Dam upstream to the Highway 395 Bridge near Pasco, Washington was planned to open August 1 and be managed based on in-season harvest estimates and run-size updates. Regulations included Chinook retention open August 1 – December 31 with a two adult fish daily bag limit, except Chinook and steelhead retention were both limited to one fish/day. In-season regulations mirrored those adopted for the rest of the river, with steelhead retention prohibited effective August 27 then all angling for salmonids closed effective September 13.
    - Season total catch estimates include 958 kept Chinook (97 released), 12 Coho kept (6 released), and 39 steelhead kept (4 released) from 5,659 angler trips.
    - “Party Fishing” regulations were in effect all season.

#### Commercial Fisheries:

- A commercial summer Chinook fishery did not occur. Current WA and OR Commission guidance requires the use of gear other than traditional gillnets for this fishery. Based on results of recent gear evaluations, and the limited commercial sockeye allocation, there are few alternative gears available to access the commercial share of summer Chinook, especially in an open-competitive fishery.
- The preseason plan for the Early Fall commercial drift net fishery was for six 9-hour fishing periods in Zones 4-5 during the last three weeks of August. The actual August season consisted of four periods between 7 and 9 hours in duration in Zones 4-5 with a 9-inch minimum mesh restriction. The actual catch of 8,320 Chinook was less than the preseason expectation of 10,000. Coho landings were also low at 380 fish. Deliveries ranged from 58–84 each period. Ex-vessel value averaged \$2.91/lb for Chinook and \$1.86/lb for Coho. The average weight for Chinook was 15.43 lbs/fish. Limited on-board

observation occurred throughout the fishery to evaluate steelhead handle. A Coho-directed fishery using tangle net gear during the month of October was planned pre-season but did not occur because URB/SRW impacts were not available due to the in-season run downgrade.

<b>2018 Non-Treaty Summer Chinook Fisheries Summary</b> <i>(All data preliminary and includes kept + release mortalities)</i>				
	<b>Preseason</b>		<b>Postseason</b>	
<b>Runsize</b>	67,300		42,120	
Harvest allocated Fishery	Allowed Pre	Post	Actual Take	Actual/ Allowed
PFMC Ocean Fisheries	9,696	3,983	3,983	100%
Below Priest Rapids Dam (PRD)	32.4%	10.0%	21.6%	
Commercial below BON	708	91	24	26%
Recreational Below Bonneville	2,408	311	1,140	367%
Recreational BON to PRD	425	55	134	244%
Below PRD Total	3,541	457	1,298	284%
Above Priest Rapids Dam (PRD)	67.6%	90.0%	78.4%	
Wanapum Tribal	120	68	68	100%
Colville Tribal	3,693	2,878	1,268	44%
Recreational above PRD	3,573	1,165	3,385	290%
Above PRD Total	7,387	4,112	4,721	115%
<b>Non-Treaty Total</b>	<b>20,624</b>	<b>8,552</b>	<b>10,002</b>	<b>117%</b>

2018 Fall Chinook Non-Treaty Catch Sharing - Preseason						
SRW - IMPACTS				Brights - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	5.73%	70%		Sport	18,000	76%
Comm	2.51%	30%		Comm	5,600	24%
LRH - Impacts				Chinook - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	4.58%	73%		Sport	27,100	72%
Comm	1.73%	27%		Comm	10,700	28%

Non-Treaty Catch Sharing - Postseason						
SRW - IMPACTS				Brights - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	7.11%	76%		Sport	15,200	80%
Comm	2.24%	24%		Comm	3,900	20%
LRH - Impacts				Chinook - Mainstem		
	Impact	Percent		Mortalities	Percent	Harvest
Sport	6.70%	75%		Sport	24,200	77%
Comm	2.17%	25%		Comm	7,400	23%

Columbia River Fall Chinook Fishery Model Summary				11-Apr-18 12:21 PM		MR2018-Final Preseason									
Ocean Option:	April 8 PFMC Ocean Option 2														
Columbia River Model Option:	Model	MR2018-Final Preseason													
Average URB % by Fishery (Sport) Time Blocks															
				2018 Fall Chinook Non-Treaty Catch Sharing - Preseason											
<b>Management Guidelines</b>		<b>Goal/Guideline</b>	<b>SRW</b>	<b>Total URB</b>	<b>SRW - IMPACTS</b>			<b>Brights - Mainstem</b>							
Harvest Rate	38.25%	38.24%	38.24%		Impact	Percent	Mortalities	Percent	Harvest						
Non-Treaty	8.25%	8.24%	8.24%		Sport	5.73%	70%	Sport	18,000	76%	17,600				
Treaty	30.0%	30.0%	30.0%		Comm	2.51%	30%	Comm	5,600	24%	5,600				
% of Harvestable Surplus		<b>Total</b>			<b>LRH - Impacts</b>			<b>Chinook - Mainstem</b>							
Non-Treaty	50%	29%			Impact	Percent	Mortalities	Percent	Harvest						
Treaty	50%	41%			Sport	4.58%	73%	Sport	27,100	72%	26,600				
McNary Escapement	60,000	116,900			Comm	1.73%	27%	Comm	10,700	28%	10,700				
LRH Ocean/Inriver Exp. Rate	38%	36.3%													
Non-Treaty Wild B Index Steelhead	2%	1.8%													
Treaty Total B Index Steelhead	15%	15%													
Upriver Coho to Bonneville Dam	50%	65%													
Lower Columbia Chum	5%	0.03%													
				<b>Total</b>	<b>LRH</b>	<b>LRW</b>	<b>BPH</b>	<b>URB</b>	<b>BUB</b>	<b>LRB</b>	<b>PUB</b>	<b>SAB</b>	<b>SRW</b>	<b>LRH</b>	<b>SRW</b>
<b>Ocean Harvest</b>				55,770	11,530	2,600	14,890	22,130	0	400	4,210			ER	HR
<b>Columbia River Run</b>				375,520	63,910	7,860	51,420	205,060	0	3,760	38,200	5,300	9,600	6.3%	7.8%
<b>Harvest Below Bonneville</b>				<b>Fishery Description</b>											
Zone 4-5 Wk 33			2 days	2,540	370	0	950	1,050	0	0	160	0	50	0.3%	0.5%
Zone 4-5 Wk 34			3 days	3,810	560	0	1,420	1,580	0	10	240	0	70	0.5%	0.8%
Zone 4-5 Wk 35			1 day	3,630	440	10	1,280	1,590	0	20	280	10	70	0.4%	0.8%
Oct Coho Tanglenet		October	Coho target	730	100	30	10	520	0	0	70	0	20	0.1%	0.3%
Select Areas			Full Season	8,880	5,320	0	270	410	0	0	60	2,810	20	0.4%	0.2%
Buoy 10 Kept + Morts	1 salmonid	Non MSF	Aug 1 - 24	15,400	3,380	140	3,460	3,570	0	70	750	2,880	170	3.7%	1.7%
TP to Lewis	1 salmonid	Non MSF	Aug 1 - Sept 2	4,260	540	140	140	2,770	0	50	620	20	130	0.6%	1.3%
Lewis to Bonn	1 salmonid	Non MSF	Aug 1 - Sept 14	5,790	230	0	160	4,430	0	100	870	0	210	0.3%	2.2%
Tributary Sport	MSF		Full season	4,100	3,250	850	0	0	0	0	0	0	0	0.0%	0.0%
<b>Lower River Total</b>				<b>49,130</b>	<b>14,200</b>	<b>1,170</b>	<b>7,700</b>	<b>15,920</b>	<b>0</b>	<b>240</b>	<b>3,050</b>	<b>5,710</b>	<b>750</b>	<b>6.3%</b>	<b>7.76%</b>
Bonneville Dam Passage				253,090			40,280	189,140	0		23,660		8,850		
<b>Harvest Above Bonneville</b>															
Zone 6 - Bonn to Hwy 395	1 Chinook		Manage Inseason	1,630				980	0		650		50		0.5%
Treaty Comm. and C&S			Average season	91,470			21,280	60,450	0		9,730		2,830		29.5%
Hanford Reach Sport			Average season	7,790				7,790					0		
McNary Dam Passage				116,880				116,880							
Lower Granite Dam Passage															

Columbia River Fall Chinook Fishery Model Summary													
Ocean Option:	Preliminary Post season	Date: March 8, 2019		<b>MR2018-Postseason</b>									
Columbia River Model Option:	Model	MR2018-Postseason											
Average URB % by Fishery (Sport) Time Blocks													
<b>Management Guidelines</b>				<b>Non-Treaty Catch Sharing</b>									
	<b>Goal/Guideline</b>	<b>Actual SRW</b>	<b>Actual Total URB</b>	<b>SRW - IMPACTS</b>			<b>Brights - Mainstem</b>						
Harvest Rate	38.25%	29.58%	29.58%		Impact	Percent		Mortalities	Percent	Harvest			
Non-Treaty	8.25%	9.35%	9.35%	Sport	7.11%	76%		Sport	15,200	80%	14,900		
Treaty	30.0%	20.22%	20.22%	Comm	2.24%	24%		Comm	3,900	20%	3,900		
<b>Management Guidelines</b>				<b>LRH - Impacts</b>			<b>Chinook - Mainstem</b>						
	<b>Goal/Guideline</b>	<b>Actual</b>			Impact	Percent		Mortalities	Percent	Harvest			
Non-Treaty % of Harvestable Surplus	50%	37%		Sport	6.70%	75%		Sport	24,200	77%	23,800		
Treaty % of Harvestable Surplus	50%	42%		Comm	2.17%	25%		Comm	7,400	23%	7,400		
McNary Escapement	60,000	100,000											
LRH Ocean/Inriver Exp. Rate	38%	34.5%											
Non-Treaty Wild B Index Steelhead	2%	<1%											
Treaty Total B Index Steelhead	15%	5.08%											
Upriver Coho to Bonneville Dam	50%	71%											
Lower Columbia Chum	5%	0.05%											
				<b>Total</b>	<b>LRH</b>	<b>LRW</b>	<b>BPH</b>	<b>URB</b>	<b>BUB</b>	<b>LRB</b>	<b>PUB</b>	<b>SAB</b>	<b>SRW</b>
<b>Ocean Harvest</b>				34,750	8,390	2,050	6,880	12,610	0	1,160	3,650		
<b>Columbia River Run</b>				293,420	52,960	8,270	28,860	149,040	0	14,240	36,010	4,040	10,640
<b>Harvest Below Bonneville</b>				<b>Fishery Description</b>									
Zone 4-5 Wk 33				0	0	0	0	0	0	0	0	0	0
Zone 4-5 Wk 34				3,350	100	0	1,070	1,630	0	20	220	0	120
Zone 4-5 Wk 35				4,970	760	0	1,560	1,650	0	150	210	0	120
Oct Coho Tanglenet				0	0	0	0	0	0	0	0	0	0
Select Areas				6,600	4,480	0	150	70	0	0	20	1,740	0
Buoy 10 Kept + Morts				12,570	4,500	600	1,690	3,010	0	10	210	1,440	210
TP to Lewis				5,070	150	0	190	4,390	0	0	90	170	310
Lewis to Bonn				5,590	100	0	730	3,120	0	600	650	0	220
Tributary Sport				3,120	2,660	460	0	0	0	0	0	0	0
<b>Lower River Total</b>				<b>41,280</b>	<b>12,770</b>	<b>1,050</b>	<b>5,390</b>	<b>13,860</b>	<b>0</b>	<b>780</b>	<b>1,390</b>	<b>3,340</b>	<b>990</b>
Bonneville Dam Passage				190,180			21,340	135,120	0		33,660		9,650
<b>Harvest Above Bonneville</b>													
Zone 6 - Bonn to Hwy 395				1 Chinook				80	0		890		10
Treaty Comm. and C&S							10,560	30,140	0		13,710		2,150
Harford Reach Sport								8,560					0
McNary Dam Passage								100,030					
Lower Granite Dam Passage													
<b>Escapement</b>													
Hatchery					40,200		10,780		0		19,060	700	
Natural					21,040		10,400		0		7,180	440	
Total					19,090	7,220	340	100,030	0	13,460	4,270	190	
Hatchery Surplus					5,450		3,400		0		1,830	(560)	
Natural Surplus						(401)	(960)	40,030					

<b>2018 Preseason Expectations and Post-season Actual Coho Harvest and Exploitation Rates</b>		
Harvest Summary (kept + release mortalities)		
	<b>Total Harvest Mortalities</b>	
Fishery	Preseason	Post-season
Mainstem Commercial (all gears)	13,583	380
Select Area Commercial	36,141	12,111
B10 Sport	27,468	7,206
LCR Sport	1,576	1,071
Ocean Fisheries	76,890	43,025
<b>Total Harvest/Mortalities</b>	<b>155,658</b>	<b>63,793</b>
	<b>Exploitation Rate</b>	
Fishery	Preseason	Post-season
Mainstem Commercial (all gears)	1.90%	0.34%
Select Area Commercial	0.28%	0.10%
B10 Sport	3.16%	1.12%
LCR Sport	0.09%	0.16%
Ocean Fisheries	9.90%	9.41%
<b>Total Exploitation Rate</b>	<b>15.32%</b>	<b>11.14%</b>

## **2019 FORECASTS, CONSERVATION OBJECTIVES, AND POLICY GUIDANCE**

### Upper Columbia Summer Chinook

- Forecast = 35,900
- Below Priest Rapids Dam available harvest allocations TBD. WFWC currently allocates 70% sport and 30% commercial; OFWC currently allocates 80% sport and 20% commercial
- No directed commercial or sport retention fisheries below Priest Rapids Dam given expected ocean harvest and sharing allocations within the Upper Columbia Management Plan.
- Reserve impacts to prosecute Select Areas and recreational summer steelhead fishery.

### Upriver Summer Steelhead

- Forecast = 127,000 (Skamania + A-Index + B-Index)
  - A-Index = 110,000 (34,000 wild)
  - B-Index = 8,000 (950 wild)
- Non-treaty fisheries allowed 2% impact rate on both wild A-Index and wild B-Index.
- Given the poor expected return for upriver summer steelhead, fishery restrictions similar to those enacted in 2017 may likely be considered, for example:
  - Daily bag limit may not include more than one hatchery steelhead
  - Night fishing closures
  - Rolling 1-2 month steelhead retention closures for mainstem and some tributary recreational fisheries
    - August: Buoy 10 to The Dalles Dam
    - September: The Dalles Dam to John Day Dam
    - September and October: John Day Dam to McNary Dam
    - October and November: McNary Dam to Hwy 395 Bridge (Pasco)

### Lower Columbia River (LCR) Tule Fall Chinook

- Total ocean and Columbia River ER limit = 38%
- Columbia River ER = currently assumed to be ~11%
- Not likely to be a constraint in 2019

### Snake River Wild/Upriver Bright (URB) Fall Chinook

- Non-treaty harvest rate is 8.25%
- Non-treaty exceeded its ESA share in 2017 and 2018, but the overall ESA limit (Non-treaty + Treaty) has not been exceeded

### Columbia River Coho

- Harvest matrix in place since 2015
- Pre-NOF ocean abundance forecast = 905,600
  - 545,000 early stock, 360,600 late stock
- Total ocean and Columbia River ER limit = 23% on Lower River Natural (LCN) Coho

### Commission Guidance

- Summer
  - Harvest allocations TBD. WFWC policy is 70% recreational 30% commercial. OFWC is currently 80% recreational and 20% commercial. Gillnets allowed under current WA Policy.
- Fall
  - Recreational no more than 70% and commercial not less than 30% for most constraining fall Chinook stock (URB in 2019).
  - LCN Coho impacts prioritized to Select Area fisheries and mainstem commercial Chinook fisheries, followed by recreational fisheries, and then Coho-directed mainstem commercial fisheries. Current OFWC guidance includes commercial hatchery Coho fisheries in first tier.
  - Gillnets allowed in the mainstem – Chinook (OR and WA Policy) and Coho (WA Policy)
- Other
  - Rescind barbless hook regulation in Columbia River by June 1, 2019 (WA Policy)

<b>Columbia River Fall Chinook Returns</b>			
	<b>2018</b>		<b>2019</b>
<b>Stock</b>	<b>Forecast</b>	<b>Return</b>	<b>Forecast</b>
Lower River Hatchery - LRH	63,900	53,000	54,500
Lower River Wild - LRW	7,900	8,300	13,700
Lower River Bright - LRB	3,800	14,200	8,000
Bonneville Pool Hatchery - BPH	51,400	28,900	46,000
Upriver Bright – URB	205,100	149,000	158,400
<i>Snake River Wild (SRW)<sup>1</sup></i>	9,600	10,600	8,600
Pool Upriver Bright - PUB	38,200	36,000	56,700
Select Area Bright - SAB	5,300	4,000	3,100
<b>Lower River Total</b>	<b>80,800</b>	<b>79,500</b>	<b>79,300</b>
<b>Upriver Total</b>	<b>294,700</b>	<b>213,900</b>	<b>261,100</b>
<b>Columbia River Total</b>	<b>375,500</b>	<b>293,400</b>	<b>340,400</b>
<i>2018 forecast is post-NOF; 2019 is pre-NOF</i>			
<i>SRW sub-component of URB</i>			

**CONSIDERATIONS FOR 2019 FISHERIES**

- Non-treaty fisheries exceeded the SRW impact rate allowance in 2017 and 2018.

<b>2017-2018 SRW Fall Chinook Impacts by Fishery</b>					
Fishery	2017		2018		Average % Post/Pre
	Pre	Post	Pre	Post	
Aug Z 4-5	4.1%	4.0%	2.1%	2.2%	101.5%
Coho Tangle net	0.0%	0.0%	0.3%	0.0%	0%
Select Areas	0.2%	0.3%	0.2%	0.0%	93.4%
Buoy 10	1.6%	4.1%	1.7%	2.0%	185.2%
TP to Lewis	2.2%	2.0%	1.3%	2.9%	154.1%
Lewis to Bonneville	3.2%	4.8%	2.2%	2.1%	123.4%
Bonneville to Hwy 395	0.7%	0.9%	0.5%	0.1%	67.5%
<b>Total</b>	<b>12.01%</b>	<b>16.00%</b>	<b>8.24%</b>	<b>9.35%</b>	<b>123.3%</b>
Commercial	4.3%	4.3%	2.5%	2.2%	94.1%
Sport	7.7%	11.7%	5.7%	7.1%	138.3%

- The LCR fall sport fishery has seen an increase in angler effort over time, averaging 41,000 trips per year in the 1980’s, 54,000 angler trips in the 1990’s, 94,000 trips in the 2000’s, and 125,000 trips since 2010
  - Annual fall Chinook catch has also increased, averaging 2,300 during the 1980s, 5,000 during 1990’s, 14,700 during the 2000’s, and 25,400 since 2010.
  - Buoy 10 angler effort fluctuates with annual salmon returns but average effort has remained relatively stable when compared to years prior to 2010. However, Chinook harvest rates have been increasing in recent years.
- Collectively, it is becoming harder to maintain season length, particularly in years when URB/SRW Chinook are the limiting stock (i.e. 8.25%).
- Due to overages for SRW impact rates in recent years, staff is taking a conservative approach for planning 2019 fall Chinook fisheries. Therefore, staff does not recommend fully allocating all available SRW impacts prior to the run update.
- Preliminary modelling for recreational fisheries based on an approximate 10% SRW/URB impact buffer are presented below:

Preliminary 2019 Fall Recreational Fishery Modelling					
	BUOY 10			LCR	
	1	2	3	TP-WR	WR-BONN
Chinook/August Season	Aug 1-15 nMSF; Aug 16-31 MSF	Aug 1-15 MSF; Aug 16-24 (9d) nMSF;	Aug 1-22 nMSF	Aug 1 - Aug 25	Aug 1 -Sept 10
Bag	2 fish/1 CHF	1 Salmonid	1 Salmonid	1 Salmonid	1 Salmonid
Sept-Oct Season	Sept 1-Oct 31	Aug 25-Oct 31	Aug 23-Oct 31	Aug 26-Oct 31	Sept 11-Oct 31
Bag	2-3 fish/ 0 CHF	2-3 fish/ 0 CHF	2-3 fish/ 0 CHF	2 fish/ 0 CHF	2 fish/ 0 CHF
Additional		Area from TP line to west Puget Isl. closed to CHF retention effective Aug 25	Area from TP line to west Puget Isl. closed to CHF retention effective Aug 23		

- **All options are preliminary.** Staff will complete additional review of all scenarios.
  - All Buoy 10 options include a URB Chinook set-aside (release mortalities) for Coho-directed opportunity.
  - To help avoid the substantial SRW impact overage that occurred in the TP-Warrior Rock area in 2018 (which partially resulted from effort shift from Buoy 10 to above the Tongue Point line), staff modelled several fishery options that included Chinook retention closing in the area from Tongue Point/Rocky Point line upstream to the west end of Puget Island, when Buoy 10 closes to Chinook retention.
  - Sub-allocations of the recreational URB harvest share for Buoy 10 and the TP-Warrior Rock were revised slightly from 2018.
  - Recreational fall Chinook fisheries from Bonneville to McNary Dam will open August 1 and be managed in-season based on an 8.3% URB sub-allocation and the URB run size.
  - Staff was asked to provide a model for fisheries below Longview with a provision that guides would only fish 5 days per week. This will be included for the next meeting.
- Mainstem commercial fisheries will be limited by available SRW impacts. Available impacts for wild B-Index steelhead may also be constraining.
  - Preliminary modelling indicates the early fall fishery would be 4-5 days in duration (similar to 2017 and 2018) with an expected catch of approximately 8,500 adult Chinook.
  - Preliminary planning anticipates Coho tangle net opportunity throughout October.
  - Additional late-fall opportunity will be contingent upon in-season updates for URB/SRW Chinook and wild B-Index steelhead.

*Oregon/Washington Departments of Fish and Wildlife  
March 18, 2019*

Columbia River North of Falcon #1 - March 18, 2019

UPDATED 10:57AM 3/18/2019

	2018 Actual			
	Harvest	Season	URB Catch	Catch/URB
<b>Total Fall Chinook Run</b>	293,400			
<b>Sport</b>				
B10	11,450	Aug 1-24	3,010	3.8
TP - Lewis	4,980	Aug 1-Sept 2	4,390	1.1
Lewis - Bonn	5,190	Aug 1-Sept 12	3,120	1.7
Bonn - McN	970	Aug 1-Sept 12	80	12.1
<b>Commercial</b>				
Week 33	0	No fishery		
Week 34	3,050	2 periods	1,630	1.9
Week 35	4,330	2 periods	1,650	2.6
Sept	0	No fishery		
Coho TN	0	No fishery		
Select Area	6,450	Reduced season	70	92.1
		<b>Goal</b>		
URB - Sport	76%	70%		
URB - Comm	24%	30%		
URB - Total HR	9.4%	8.25%		
LRH - Sport	75%	NA		
LRH - Comm	25%	NA		
LRH - Total ER	34.5%	38%		
LRH - Total inriver ER	8.85%	NA		

	2018 Fall Chinook Impact - Expected versus Actual					
	LCR tule impact			SRW harvest rate		
Sport	Pre	Post	% of Pre	Pre	Post	% of Pre
B10	3.70%	6.32%	171%	1.74%	2.02%	116%
TP - Lewis	0.59%	0.21%	36%	1.35%	2.94%	218%
Lewis - Bonn	0.30%	0.16%	55%	2.16%	2.09%	97%
Bonn - McN				0.48%	0.05%	11%
<b>Commercial</b>						
Week 33	0.33%	0.00%	0%	0.51%	0.00%	0%
Week 34	0.49%	0.06%	12%	0.77%	1.10%	142%
Week 35	0.40%	1.05%	264%	0.78%	1.10%	142%
Sept						
Coho TN	0.11%	0.00%	0%	0.26%	0.00%	0%
Select Area	0.40%	1.04%	261%	0.20%	0.04%	20%
Total Sport	4.58%	6.70%	146%	5.73%	7.11%	124%
Total Comm	1.73%	2.15%	125%	2.51%	2.24%	89%
Total	6.31%	8.85%	140%	8.24%	9.35%	113%

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
North of Cape Falcon	North of Cape Falcon	North of Cape Falcon
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<p>Model #: Coho-1911, Chinook 1019</p> <ol style="list-style-type: none"> <li>Overall non-Indian TAC: 65,000 Chinook and 205,000 coho marked with a healed adipose fin clip (marked).</li> <li>Non-Indian commercial troll TAC: 32,500 Chinook and 32,800 marked coho.</li> <li>Trade: May be considered at the April Council meeting.</li> <li>Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</li> </ol>	<p>Model #: Coho-1912, Chinook 1119</p> <ol style="list-style-type: none"> <li>Overall non-Indian TAC: 55,000 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).</li> <li>Non-Indian commercial troll TAC: 27,500 Chinook and 30,400 marked coho.</li> <li>Trade:</li> <li>Same as Alternative 1</li> </ol>	<p>Model #: Coho-1913, Chinook 1219</p> <ol style="list-style-type: none"> <li>Overall non-Indian TAC: 45,000 Chinook and 100,000 coho marked with a healed adipose fin clip (marked).</li> <li>Non-Indian commercial troll TAC: 22,500 Chinook and 5,600 coho.</li> <li>Trade:</li> <li>Same as Alternative 1</li> </ol>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 30, or 21,700 Chinook. No more than 4,825 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,780 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River the landing and possession limit is 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between the Leadbetter Pt. and Cape Falcon the landing and possession limit is 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>All salmon, except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>When it is projected that approximately 75% of the overall Chinook guideline has been landed, approximately 75% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 75% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 28, or 16,500 Chinook. No more than 5,200 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 4,400 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between the Leadbetter Pt. and Cape Falcon landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Same as Alternative 1</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 25, or 11,300 Chinook. No more than 3,550 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,000 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open five days per week (Fri.-Tues.) (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 40 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between the Queets River and Leadbetter Pt. a landing and possession limit of 200 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon the landing and possession limit is 40 Chinook per vessel per open period (C.1, C.6).</p> <p>Same as Alternative 1</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 30, or 10,800 Chinook or 32,800 coho (C.8).</li> </ul> <p>Open seven days per week. All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 60 Chinook per vessel per landing week (Thurs.-Wed.) will be in place (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon landing and possession limit of 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Landing and possession limit of 150 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 24, or 11,000 Chinook or 30,400 coho; no more than 5,200 Chinook may be caught in the area between the U.S./Canada border and the Queets River (C.8).</li> </ul> <p>Same as Alternative 1</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) will be in place (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Landing and possession limit of 100 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 24, or 11,200 Chinook or 5,600 coho; no more than 5,300 Chinook may be caught in the area between the U.S./Canada border and the Queets River, and no more than 1,325 Chinook may be caught in the area between Leadbetter Point and Cape Falcon (C.8).</li> <li>Open July 1-2 then;</li> <li>July 5-September 24; open five days per week (Fri. - Tues.) (C.1).</li> </ul> <p>All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 40 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between the Queets River and Leadbetter Pt. a landing and possession limit of 100 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon a landing and possession limit of 40 Chinook per vessel per open period (C.1, C.6).</p> <p>Landing and possession limit of 10 marked coho per vessel per open period (C.1).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish in a Washington port and must possess a Washington troll license. For delivery to Washington ports south of Leadbetter Point, vessels must notify the Washington Department of Fish and Wildlife at 360-249-1215 prior to crossing the Leadbetter Point line with area fished, total Chinook, coho and halibut catch aboard, and destination with approximate time of delivery. During any single trip, only one side of the Leadbetter line may be fished (C.11).</p>	<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point (C.11).</p>	<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point (C.11).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Mandatory closed areas include: Salmon troll Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 12, Grays Harbor Control Zone (C.5). Vessels must land and deliver their salmon within 24 hours of any closure of this fishery. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver all species of fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land all species of fish in Garibaldi, Oregon. Under state law, vessels must report their catch on a state fish receiving ticket. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon to notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 ext. 271 or sending notification via e-mail to nfalcon.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. (C.11).</p>		

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
North of Cape Falcon	North of Cape Falcon	North of Cape Falcon
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<p>1. Overall non-Indian TAC: 65,000 Chinook and 205,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 32,500 Chinook and 172,200 marked coho; all retained coho must be marked.</p> <p>3. A trade with commercial troll may be considered in April.</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens August 1 with an expected landed catch of 40,000 marked coho in August and September.</p> <p>6. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>	<p>1. Overall non-Indian TAC: 55,000 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 27,500 Chinook and 159,600 marked coho; all retained coho must be marked.</p> <p>3. Trade:</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens August 1 with an expected landed catch of 45,000 marked coho in August and September.</p> <p>6. Same as Alternative I</p>	<p>Overall non-Indian TAC: 45,000 Chinook and 100,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 22,500 Chinook and 94,400 marked coho; all retained coho must be marked.</p> <p>3. Trade:</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens August 1 with an expected landed catch of 50,000 marked coho in August and September.</p> <p>6. Same as Alternative I</p>
<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 15 through earlier of September 30, or 17,910 marked coho subarea quota, with a subarea guideline of 6,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 22 through earlier of September 30, or 16,600 marked coho subarea quota, with a subarea guideline of 5,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>	<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 29 through earlier of September 15, or 4,370 marked coho subarea quota, with a subarea guideline of 4,400 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>

**A. SEASON ALTERNATIVE DESCRIPTIONS**

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 15 through earlier of September 22, or 4,380 marked coho subarea quota, with a subarea guideline of 1,400 Chinook (C.5)</li> <li>• September 28 through earlier of October 13, or 100 marked coho quota, or 100 Chinook quota (C.5) in the area north of 47°50'00" N. lat. and south of 48°00'00" N. lat.</li> </ul> <p>Open seven days per week. All salmon, two salmon per day. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 4,150 marked coho subarea quota, with a subarea guideline of 1,300 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 15, or 1,090 marked coho subarea quota, with a subarea guideline of 1,100 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (see C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Same as Alternative 1</p>
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 63,710 marked coho subarea quota, with a subarea guideline of 15,700 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 12 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 22, or 59,050 marked coho subarea quota, with a subarea guideline of 13,300 Chinook (C.5)</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 16 through earlier of September 15, or 15,540 marked coho subarea quota, with a subarea guideline of 10,900 Chinook (C.5).</li> </ul> <p>Open five days per week (Sunday through Thursday). All salmon; two salmon per day no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 86,100 marked coho subarea quota, with a subarea guideline of 8,800 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 79,800 marked coho subarea quota, with a subarea guideline of 7,400 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p>	<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 30, or 73,400 marked coho subarea quota, with a subarea guideline of 6,100 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p>

Table 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery Alternatives\_STT analyzed.<sup>a/</sup> (Page 1 of 2)

Key Stock/Criteria	PROJECTED			2019
	Alt I	Alt II	Alt III	Criteria
<b>CHINOOK</b>		<b>CHINOOK</b>		<b>CHINOOK</b>
Columbia Upriver Brights	160.7	163.4	165.1	74.0 Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest. The management goal has been increased to 60.0 by Columbia River managers.
Mid-Columbia Brights	65.6	66.7	67.4	14.9 Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	53.9	55.2	56.2	25.0 Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules <sup>c/</sup> (threatened)	<b>39.2%</b>	36.7%	34.8%	≤ 38.0% Total adult equivalent fishery exploitation rate (2019 NMFS ESA guidance).
Columbia Lower River Wild <sup>d/</sup> (threatened)	14.0	14.2	14.4	6.9 Minimum ocean escapement to attain MSY spawner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	46.0	48.1	49.5	8.2 Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Upper Columbia River Summer	35.1	36.0	36.7	29.0 Aggregate escapement to mouth of Columbia River (2019 NMFS guidance).
Snake River Fall (threatened) SRFI	67.1%	59.7%	53.7%	≤ 70.0% Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Klamath River Fall	46.4	46.1	46.4	≥ 40.7 2019 minimum natural area adult escapement (FMP control rule).
Federally recognized tribal harvest	50.0%	50.0%	50.0%	50.0% Equals 28.8, 29.0, and 29.1 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spawner reduction) rate	47.3%	47.6%	47.3%	≤ 53.7% FMP control rule.
Adult river mouth return	98.2	98.1	98.5	NA Total adults in thousands.
Age-4 ocean harvest rate	15.9%	16.0%	15.3%	≤ 16.0% NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	6.9%	6.9%	7.0%	NA Includes 0.0 (thousand) adult fish impacted in the KMZ sport fishery during fall (Sept.-Dec.) 2018.
River recreational fishery share	15.0%	15.0%	15.0%	NA Equals 4.3, 4.4, and 4.4 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	15.7%	15.6%	13.5%	≤ 15.7% Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: <u>Recreational</u> - Pt. Arena to Pigeon Pt. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. <u>Commercial</u> - Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2019 ESA Guidance).
Sacramento River Fall	152.3	163.9	--	≥ 151.0 Alternatives I & II: 2019 minimum hatchery and natural area adult escapement (Council guidance).
	--	--	180.1	≥ 180.0 Alternative III: 2019 minimum hatchery and natural area adult escapement (Council guidance).
Sacramento Index Exploitation Rate	59.9%	56.8%	52.6%	≤ 67.9% FMP control rule.
Ocean commercial impacts	149.6	136.1	121.0	Includes fall (Sept-Dec) 2018 impacts (6.2 thousand SRFC).
Ocean recreational impacts	50.9	50.7	46.8	Includes fall 2018 impacts (7.7 thousand SRFC).
River recreational impacts	26.9	28.9	31.8	NA Equals 11.8%, 13.4%, and 15.9% of the total allowable harvest.

Table 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery Alternatives\_STT analyzed.<sup>a/</sup> (Page 2 of 2)

Key Stock/Criteria	PROJECTED			2019	
	Alt I	Alt II	Alt III	Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>
<b>COHO</b>	<b>COHO</b>			<b>COHO</b>	
Interior Fraser (Thompson River)	<b>11.0%(6.3%)</b>	<b>10.1%(5.4%)</b>	7.7%(3.0%)	≤ 10.0%	2019 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	33.8%(5.7%)	33.2%(4.9%)	31.4%(2.7%)	≤ 35.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Stillaguamish	32.5%(4.1%)	31.9%(3.4%)	30.5%(1.9%)	≤ 50.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Snohomish	33.7%(4.1%)	33.1%(3.4%)	31.6%(1.9%)	≤ 40.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Hood Canal	<b>48.8%(6.3%)</b>	<b>48.2%(5.4%)</b>	<b>46.8%(2.9%)</b>	≤ 45.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Strait of Juan de Fuca	9.6%(5.0%)	8.9%(4.3%)	7.0%(2.4%)	≤ 20.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Quillayute Fall	13.6	13.7	14.1	6.3	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Hoh	5.6	5.8	6.2	2.0	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Queets Wild	8.9	9.1	9.7	5.8	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Grays Harbor	65.3	66.1	68.1	24.4	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Willapa Bay Natural	55.5	56.3	58.5	17.2	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Low er Columbia River Natural (threatened)	15.3%	13.4%	9.3%	≤ 23.0%	Total marine and mainstem Columbia R. fishery exploitation rate (2018 NMFS ESA guidance). Value depicted is marine ER before Buoy 10.
Upper Columbia <sup>e/</sup>	≥ 50%	≥ 50%	≥ 50%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	337.2	351.0	372.0	77.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.7 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	204.9	217.4	250.6	9.7	Minimum ocean escapement to attain hatchery egg-take goal of 6.4 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural	14.6%	13.0%	10.4%	≤ 15.0%	Marine and freshw ater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)	5.8%	5.8%	6.2%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

a/ Projections in the table assume 2018 post season fishing effort scalars for coho in Canadian fisheries. Model results for Chinook in this table used 2018 preseason catches and fishing effort scalars, and are updated with 2018 post season data if available. Assumptions for these fisheries will be changed prior to the April meeting as new information becomes available.

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshw ater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spaw ner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for LCN coho include marine impacts only. Exploitation rates for OCN coho represent marine and freshw ater impacts. Values reported for Klamath River fall Chinook are natural area adult spaw ners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spaw ners.

c/ Includes projected impacts of inriver fisheries that have not yet been shaped.

d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. It is anticipated that fishery management will be adjusted by state and tribal comanagers during the preseason planning process to comply with stock management objectives.

e/ Includes minor contributions from East Fork Lewis River and Sandy River.

**Washington Department of Fish and Wildlife – Region 5**  
**2019 North of Falcon Tributary Sport SALMON Preliminary Proposals**  
**March 18, 2019**

**Region 5 – Columbia River Tributary Coho Fisheries**

*The Columbia River coho return for 2019 is forecast to be considerably larger than 2018. Tributary-specific coho forecasts for 2019 are in-development at this time, but there is potential for increased harvest opportunity in some tributary fisheries relative to 2018 seasons. Options for modified fishing rules (if warranted) will be provided when available.*

**Cowlitz River**

1. Start season August 1<sup>st</sup> with hatchery Chinook daily limit of one (1) adult on the Cowlitz River, or
2. Start season August 1<sup>st</sup> with no retention of Chinook on the Cowlitz River

*Justification – Based on preliminary forecasts, the Cowlitz Salmon Hatchery should achieve the 2019 broodstock collection goal for fall Chinook. The broodstock collection was forecast to be met in 2018; however, only approximately 42% of the program goal was achieved. Therefore, we propose to start the season with a conservative approach and if the run develops as expected we may be able to increase the daily limit via emergency regulation in-season.*

**Toutle/Green Rivers**

1. Start season August 1<sup>st</sup> with hatchery Chinook daily limit of one (1) adult on the Toutle and Green Rivers, or
2. Start season August 1<sup>st</sup> with no retention of Chinook on the Toutle and Green Rivers

*Justification: Based on preliminary forecasts, North Toutle Hatchery (located on the Green River) should achieve the 2019 broodstock collection goal for fall Chinook. The broodstock collection was forecast to be met in 2018; however, the program goal was not achieved even with a reduced fishery. This was likely due to the combination of a lower than expected run size and low water in the rivers making recruitment to the hatchery more difficult. Therefore, we propose to start the season with a conservative approach and if the run develops as expected we may be able to increase the daily limit via emergency regulation in-season.*

**Lewis River**

Increase salmon adult daily limit to two (2) Chinook or Hatchery Coho for Oct 1-Dec 31

*Justification – Escapement goal of 5,700 adults is likely to be met based on the forecast. Daily limit reduction and area closures were implemented in 2018 to ensure escapement goal was met. Adult salmon daily limits for August 1 – September 30 would remain two hatchery Chinook or hatchery Coho.*

### **Elochoman River**

1. Open hatchery steelhead retention during September and October from 200 feet above the temporary weir upstream to the Elochoman Hatchery Bridge. Or,
2. Maintain seasons in permanent rule.

*Justification: Provide additional opportunity for anglers to harvest hatchery steelhead.*

### **Kalama River**

Daily limit of 3 hatchery salmon (Chinook or Coho), August 1-December 31.

*Justification: Provide additional opportunity for anglers to harvest hatchery Coho based on preliminary forecasts.*

### **Washougal River**

1. Start season August 1<sup>st</sup> with hatchery Chinook daily limit of one (1) adult on the Washougal River, or
2. Start season August 1<sup>st</sup> with no retention of Chinook on the Washougal River

*Justification: Based on preliminary forecasts, broodstock collection goals for Washougal Hatchery in 2019 should be achieved. The broodstock collection was forecast to be met in 2018; however, the program goal was not achieved. Therefore, we propose to start the season with a conservative approach and if the run develops as expected we may be able to increase the daily limit via emergency regulation in-season.*

### **Drano Lake**

1. Reduce the adult salmon daily limit and consider night closure in Drano Lake.

*Justification: Provides greater certainty of meeting hatchery broodstock needs at Little White Salmon National Fish Hatchery and implements a daily limit that is better aligned with current fall Chinook forecasts. Potential for alignment of salmon and steelhead daily limits and night closure with adjacent waters of the mainstem Columbia River. Night fishing closure provides additional protections for ESA-listed summer steelhead. Monitor in-season returns and modify daily limits as needed through emergency rule.*

### **Tributary Barbless hook rules**

WDFW staff are examining the FWC's recent decision to rescind barbless hook rules on areas of the mainstem Columbia River and internally assessing current and future tributary fishing rules related to barbless hooks.

### **Summer Steelhead**

The 2019 Columbia River summer steelhead run, especially B-index, is forecast to be very low. Based on this information, fishing regulations enacted in 2017 during a similar low run, are being considered for the mainstem Columbia River and the lower sections of Washington tributaries. These may include: reduced steelhead daily limits, steelhead retention closures in late summer/early fall, and night closures.

**Washington Department of Fish and Wildlife – Region 5**  
**2019 North of Falcon Tributary Sport SALMON Preliminary Proposals**  
**March 18, 2019**

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Columbia River North of Falcon Meeting  
Hosted by Washington and Oregon Departments of Fish and Wildlife  
April 2, 2019  
10:00 AM - 1:00 PM  
WDFW Region 5 Office – Ridgefield, WA

**Agenda**

- Introductions (10:00 AM)
- 2019 Fishery Options (10:05 AM – 11:00 AM) (Review Handouts)
  - Summer Chinook
  - Sockeye
  - Summer Steelhead
  - Fall Chinook
  - Coho
- Sport/Commercial Break Outs (11:00 AM – 12:00 PM)
- Next Steps (12:15 PM – 1:00 PM)
  - Final preseason plan from today
  - Preseason plan and rules finalized April 11-15 at PFMC, Double Tree by Hilton Sonoma, Rohnert Park, California
  - 2019 Non-Treaty Columbia River Summer/Fall Fishery Allocation Agreement document will be finalized in May and includes:
    - ▶ Management intent for summer and fall season fisheries
    - ▶ Sport/commercial allocations
    - ▶ Preseason goals and expectations for sport and commercial fisheries
    - ▶ Steelhead fishery restrictions

## Ground Rules

1. Focus on the task at hand – *Stick to the agenda*
2. One person at a time – *Raise your hand to speak*
3. Allow for a balance of speaking time – respect time limits
4. Be courteous
  - Be tough on issues and questions, not on people and organizations
  - No personal attacks
5. Listen with respect
6. Keep side conversations to a minimum
7. Turn off cell phones/put them in the non-ring mode during meeting

Columbia River North of Falcon Meeting  
WDFW – Ridgefield, WA  
April 2, 2019  
2019 Fishery Options

- Summer Chinook
  - No targeted summer Chinook fisheries
  - Incidental catch in steelhead sport fisheries (release mortalities) and SAFE
  
- Sockeye
  - 2019 forecast – 94,400
  - No targeted fisheries
  - Incidental catch (release mortalities) in steelhead sport fisheries
  
- Summer Steelhead (See Handout)
  - Fishery restrictions – similar to 2017
  - Staff will monitor the run status and fisheries in-season to determine if further restrictions are necessary
  
- Fall Chinook (see Model Handout)
  - Preseason planning does not allocate all available non-treaty SRW/URB impacts prior to the run update due to exceedance of non-treaty ESA impacts of URBs in 2017 (107%) and 2018 (113%)
  - Combined non-treaty SRW/URB allocation pre-update is 80% of 8.25% allocation (20% Set Aside)
  - 2010-2018 average prediction error for URBs is 28%

Recreational

- Staff proposed option (3C) presented below:
  - Blend of input from NOF #1
  - Based on precautionary approach and equitable sharing of URB impacts
  - Incorporates URB set-aside pre-update (21% vs 10% discussed at NOF#1)
  - Reserves Chinook impacts for Coho-directed opportunity at Buoy 10

<b>Fall Chinook Model Description – MR2019-Preseason-Option 3C w/20% Set Aside</b>					
	Chinook Retention	Chinook Regulations	Daily limit	Coho Retention	Other
Buoy 10	8/1 – 8/20	Non-MSF	2 fish/1 CHF	8/1 - 12/31	
Tongue Point to Warrior Rock	8/1 – 8/27	Non-MSF	1 salmonid*	8/1 - 12/31	Chinook closed from TP to Puget Island beginning 8/21
Warrior Rock to Bonneville	8/1 – 9/8	Non-MSF	1 salmonid*	8/1 - 12/31	
Zone 6	8/1 – TBD	Non-MSF	1 salmonid*	8/1 - 12/31	

\*Daily limit after Chinook retention closes switches to 2 fish

### Commercial

- Preseason model allocates 81% of available URB commercial impacts pre-update (19% set-aside)
  - Early fall fishery in Zone 4-5 August (5 days)
  - Potential for September (post-update) in Zones 4-5
- Coho
- Recreational: Standard retention seasons – potential increased daily limits to be addressed in-season
  - Commercial: Tangle net fishery – October
- Other Options
- WA staff were asked to model fisheries below Longview with a provision that guiding be limited to 5 days per week. For the Buoy 10 fishery, they estimated this would result in an approximate 10% reduction in Chinook catch. Further in-depth discussions would be needed before this would be considered or could be implemented.
  - Staff was asked to model Buoy 10 with mark-selective regulations during the month of August. This model output results in an un-equitable URB sharing with the Buoy 10 fishery taking the majority of the conservation burden for URBs and would add limited opportunity to those areas upstream of Tongue Point. This option would increase harvest of LRH hatchery fish and may increase risk of not meeting brood stock needs at some hatcheries.

*Oregon/Washington Departments of Fish and Wildlife  
April 2, 2019*

# Columbia River Fall Chinook Fishery Model Summary

27-Mar-19

Ocean Option: March PFMC -Option 2  
 Columbia River Model Option: Model

2019 Preseason - Opt. 3C/Pre-Update; reduced TP, w/20% Set Aside

Management Guidelines	Goal/Guideline	SRW	Total URB
Harvest Rate	38.25%	36.09%	36.06%
Non-Treaty	8.25%	6.58%	6.58%
Treaty	30.0%	29.5%	29.5%
% of Harvestable Surplus		<b>Total</b>	
Non-Treaty	50%	29%	
Treaty	50%	44%	
McNary Escapement	60,000	93,600	
LRH Ocean/river Exp. Rate	38%	36.5%	
Non-Treaty Wild B Index Steelhead	2%	2.0%	
Treaty Total B Index Steelhead	15%	15%	
Upriver Coho to Bonneville Dam	50%	65%	
Lower Columbia Chum	5%	0.03%	

Non-Treaty Catch Sharing			
SRW - Post-Update Impacts		Pre-Update Brights - Mainstem	
Impact	Percent	Mortalities	Harvest
Sport	5.77%	11,900	70%
Comm	2.48%	5,100	30%
			11,900
			5,100
LRH - Pre-Update Impacts		Pre-Update Chinook - Mainstem	
Impact	Percent	Mortalities	Harvest
Sport	6.39%	21,200	69%
Comm	1.63%	9,500	31%
			21,200
			9,500
SRW% Set Aside			
		20%	Aggregate
Sport	4.57%	21%	Sport
Comm	2.01%	19%	Comm

Ocean Harvest	LRH	LRW	BPH	URB	LRB	PUB	SAB	SRW	LRH	SRW	SRW	HR
<b>Total</b>	53,670	11,570	5,020	13,250	16,630	830	6,380					
<b>Columbia River Run</b>	350,800	55,210	14,200	48,150	160,060	7,950	62,130	3,100	8,600	8.0%	8.0%	6.4%
<b>Harvest Below Bonneville</b>												
Zone 4-5 Wk 34	3,530	380	0	1,410	1,320	20	390	10	70	0.4%	0.4%	0.82%
Zone 4-5 Wk 35	4,670	500	20	1,760	1,730	50	610	10	90	0.6%	0.6%	1.08%
Sept Z 4-5 Wk38-Wk40	590	60	10	140	240	30	110	0	10	0.1%	0.1%	0.15%
Oct Coho Tanglenet	670	80	60	10	410	0	110	0	20	0.1%	0.1%	0.26%
Select Areas	6,250	4,060	0	250	270	0	90	1,580	10	0.4%	0.4%	0.17%
Buoy 10 Kept + Mort	13,500	4,530	440	3,330	2,320	80	620	1,100	120	5.9%	5.9%	1.45%
TP to Lewis	1,580	30	0	10	1,410	10	90	10	80	0.0%	0.0%	0.88%
Lewis to Bonn	3,330	120	0	170	2,480	170	390	0	130	0.2%	0.2%	1.55%
Tributary Sport	3,560	2,310	1,250	0	0	0	0	0	0	0.3%	0.3%	0.00%
<b>Lower River Total</b>	<b>37,680</b>	<b>12,080</b>	<b>1,780</b>	<b>7,090</b>	<b>10,170</b>	<b>360</b>	<b>2,410</b>	<b>2,710</b>	<b>550</b>	<b>8.0%</b>	<b>8.0%</b>	<b>6.36%</b>
Bonneville Dam Passage	229,270			36,580	149,890		42,800		8,050			
<b>Harvest Above Bonneville</b>												
Zone 6 - Bonn to Hwy 395	2,790			1,110			1,680		60			0.69%
Treaty Comm. and C&S	82,950			19,930	47,190		15,830		2,540			29.5%
Hanford Reach Sport	6,260			6,260					0			
McNary Dam Passage	93,600			93,600								
Lower Granite Dam Passage									5,525			
<b>Escapement</b>												
Hatchery	43,130			16,650	7,590		25,290		390			
Natural	23,930			13,040			13,020		240			
	19,210			3,610	7,590		14,690		150			
<b>Hatchery Surplus</b>												
Natural Surplus	10,150			6,040	2,310		10,600		240			

## 2019 Fisheries Descriptions

Aug 18-24  
 Aug 25-31  
 Sept 15-28  
 Coho target  
 Full Season  
 nMSF Aug 1-20  
 nMSF Aug 1-27, CK clsd <Puget I. Aug 21  
 nMSF Aug 1-Sept 8  
 Coho full season  
 Reduced seasons  
 MSF  
 \*Additional coho limits considered inseason

1 Salmonid  
 Average season  
 Average season

2019 Steelhead Regulations - Draft Proposal -April 2, 2019		August	September	October	November	December
<b>Columbia River</b>						
Below Bonneville Dam	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Bonneville Dam to The Dalles Dam	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
The Dalles Dam to John Day Dam	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
John Day Dam to McNary Dam	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
McNary Dam to Hwy 395 bridge in Pasco	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Hwy 395 bridge in Pasco Upstream to Hanford	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
<b>Columbia River Tributaries</b>						
Cowlitz River-downstream of Lexington Drive/Sparks Road bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Lewis River-downstream of the confluence with the East Fork	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Wind River-downstream of Shipherd Falls	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Drano Lake	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
White Salmon River-downstream of the county road bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Klickitat River-downstream of the Fisher Hill Bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead

July - All Areas - Daily limit 1, night closure for salmon and steelhead

Model Summaries - Columbia River North of Falcon #2 - April 2, 2019

2019 Commercial Option OPTION A w/buffer Zone 4-5 Week 34, 35					2019 Commercial Option OPTION A1 w/buffer Zone 4-5 Week 33, 34, 35				
	Harvest	Season	URB Catch	Catch/ URB		Harvest	Season	URB Catch	Catch/ URB
<b>Commercial</b>									
Week 32 - Aug 4-10	0	No fishery			0	No fishery			
Week 33 - Aug 11-17	0	No fishery			280	1 day	170	1.6	
Week 34 - Aug 18-24	3,440	3 days	1,300	2.6	2,410	2+days	910	2.6	
Week 35 - Aug 25-31	4,550	2+days	1,700	2.7	5,130	2+days	1,910	2.7	
Sept placeholder	580	Placeholder	230	2.5	580	Placeholder	230	2.5	
Coho TN	660	October	400	1.7	660	October	400	1.7	
Select Area	6,150	Full Season	260	23.7	6,150	Full Season	260	23.7	
August Subtotal	7,990		3,000		7,820		2,990		

2019 Commercial Option OPTION A2 w/buffer Zone 4-5 Week 32					2019 Commercial Option OPTION A3 w/buffer Zone 4-5 Week - 2 days Week 33				
	Harvest	Season	URB Catch	Catch/ URB		Harvest	Season	URB Catch	Catch/ URB
<b>Commercial</b>									
Week 32 - Aug 4-10	280	1 day	170	1.6	0	No fishery			
Week 33 - Aug 11-17	280	1 day	170	1.6	570	2 day	350	1.6	
Week 34 - Aug 18-24	2,410	2+days	910	2.6	2,410	2+days	910	2.6	
Week 35 - Aug 25-31	4,680	2+days	1,740	2.7	4,680	2+days	1,740	2.7	
Sept placeholder	580	Placeholder	230	2.5	580	Placeholder	230	2.5	
Coho TN	660	October	400	1.7	660	October	400	1.7	
Select Area	6,150	Full Season	260	23.7	6,150	Full Season	260	23.7	
August Subtotal	7,650		2,990		7,660		3,000		

# July 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

# August 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# September 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# October 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



# 2019 North of Falcon

Salmon Forecasts

# 2019 Forecast Meeting Schedule

9:00 – 9:30	<u>Introduction</u> <ul style="list-style-type: none"><li>• Welcome and Introduction</li><li>• North of Falcon – Setting Salmon Fisheries in 2019</li></ul>	Ron Warren Kyle Adicks
9:30 – 10:00	<u>Southern Resident Killer Whales</u>	Kirt Hughes
10:00 – 11:00	<u>Salmon Forecasts 2019</u> <ul style="list-style-type: none"><li>• 2018/19 Environmental Outlook</li><li>• Puget Sound and Coast Chinook, Coho, Pink, Chum, Sockeye Stocks</li><li>• Columbia River Salmon Stocks</li><li>• PFMC Salmon Technical Team Review</li></ul>	Marisa Litz Aaron Dufault Ryan Lothrop Cindy LeFleur Wendy Beeghley
11:00 - Noon	<u>Regional Discussion Sessions</u> <ul style="list-style-type: none"><li>• Puget Sound Recreational Big Room</li><li>• Columbia River &amp; Ocean Small Room 1</li><li>• Coastal</li><li>• Puget Sound Commercial Small Room 2</li></ul>	Mark, Aaron, Derek Ryan, Kyle(s), Wendy Annette Kirt, Kwasi, Marisa
Noon – 1:00 pm	Lunch Break	
1:00 – 3:00	<u>Regional Discussion Sessions Continued</u>	

# 2019 NOF Meeting Schedule

Date	Purpose	Location
Feb. 26	Willapa Bay – Grays Harbor Forecast meeting	Montesano City Hall
Feb. 27	Statewide Forecast Meeting	Lacey Community Center
Mar. 7-12	Pacific Fishery Management Council meeting	Vancouver, WA Hilton
Mar. 18	Columbia River Fisheries Meeting	WDFW Region 5 Headquarters, Ridgefield
Mar. 19	North of Falcon 1	DSHS Office Building 2 Auditorium, Olympia
Mar. 21	Puget Sound Recreational Fisheries Discussion	Trinity Methodist Church, Sequim
Mar. 25	Ocean Management Option Public Hearing	Chateau Westport
Mar. 26	Grays Harbor Fisheries Discussion	Montesano City Hall
Mar. 26	Upper Columbia River Fisheries Discussion	Douglas County PUD, Wenatchee
Mar. 27	Puget Sound Recreational Fisheries Discussion	WDFW Mill Creek Office
Mar. 27	Willapa Bay Fisheries Discussion	Raymond Elks Club
Mar. 27	Mid-Columbia River Public Meeting	Kennewick Irrigation District Board Auditorium
Mar. 28	Snake River Fisheries Discussion	Walla Walla Comm. College, Clarkston
Apr. 2	Columbia River and Ocean Fisheries Discussion	WDFW Region 5 Headquarters, Ridgefield
Apr. 3	North of Falcon 2	Lynnwood Embassy Suites
Apr. 11-15	Pacific Fishery Management Council	Double Tree Hilton Sonoma, Rohnert Park, CA

# Handouts

- Agenda/Schedule
- FWC Policies (NOF Policy)
- PFMC Tables
- Regional Forecast Details:
  - Puget Sound and Columbia Chinook
  - Puget Sound Coho
  - Puget Sound Chum & Sockeye
- Presentation slides  
(<http://wdfw.wa.gov/fishing/northfalcon/>)

# Update on Southern Resident Orca Recovery Efforts



*Dave Ellifrit, Center for Whale Research*





# WHAT IS WASHINGTON DOING TO HELP ORCAS?

Over the past several years, Washington state has been working to protect the ecosystem that supports orcas. Saving our southern resident killer whales requires us to tackle many challenges, both in the short-term and over the coming decades.



GOVERNOR'S  
SOUTHERN RESIDENT  
**ORCA**  
TASK FORCE

# Governor Inslee takes action



# Governor's Executive Order

March 2018

- Supplemental Funding
- Immediate actions for state agencies
- Established Task Force

# Task Force and Working Groups



- Stephanie Solien & Les Purce, co-chairs
- Diverse membership
- Three Working Groups
  - ✓ Vessels (Todd Hass, Puget Sound Partnership)
  - ✓ Contaminants (Derek Day, Ecology)
  - ✓ Prey [Penny Becker (WA Dept. Fish & Wildlife) & Steve Martin (Gov. Salmon Recovery Office)]

# Reports

## 2018

Draft due Oct. 1, 2018 | Final due Nov. 15, 2018

Content included:

- Task Force recommendations for addressing all major threats and recovering Southern Residents (policies, programs, priority actions, legislation, budget needs)
- Summary of minority views and actions considered but not ultimately recommended

## 2019

Due Oct. 1, 2019

Content will include:

- Progress made
- Lessons learned
- Outstanding needs and additional recommendations

# Task Force Recommendations

36 recommendations

- **Prey - 16 recommendations**
- Vessels - 10 recommendations
- Contaminants - 10 recommendations
  - 10 recommendations require or likely require legislative changes

# Prey Recommendations



# RESTORE & ACQUIRE HABITAT

## Recommendations 1 and 2

- Significantly increase investment in restoration and acquisition of habitat for Chinook and forage fish



# BETTER IMPLEMENT & ENFORCE HABITAT PROTECTION LAWS

## Recommendation 3

- Increase Enforcement and Technical Assistance for Hydraulic Permitting, Shoreline, Water Quality and Water Quantity Laws

# AMEND LAWS TO STRENGTHEN HABITAT PROTECTION

## Recommendation 4

- Through legislation, amend existing State authorities to better align with local Shoreline Management laws
- Give state agencies the authority to deny, amend unnecessary bulkhead requests to protect habitat

# INCENTIVIZE HABITAT PROTECTION & ENHANCEMENT

## Recommendation 5

- Develop incentives to encourage voluntary actions to protect habitat

# INCREASE HATCHERY PRODUCTION

## Recommendation 6

- Increase Hatchery Production of Salmon in Concert with increased Habitat protection and restoration



# INCREASE ABUNDANCE AND IMPROVE SURVIVAL OF CHINOOK AROUND HYDRO DAMS

## Recommendation 7

- Prepare an implementation strategy to reestablish salmon runs above existing dams

## Recommendation 8

- Modify State Water Quality Standards for Greater Spill over Columbia River and Snake River Dams

## Recommendation 9

- Facilitate a Stakeholder process around potential Lower Snake River Dam Removal

# INCREASE CHINOOK ABUNDANCE THROUGH REDUCED CATCH AND BYCATCH

## Recommendation 10

- Support full implementation and funding of the 2019-28 Pacific Salmon Treaty – Federal Request

## Recommendation 11

- Reduce Chinook bycatch in West Coast Commercial Fisheries

# DECREASE THE NUMBER OF CHINOOK LOST TO PREDATION BY SPECIES OTHER THAN ORCAS

## Recommendation 12

- Develop Science and Options for Pinniped Management in Puget Sound

## Recommendation 13

- Increase Management of Pinnipeds on the Columbia River

## Recommendation 14

- Reduce populations of nonnative predatory fish that prey upon or compete with Chinook

# SUPPORT A HEALTHY MARINE FOOD WEB AND FORAGE FISH POPULATIONS

## Recommendation 15

- Monitor and manage forage fish populations to support Chinook

## Recommendation 16

- Support the Puget Sound zooplankton sampling program for management of Chinook and forage fish

# What's Going On Now, What's Next



Budget	Recommendation
Operating	\$66.3 M
Capital	\$594.8 M
Transportation	\$408.7 M
<b>Total</b>	<b>\$1.07 B</b>

- 3 Governor request plus multiple other state legislative bills (vessels, oil traffic, habitat)
- State agencies implement recommendations as possible with funds now and when new funds hopefully become available in July 2019
- Year 2 work of the Task Force

# Fish & Wildlife Commission North of Falcon Policy Direction

The Department will continue to consider effects of salmon fisheries on Southern Resident Killer Whales (SRKW) when setting fishing seasons. **The Department will work with the National Marine Fisheries Service to refine tools to assess the effects of fisheries on available prey for SRKW, and will plan fisheries to ensure that they provide proper protection to SRKW from reduction to prey availability or from fishery vessel traffic,** consistent with the Endangered Species Act.

# Orca Risk Assessment and Adaptive Management Framework

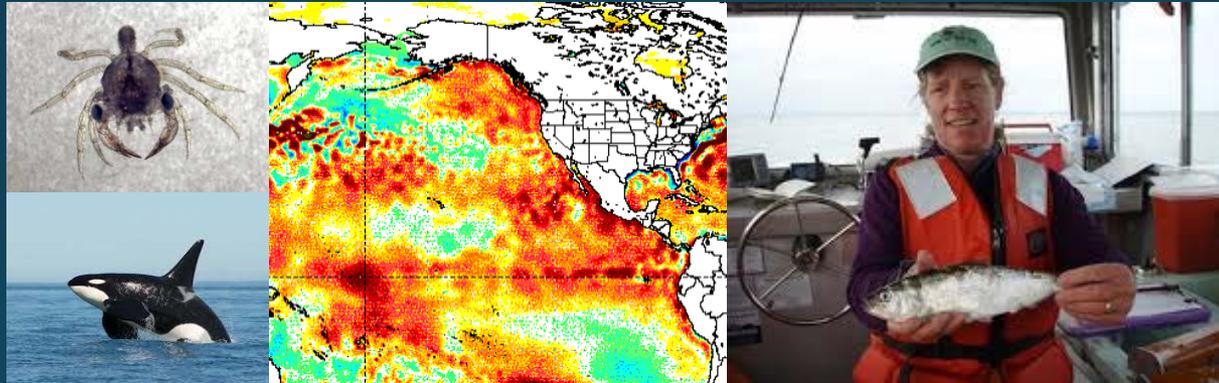
- Identifies conditions when increased prey is essential for orcas
- Categorizes orca status and expected Chinook abundance for a given year, weights fisheries based on their spatial overlap with orcas during key foraging times, and establishes threshold proportions for maximum allowable reduction of Chinook by fisheries for a given time and area
- If planned fisheries are projected to exceed the allowable prey reduction threshold, then adjustments made until the threshold is met

# QUESTIONS?



<https://www.governor.wa.gov/issues/issues/energy-environment/southern-resident-killer-whale-recovery-and-task-force>

# Update on Ocean Conditions



Marisa Litz

Marisa.litz@dfw.wa.gov

Acknowledgements:  
Laurie Weitkamp, NOAA Fisheries



Washington  
Department of  
**FISH** and  
**WILDLIFE**

# Outline

- Update on the “Warm Blobs”, El Niños, and La Niñas
- Physical and biological observations
- NWFSC environmental indicators (stoplight chart)

## Take-Home Messages:

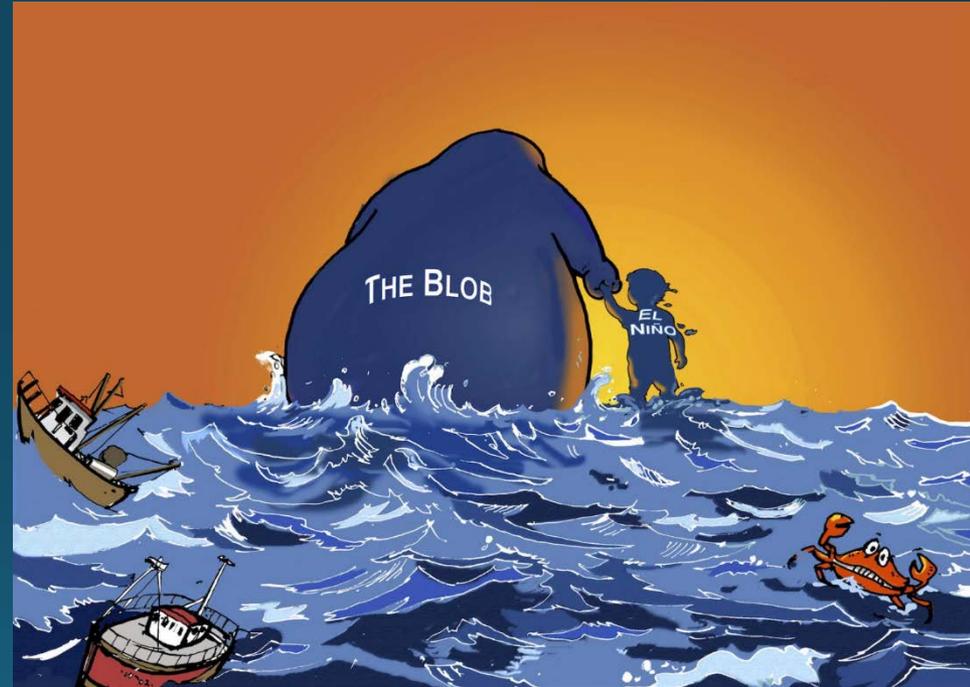
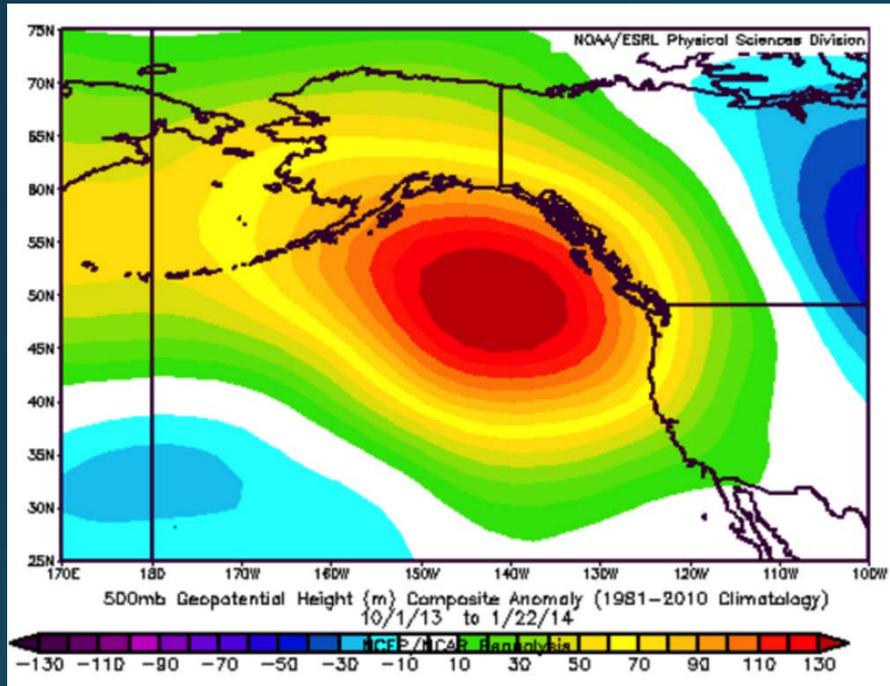
- Sea surface temperatures (SSTs) cooled following “The Blob”, ushering in weak La Niñas
- Return of warm SST anomalies to the North and South in Fall 2018
- Projections are for a weak El Niño through spring 2019
- Cooling in 2018 and return to “normal”ish conditions (upwelling/copepods) may lead to better survival

# The ecosystem is connected



# What is the “Warm Blob”?

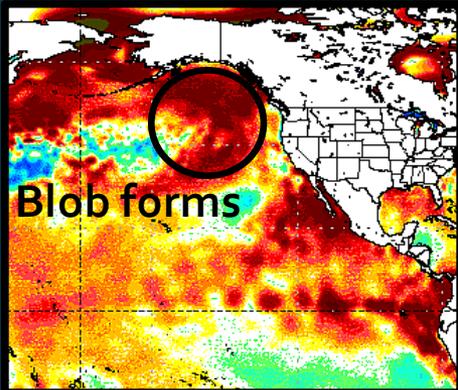
## Ridiculously Resilient Ridge



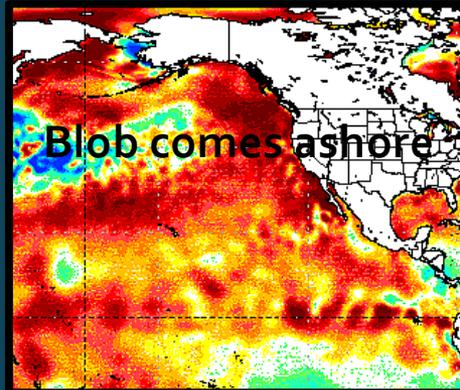
## Atmospheric Pressure Anomalies Oct 1, 2013 – Jan 22, 2014

# Sea Surface Temperature Anomalies

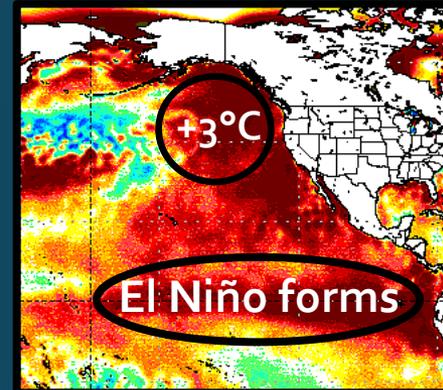
July 2014



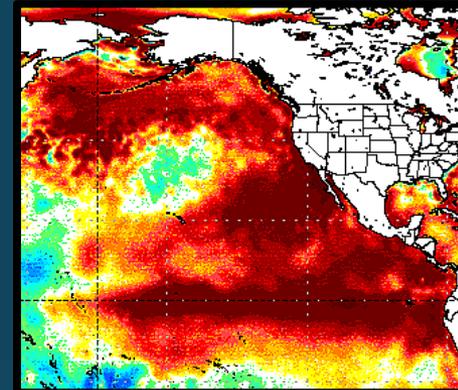
October 2014



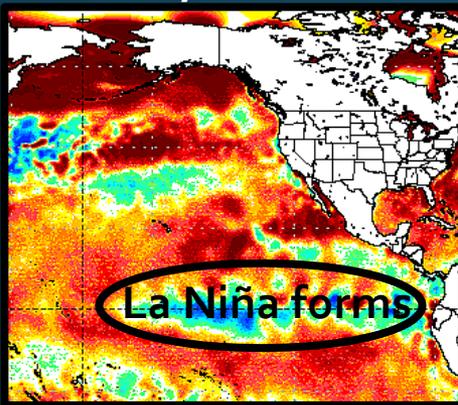
July 2015



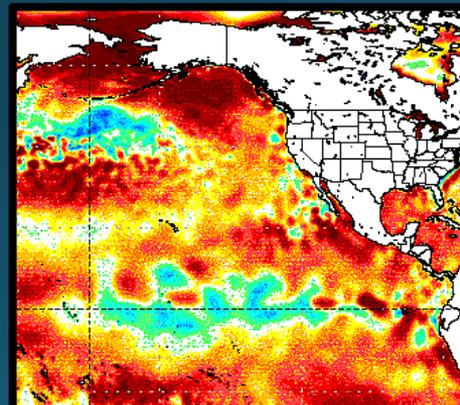
October 2015



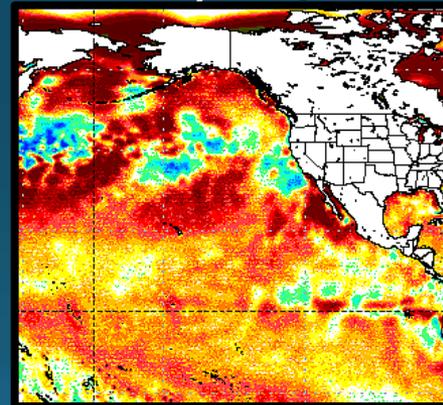
July 2016



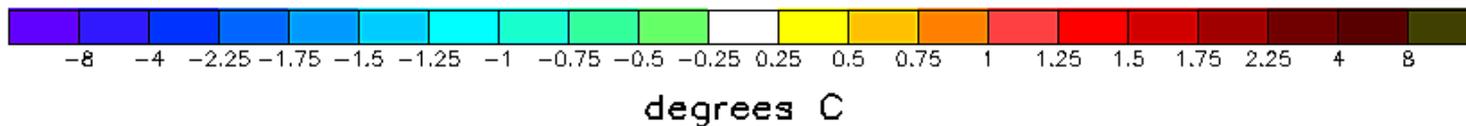
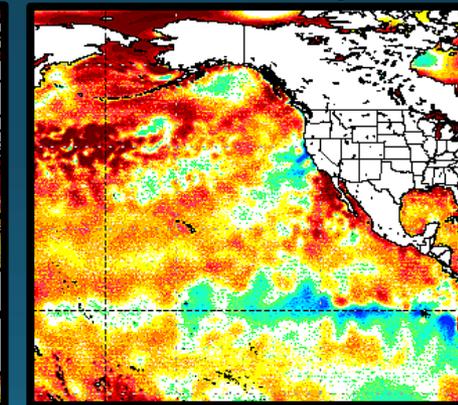
October 2016



July 2017



October 2017



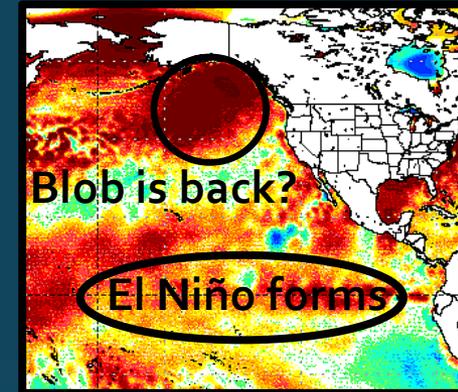
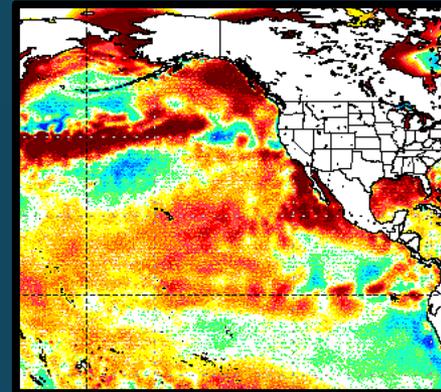
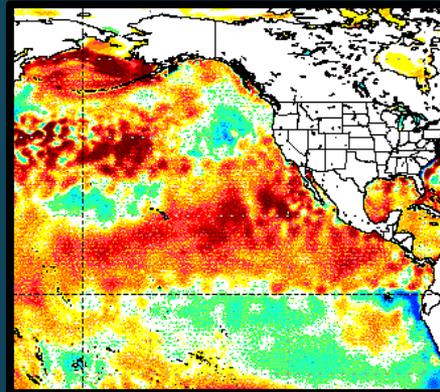
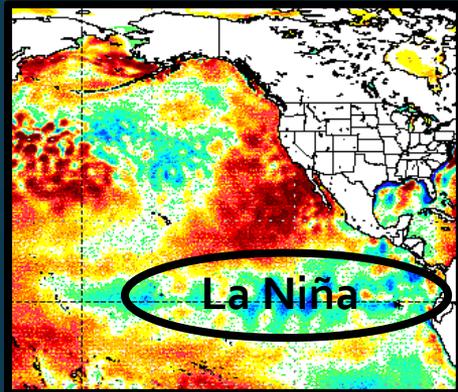
# Sea Surface Temperature Anomalies

Jan 2018

April 2018

July 2018

October 2018



Weak La Niña dissipated in Spring 2018 and summer/fall were ENSO neutral

Mild September and October led to concerns of a return of "The Blob"

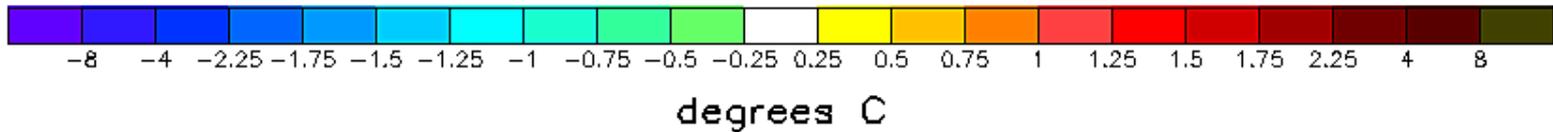
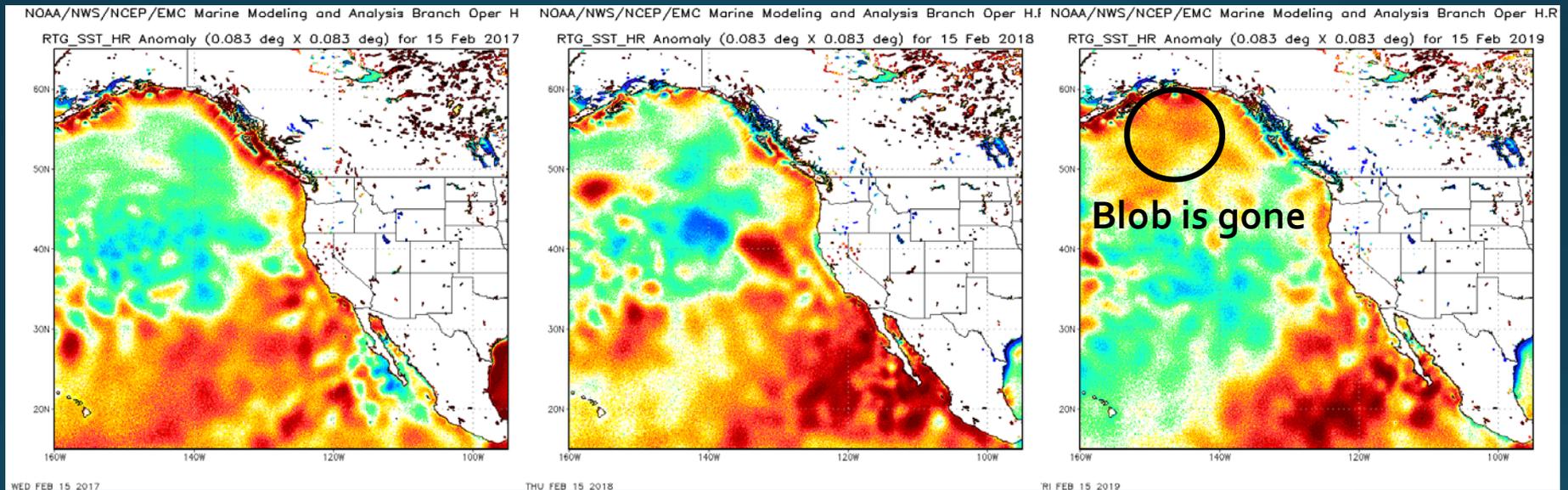


# North Pacific cools through 2017-2018

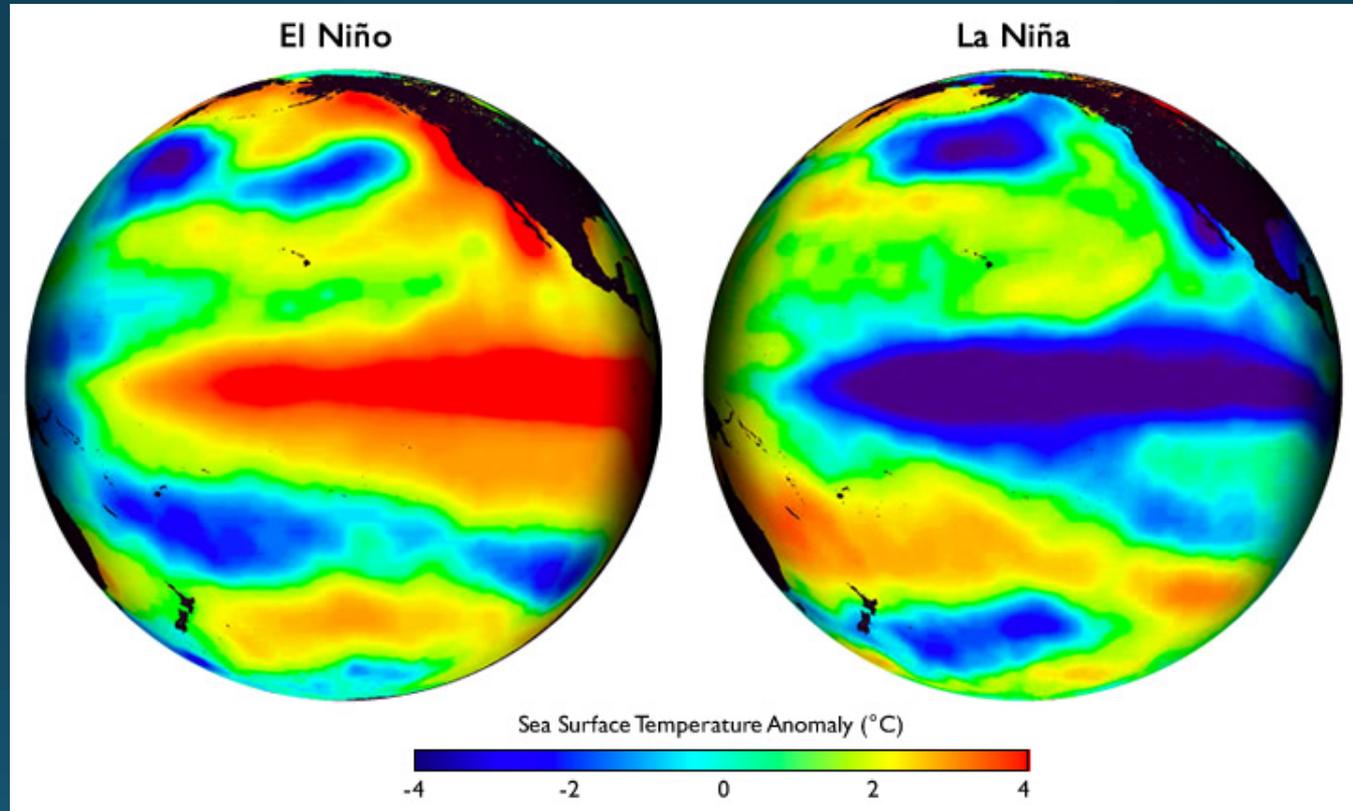
Feb 15, 2017

Feb 15, 2018

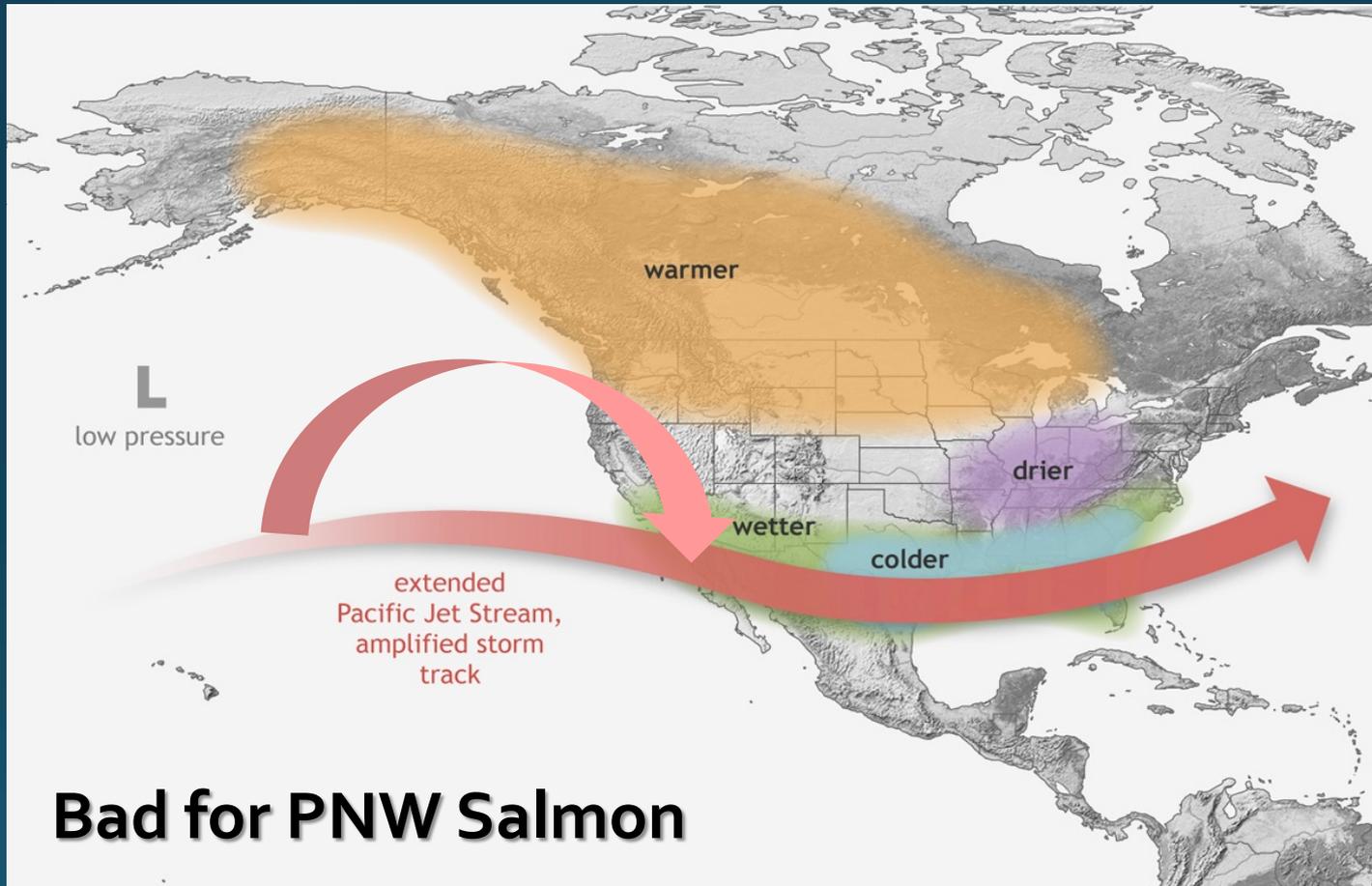
Feb 15, 2019



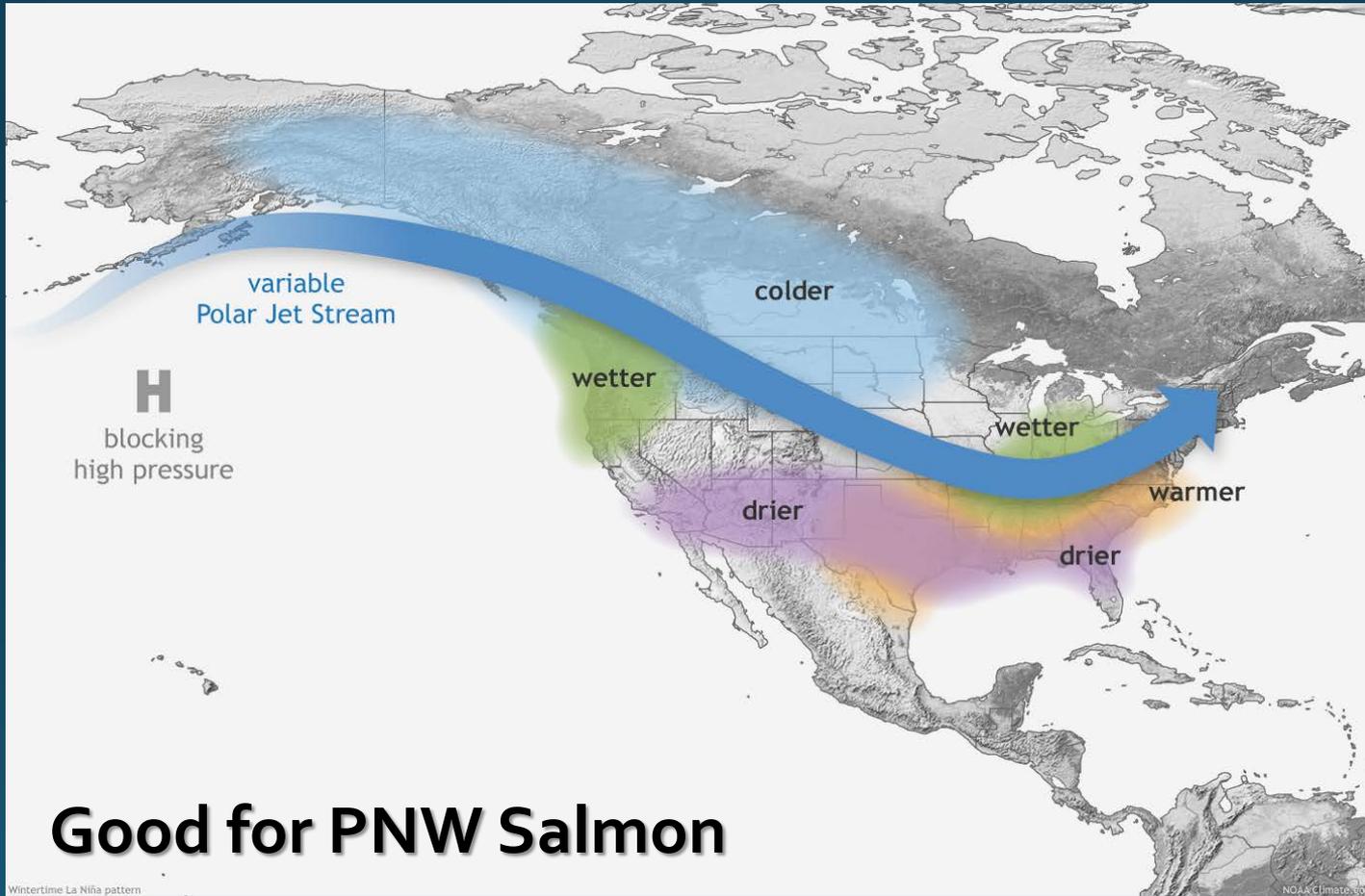
2014-16 **Strong** and 2019 **weak El Niños** and  
2016 + 2017/2018 **weak La Niñas**



# Typical El Niño Pattern



# Typical La Niña Pattern



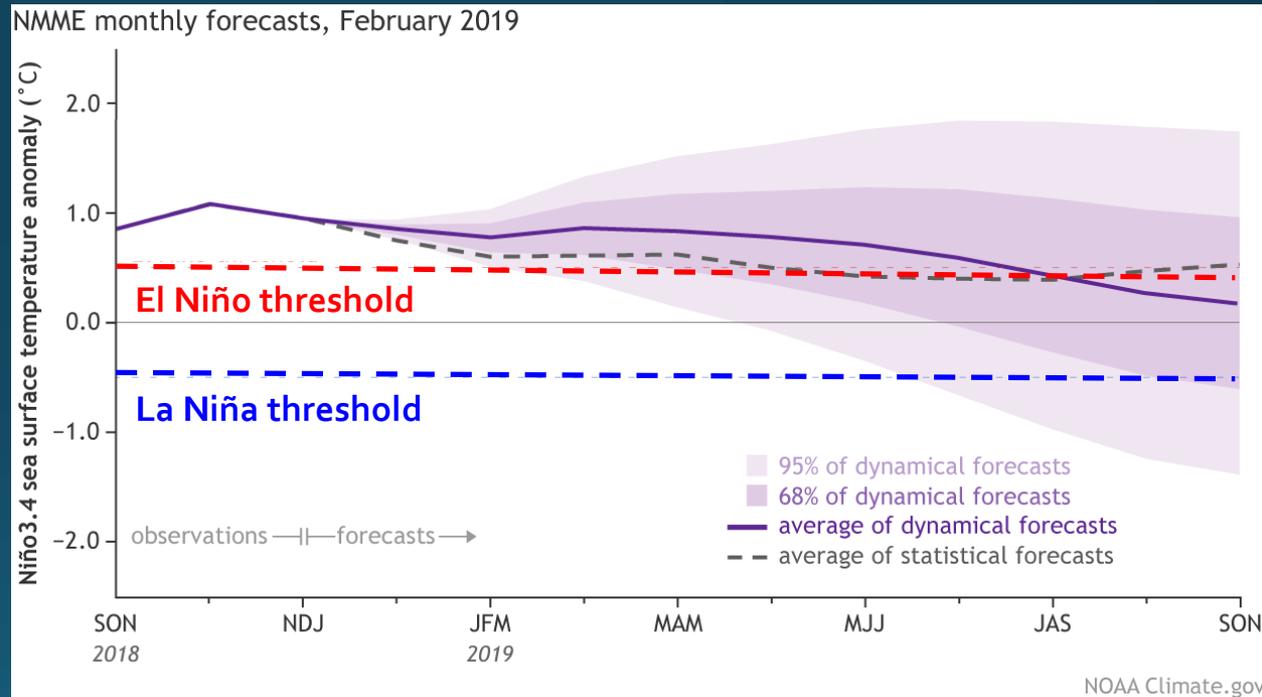
# ENSO Outlook

## El Niño Advisory

Equatorial sea surface temperatures (SSTs) are above average across most of the Pacific Ocean.

Weak El Niño conditions are present and are expected to continue through the Northern Hemisphere spring 2019 (~55% chance).

Widespread or significant global impacts are not anticipated.

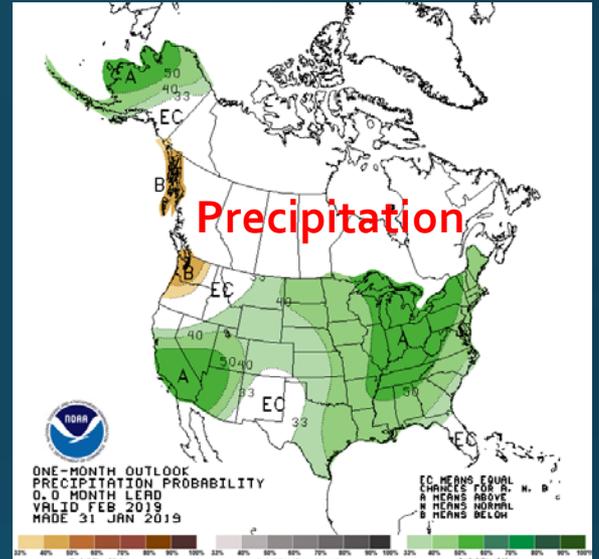
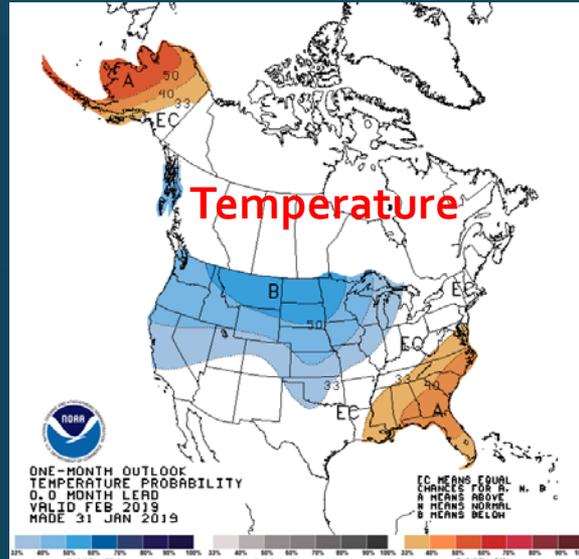


# Terrestrial impacts on salmon production

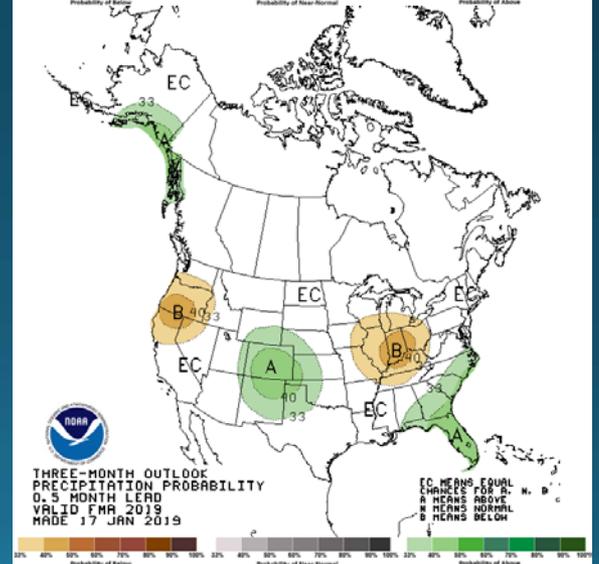
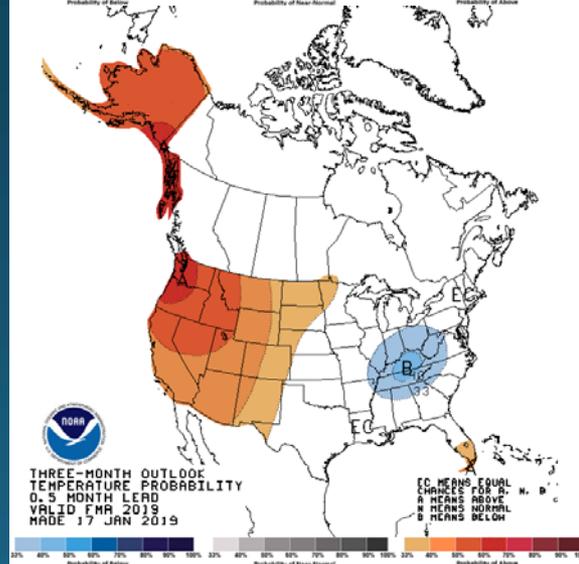


# Terrestrial Climate Outlook

1 Month  
Feb 2019



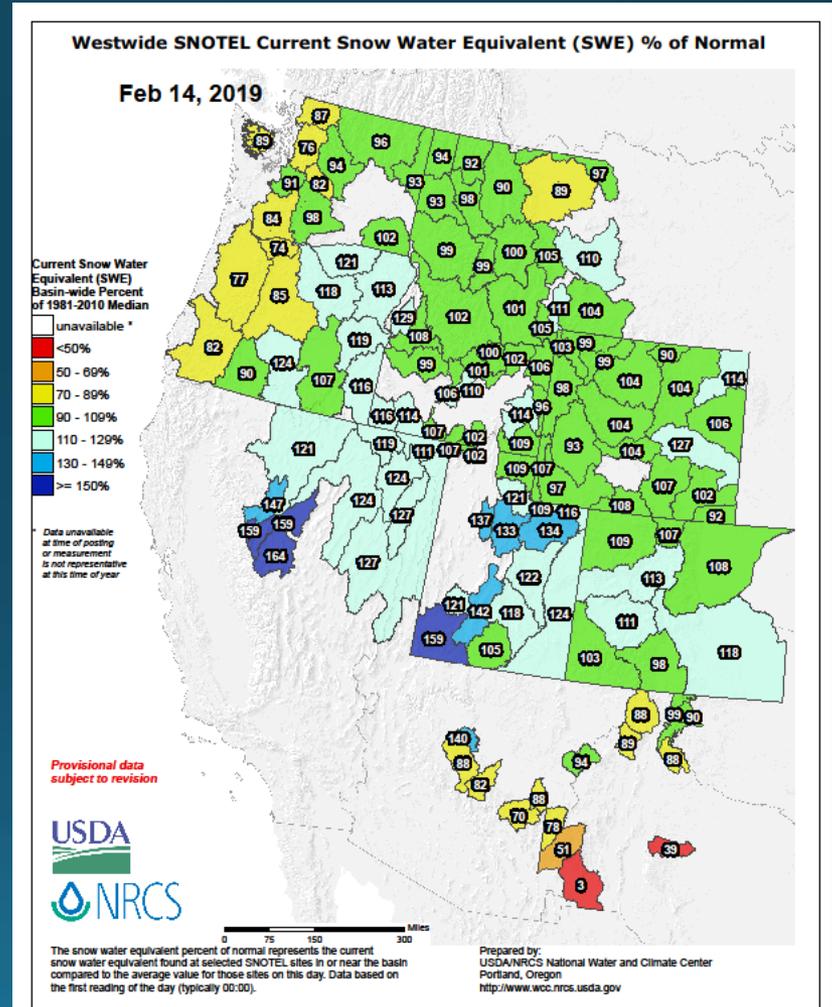
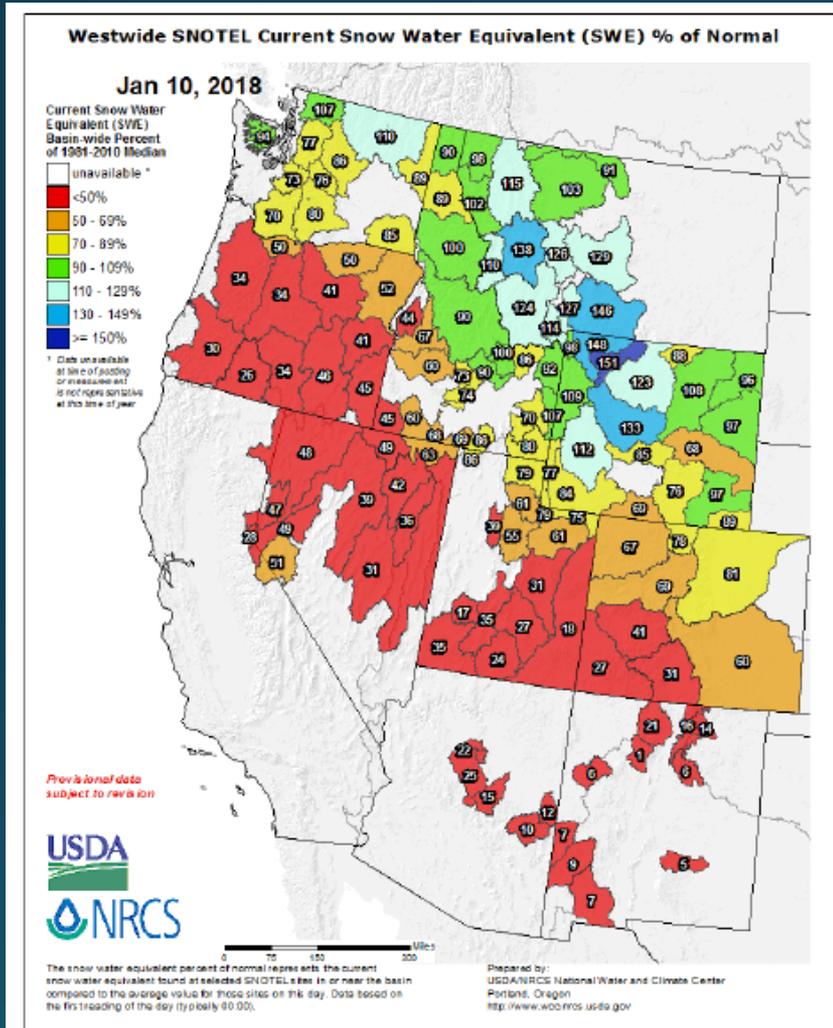
3 months:  
Feb – Apr 2019



# Current Snow Pack

Jan 2018

Feb 2019



# Biological Responses to the Warm Ocean

## 2015

Harmful algal blooms shut down crab and clam fisheries CA – AK



Reductions in zooplankton and changes to jellyfish community



Tropical fish caught in the PNW



Whales feeding in estuaries

## 2016

Pelagic red crabs wash ashore



Food web changes continue



Anchovy increase in Salish Sea



Whales nearshore;  
entangled in fishing lines

## 2017

Pyrosomes explode in N Pacific



Sea bird die offs in Bering Sea



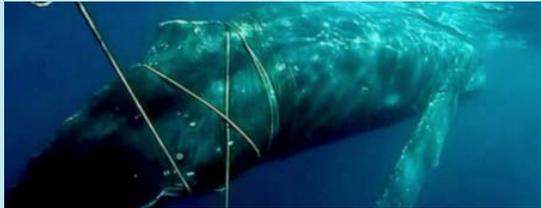
Pacific cod collapse in Gulf of AK



Sea lion abundance  
increasing in PNW

# Huge Responses at all Trophic Levels

More whale entanglements in estuaries and near shore



## 2018

Hypoxic conditions on shelf and estuary from Jun-Sep

Better than expected Chinook returns to South Puget Sound



Northern, lipid-rich copepods and high abundances of crab megalopae in coastal waters

Pyrosomes dissipated off OR/WA for first time since 2017



Record breaking opah caught off WA



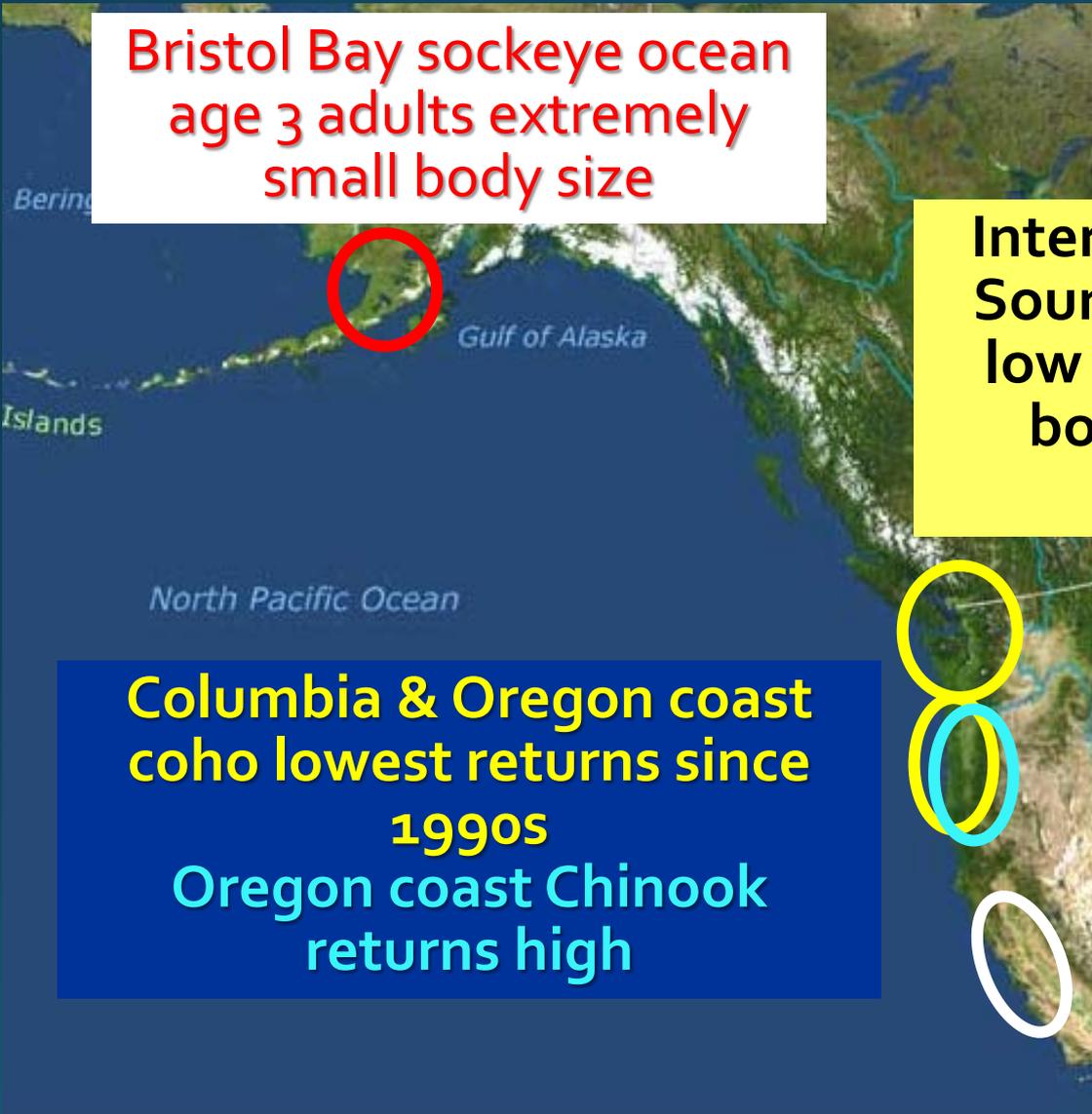
Culling of up to 93 sea lions approved by federal government below Willamette Falls to protect winter run of steelhead



Mourning Orca mother carries dead calf for a record 17 days



# Unusual salmon observations in 2015



Bristol Bay sockeye ocean age 3 adults extremely small body size

The map shows the Pacific Northwest coast of North America and Alaska. A red circle highlights Bristol Bay, Alaska. A yellow circle highlights the Puget Sound region. A cyan circle highlights the Columbia River region. A white circle highlights the Central Valley of California. Labels on the map include 'Bering Islands', 'Gulf of Alaska', and 'North Pacific Ocean'.

Interior Fraser & Puget Sound coho extremely low abundance, small body size, and low fecundity

Columbia & Oregon coast coho lowest returns since 1990s  
Oregon coast Chinook returns high

Extremely low downstream survival Central Valley Chinook & steelhead (drought)

# Unusual salmon observations in 2016

Alaska pinks: **lowest**  
returns in memory

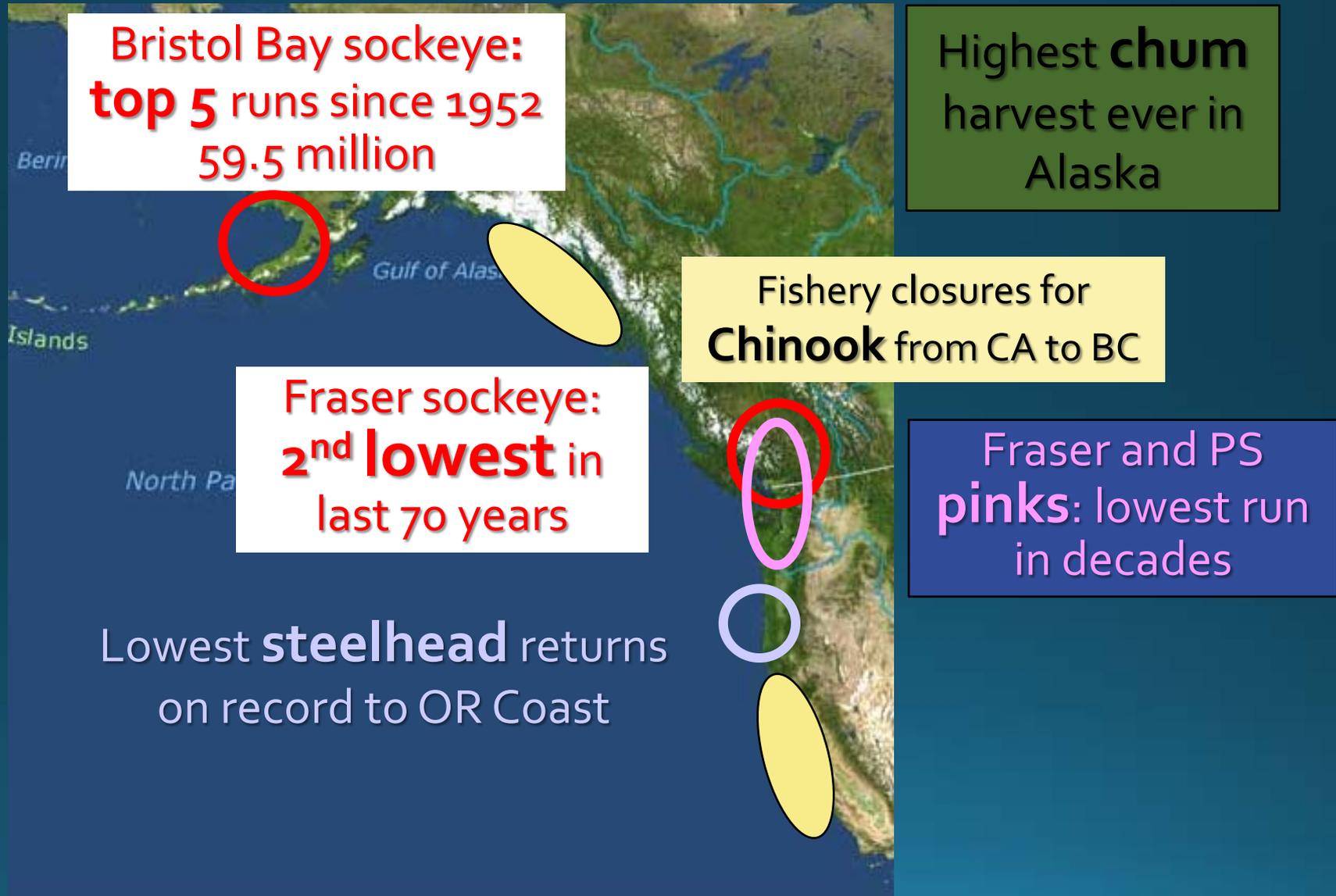


Fraser sockeye  
**lowest** on record

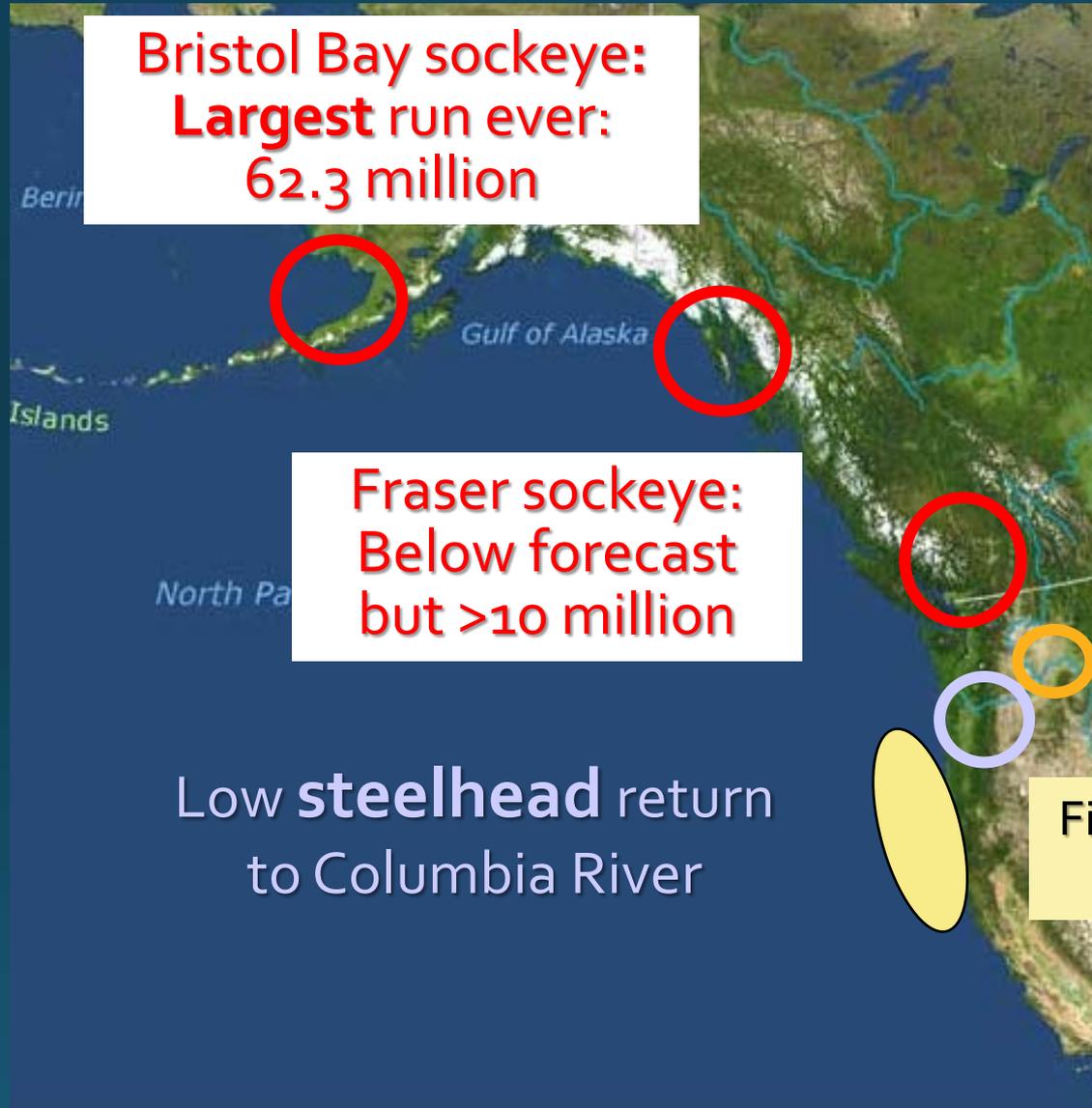
Fraser chum  
**highest** in  
20 years

High chum returns WA &  
OR coasts, Columbia

# Unusual salmon observations in 2017



# Unusual salmon observations in 2018



Bristol Bay sockeye:  
**Largest** run ever:  
62.3 million

**Poor** sockeye,  
pink, and Coho  
run in SE Alaska

Fraser sockeye:  
Below forecast  
but >10 million

High shad  
returns on  
Columbia River

Low **steelhead** return  
to Columbia River

Fishery closures for **Coho**  
in OR and CA

# Salmon Indicators: **Bad** -> **Fair** -> **Good**

Basin-scale  
physical  
indices

Ecosystem Indicators	Year																				
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PDO (Sum Dec-March)	18	6	3	13	7	20	12	16	14	9	5	1	15	4	2	8	10	21	19	17	11
PDO (Sum May-Sept)	10	4	6	5	11	17	16	18	12	14	2	9	7	3	1	8	19	21	20	15	13
ONI (Average Jan-June)	20	1	1	7	14	16	15	17	9	12	3	11	18	4	6	8	10	19	21	13	5

Regional  
physical  
indices

46050 SST (°C; May-Sept)	16	9	3	4	1	8	21	15	5	17	2	10	7	11	12	13	14	20	18	6	19
Upper 20 m T (°C; Nov-Mar)	20	11	8	10	6	15	16	12	13	5	1	9	17	4	3	7	2	21	19	18	14
Upper 20 m T (°C; May-Sept)	17	12	14	4	1	3	21	19	7	8	2	5	13	10	6	18	20	9	15	11	16
Deep temperature (°C; May-Sept)	21	6	8	4	1	10	12	16	11	5	2	7	14	9	3	15	20	18	13	17	19
Deep salinity (May-Sept)	19	3	9	4	5	16	17	10	7	1	2	14	18	13	12	11	20	15	8	6	6

Regional  
biological  
indices

Copepod richness anom. (no. species; May-Sept)	19	2	1	7	6	14	13	18	15	10	8	9	17	4	5	3	11	20	21	16	12
N. copepod biomass anom. (mg C m <sup>-3</sup> ; May-Sept)	19	14	10	11	3	16	13	20	15	12	6	9	8	1	2	4	5	17	21	18	7
S. copepod biomass anom. (mg C m <sup>-3</sup> ; May-Sept)	21	2	5	4	3	14	15	20	13	10	1	7	16	9	8	6	11	18	19	17	12
Biological transition (day of year)	18	8	5	7	9	14	13	19	12	2	1	3	16	6	10	4	11	21	21	17	15
Ichthyoplankton biomass (mg C 1,000 m <sup>-3</sup> ; Jan-Mar)	21	12	3	8	10	19	18	15	17	16	2	13	5	14	11	9	20	6	7	1	4
Ichthyoplankton community index (PCO axis 1 scores; Jan-Mar)	10	13	2	7	5	11	20	18	3	12	1	14	15	8	4	6	9	19	21	17	16
Chinook salmon juvenile catches (no. km <sup>-1</sup> ; June)	19	4	5	16	8	12	17	20	11	9	1	6	7	15	3	2	10	13	18	21	14
Coho salmon juvenile catches (no. km <sup>-1</sup> ; June)	19	8	13	6	7	3	16	20	17	5	4	10	11	15	18	1	12	9	14	21	2
Mean of ranks	17.9	7.2	6.0	7.3	6.1	13.0	15.9	17.1	11.3	9.2	2.7	8.6	12.8	8.1	6.6	7.7	12.8	16.7	17.2	14.4	11.6
Rank of the mean rank	21	5	2	6	3	15	17	19	11	10	1	9	13	8	4	7	13	18	20	16	12

**2018 =  
Ranked 12th**

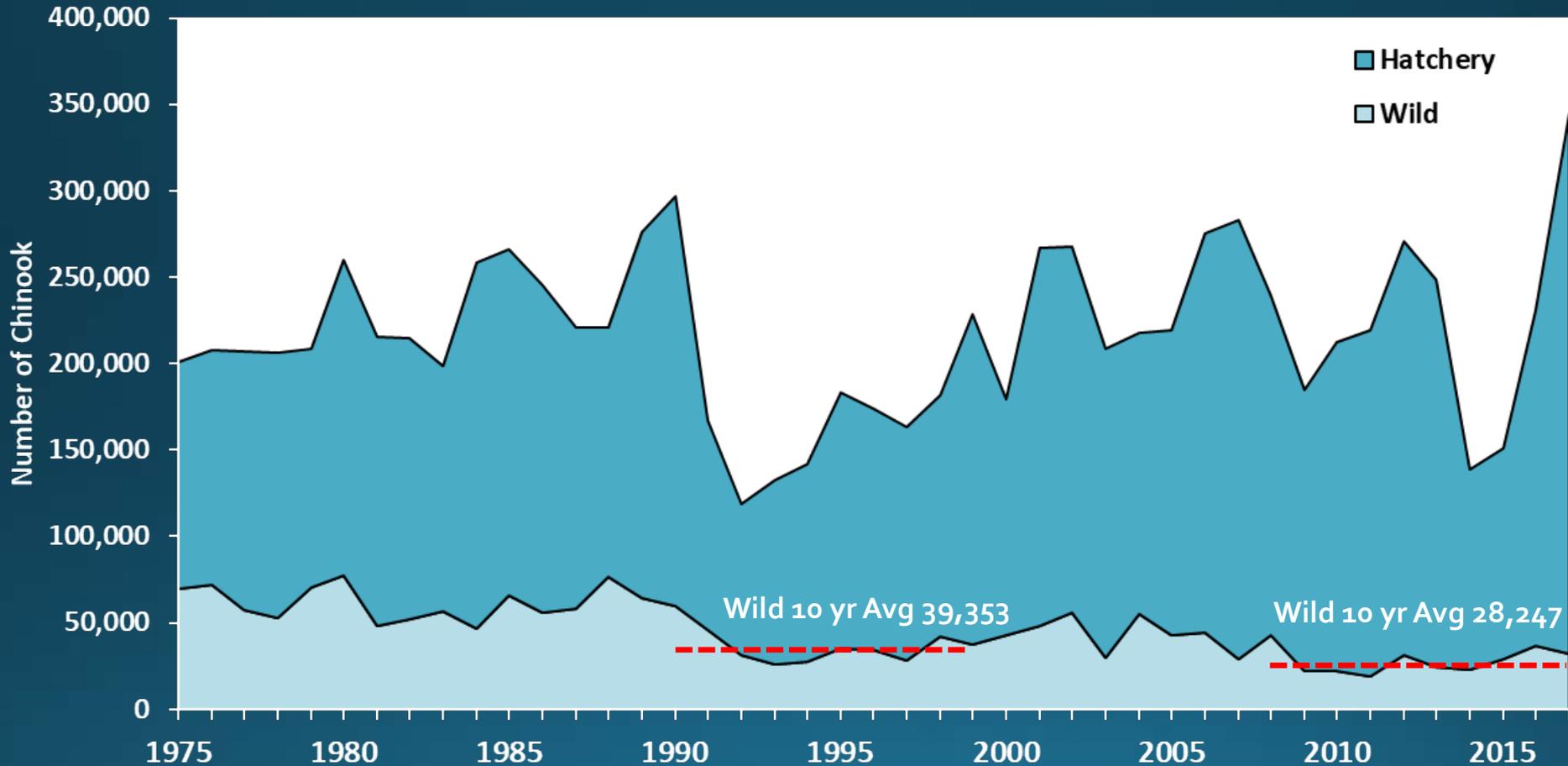
# Questions?

# WA Coast and Puget Sound 2018 Returns and 2019 Forecasts

# Chinook Salmon



# Chinook Historical Runsize – Puget Sound

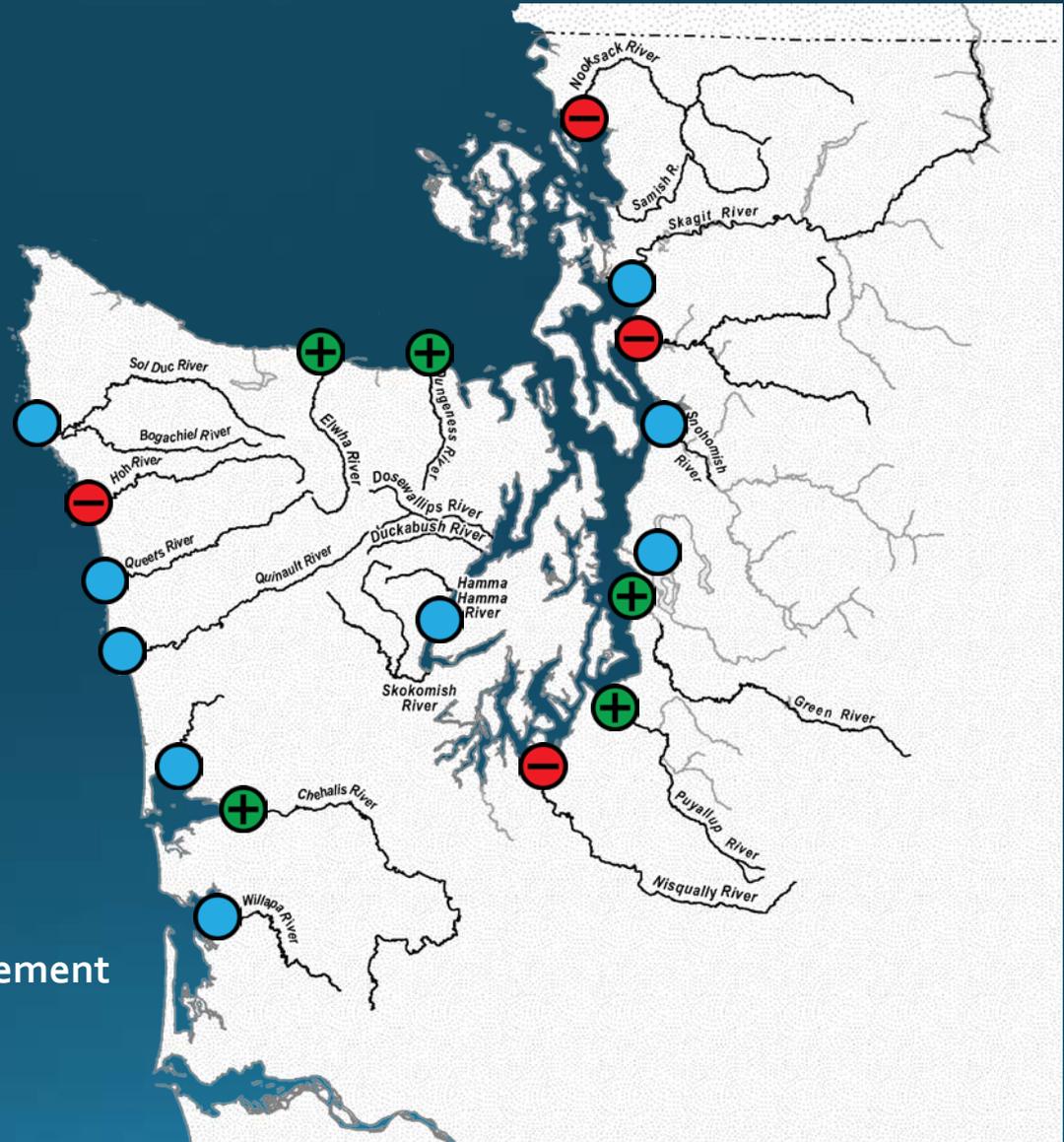


Wild Chinook ↓ ~28% since 10yr avg. prior to listing under ESA in 1999

# 2018 Wild Fall Chinook Returns



- All returns are preliminary
- Returns range from **Poor** to **Good** in Puget Sound and on the Coast



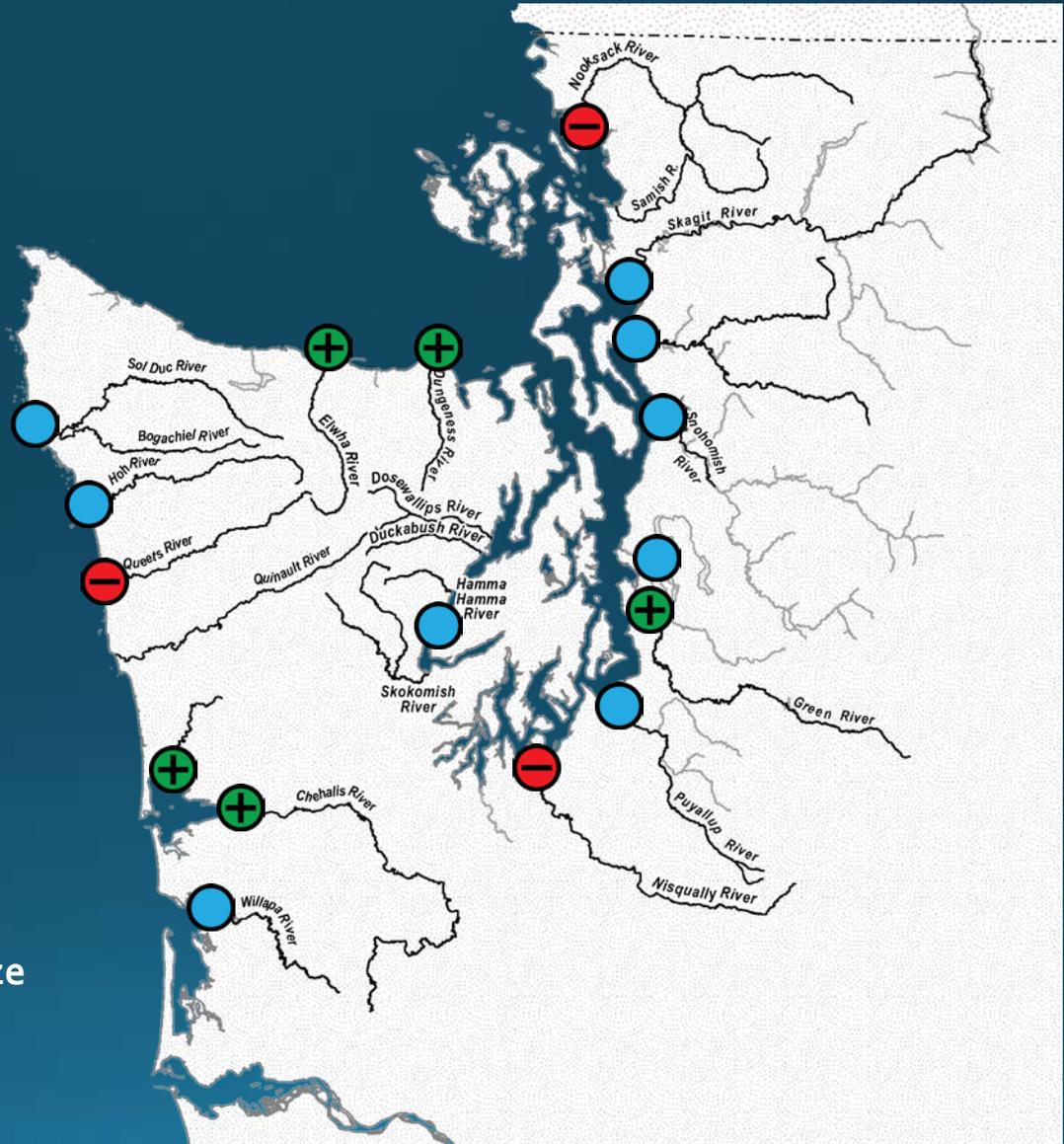
Relative to Recent 10yr Avg. Escapement

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Wild Fall Chinook Forecasts



- Forecasts range from **Poor** to **Good** for both Puget Sound and Coast
- Both Puget Sound and Coast wild forecasts **↑ 6%**

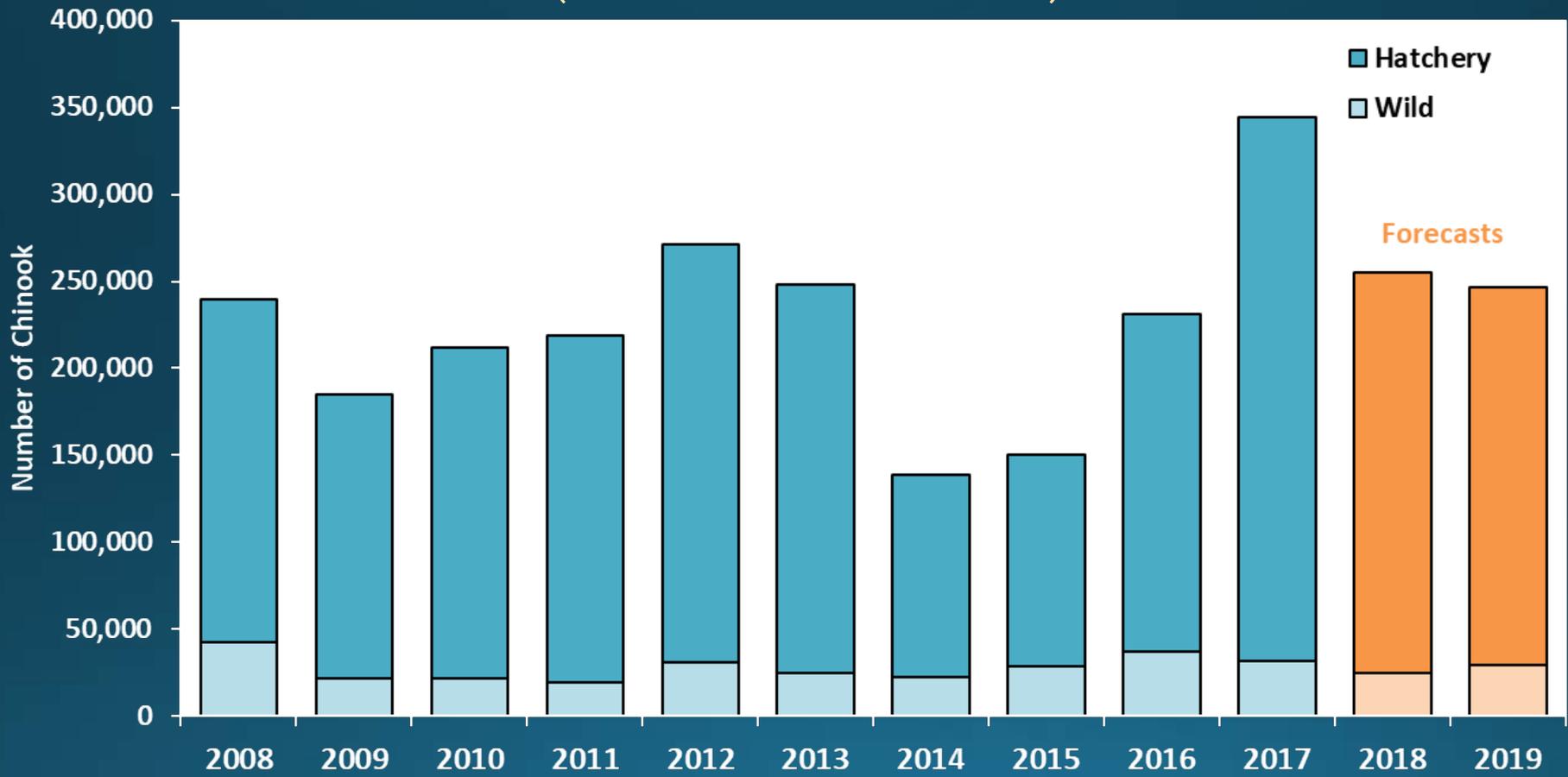


Relative to Recent 10yr Avg. Runsize

- (+) Good > 125%
- (●) Neutral 75-125%
- (-) Poor < 75%

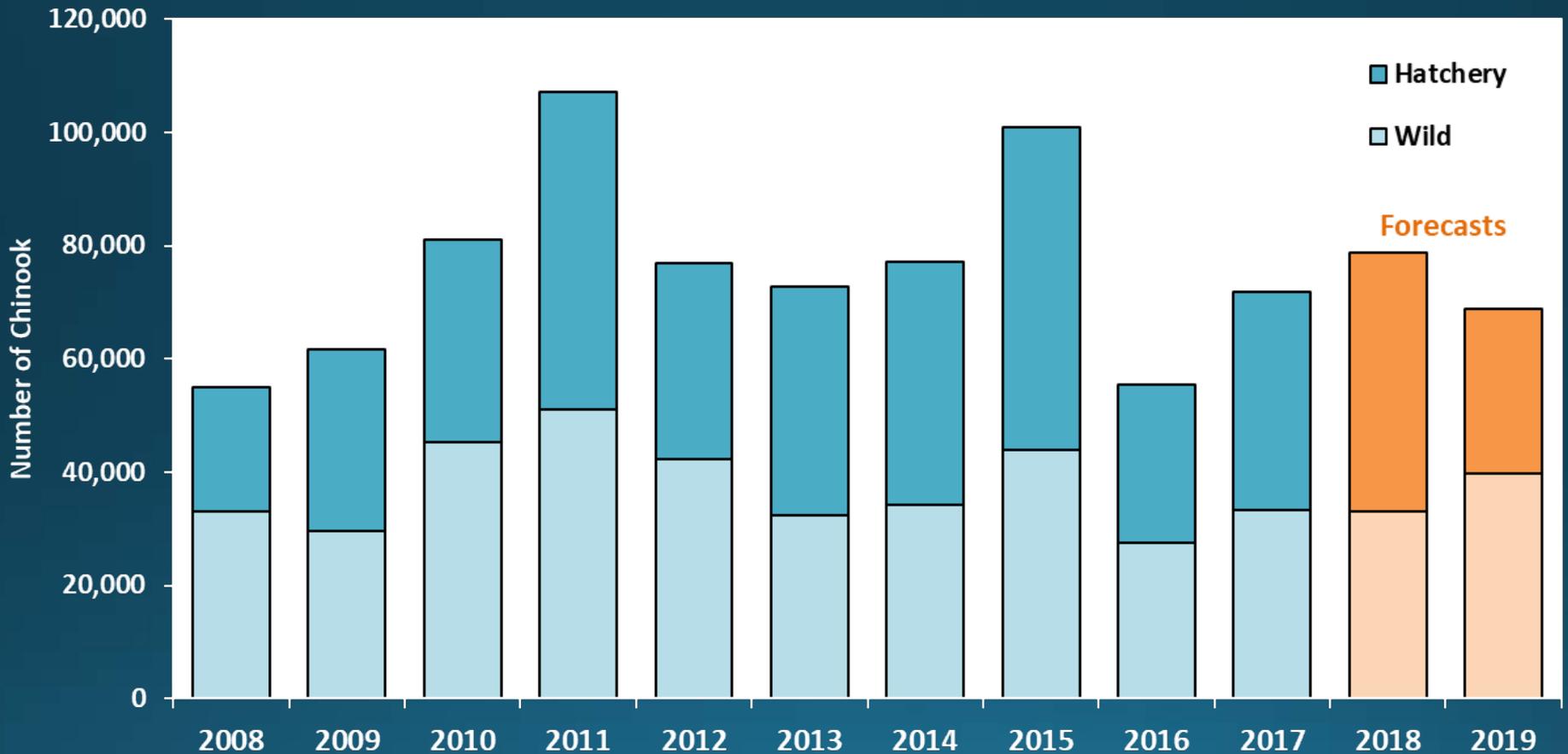
# P. Sound Hatchery Chinook Forecasts

Puget Sound hatchery Chinook forecast ▲ 11% from recent 10 year avg  
(▼ 6% from 2018 forecast)



# Coastal Hatchery Chinook Forecasts

Coastal Hatchery Chinook forecast ↓25% from recent 10 yr avg.  
(↓36% from 2018 Forecast)



\*Excludes Quinault R.

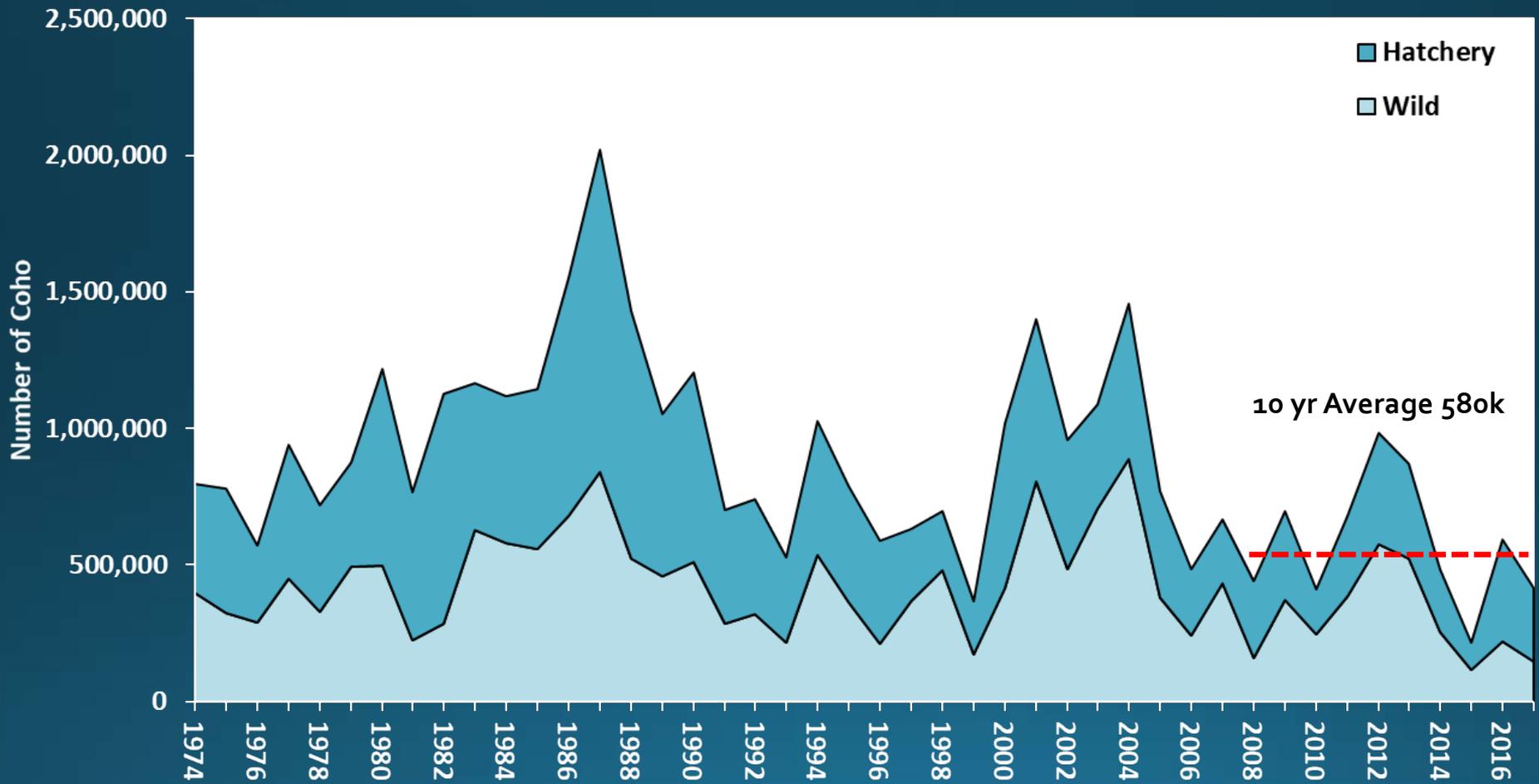
Several Coastal forecasts are preliminary and subject to change

# Coho



Thomas Kline

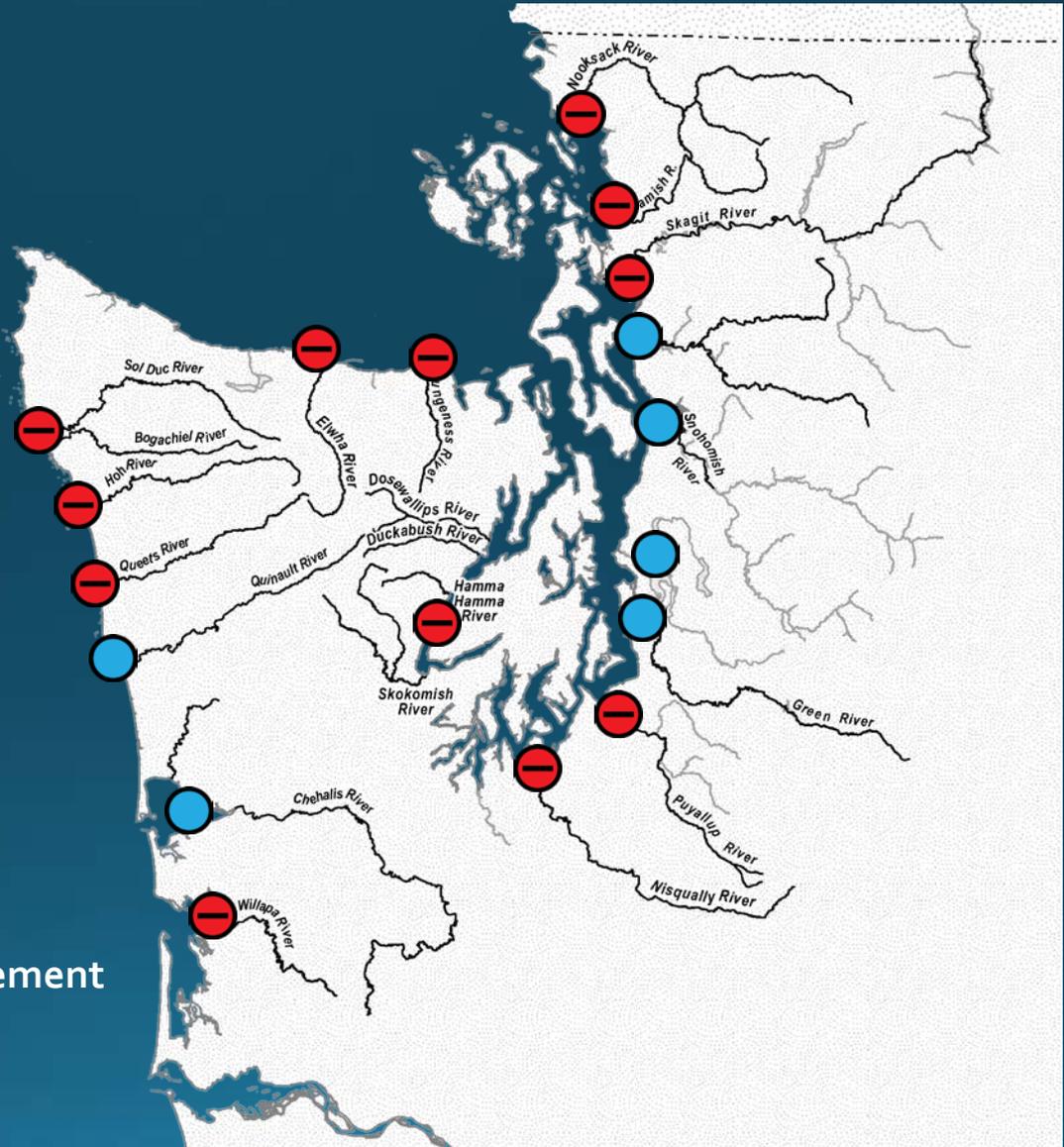
# Coho Historical Runsize – Puget Sound



# 2018 Wild Coho Returns



- All returns are preliminary
- Returns ranged from **Poor** to **Neutral** for Puget Sound and Coast



Relative to Recent 10yr Avg. Escapement

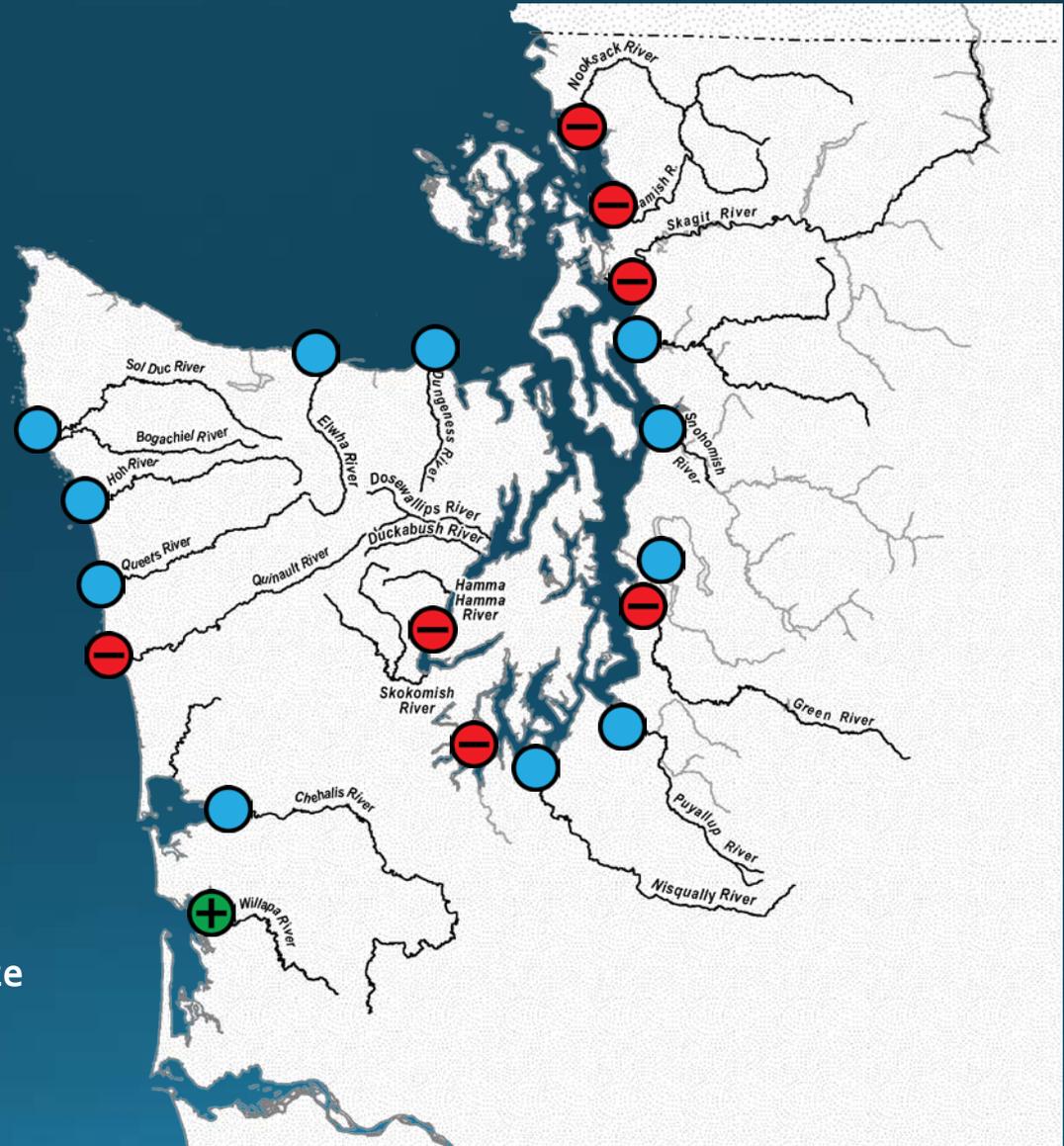
- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Wild Coho Forecasts



- Forecasts range from **Poor** to **Neutral** across Puget Sound; ↓ 15%

- **Poor** to **Good** on coast; ↓ 11%

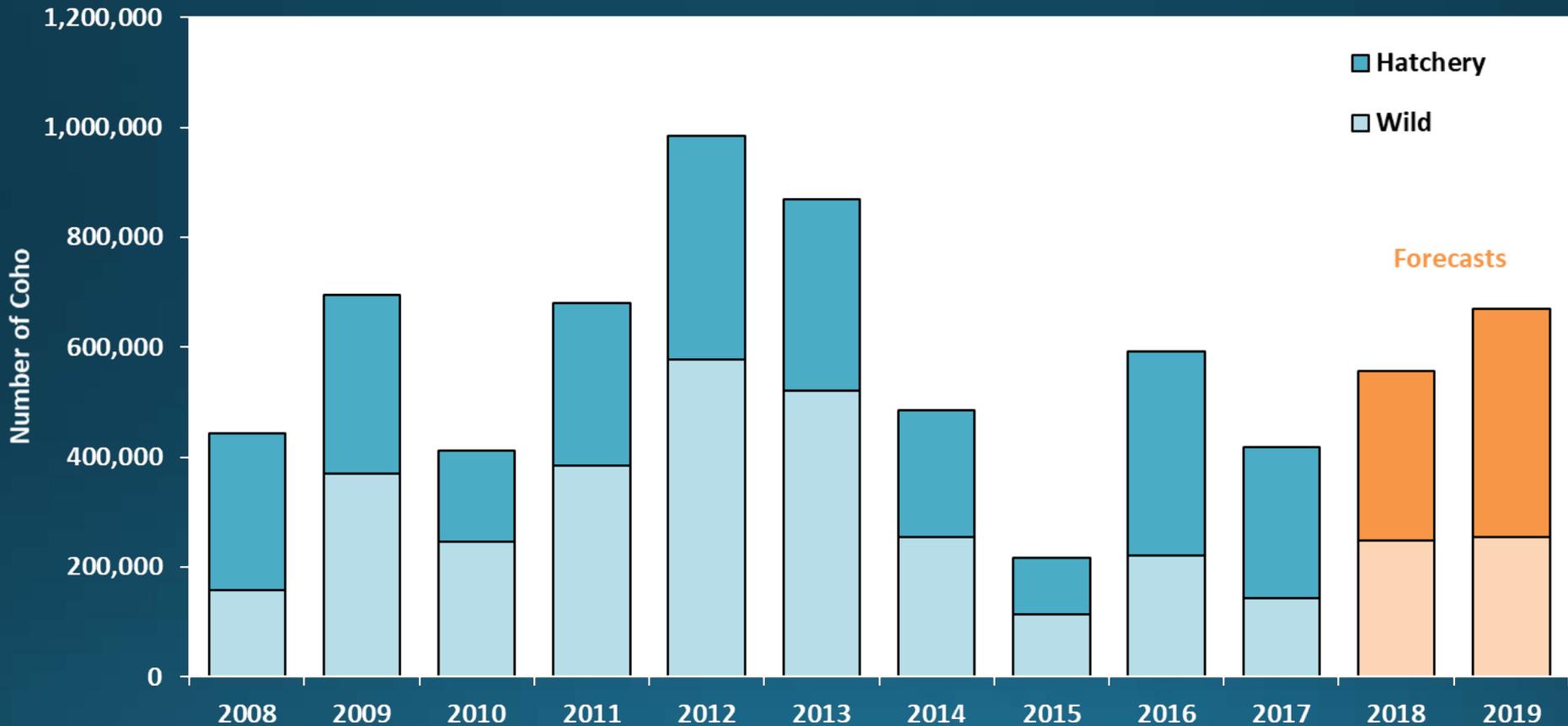


Relative to Recent 10yr Avg. Runsize

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

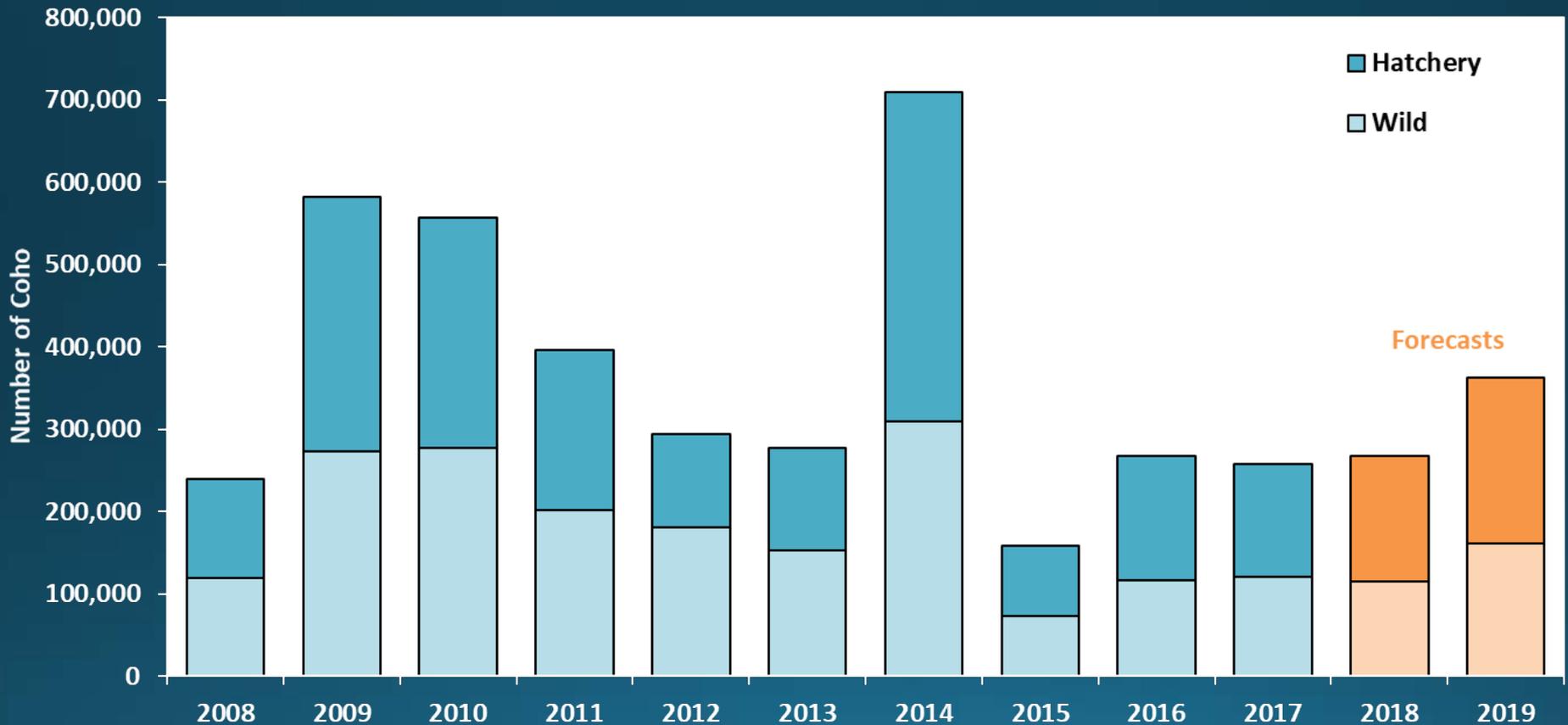
# P. Sound Hatchery Coho Forecasts

Puget Sound Hatchery Coho forecast ↑ 49% from recent 10 year avg.  
(↑ 35% from 2018 forecast)



# Coastal Hatchery Coho Forecasts

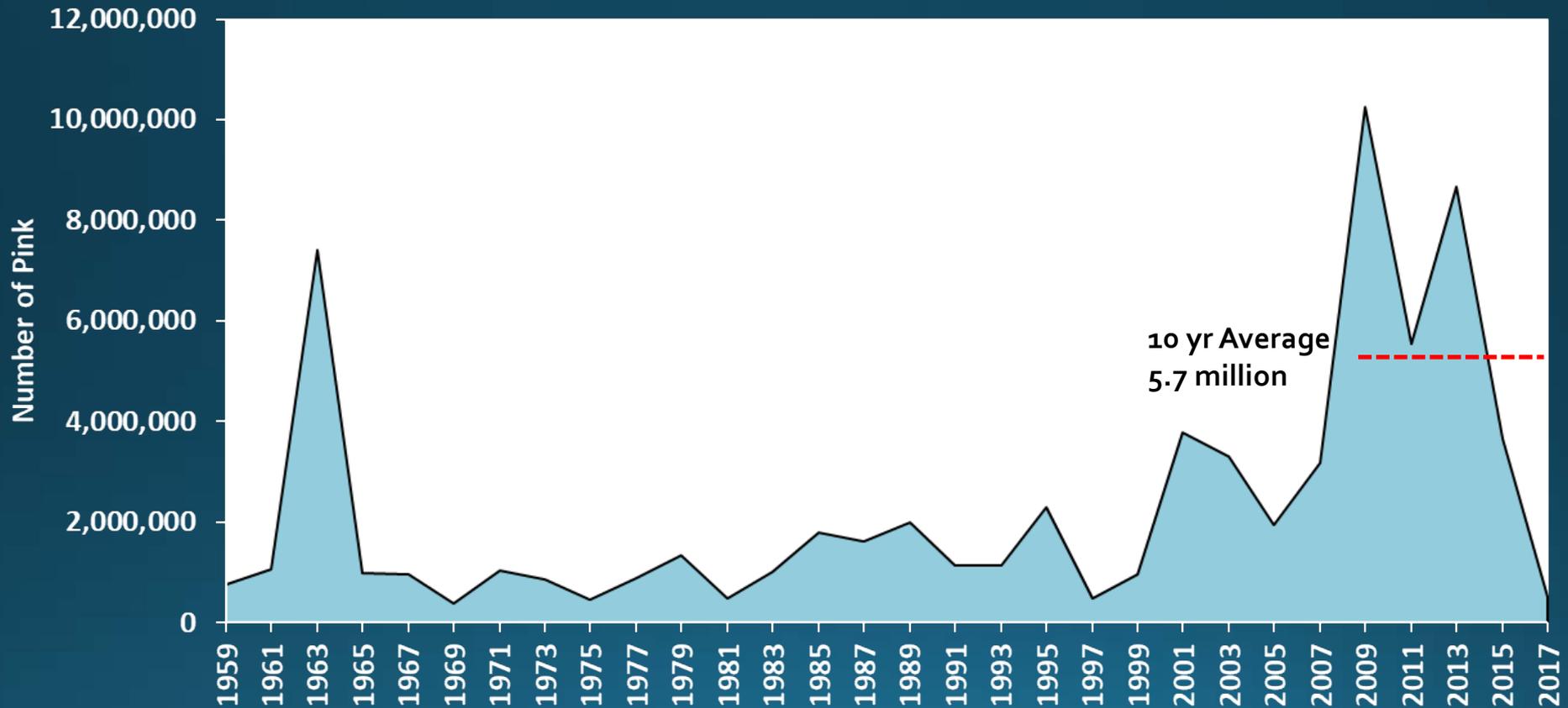
Coastal Hatchery Coho forecast  $\uparrow$  5% from recent 10 year avg.  
( $\uparrow$  20% from 2018 forecast)



# Pink



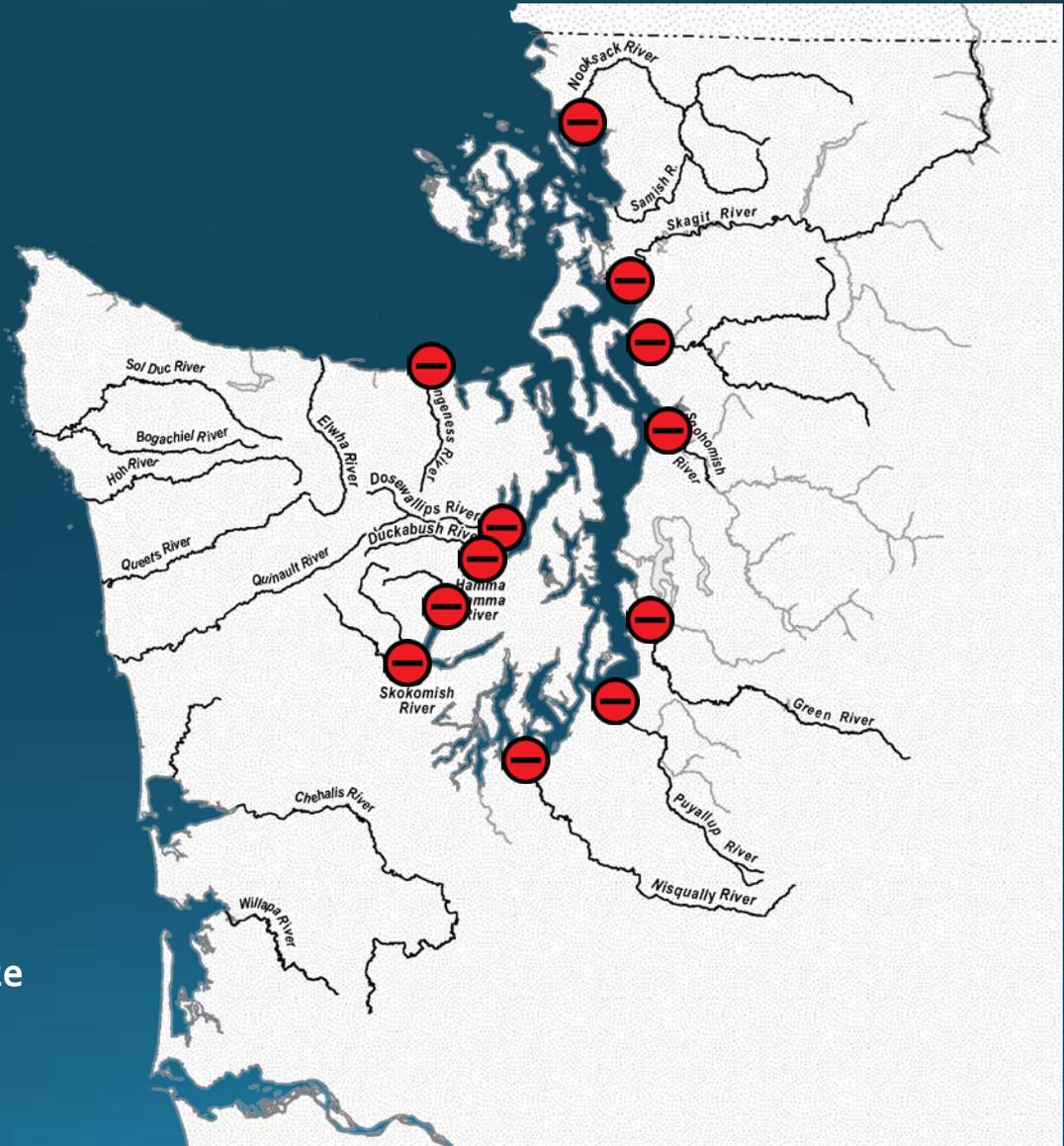
# Pink Historical Runsize



# 2017 Pink Returns



- Returns were **poor** everywhere
- Large body size common
- Poor freshwater production as fry



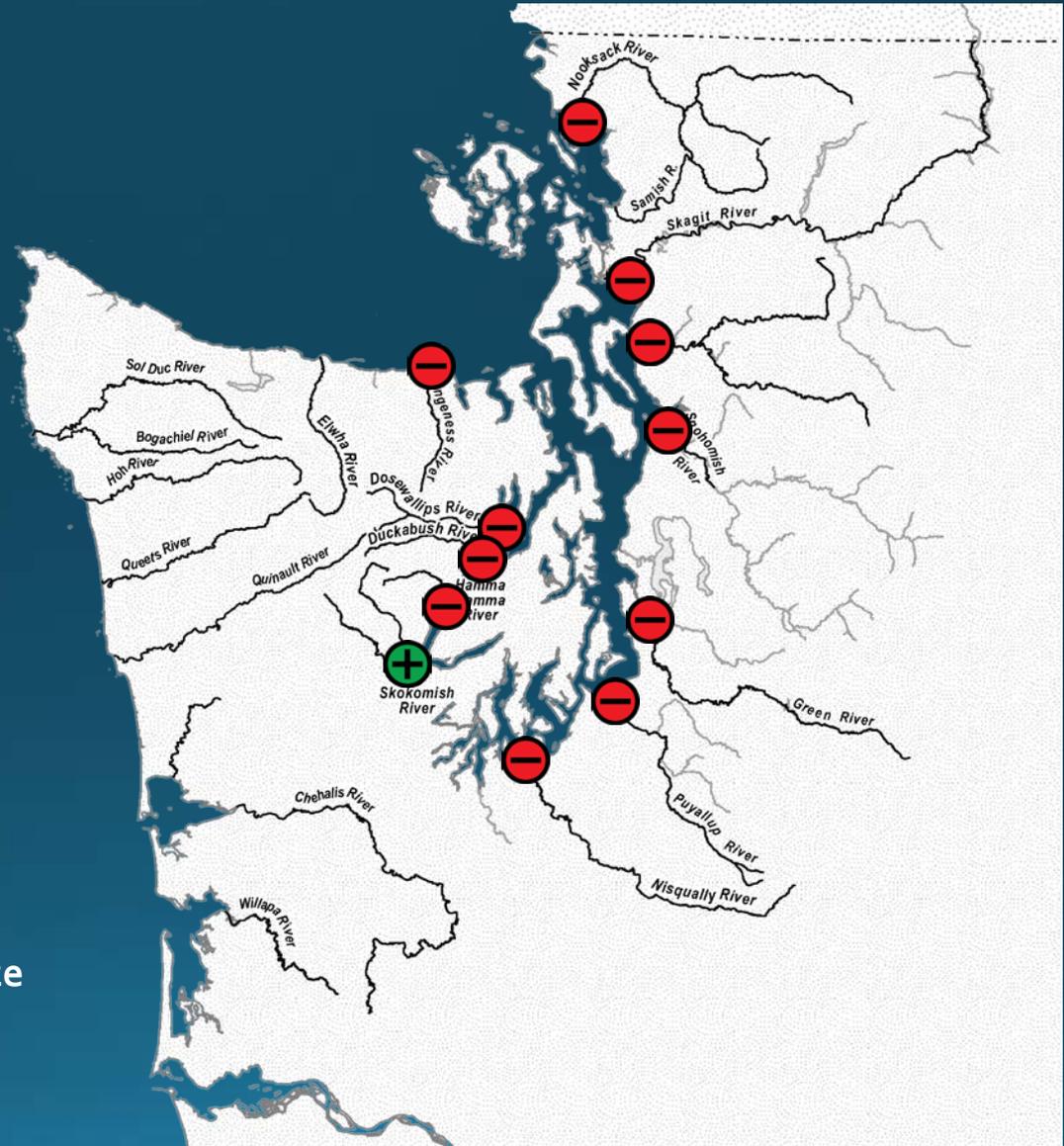
Relative to Recent 10yr Avg. Runsize

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Pink Forecasts



- Forecasts are mostly **poor**
- Very poor outmigrating fry numbers from most systems

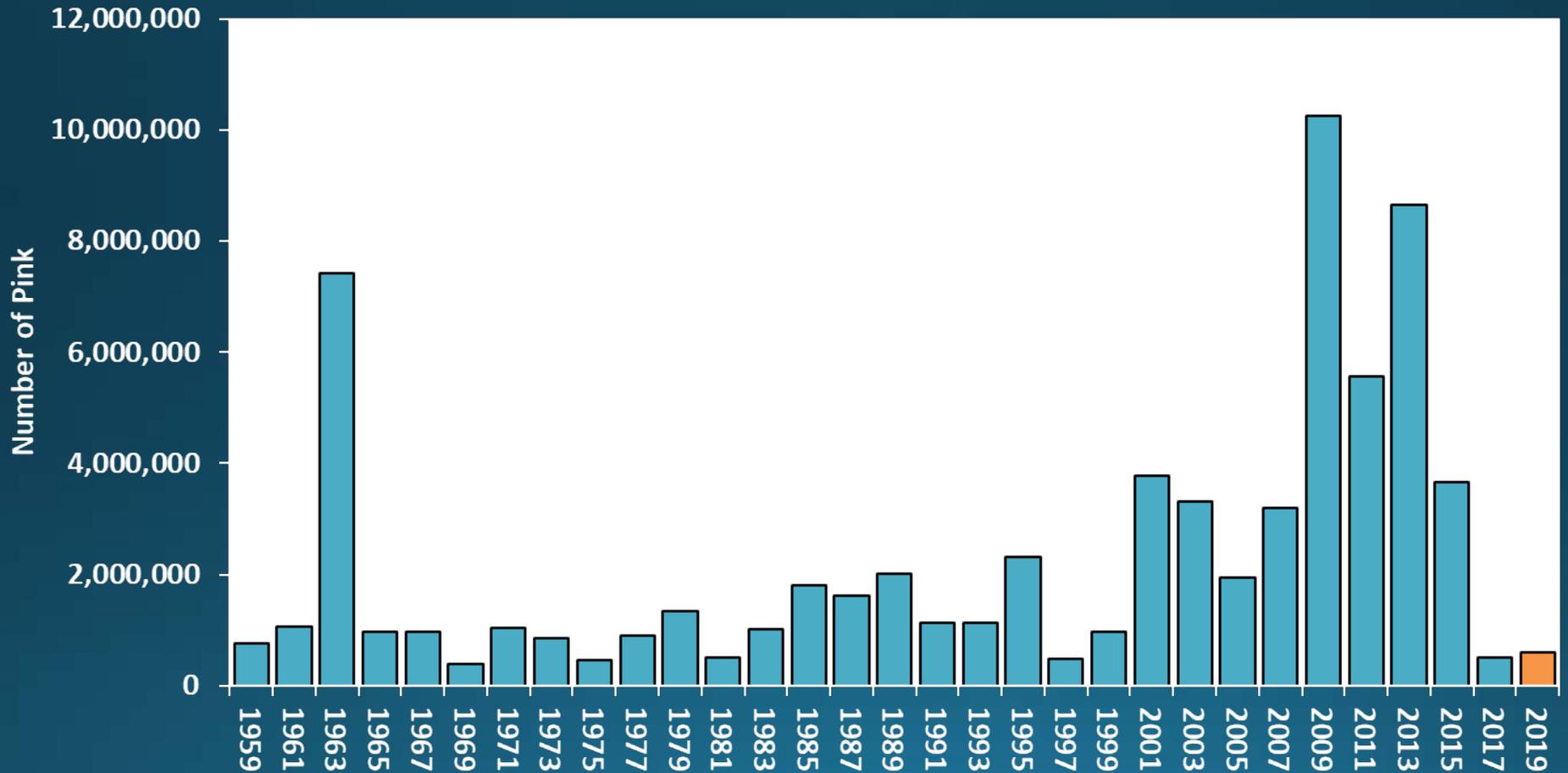


Relative to Recent 10yr Avg. Runsize

- ⊕ Good > 125%
- ⊖ Neutral 75-125%
- ⊖ Poor < 75%

# 2017 Pink Forecasts

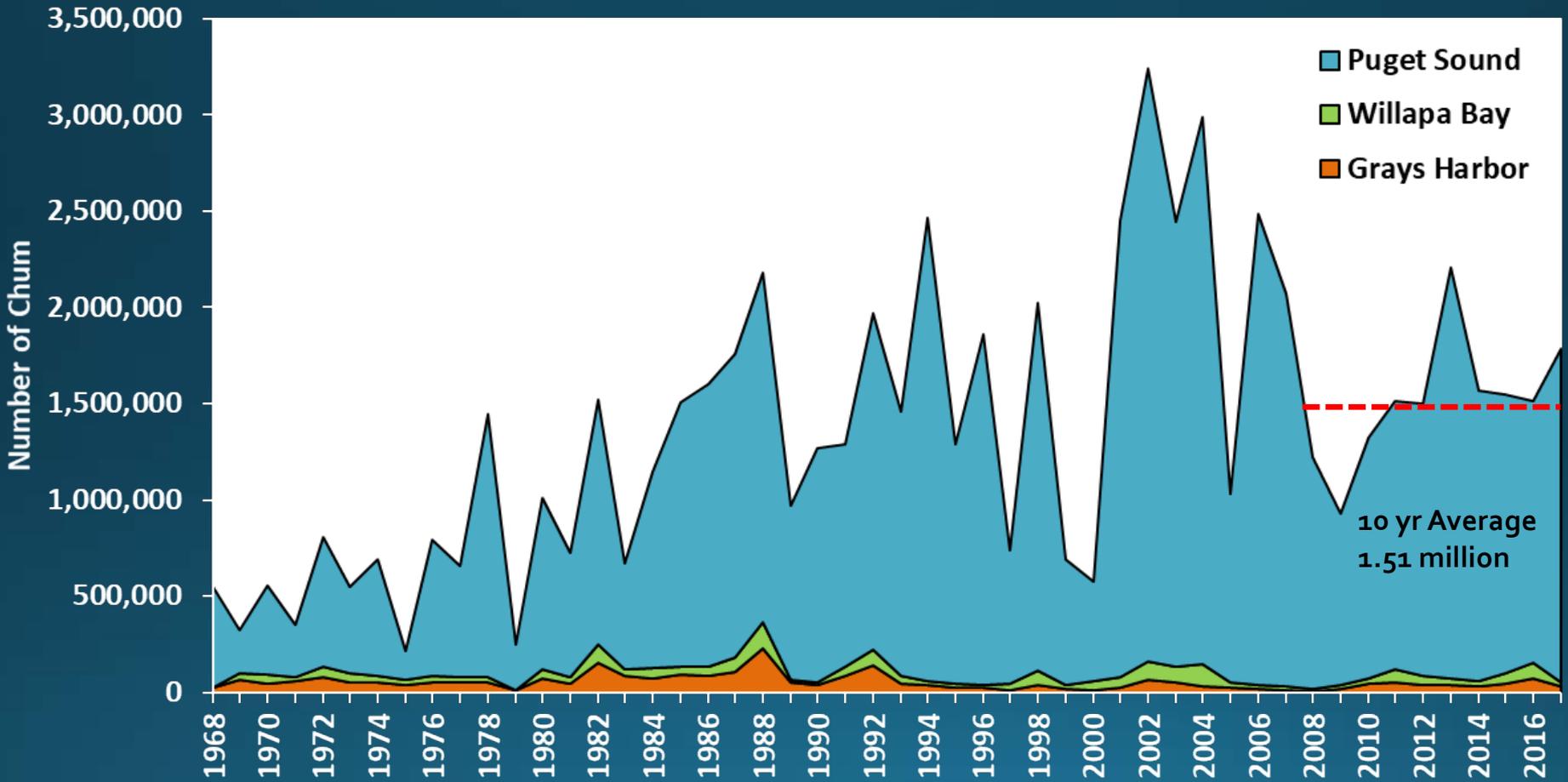
Puget Sound Pink forecast ↓ 89% from recent 10 year avg.



# Chum



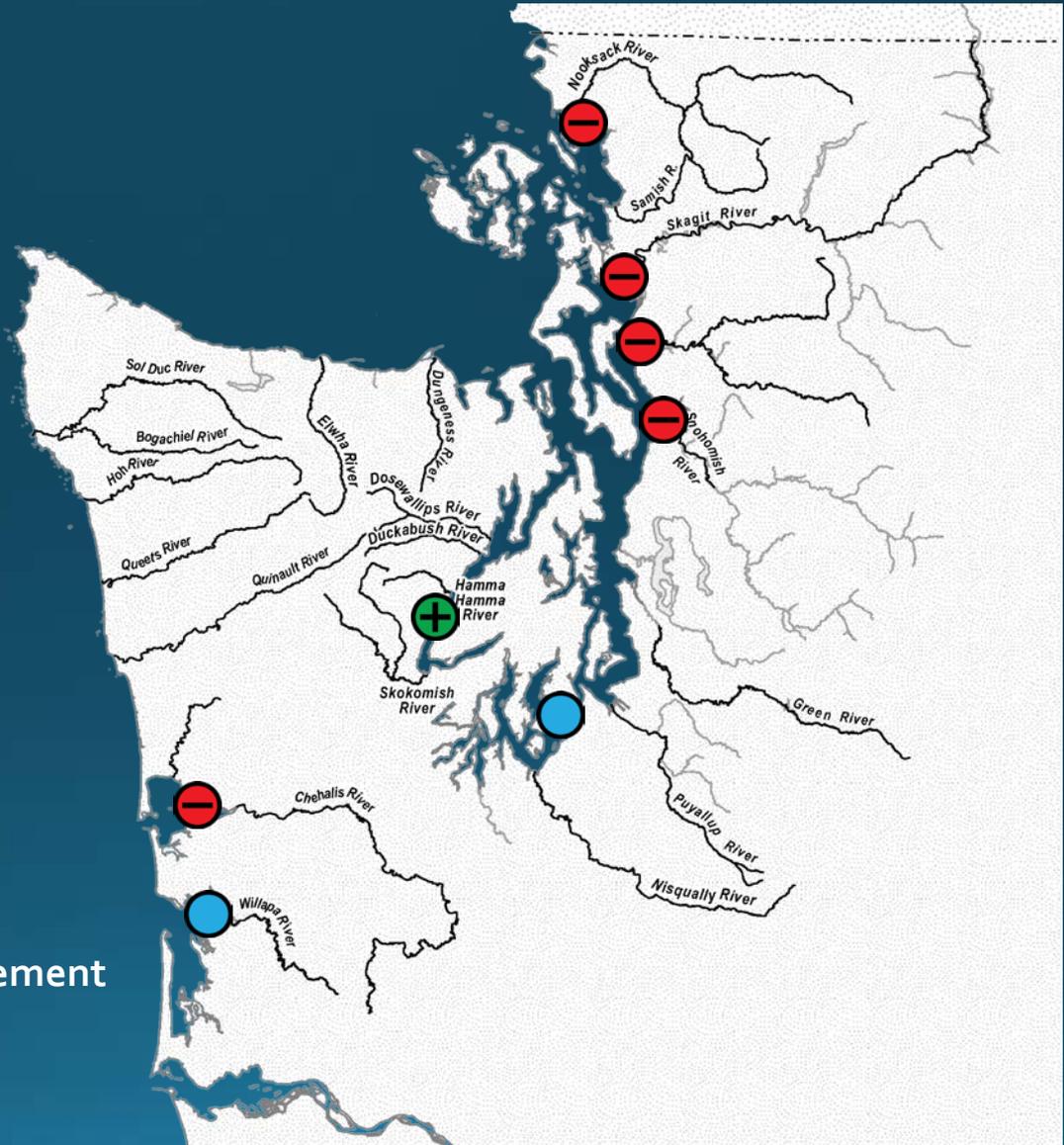
# Chum Historical Runsize



# 2018 Fall Chum HOR/NOR Returns



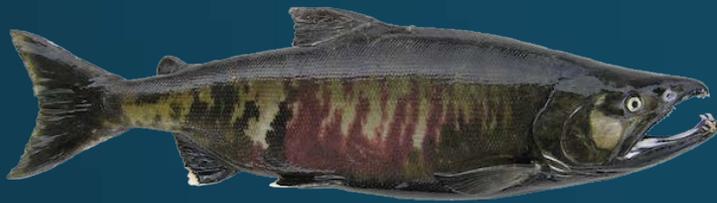
- Returns were **Poor** for N. Sound Rivers
- **Neutral** to **Good** in SS and HC
- HC and SS are relative to in-season updated runsizes, not escapement



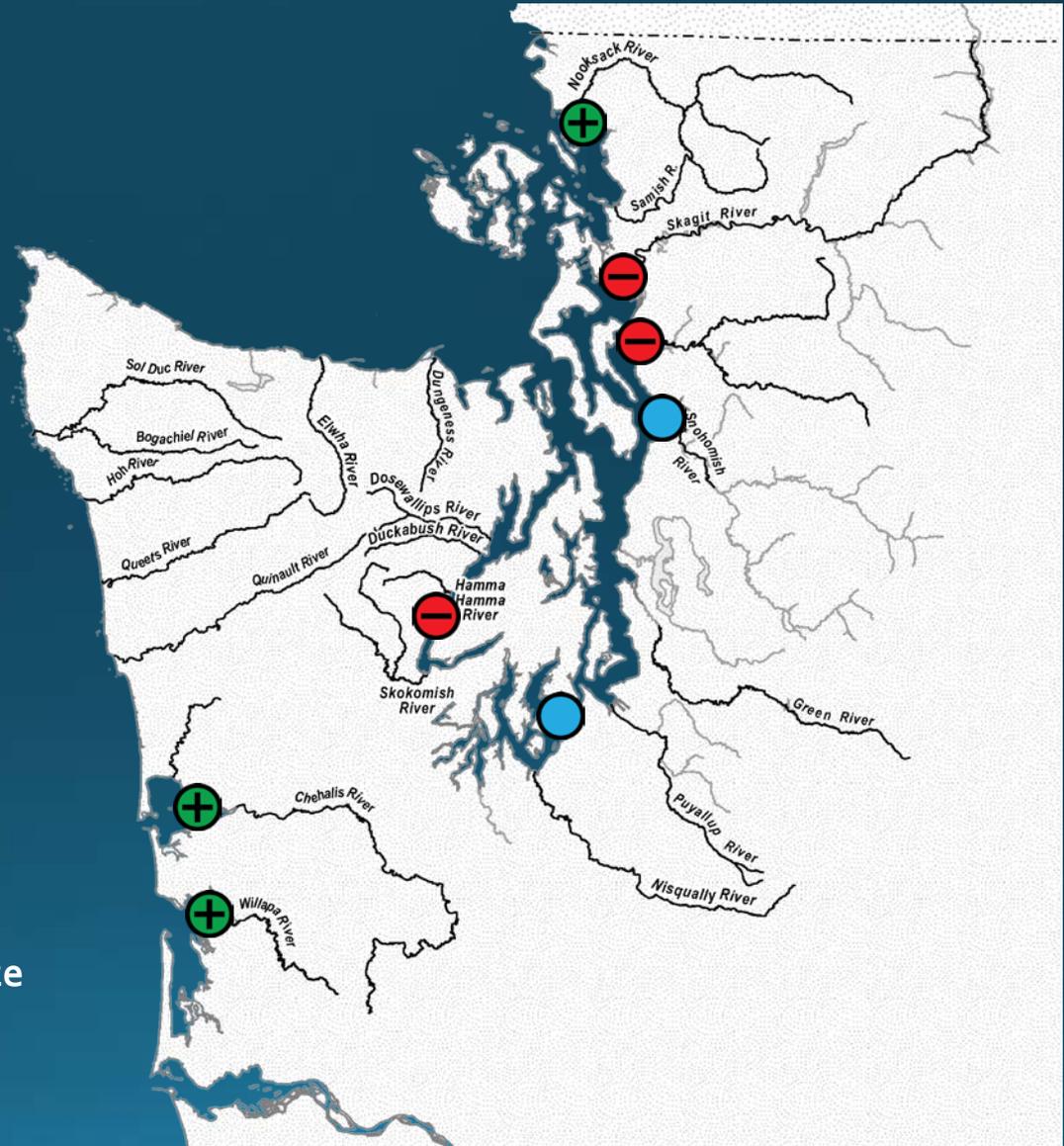
Relative to Recent 10yr Avg. Escapement

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Fall Chum HOR/NOR Forecast



- Forecasts range from **Good** to **Poor**
- Hood Canal - **519k\***
- Central/S. Sound - **391k\***
- Coast - Willapa - **52k**  
Grays H - **72k**



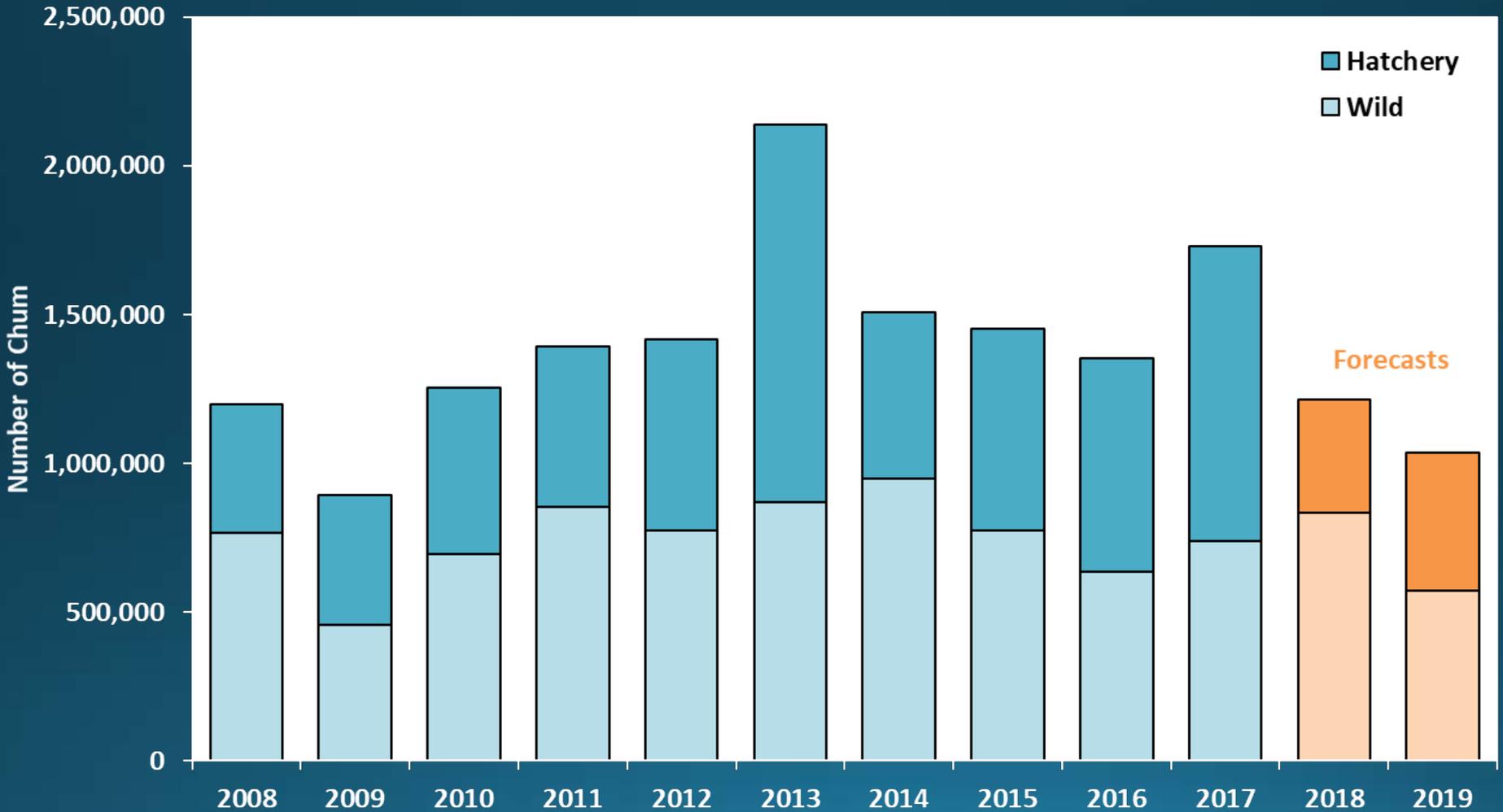
Relative to Recent 10yr Avg. Runsize

- +** Good > 125%
- Neutral 75-125%
- Poor < 75%

\* Forecasts not "agreed-to" with comanagers

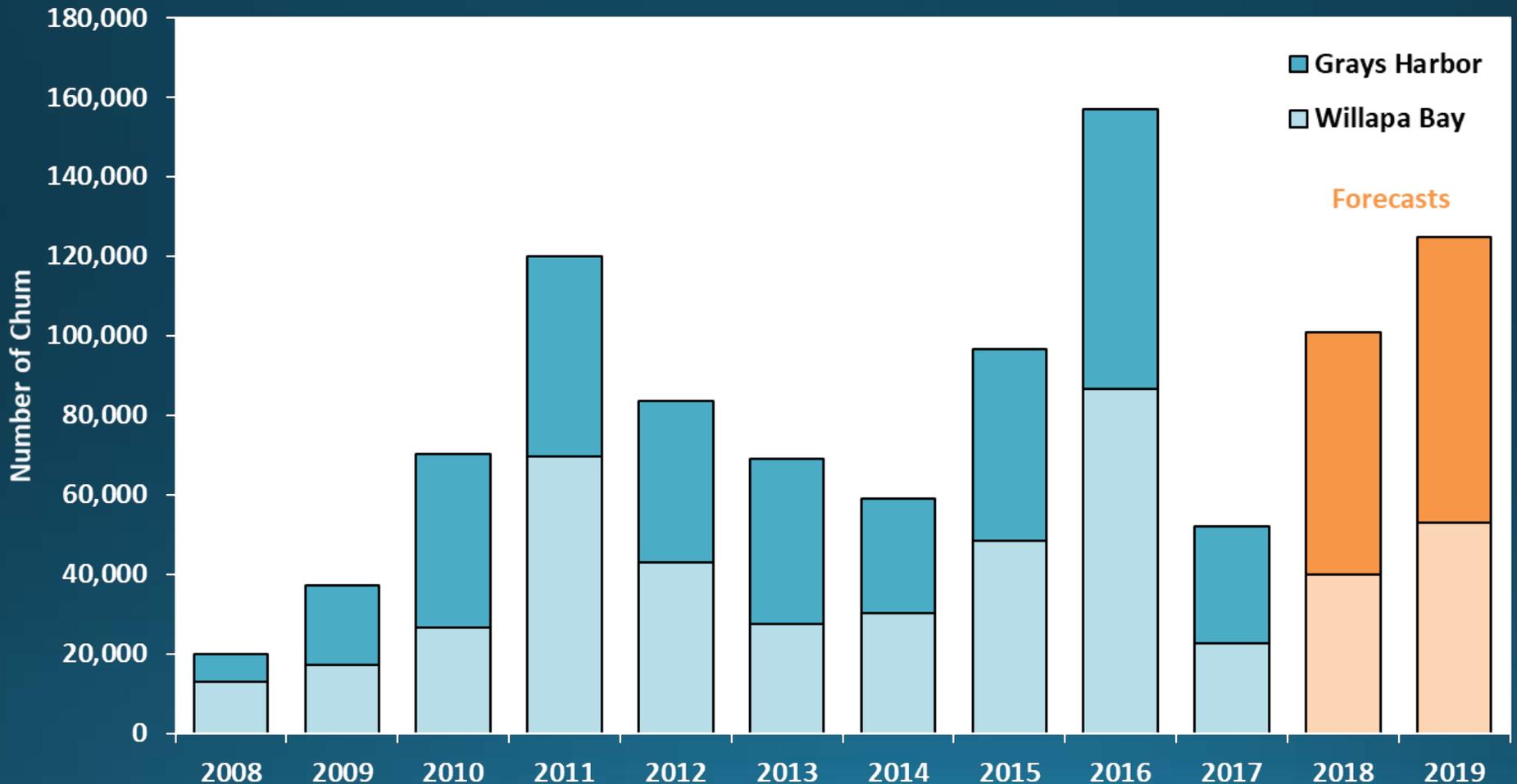
# Puget Sound Chum Forecasts

Hatchery ↓ 32% and Wild ↓ 23% over recent 10 year avg.



# Coastal Chum Forecasts

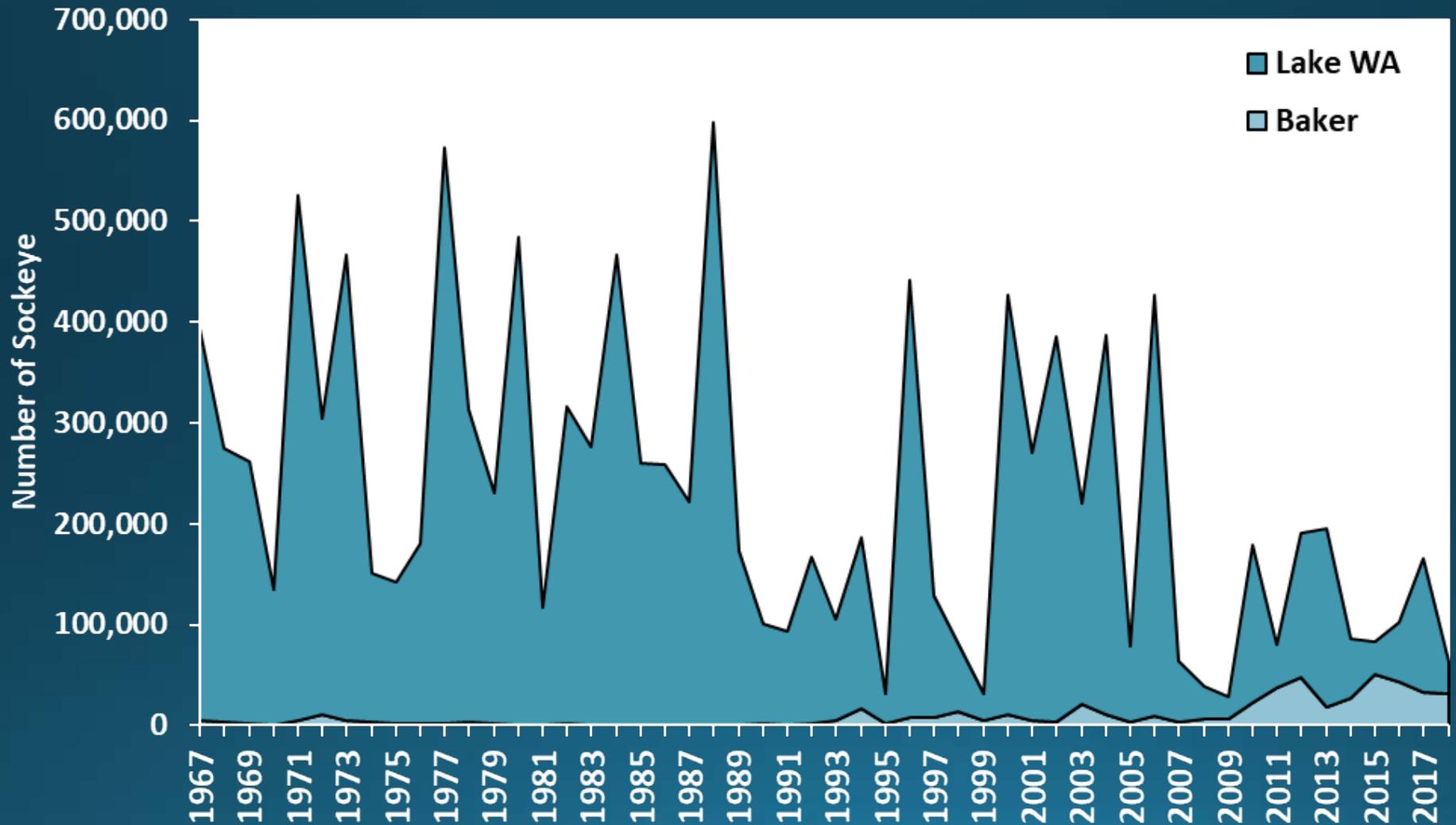
Willapa Bay ↑ 37% and Grays Harbor ↑ 89% over recent 10 year avg.



# Sockeye



# Puget Sound Sockeye Runsize



# 2018 Sockeye HOR/NOR Returns



- Returns ranged from **Poor** to **Good** in Puget Sound
- Columbia Return was **Poor**
- Baker and Lake Wa relative to total runsize



Relative to Recent 10yr Avg. Escapement

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Sockeye HOR/NOR Forecast

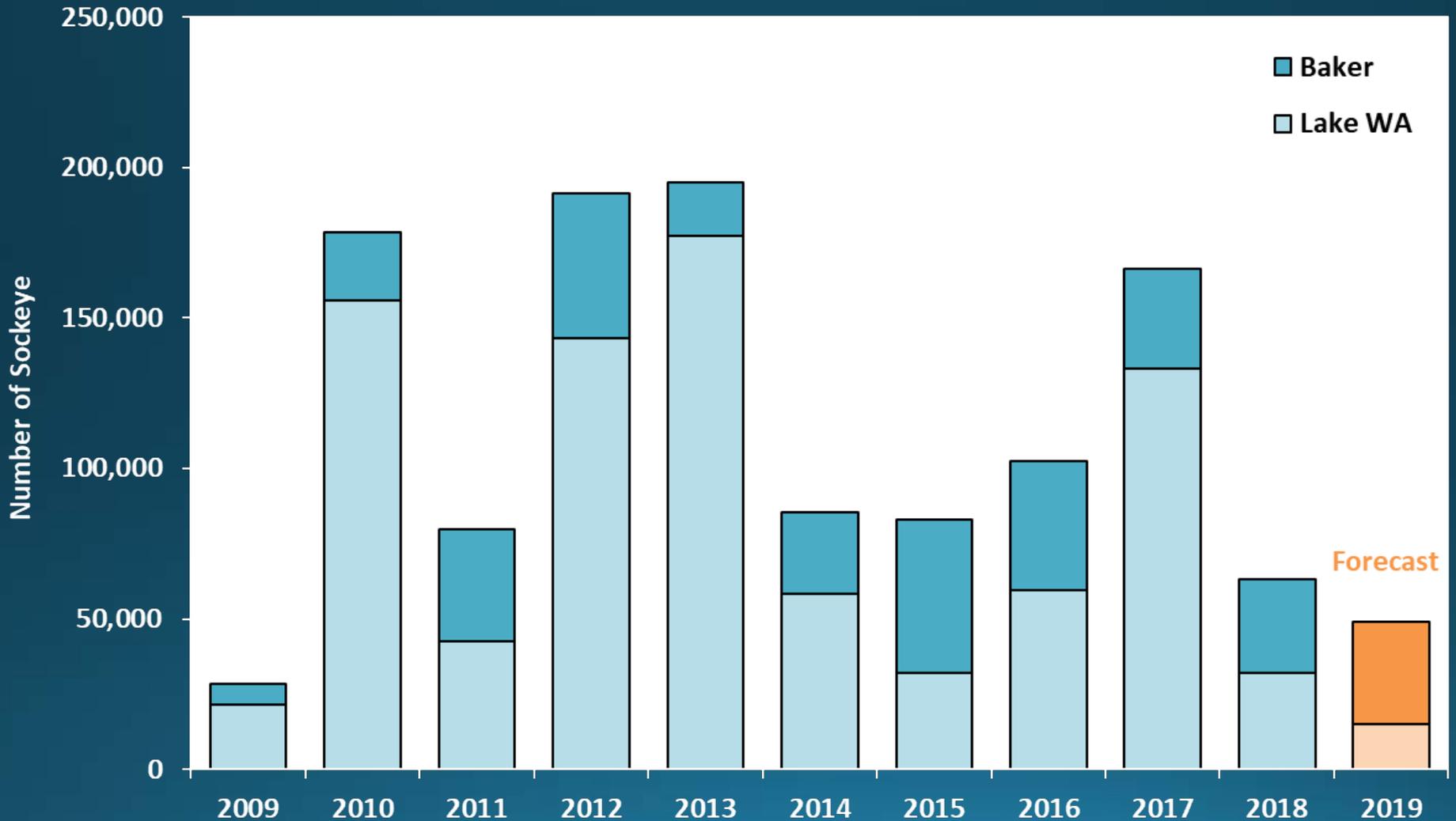


- Baker Lake – 34k
- Lake WA – 15k
- Columbia river - 93k



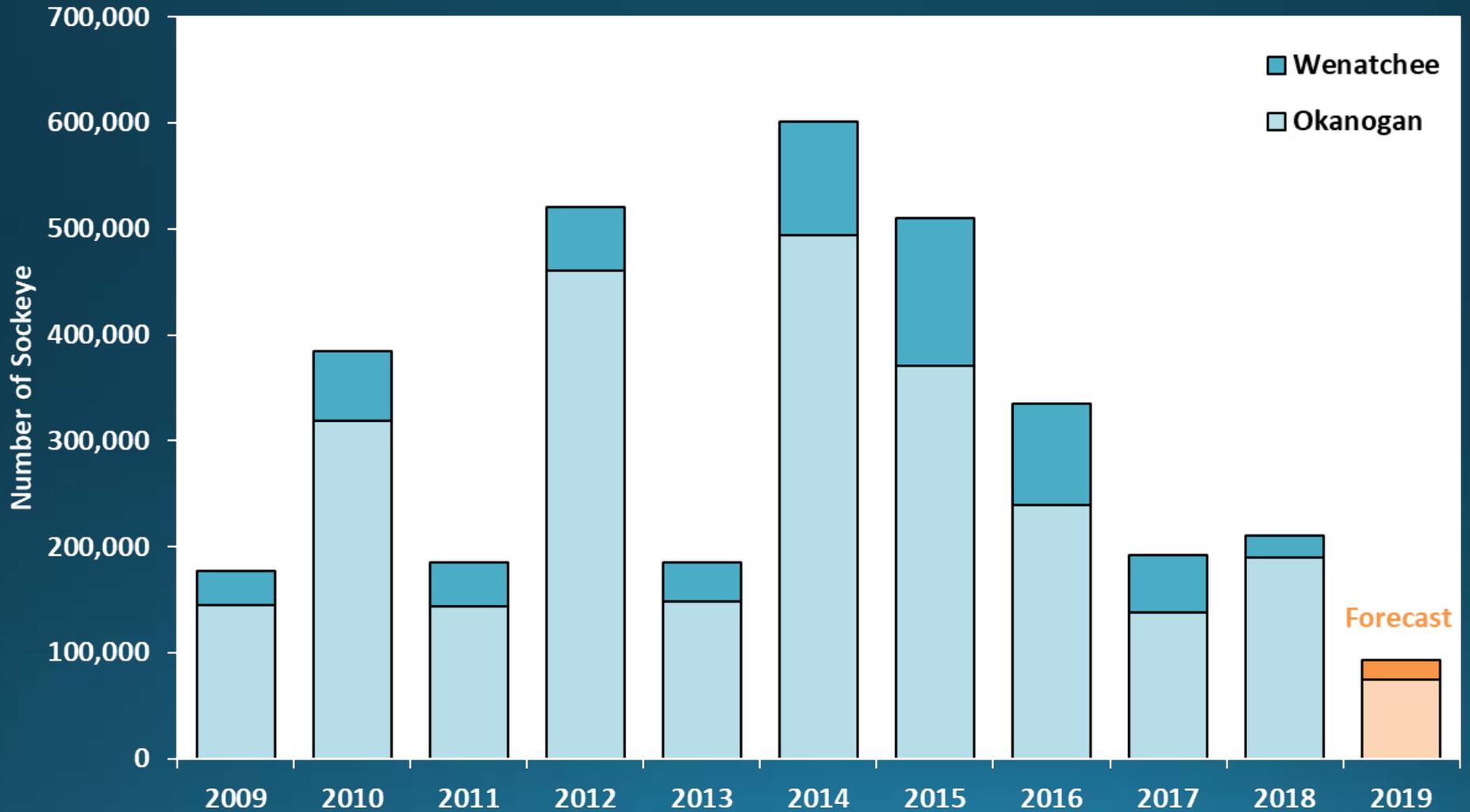
# Puget Sound Sockeye Forecasts

Lake WA ↓ 82% and Baker ↑ 6% over recent 10 year avg.



# Columbia Sockeye Forecasts

Lake Wenatchee ↓ 72% and Okanogan ↓ 72% over recent 10 year avg.

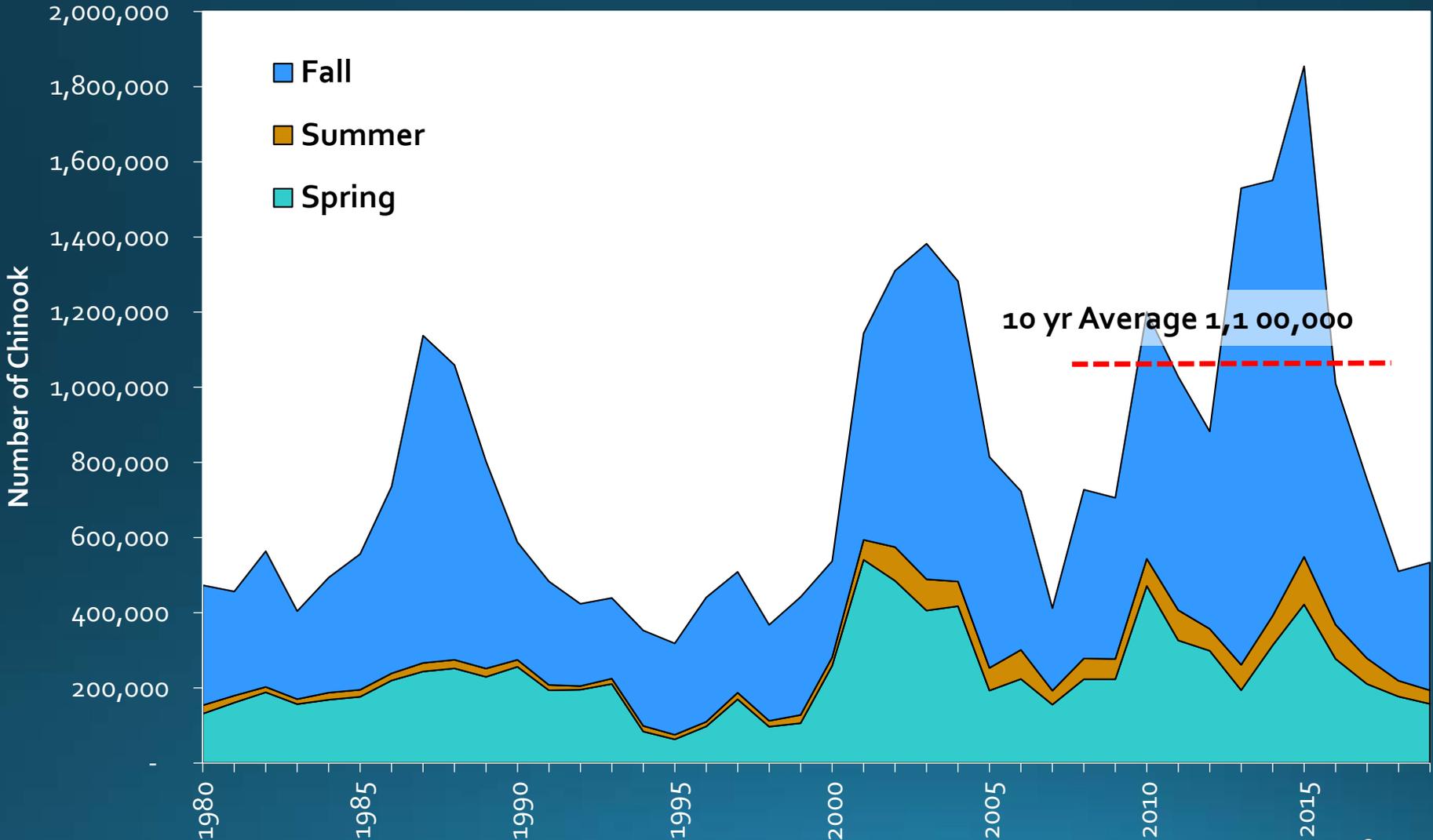


# WA Columbia River Chinook and Coho 2018 Returns and 2019 Forecasts

# Chinook Salmon



# Chinook Historical Runsize – Columbia River

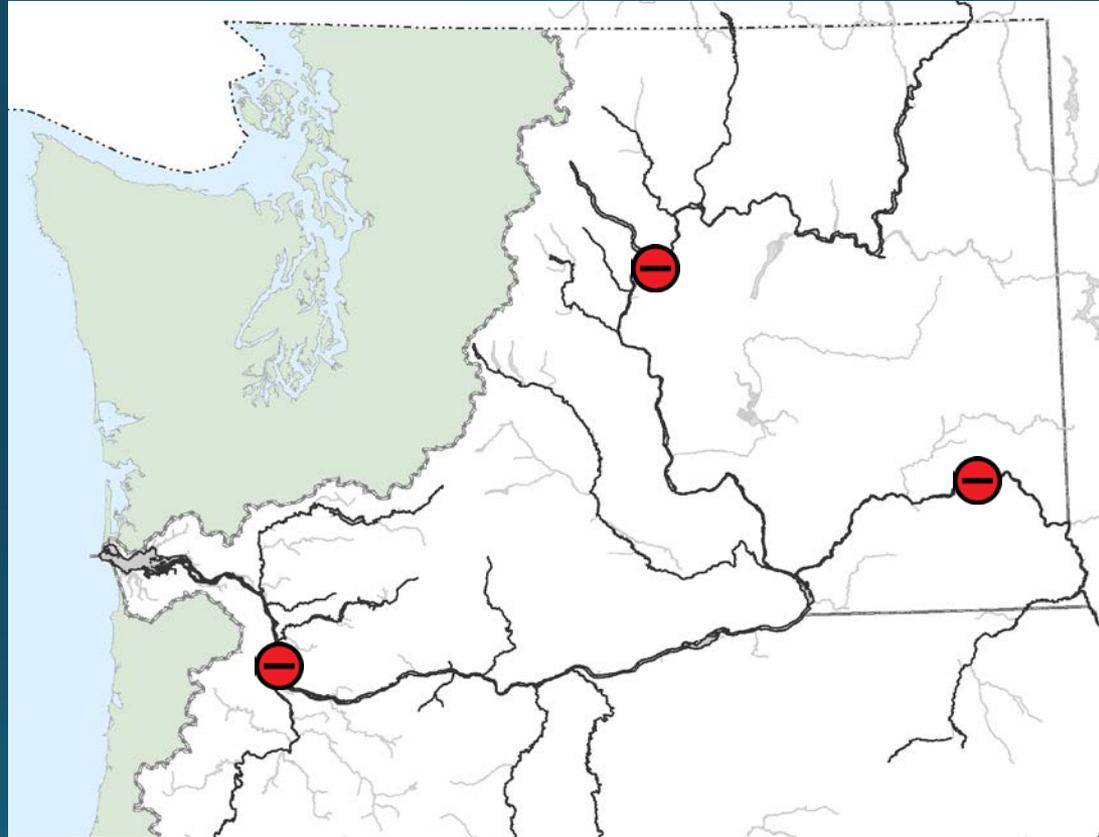


# 2018 Spring/Summer Chinook Returns



All returns are preliminary and returns range from

- Lower Spring – 62k (71%)
- Upriver Spring – 115k (56%)
- Summer – 42k (56%)



Relative to Recent 10yr Avg. Escapement

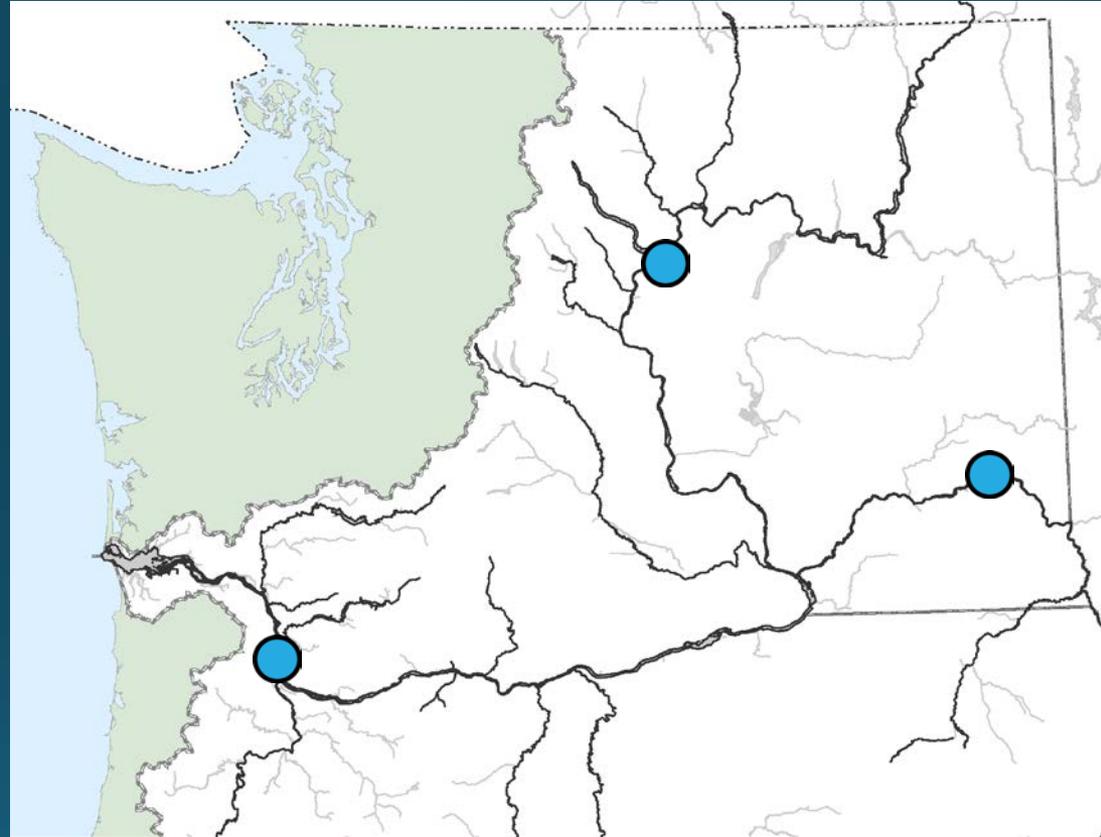
- ⊕ Good > 125%
- ⊙ Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Spring/Summer Chinook Forecasts



Forecasts in Columbia River range from

- Lower Spring – 58k (94%)
- Upriver Spring – 99k (86%)
- Summer – 36k (85%)



Relative to 2018 Runsize

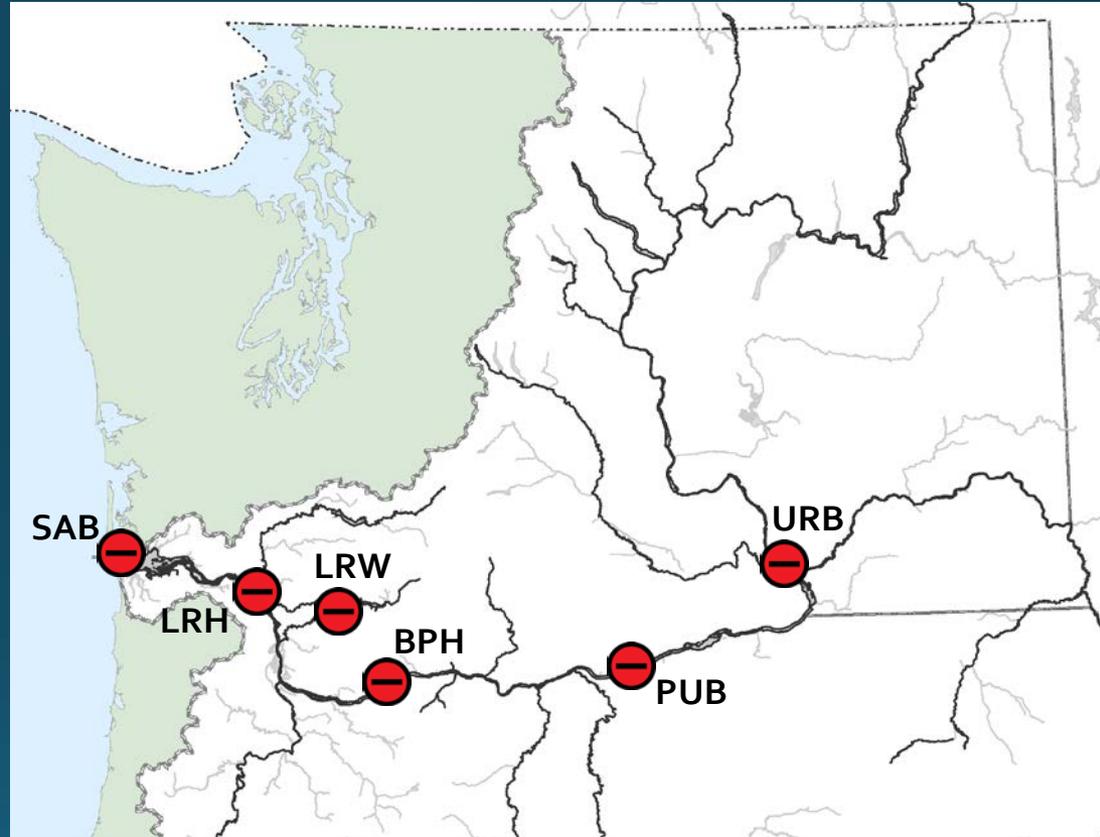
- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2018 Fall Chinook Returns



All returns are preliminary and range from

- SAB (Select Area Bright) – 4.1k (33%)
- LRH (Lower River Hatchery) – 50k (55%)
- LRW (Lower River Wild) – 8.3k (53%)
- BPH (Bonneville Pool Hatchery) – 29k (33%)
- PUB (Pool Upriver Bright) – 36k (42%)
- URB (Upriver Bright) – 149k (34%)



Relative to Recent 10yr Avg. Escapement

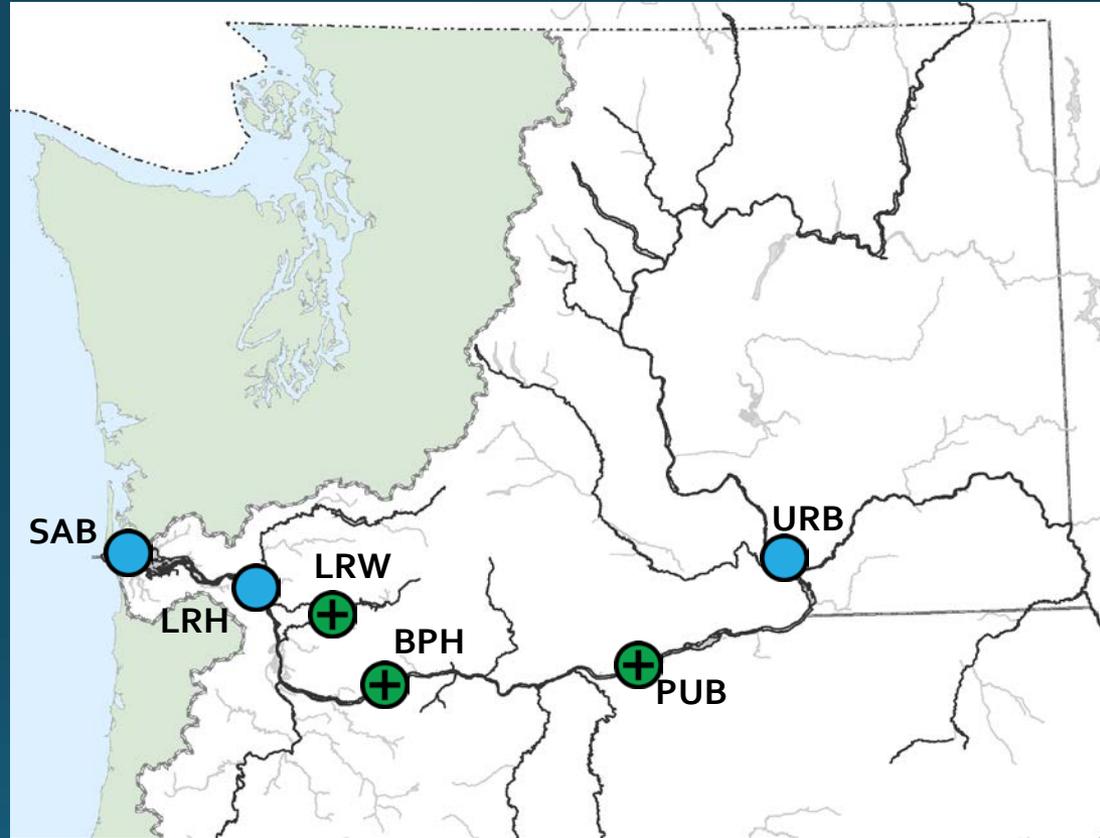
- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Fall Chinook Forecasts



Forecasts in Columbia River range from

- SAB (Select Area Bright) – 3.1k (76%)
- LRH (Lower River Hatchery) – 54.5k (108%)
- LRW (Lower River Wild) – 13.7k (165%)
- BPH (Bonneville Pool Hatchery) – 46k (159%)
- PUB (Pool Upriver Bright) – 57k (158%)
- URB (Upriver Bright) – 158k (106%)

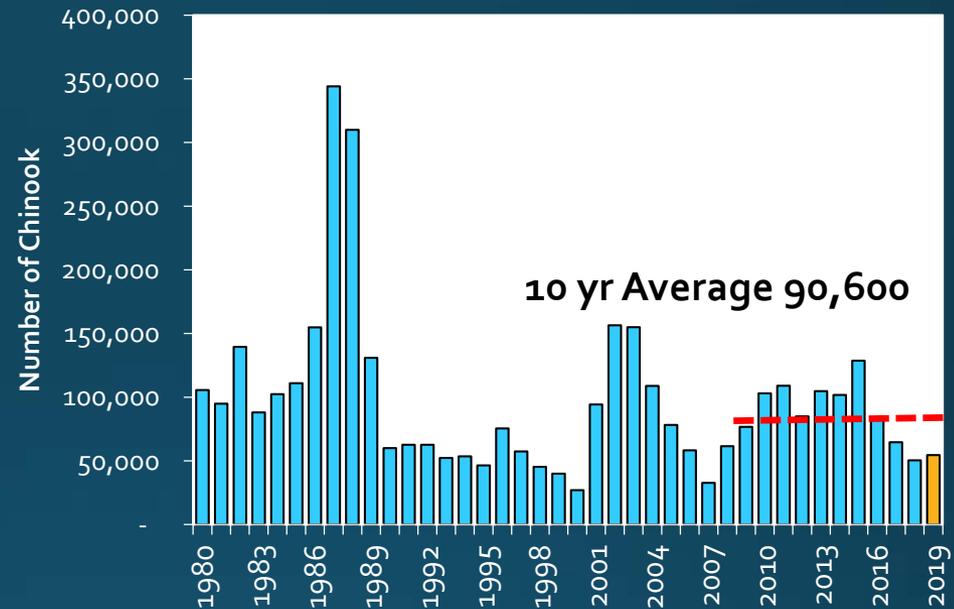


Relative to 2018 Runsize

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%

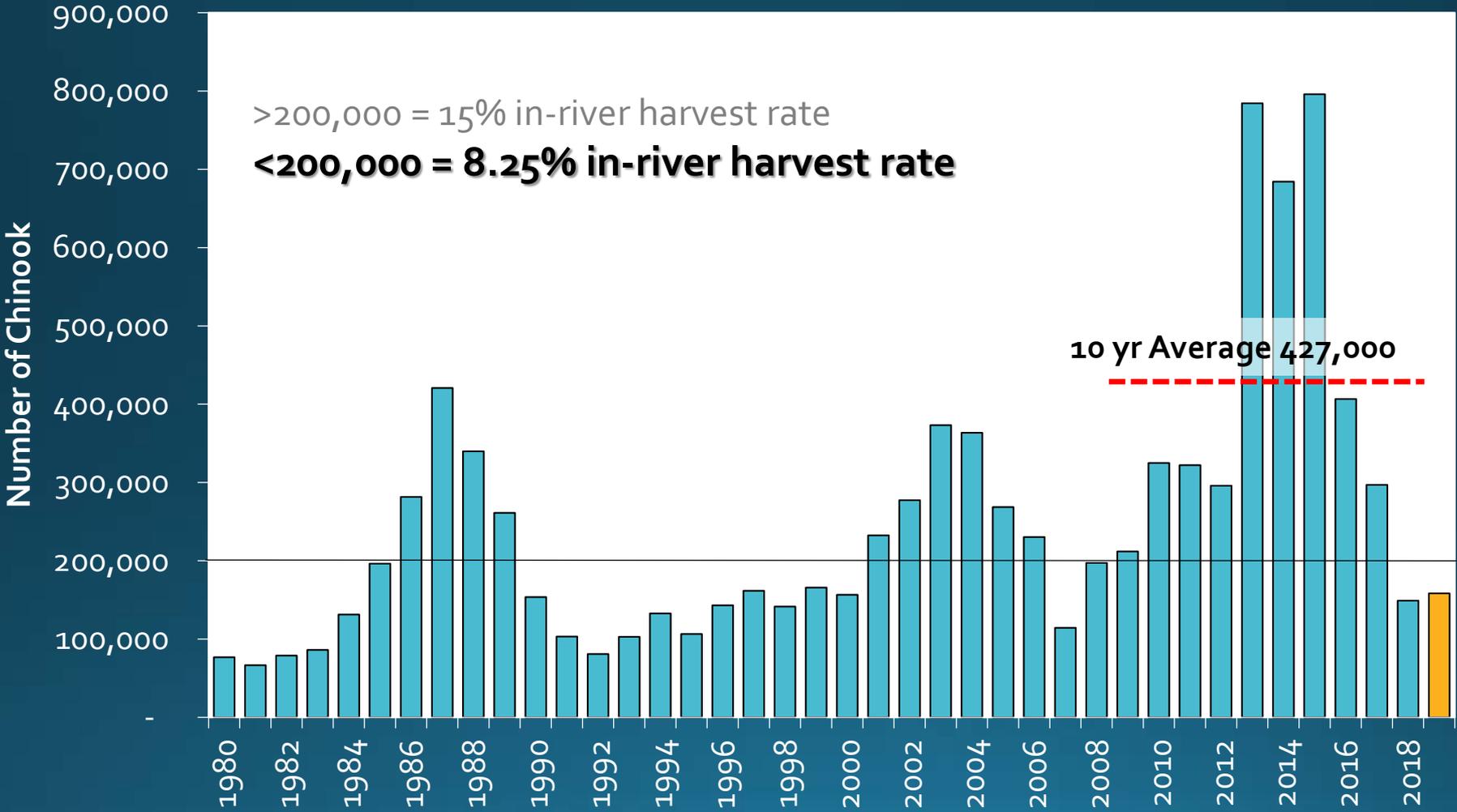
# Lower Columbia River Tule Exploitation Rate (ER) Matrix

<u>LRH Run Size</u>	<u>LCR Tule ER</u>
<30,000	30%
30,000 – 40,000	35%
<b>40,000 – 85,000</b>	<b>38%</b>
>85,000	41%

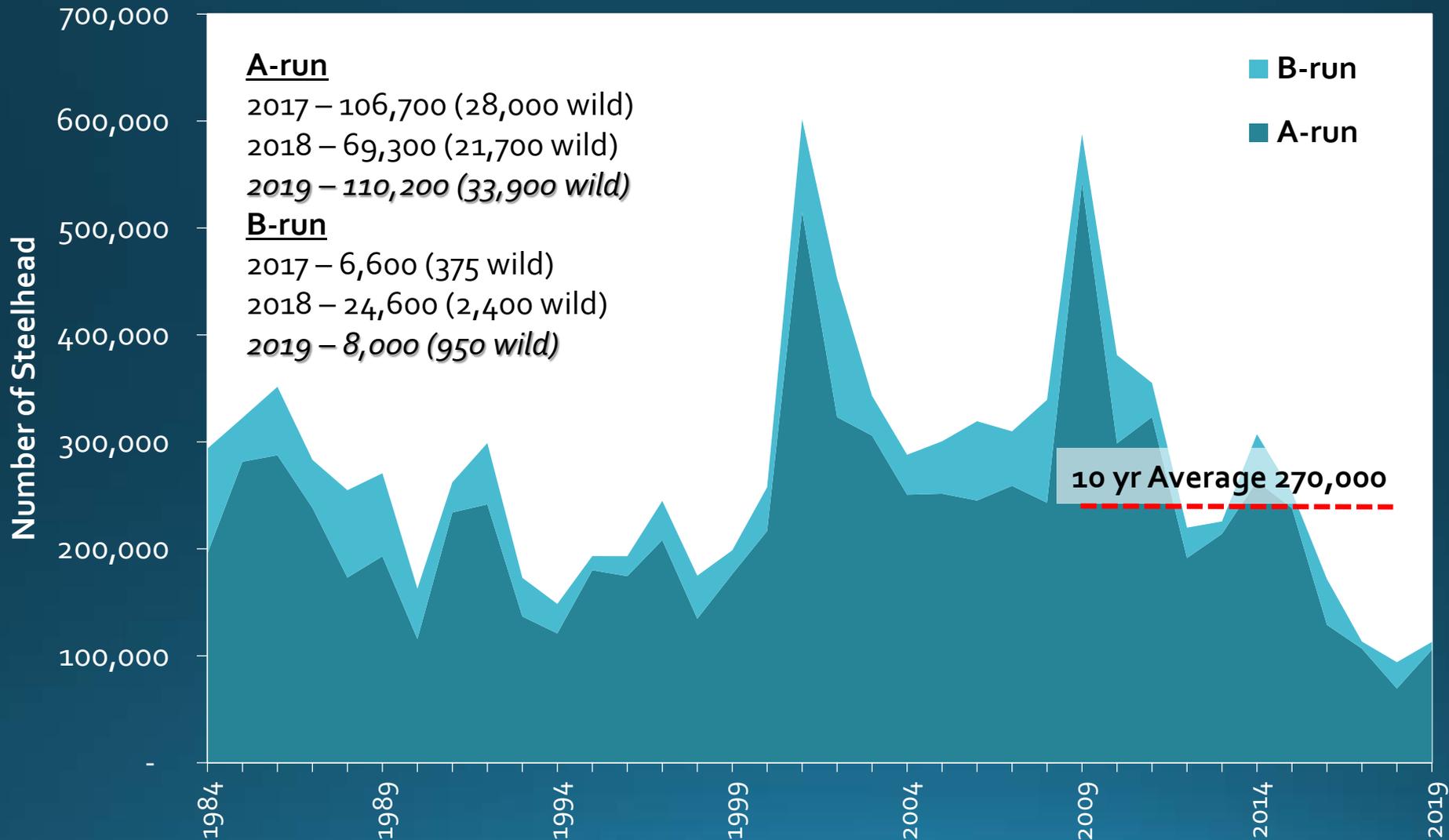


- LRH is down 40% compared to the previous 10 year return.
- 2018 LRH forecast of 54,500 will manage in ocean and in-river fisheries to not to exceed a 38% ER.

# Chinook Historical Runsize – URB



# Upper Summer Steelhead

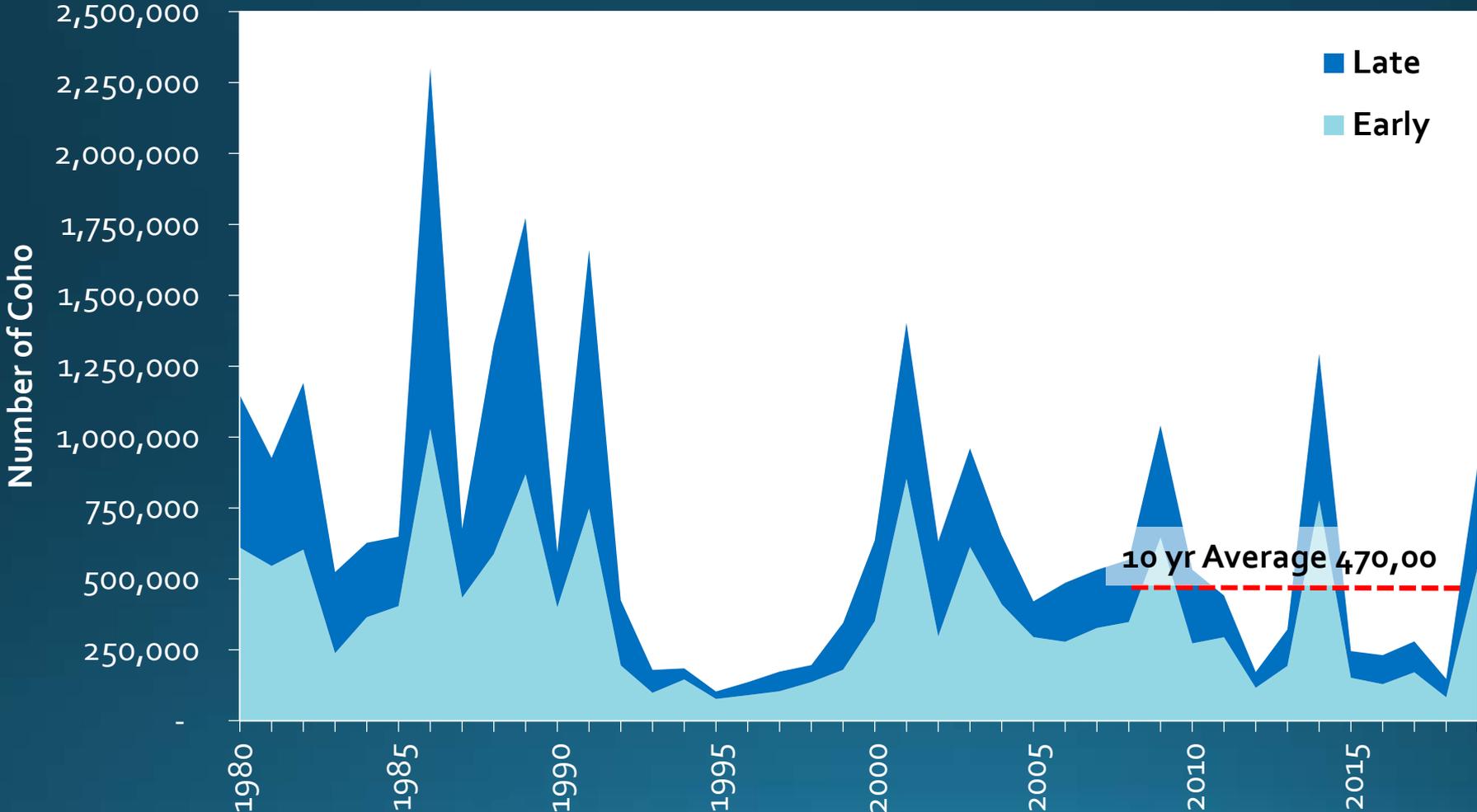


# Coho



Thomas Kline

# Coho Ocean Abundance – Columbia River

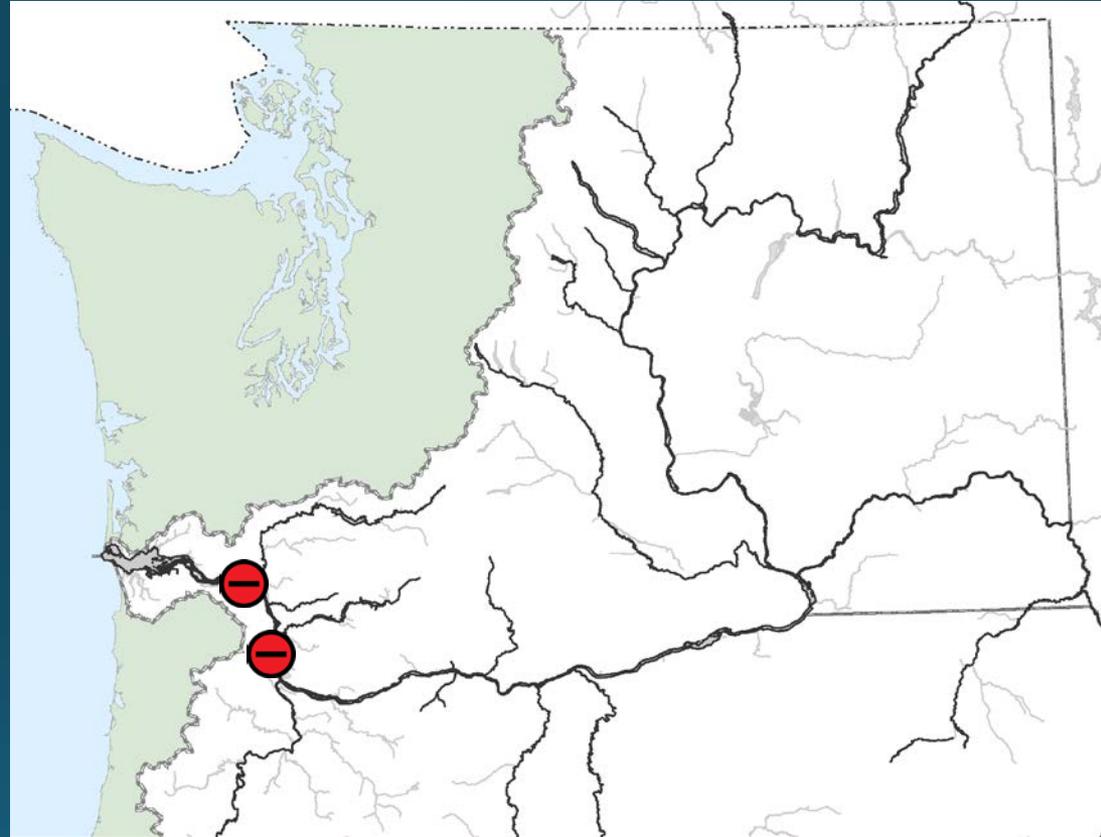


# 2018 Coho Returns



All returns are preliminary  
and returns range from

- Early – 83k (27%)
- Late – 165k (32%)



Relative to Recent 10yr Avg. Escapement

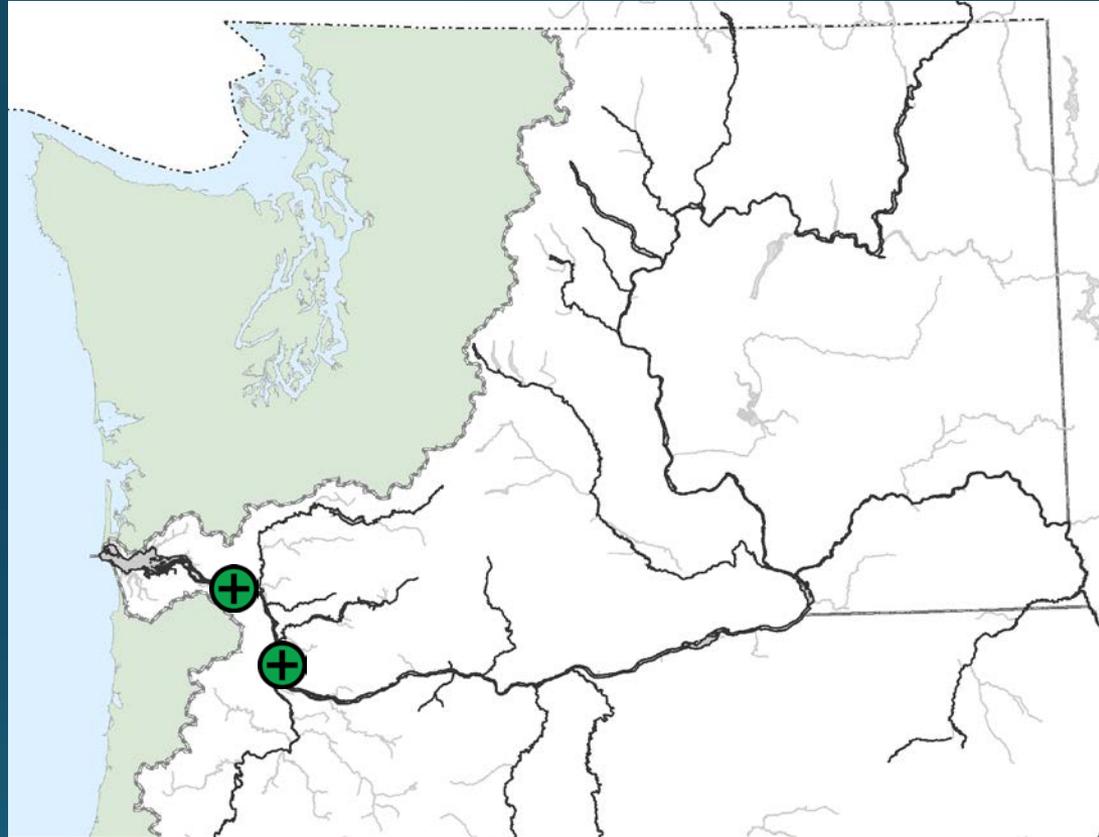
- ⊕ Good > 125%
- ⊙ Neutral 75-125%
- ⊖ Poor < 75%

# 2019 Coho Forecasts



Forecasts in Columbia River range from

- Early – 545k (660%)
- Late – 360k (560%)



Relative to Recent 2018 Runsize

-  Good > 125%
-  Neutral 75-125%
-  Poor < 75%

# Lower Columbia Natural Coho Exploitation Rate (ER) Matrix

<u>Marine Survival Index</u>	<u>ER</u>
Very Low $\leq 0.06\%$	10%
Low $\leq 0.08\%$	15%
Medium $\leq 0.17\%$	18%
<b>High <math>\leq 0.40\%</math></b>	<b>23%</b>
Very High $> 0.40\%$	30%

- Marine survival index is 0.27% (high).
- Normal seeding, exceeds 30% on index sites.
- Exploitation rate for 2019 is 23%.

# Questions?

# PFMC Pre-I Table I-1

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 1 of 3)

Production Source and Stock or Stock Group	Preseason Abundance Forecasts					
	2014	2015	2016	2017	2018	2019
<b>Sacramento River</b>						
Fall (Sacramento Index)	634.7	652.0	299.6	230.7	229.4	379.6
Winter (age-3 absent fishing)	--	--	--	--	1.6	1.9
<b>Klamath River (Ocean Abundance)</b>						
Fall	299.3	423.8	142.2	54.2	359.2	274.2
<b>Oregon Coast</b>						
North and South/Local Migrating	--	--	--	--	--	--
<b>Columbia River (Ocean Escapement)</b>						
Upriver Spring <sup>a/</sup>	227.0	232.5	188.8	160.4	166.7	99.3
Willamette Spring	58.7	55.4	68.7	38.1	53.8	40.2
Sandy Spring	5.5	5.5	NA	3.6	5.3	5.5
Cowlitz Spring	7.8	11.2	25.1	17.1	5.2	1.3
Kalama Spring	0.5	1.9	4.9	3.1	1.5	1.4
Lewis Spring	1.1	1.1	1.0	0.7	3.7	1.5
Upriver Summer <sup>b/</sup>	67.5	73.0	93.3	63.1	67.3	35.9
URB Fall	973.3	500.3	589.0	260.0	200.1	158.4
SCH Fall	115.1	160.5	89.6	158.4	50.1	46.0
LRW Fall	34.2	18.9	22.2	12.5	7.6	13.7
LRH Fall	110.0	94.9	133.7	92.4	62.4	54.5
MCB Fall	360.1	113.3	101.0	45.6	36.4	56.7

# PFMC Pre-I Table I-1 Cont.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 2 of 3)							
Production Source and Stock or Stock Group		Preseason Abundance Forecasts					
		2014	2015	2016	2017	2018	2019
<b>Washington Coast</b>							
Willapa Bay Fall	Natural	2.9	3.8	3.3	4.2	3.8	4.3
	Hatchery	29.5	31.0	36.2	34.3	40.3	23.8
Quinault Spring/Summer	Natural	NA					
Grays Harbor Fall	Natural	--	--	--	--	16.4	NA
	Hatchery	--	--	--	--	4.8	NA
Quinault Spring/Summer	Natural	NA	NA	NA	NA	NA	NA
	Hatchery	--	--	--	--	4.8	NA
Quinault Fall	Natural	6.0	8.1	5.5	5.9	5.2	3.7
	Hatchery	10.3	4.0	5.3	4.4	3.1	2.7
Queets Spring/Sum	Natural	0.5	0.4	0.5	0.5	0.5	NA
Queets Fall	Natural	3.6	4.3	4.9	3.7	3.3	NA
	Hatchery	0.9	1.5	1.7	0.9	0.6	0.5
Hoh Spring/Summer	Natural	0.9	0.8	0.9	1.0	1.1	1.0
Hoh Fall	Natural	2.5	2.6	1.8	2.7	2.6	2.5
Quillayute Spring	Hatchery	2.0	1.7	1.8	2.2	2.1	2.1
Quillayute Sum/Fall	Natural	7.6	8.5	7.5	7.6	8.0	7.9
Hoko <sup>d</sup>	Natural	2.7	3.3	2.9	1.5	1.5	2.8
<i>North Coast Totals</i>							
<i>Spring/Summer</i>	<i>Natural</i>	<i>1.4</i>	<i>1.2</i>	<i>1.4</i>	<i>1.5</i>	<i>1.6</i>	<i>1.7</i>
<i>Fall</i>	<i>Natural</i>	<i>19.7</i>	<i>23.5</i>	<i>19.7</i>	<i>19.9</i>	<i>19.1</i>	<i>16.5</i>
<i>Spring/Summer</i>	<i>Hatchery</i>	<i>2.0</i>	<i>1.7</i>	<i>1.8</i>	<i>2.2</i>	<i>2.1</i>	<i>2.1</i>
<i>Fall</i>	<i>Hatchery</i>	<i>11.2</i>	<i>5.5</i>	<i>7.0</i>	<i>5.3</i>	<i>3.7</i>	<i>3.2</i>

# PFMC Pre-I Table I-1 Cont.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 3 of 3)

Production Source and Stock or Stock Group		Preseason Abundance Forecasts					
		2014	2015	2016	2017	2018	2019
<b>Puget Sound summer/fall<sup>d/</sup></b>							
Nooksack/Samish	Hatchery	43.9	38.6	27.9	21.2	24.6	21.3
East Sound Bay	Hatchery	1.2	1.2	0.7	0.8	0.7	0.3
Skagit <sup>a/</sup>	Natural	18.0	11.8	15.1	15.8	13.3	13.6
	Hatchery	0.3	0.6	0.4	0.4	0.3	0.3
Stillaguamish <sup>b/</sup>	Natural	1.6	0.5	0.5	1.5	1.6	0.9
Snohomish <sup>b/</sup>	Natural	5.3	4.2	3.3	3.4	3.5	3.7
	Hatchery	5.4	3.3	5.0	4.8	6.5	7.2
Tulalip <sup>b/</sup>	Hatchery	4.7	1.3	1.4	5.3	7.5	12.7
South Puget Sound	Natural	4.8	3.8	4.5	4.7	4.8	8.4
	Hatchery	96.7	62.4	43.1	80.4	123.6	99.9
Hood Canal <sup>a/</sup>	Natural	3.5	3.1	2.3	2.5	3.9	1.2
	Hatchery	80.6	59	42.7	48.3	57.6	66.0
Strait of Juan de Fuca Including Dungeness spring run <sup>a/</sup>	Natural	3.8	4.9	3.7	3.1	6.0	8.3

a/ Since 2005, the upriver spring Chinook run includes Snake River summer Chinook.

b/ Since 2005, the upriver summer Chinook run includes only upper Columbia summer Chinook, and not Snake River summer Chinook.

c/ Expected spawning escapement without fishing.

d/ Unless otherwise noted, forecasts are for Puget Sound run size (4B) available to U.S. net fisheries. Does not

e/ Terminal run forecast.

f/ Includes a mixture of runsize types including escapement without fishing and terminal run. 2019 values are escapement w/out fishing for Tulalip and Snohomish natural, and terminal runsize for Stillaguamish and Snohomish hatchery.

# PFMC Pre-I Table I-2

TABLE I-2. Preseason ocean abundance adult coho salmon stock forecasts in thousands of fish. (Page 1 of 2)

Production Source and Stock or Stock Group		Preseason Ocean Abundance Forecasts					
		2014	2015	2016	2017	2018	2019
<b>OPI Area Total Abundance</b> (California, Oregon Coasts, and Columbia River)		1,213.7	1,015.0	549.2	496.2	349.0	1,009.6
OPI Public	Hatchery	983.1	808.4	396.5	394.3	294.1	933.5
	Columbia River Early	526.6	515.2	153.7	231.7	164.7	545.0
	Columbia River Late	437.5	261.8	226.9	154.6	121.5	360.6
	Coastal N. of Cape Blanco	4.8	6.9	5.5	3.5	3.3	12.0
	Coastal S. of Cape Blanco	14.2	24.4	10.4	4.5	4.6	15.9
Lower Columbia River	Natural	33.4	35.9	40.0	30.1	21.9	36.9
Oregon Coast (OCN)	Natural	230.6	206.6	152.7	101.9	54.9	76.1
<b>Washington Coast</b>							
Willapa	Natural	58.9	42.9	39.5	36.7	20.6	63.4
	Hatchery	41.0	57.7	28.1	55.0	44.5	94.0
Grays Harbor	Natural	108.8	142.6	35.7	50.0	42.4	71.5
	Hatchery	65.4	46.6	22.9	36.4	51.4	64.3
Quinault	Natural	25.0	44.2	17.1	26.3	25.4	13.9
	Hatchery	24.7	24.9	19.8	29.4	29.6	26.9
Queets	Natural	10.3	7.5	3.5	6.5	7.0	11.1
	Hatchery	15.7	11.3	4.5	13.7	10.8	13.2
Hoh	Natural	8.9	5.1	2.1	6.2	5.8	7.0

# PFMC Pre-I Table I-2 Cont.

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 2 of 2)

Production Source and Stock or Stock Group		Preseason Ocean Abundance Forecasts					
		2014	2015	2016	2017	2018	2019
Quillayute Fall	Natural	18.4	10.5	4.5	15.8	10.6	14.7
	Hatchery	12.6	8.0	6.4	17.6	16.5	17.0
Quillayute Summer	Natural	2.0	1.2	0.3	1.5	2.7	1.2
	Hatchery	3.2	2.2	1.4	3.4	3.3	3.4
North Coast Independent Tributaries	Natural	15.2	11.7	1.9	6.5	4.1	8.1
	Hatchery	11.6	11.9	2.5	0.2	7.9	12.5
<i>WA Coast Total</i>	<i>Natural</i>	<i>247.5</i>	<i>265.6</i>	<i>104.6</i>	<i>149.5</i>	<i>118.7</i>	<i>191.0</i>
	<i>Hatchery</i>	<i>174.2</i>	<i>162.6</i>	<i>85.6</i>	<i>155.6</i>	<i>164.1</i>	<i>231.3</i>
<b>Puget Sound</b>							
Strait of Juan de Fuca	Natural	12.5	11.1	4.4	13.1	7.2	8.8
	Hatchery	17.3	11.1	3.9	15.4	10.6	16.8
Nooksack-Samish	Natural	20.8	28.1	9.0	13.2	20.6	25.1
	Hatchery	61.7	50.8	28.8	45.6	61.3	59.8
Skagit	Natural	112.4	121.4	8.9	11.2	59.2	57.9
	Hatchery	15.8	19.5	4.9	7.6	13.1	9.9
Stillaguamish	Natural	32.5	31.3	2.8	7.6	19.0	23.8
	Hatchery	6.0	0.0	0.0	1.5	0.0	2.2
Snohomish	Natural	150.0	151.5	20.6	107.3	65.9	62.6
	Hatchery	78.2	53.9	16.7	62.0	38.3	43.7
South Sound	Natural	62.8	63.0	9.9	20.2	15.0	30.4
	Hatchery	150.7	180.2	27.1	102.4	103.0	180.4
Hood Canal	Natural	82.8	61.5	35.3	115.6	59.5	40.1
	Hatchery	47.6	108.4	83.5	74.9	84.5	87.9
<i>Puget Sound Total</i>	<i>Natural</i>	<i>473.8</i>	<i>467.9</i>	<i>91.0</i>	<i>288.3</i>	<i>246.4</i>	<i>248.8</i>
	<i>Hatchery</i>	<i>377.3</i>	<i>423.9</i>	<i>165.0</i>	<i>309.3</i>	<i>310.8</i>	<i>400.7</i>

# July 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

# August 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# September 2019

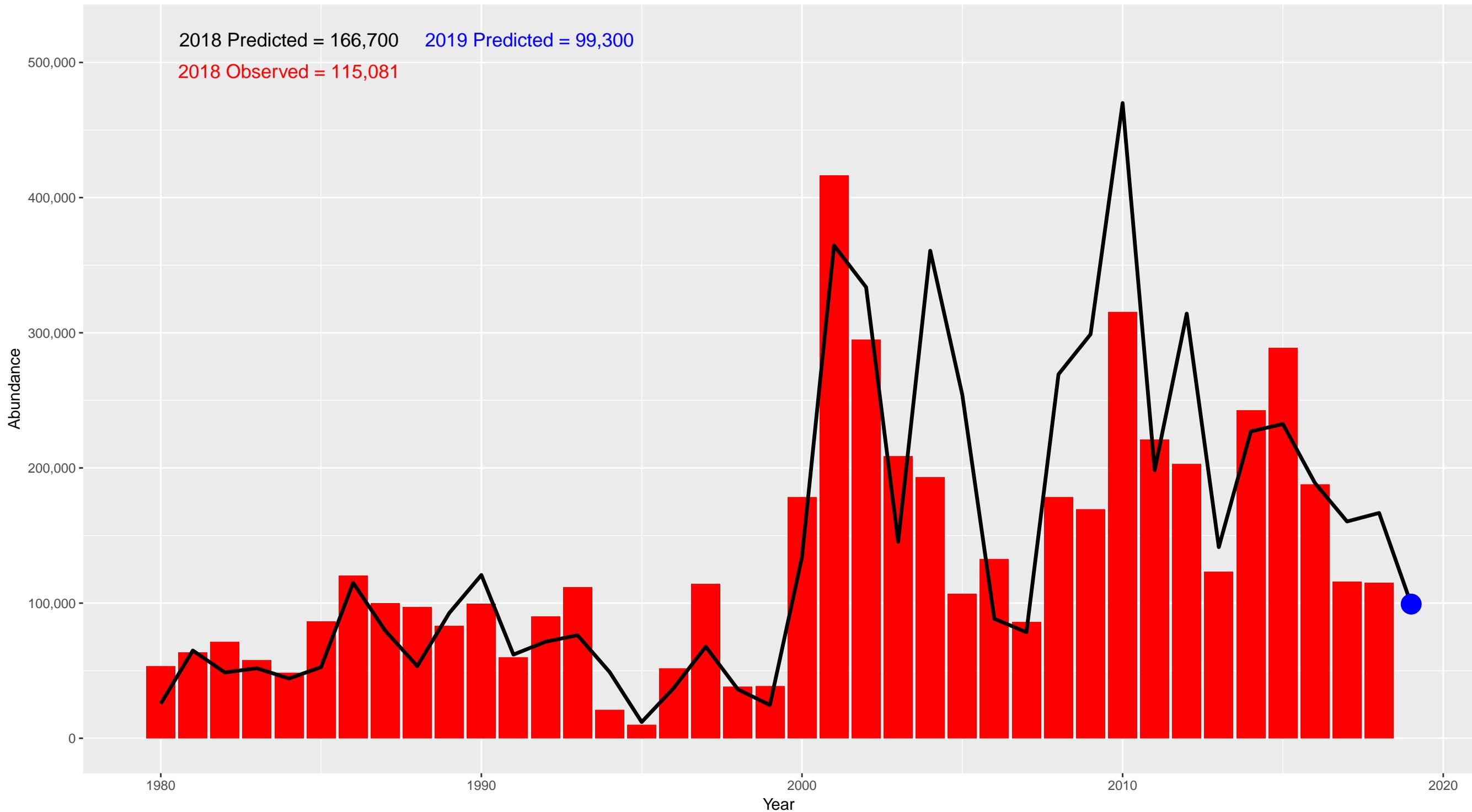
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# October 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

# Total Upriver Spring Chinook

2018 Predicted = 166,700    2019 Predicted = 99,300  
2018 Observed = 115,081

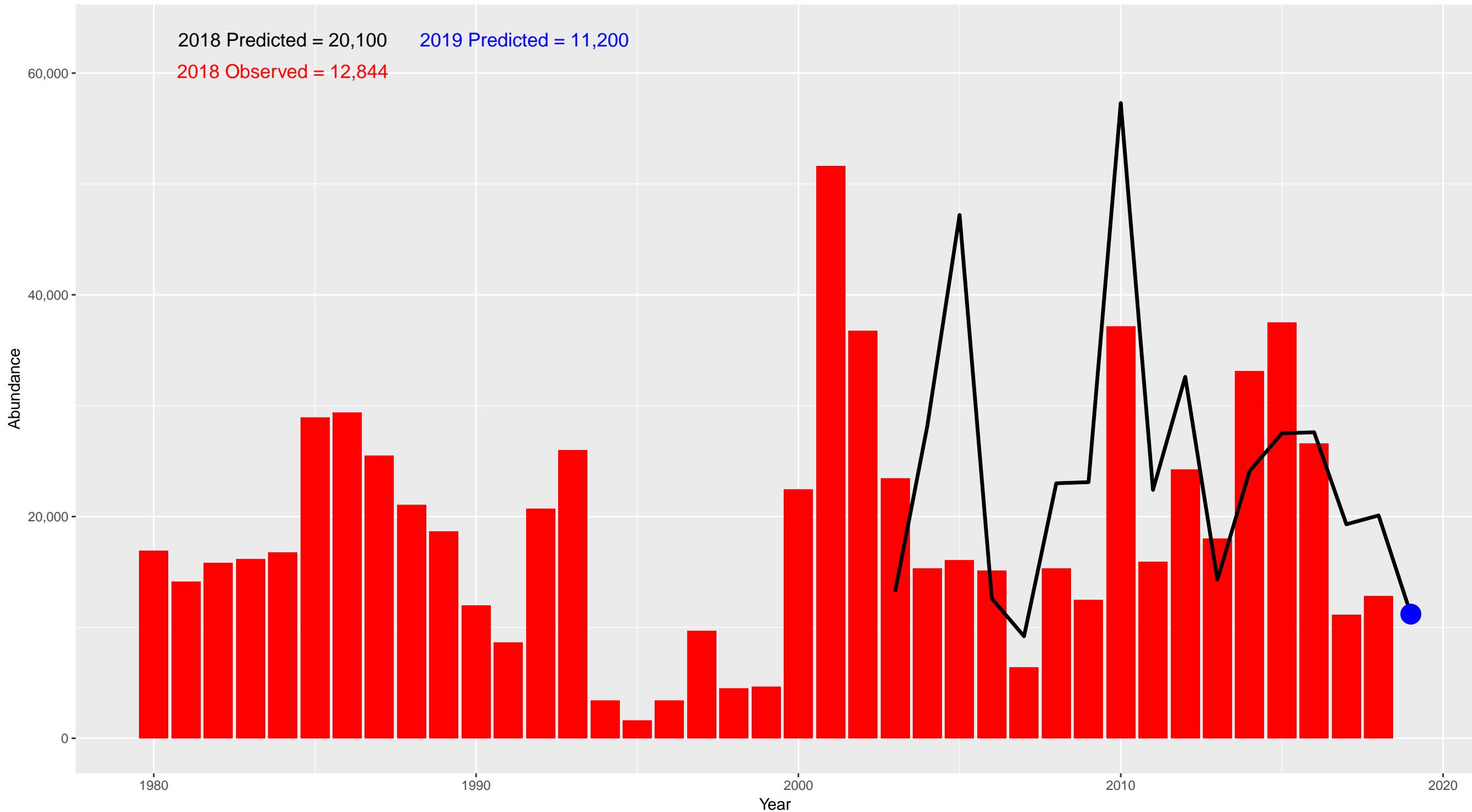


# Total Upper Columbia Spring Chinook

2018 Predicted = 20,100

2019 Predicted = 11,200

2018 Observed = 12,844

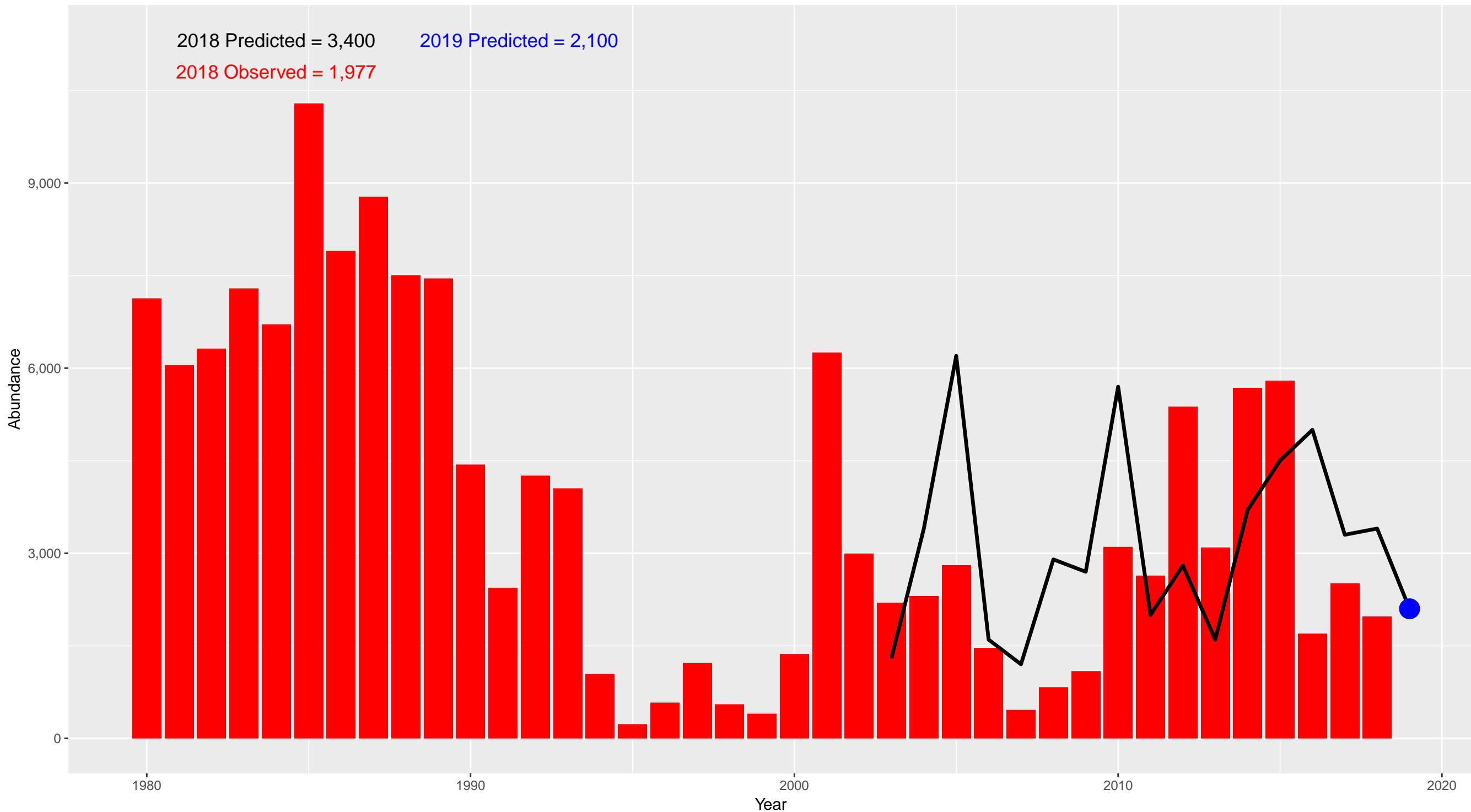


# Wild Upper Columbia Spring Chinook

2018 Predicted = 3,400

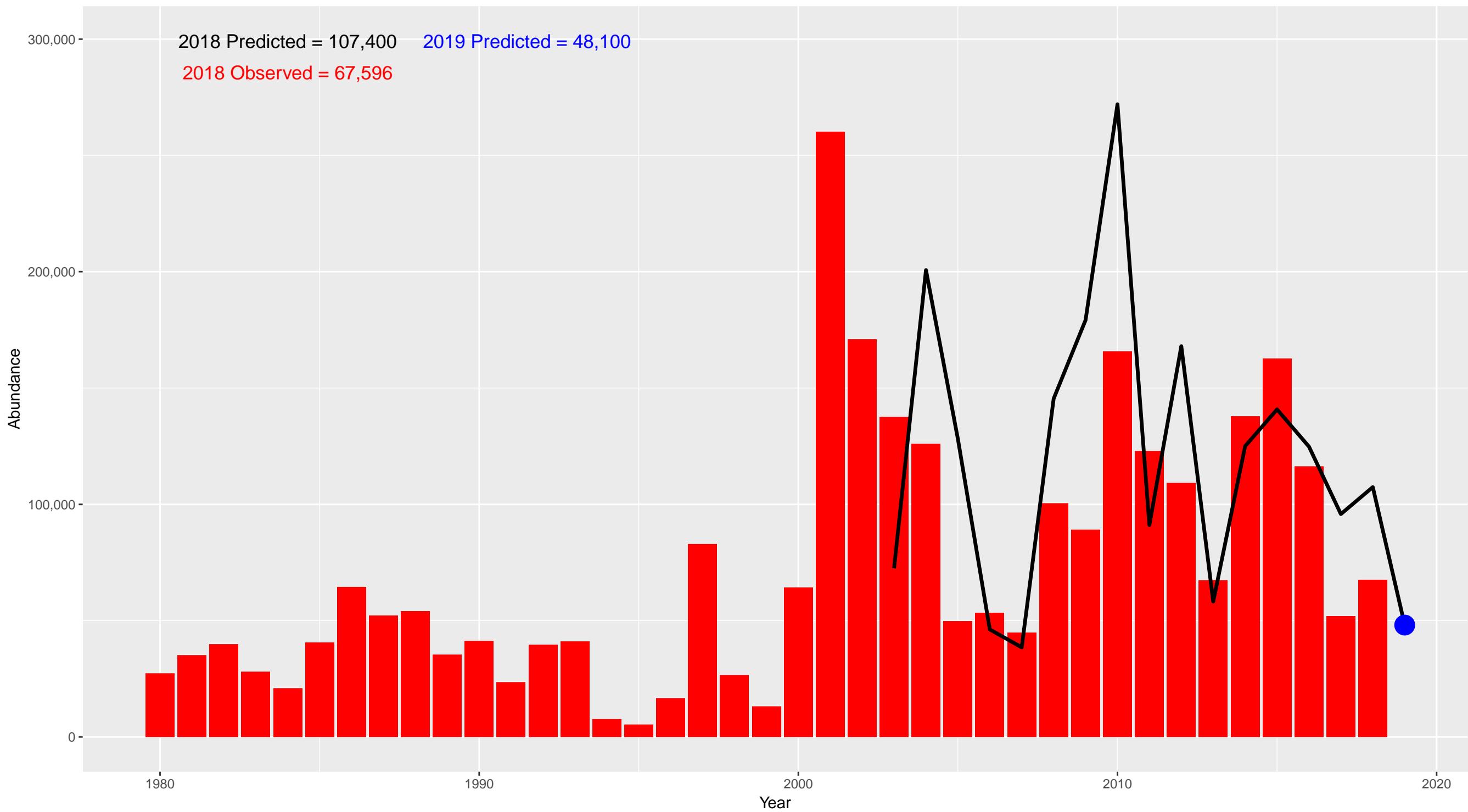
2019 Predicted = 2,100

2018 Observed = 1,977

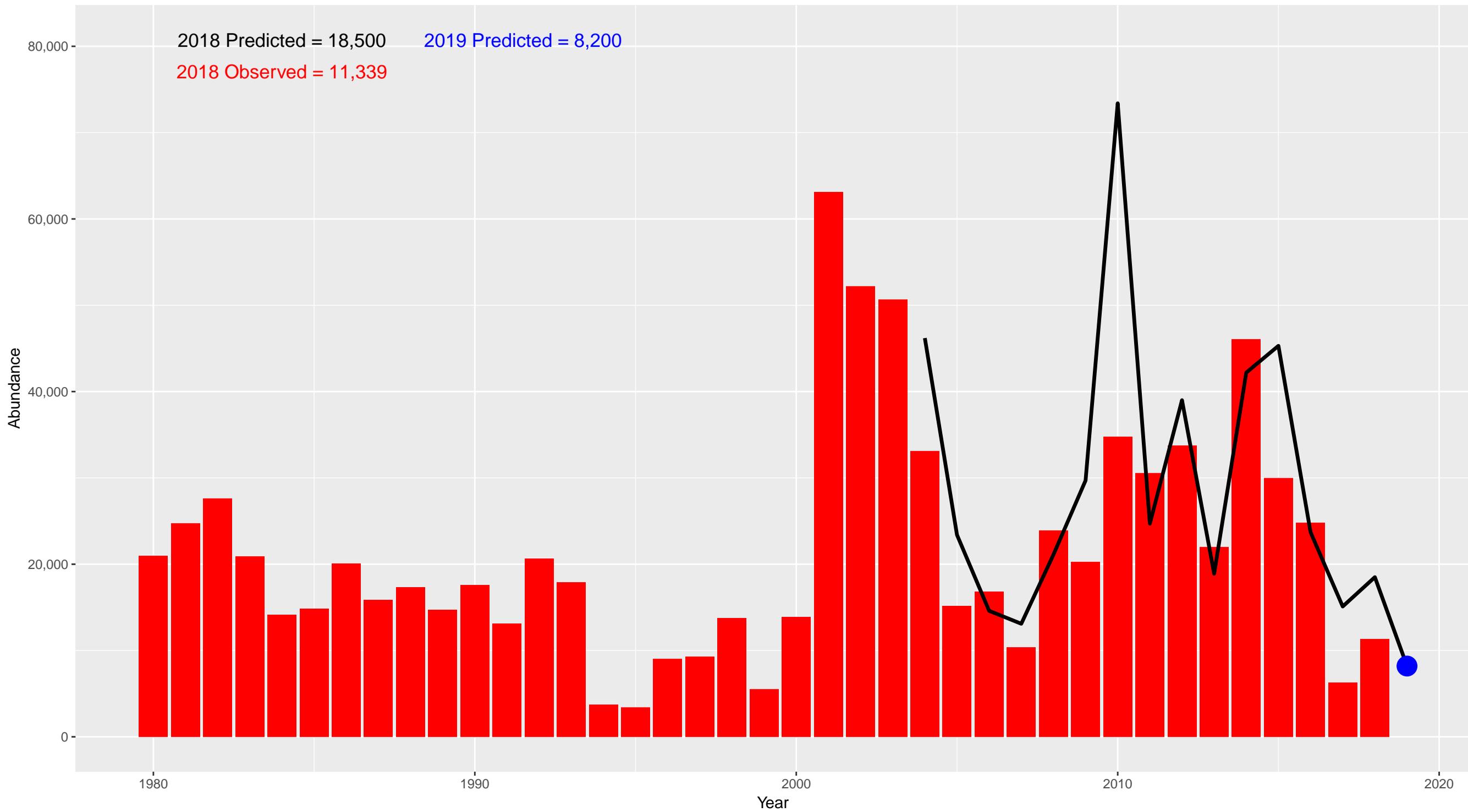


Total Snake River Spring Chinook

2018 Predicted = 107,400    2019 Predicted = 48,100  
2018 Observed = 67,596



# Wild Snake River Spring Chinook

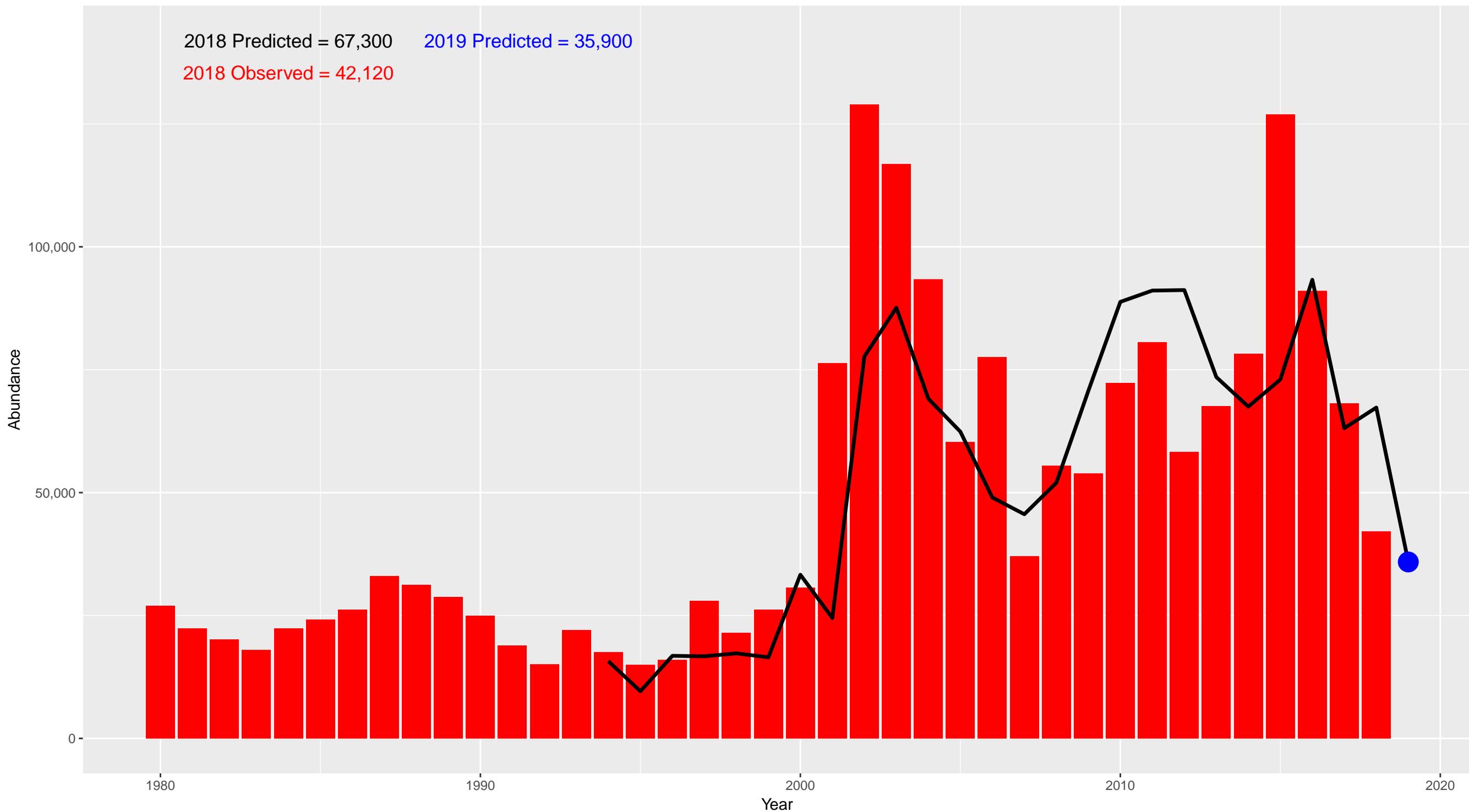


# Total Upper Columbia Summer Chinook

2018 Predicted = 67,300

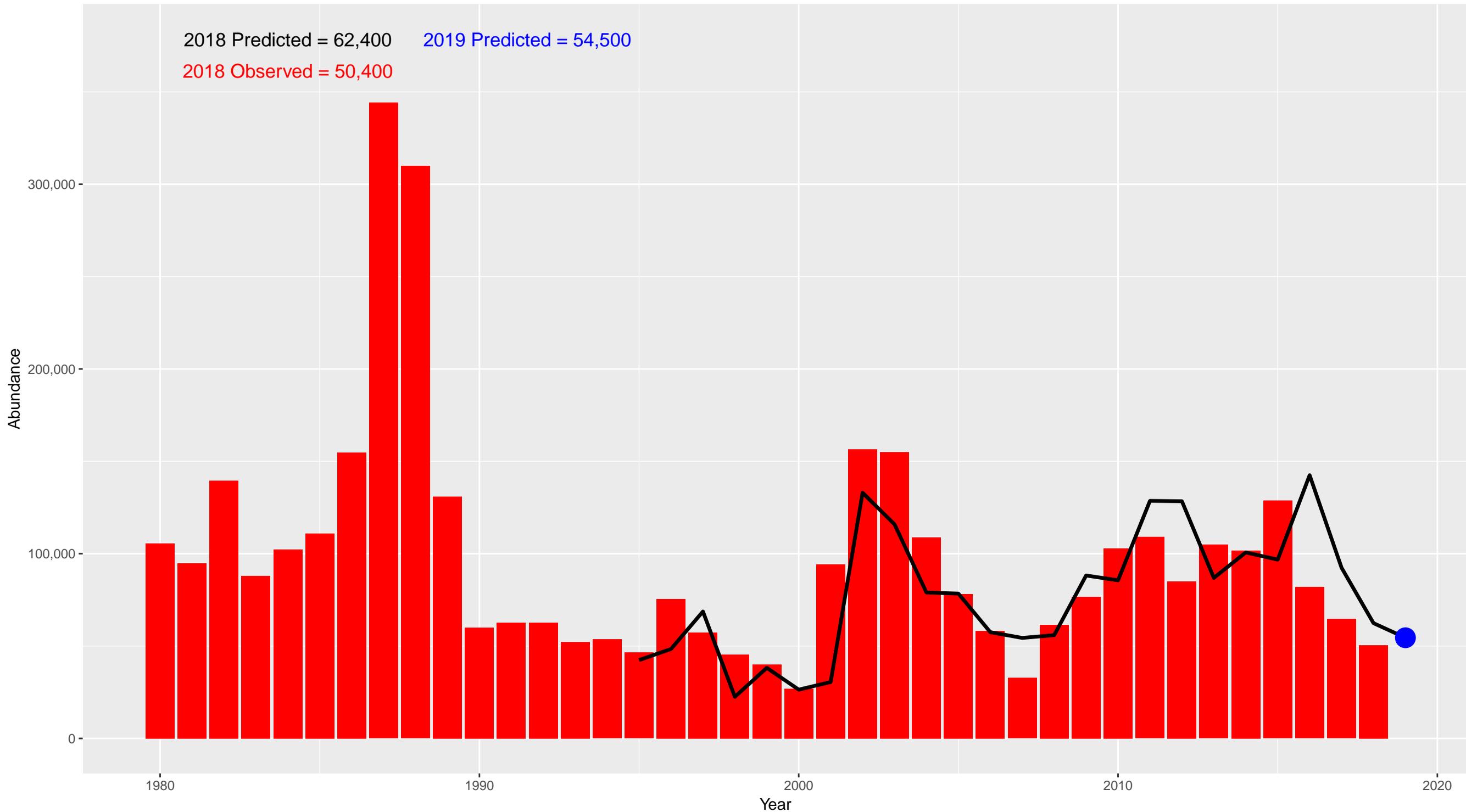
2019 Predicted = 35,900

2018 Observed = 42,120

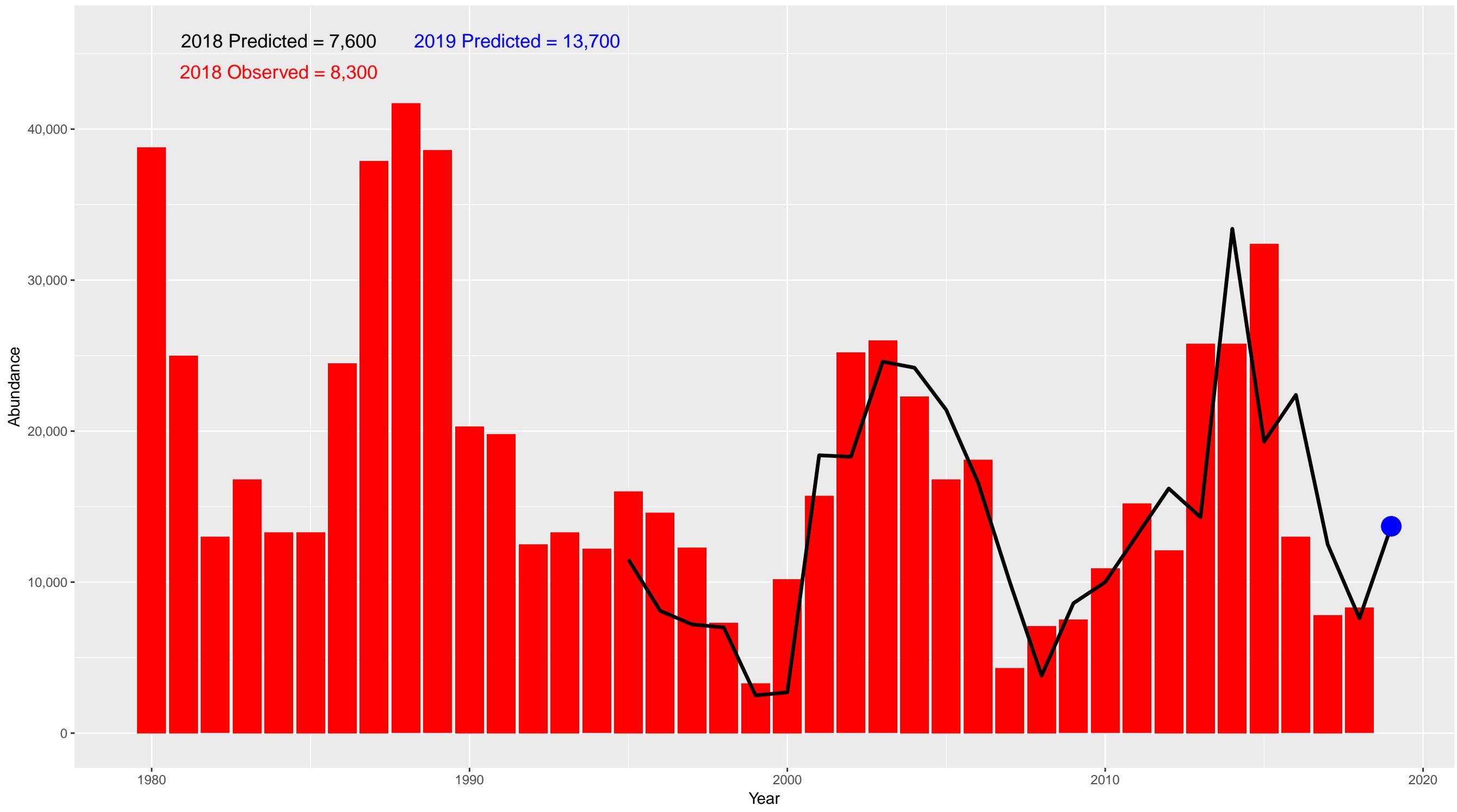


Total LRH Fall Chinook

2018 Predicted = 62,400    2019 Predicted = 54,500  
2018 Observed = 50,400

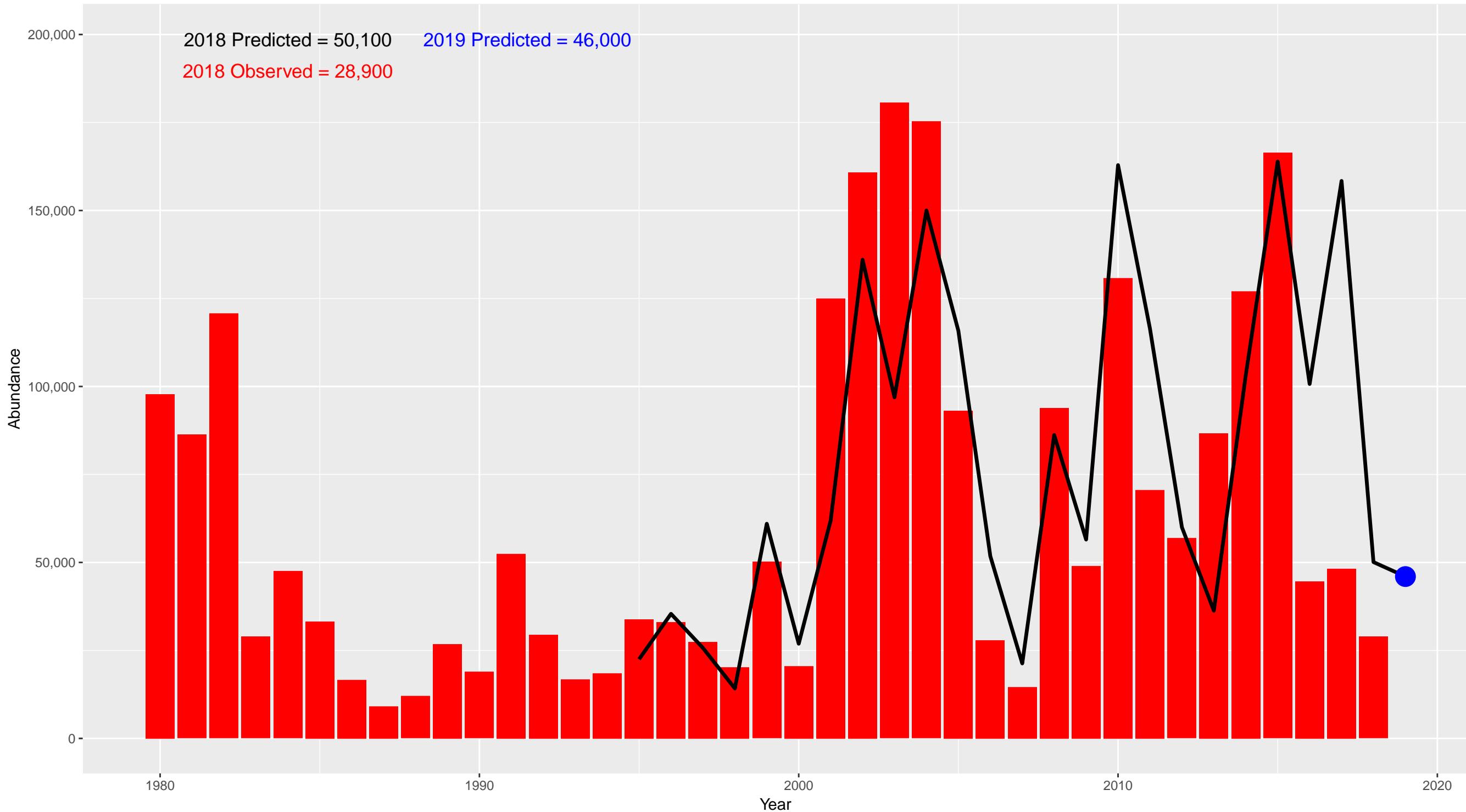


# Total LRW Fall Chinook



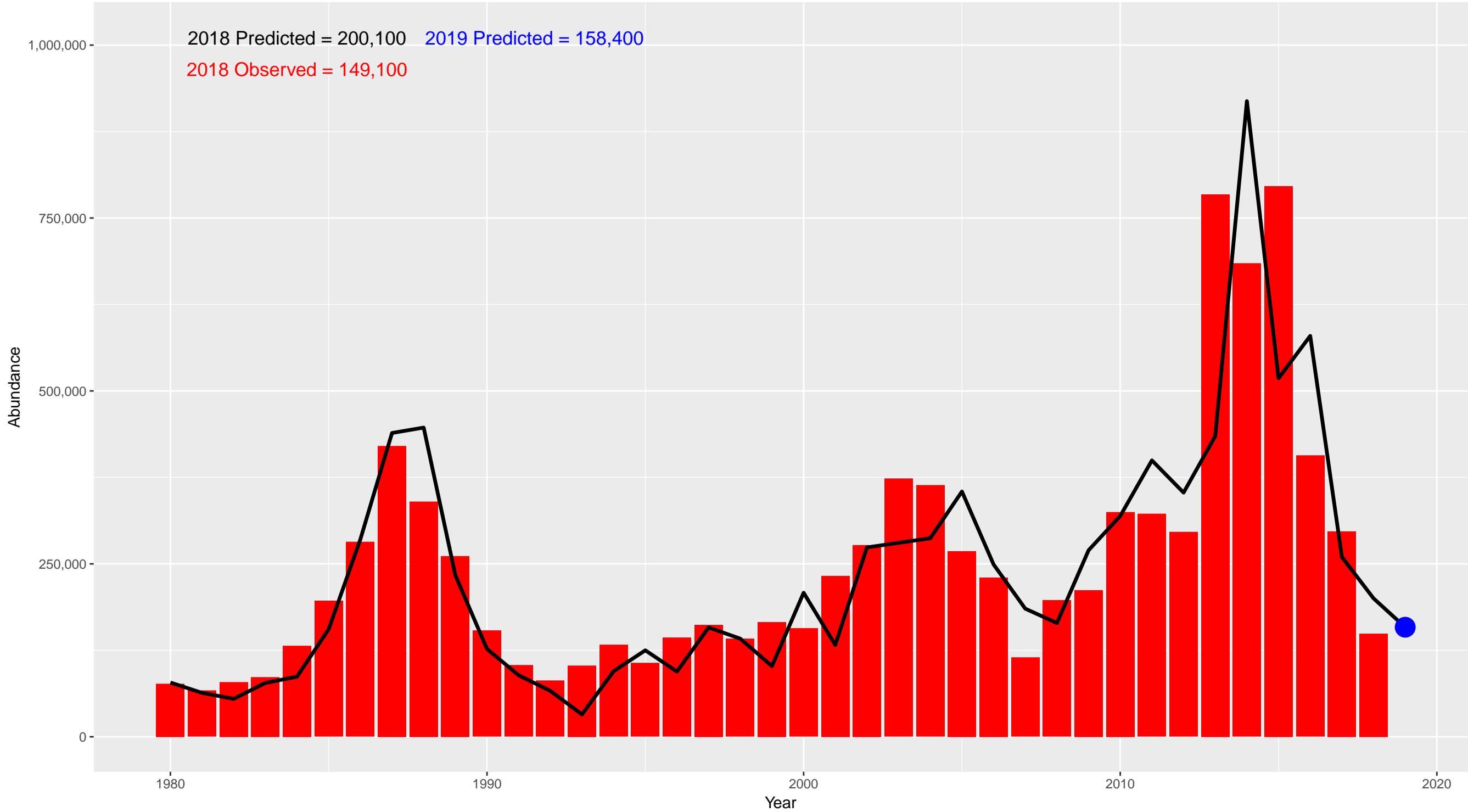
# Total BPH Fall Chinook

2018 Predicted = 50,100    2019 Predicted = 46,000  
2018 Observed = 28,900

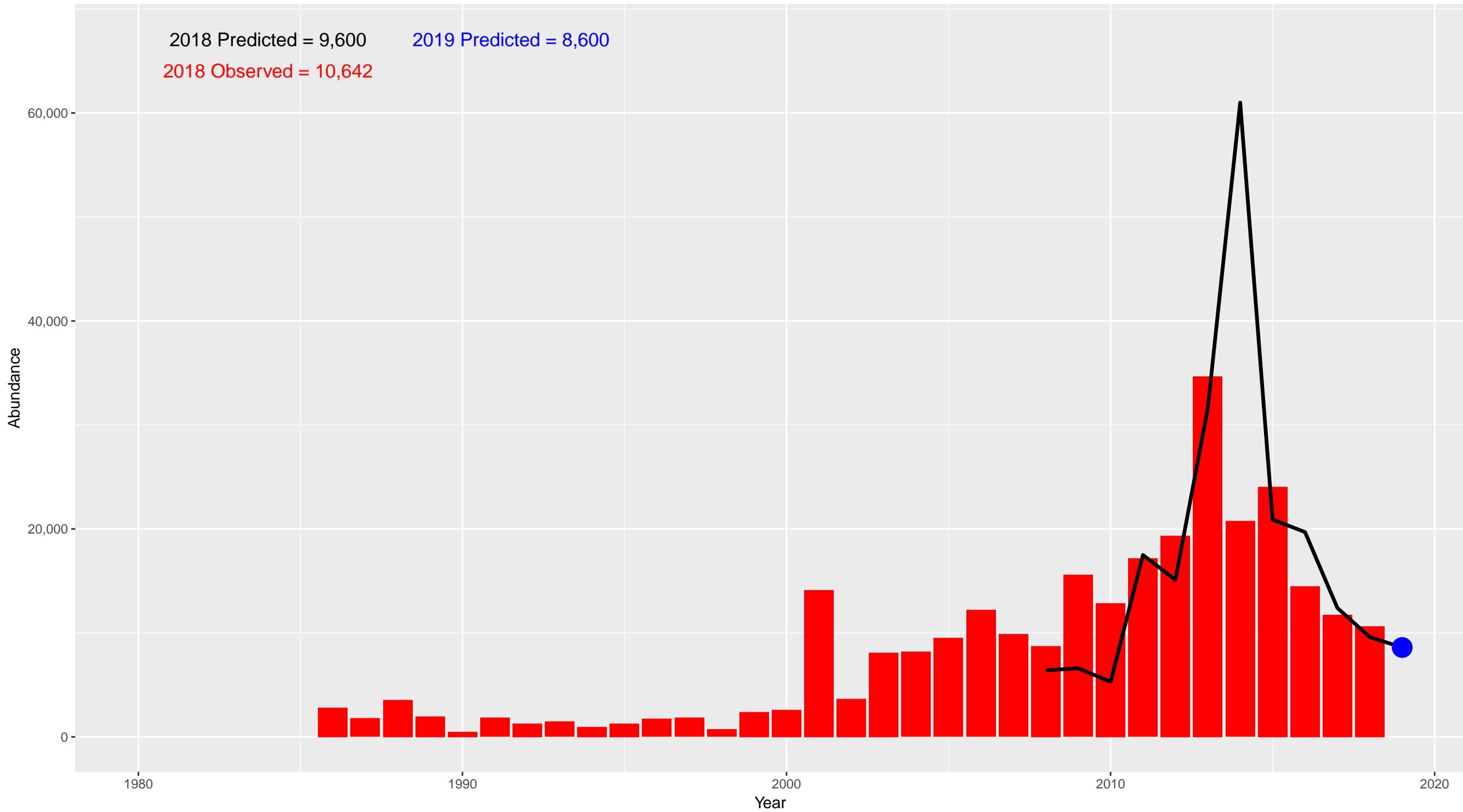


# Total URB Fall Chinook

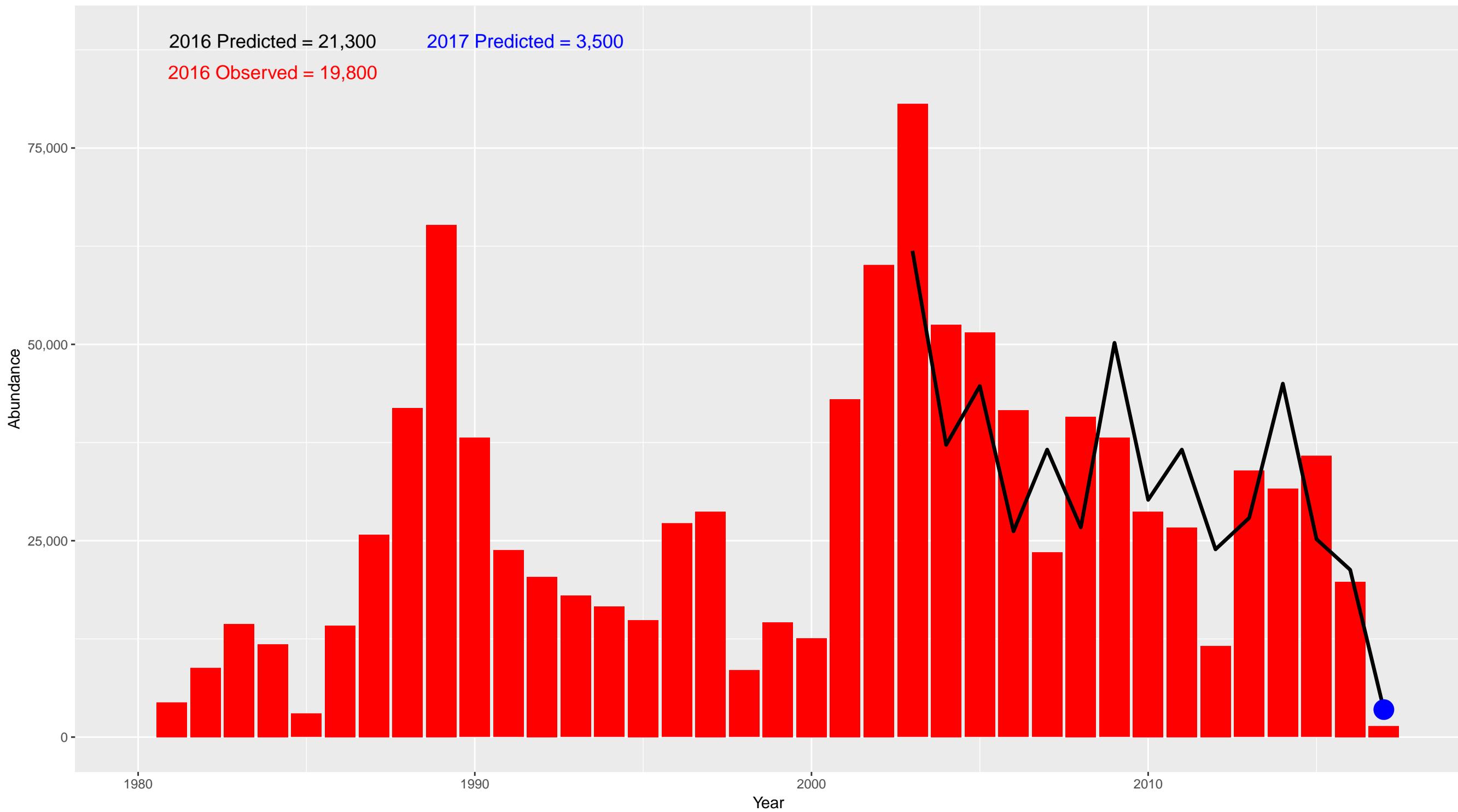
2018 Predicted = 200,100    2019 Predicted = 158,400  
2018 Observed = 149,100



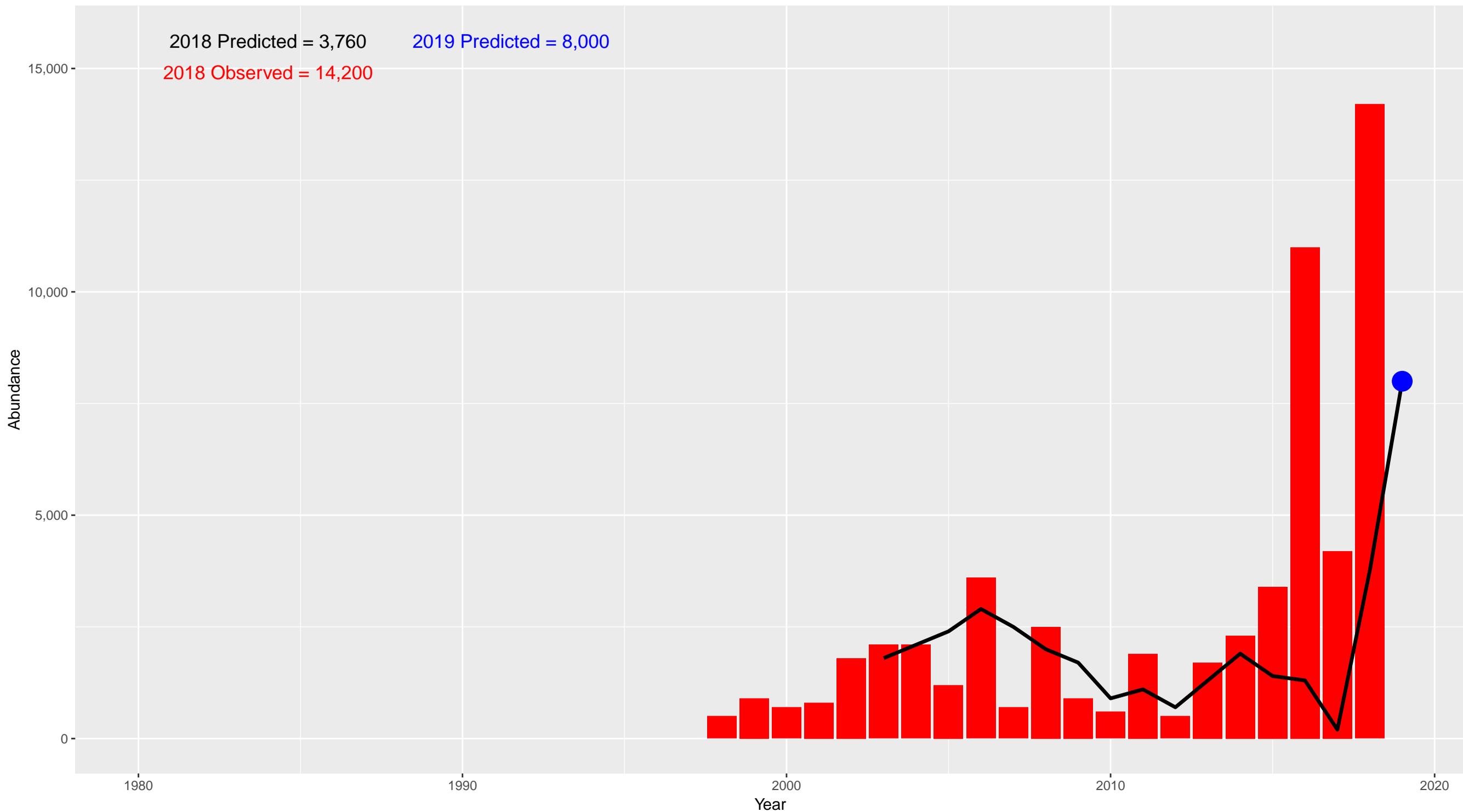
# Total SRW Fall Chinook



# Total BUB Fall Chinook



# Total LRB Fall Chinook

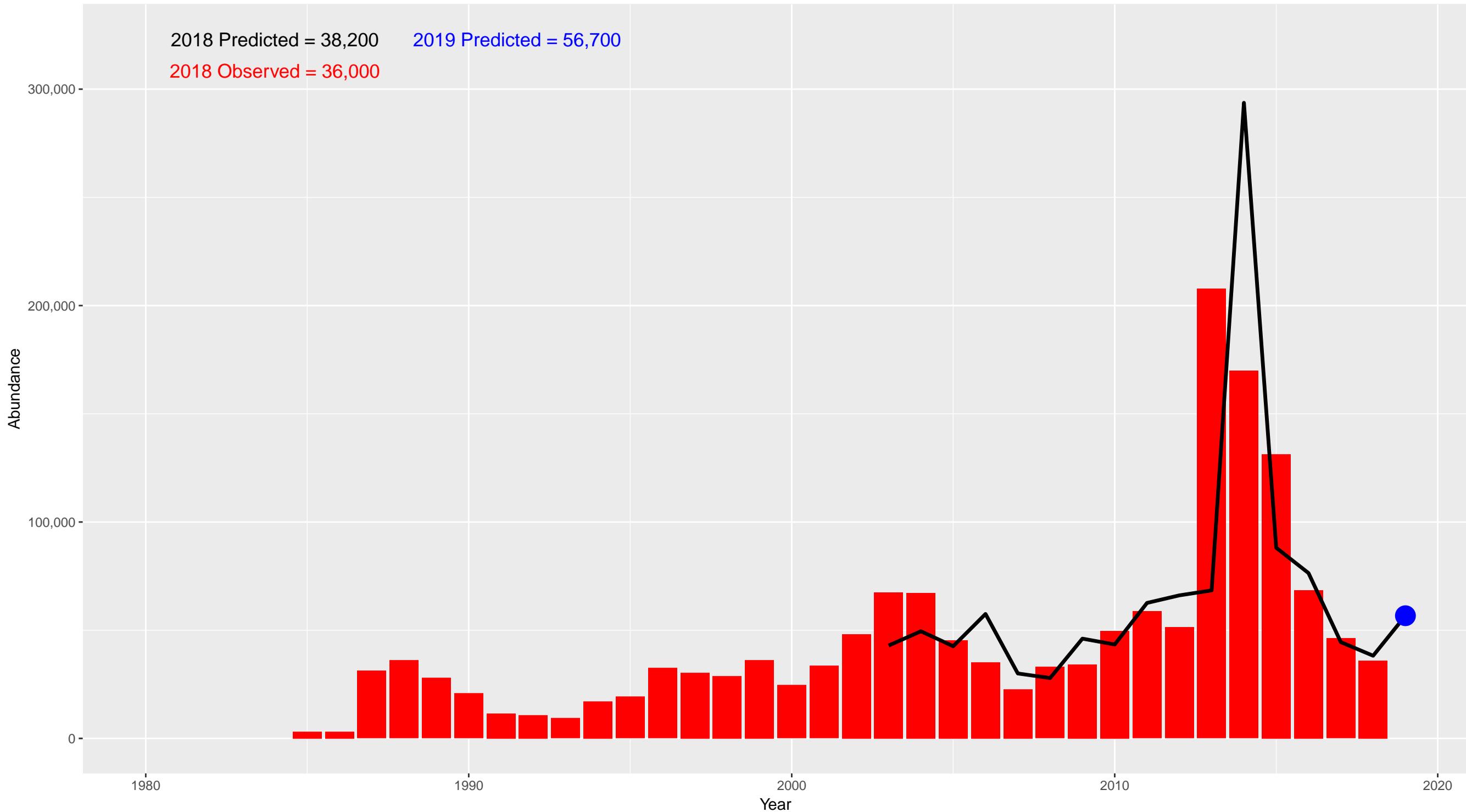


# Total PUB Fall Chinook

2018 Predicted = 38,200

2019 Predicted = 56,700

2018 Observed = 36,000

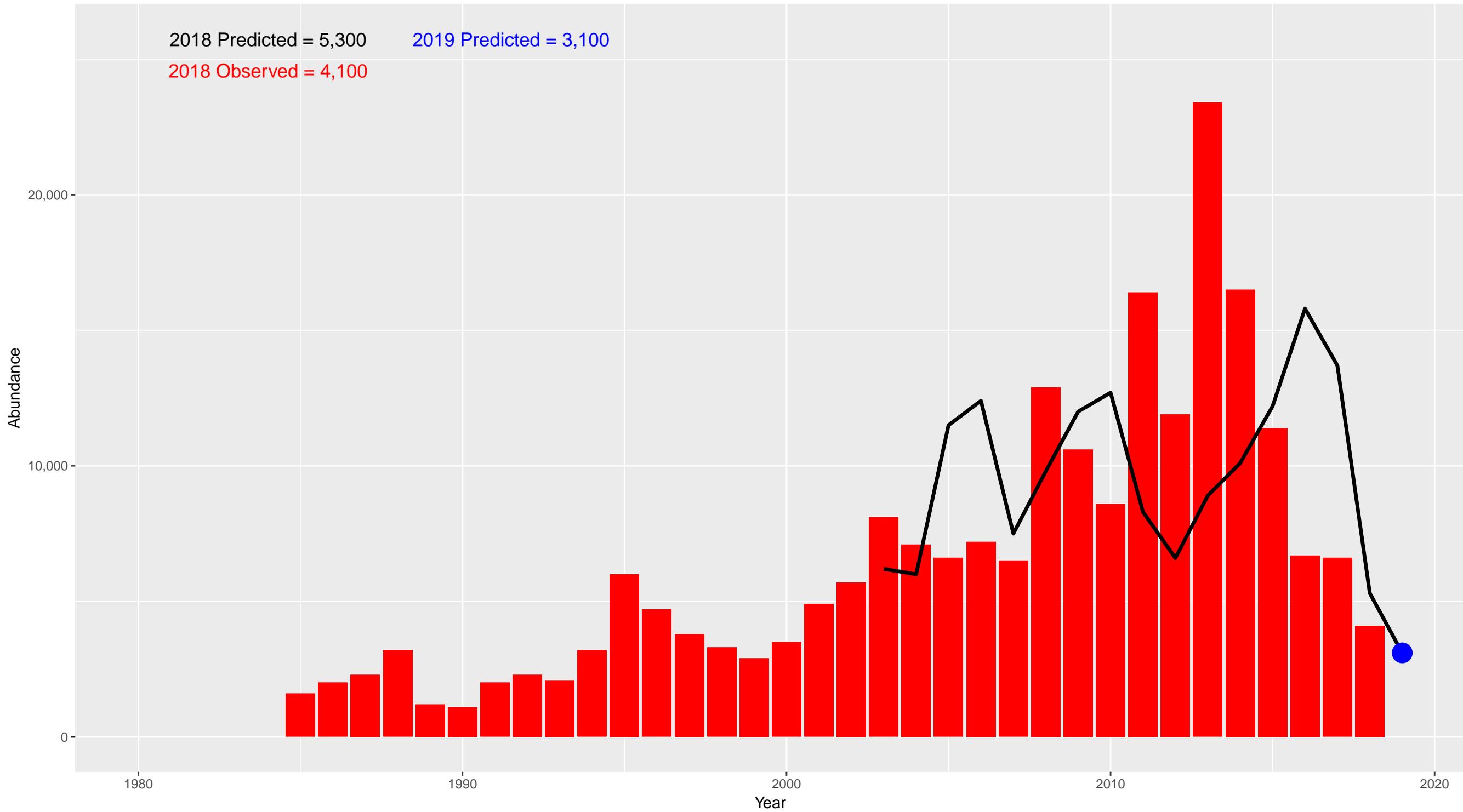


# Total SAB Fall Chinook

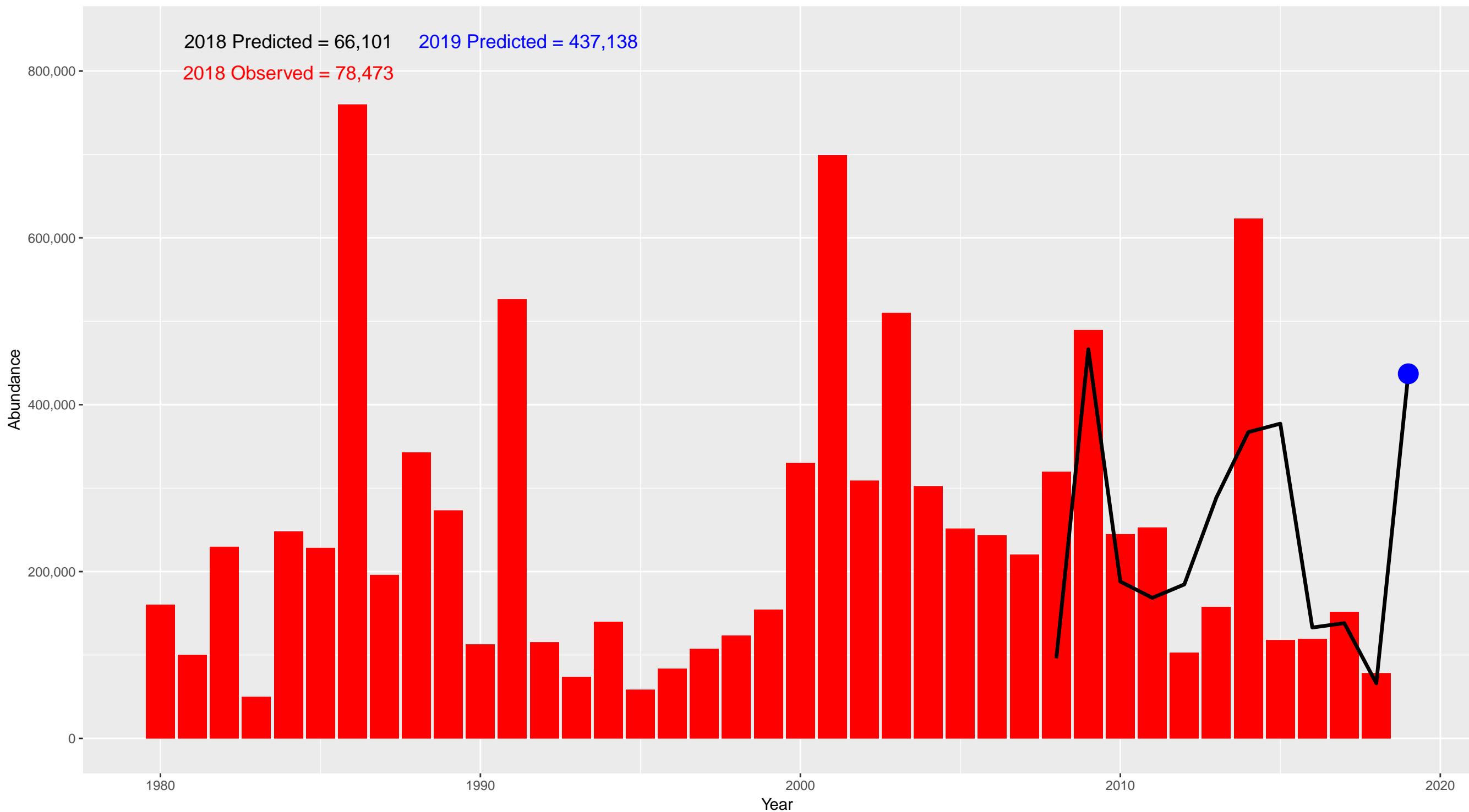
2018 Predicted = 5,300

2019 Predicted = 3,100

2018 Observed = 4,100

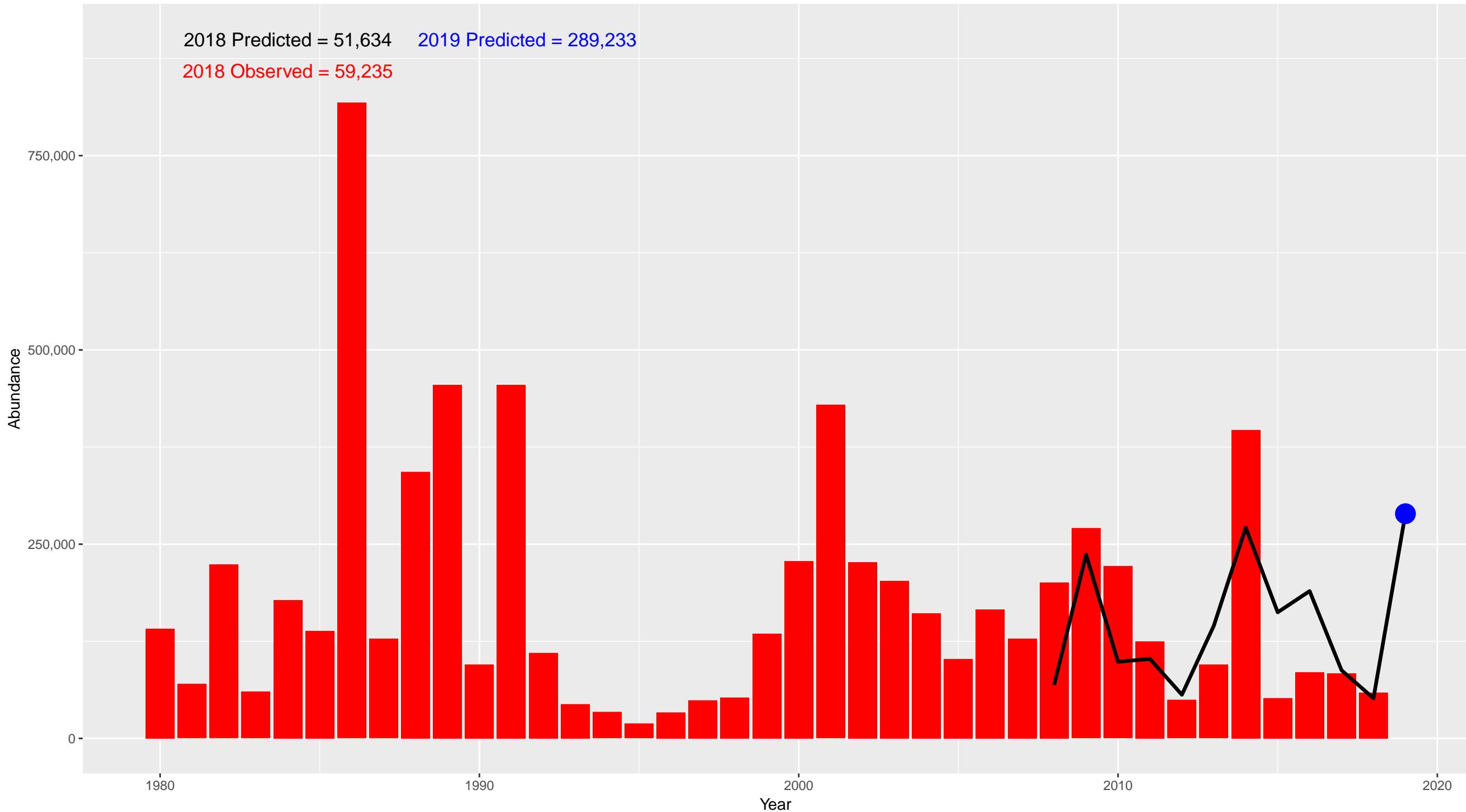


Total Early Columbia River Coho



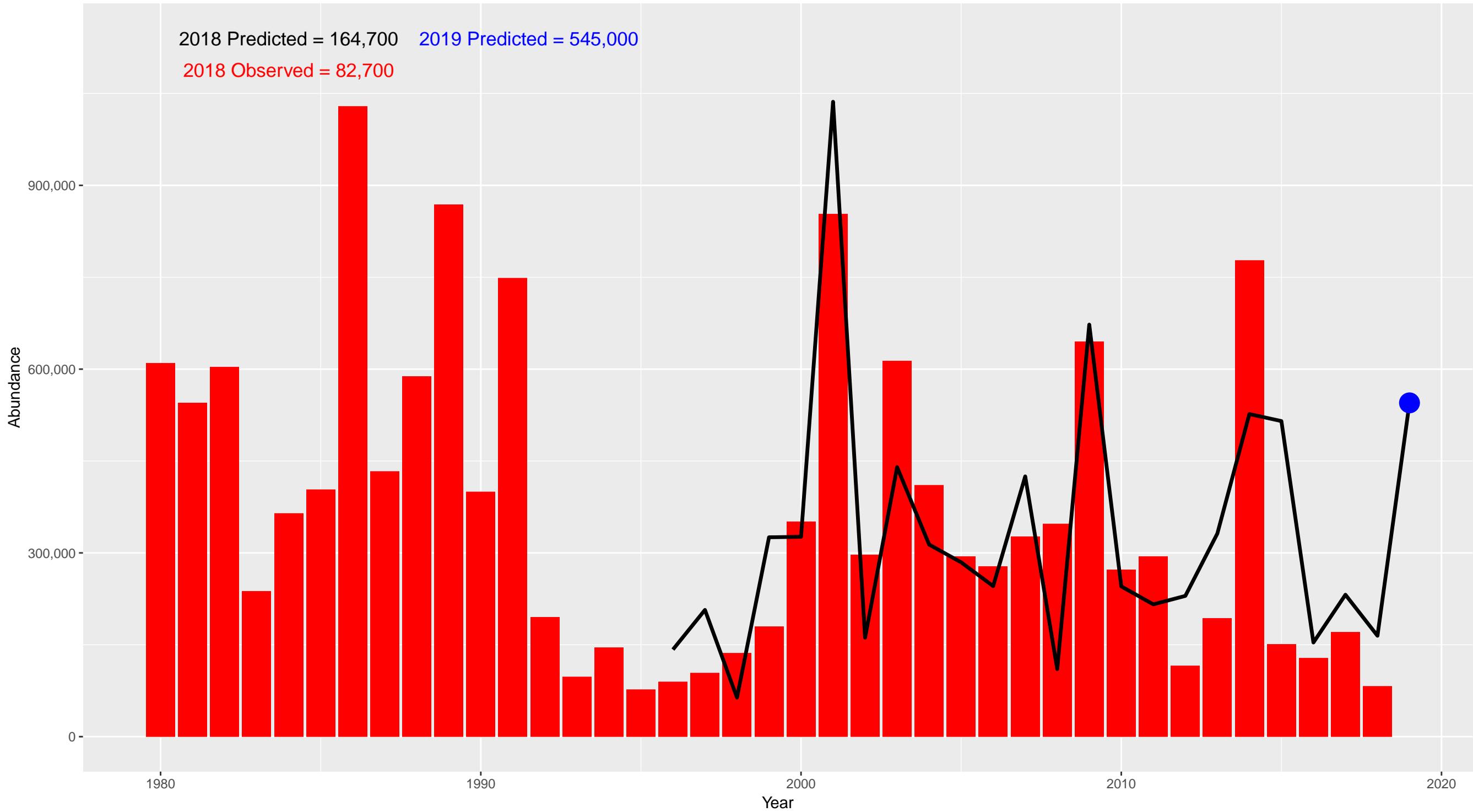
# Total Late Columbia River Coho

2018 Predicted = 51,634    2019 Predicted = 289,233  
2018 Observed = 59,235



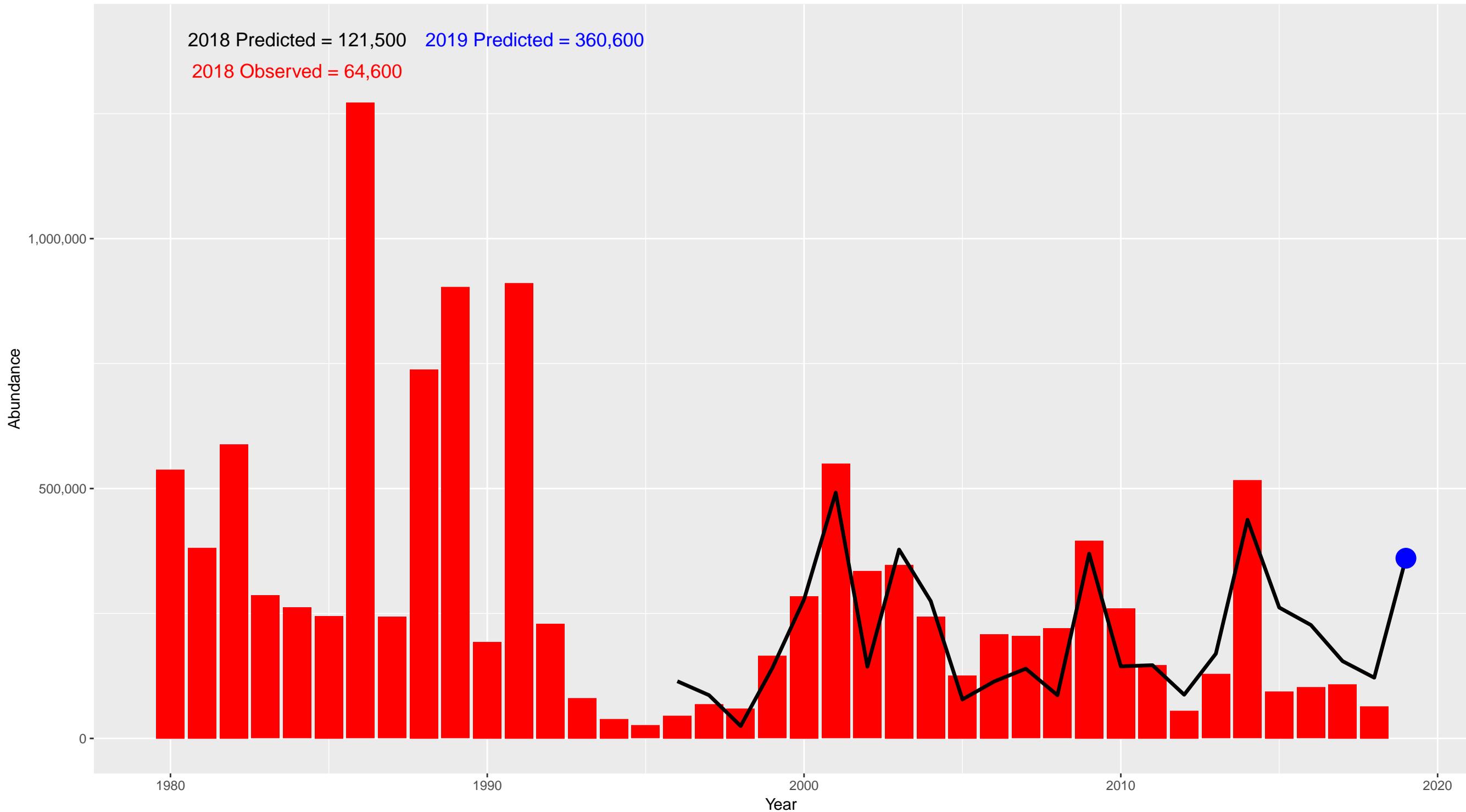
# Total Early Ocean Coho

2018 Predicted = 164,700    2019 Predicted = 545,000  
2018 Observed = 82,700



# Total Late Ocean Coho

2018 Predicted = 121,500    2019 Predicted = 360,600  
2018 Observed = 64,600

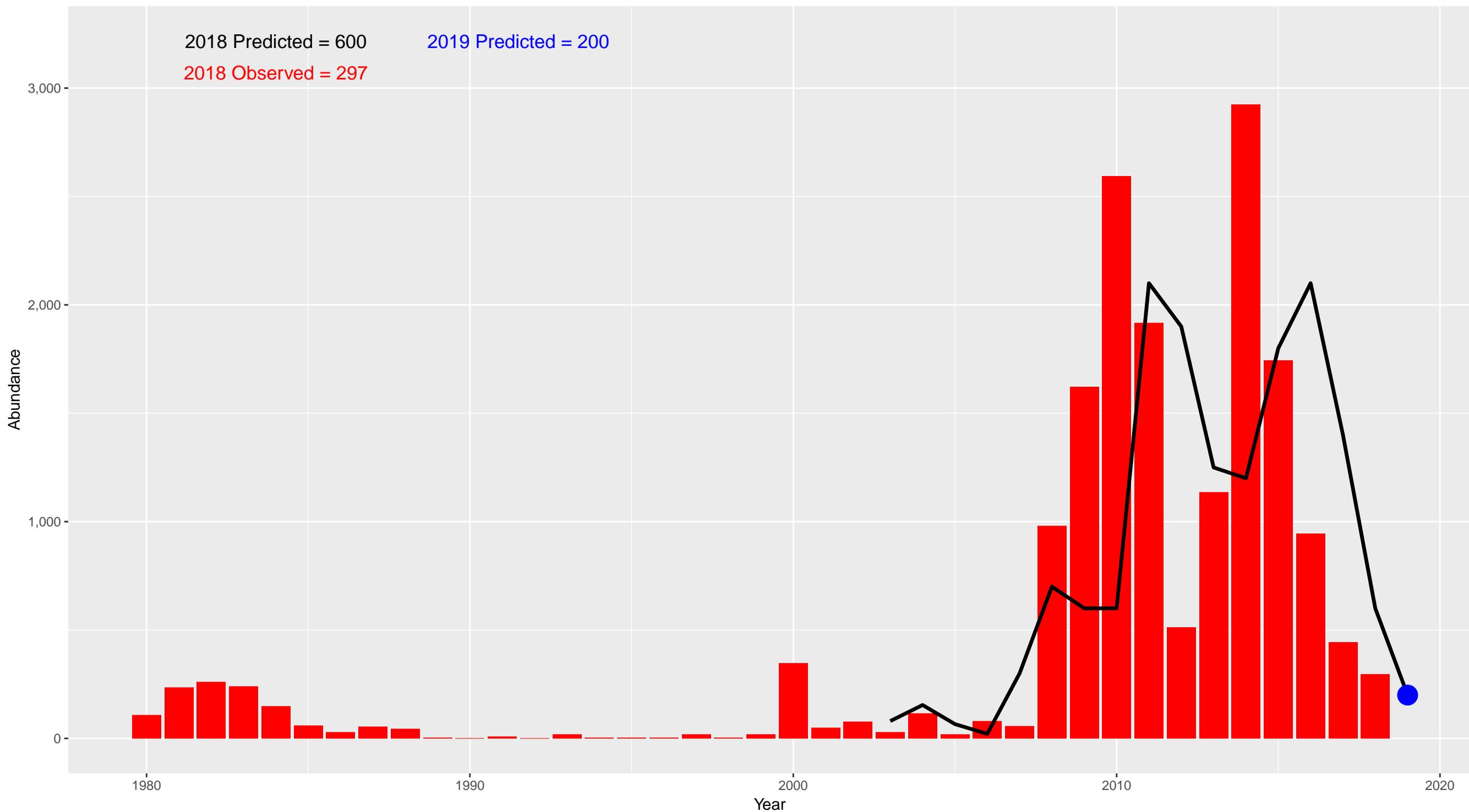


# Total Snake River Columbia River Sockeye

2018 Predicted = 600

2019 Predicted = 200

2018 Observed = 297

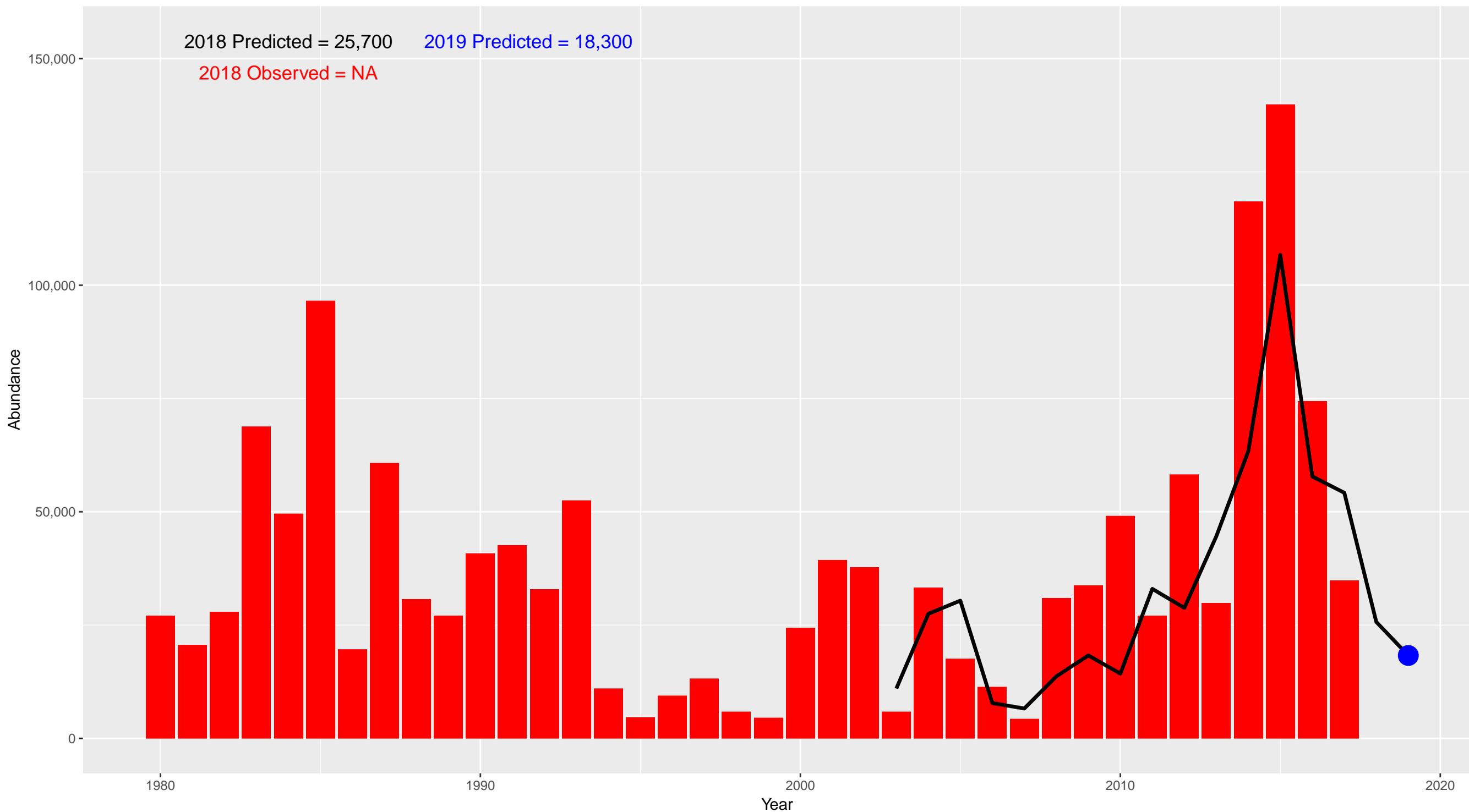


# Total Wenatchee Columbia River Sockeye

2018 Predicted = 25,700

2019 Predicted = 18,300

2018 Observed = NA

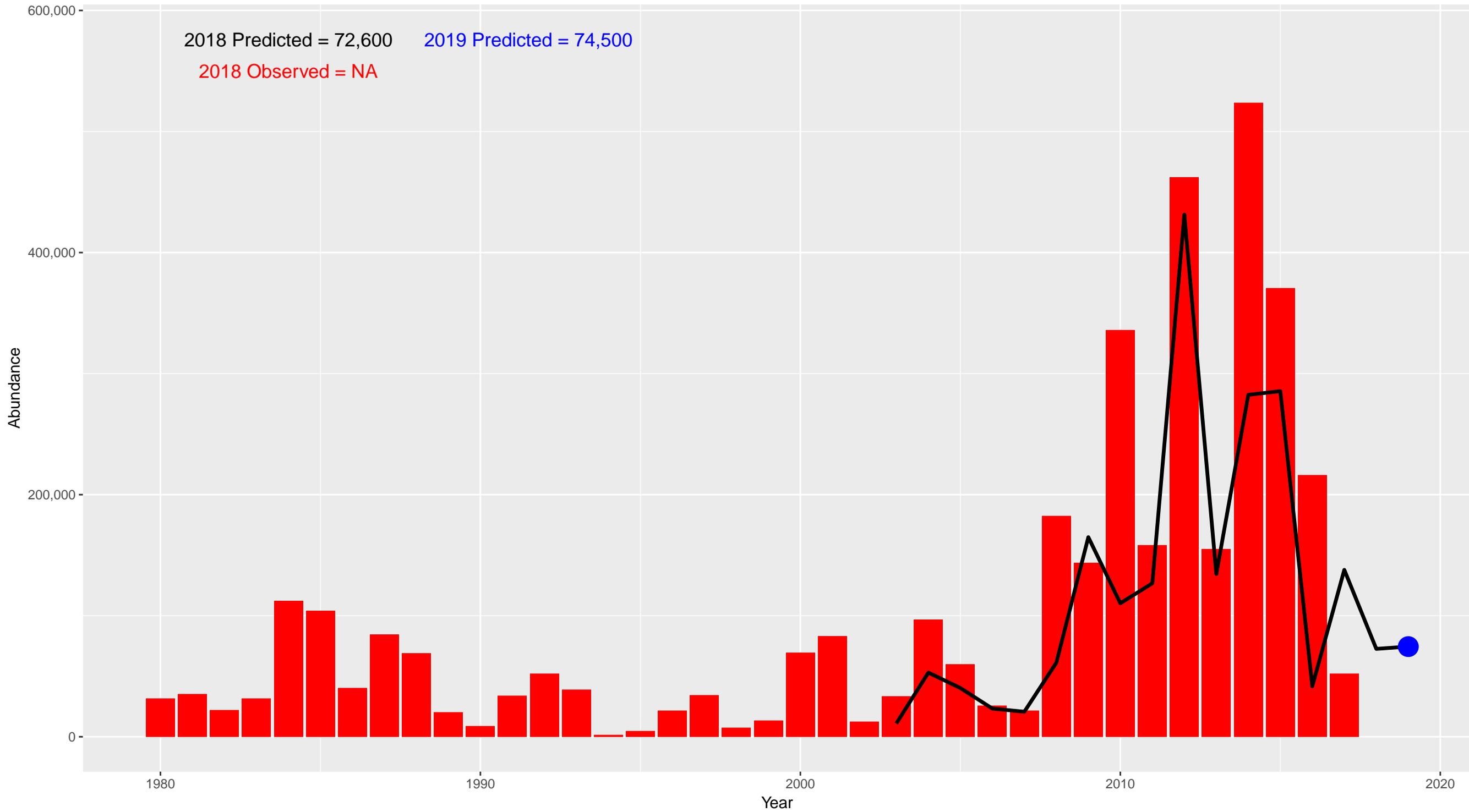


# Total Okanagan Columbia River Sockeye

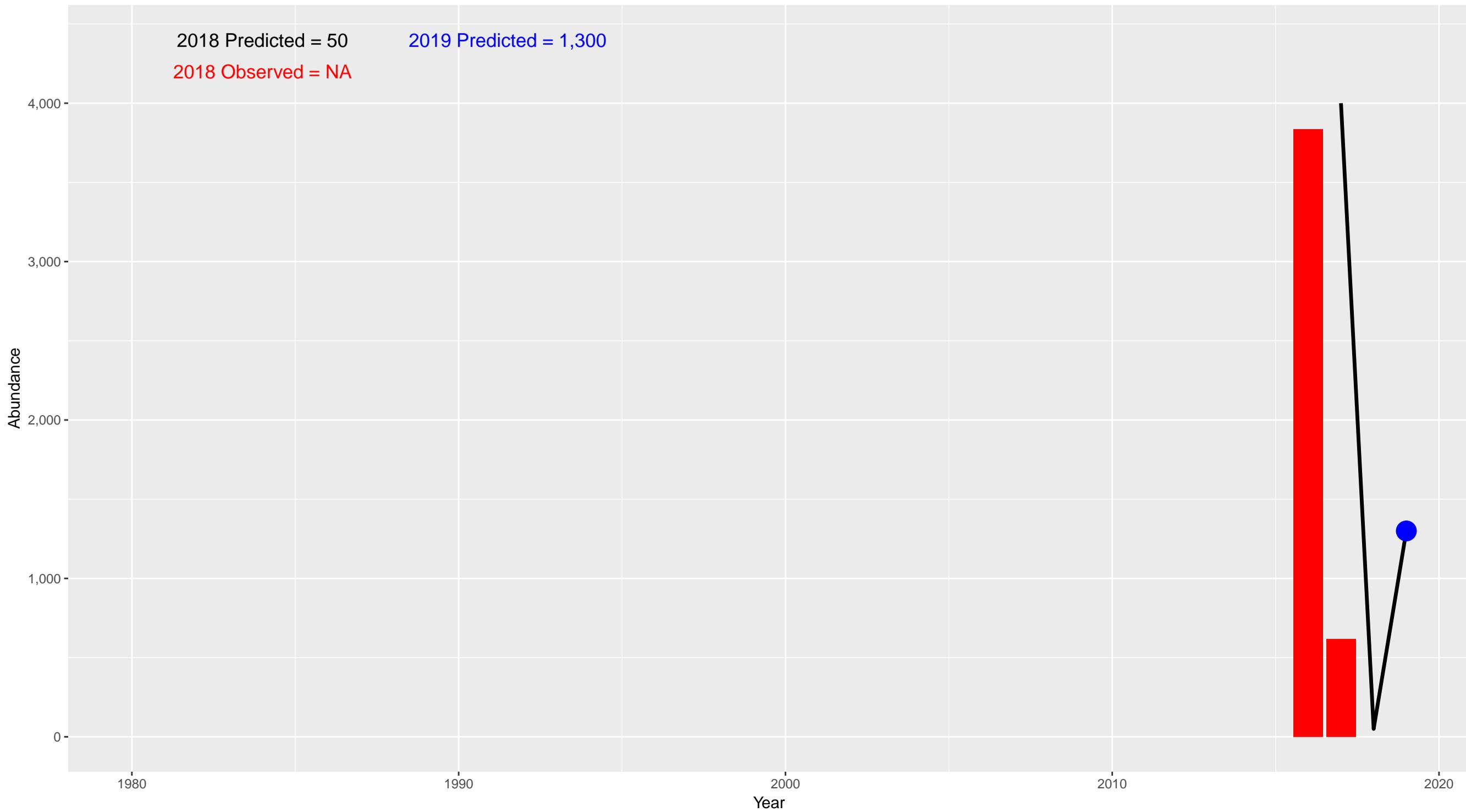
2018 Predicted = 72,600

2019 Predicted = 74,500

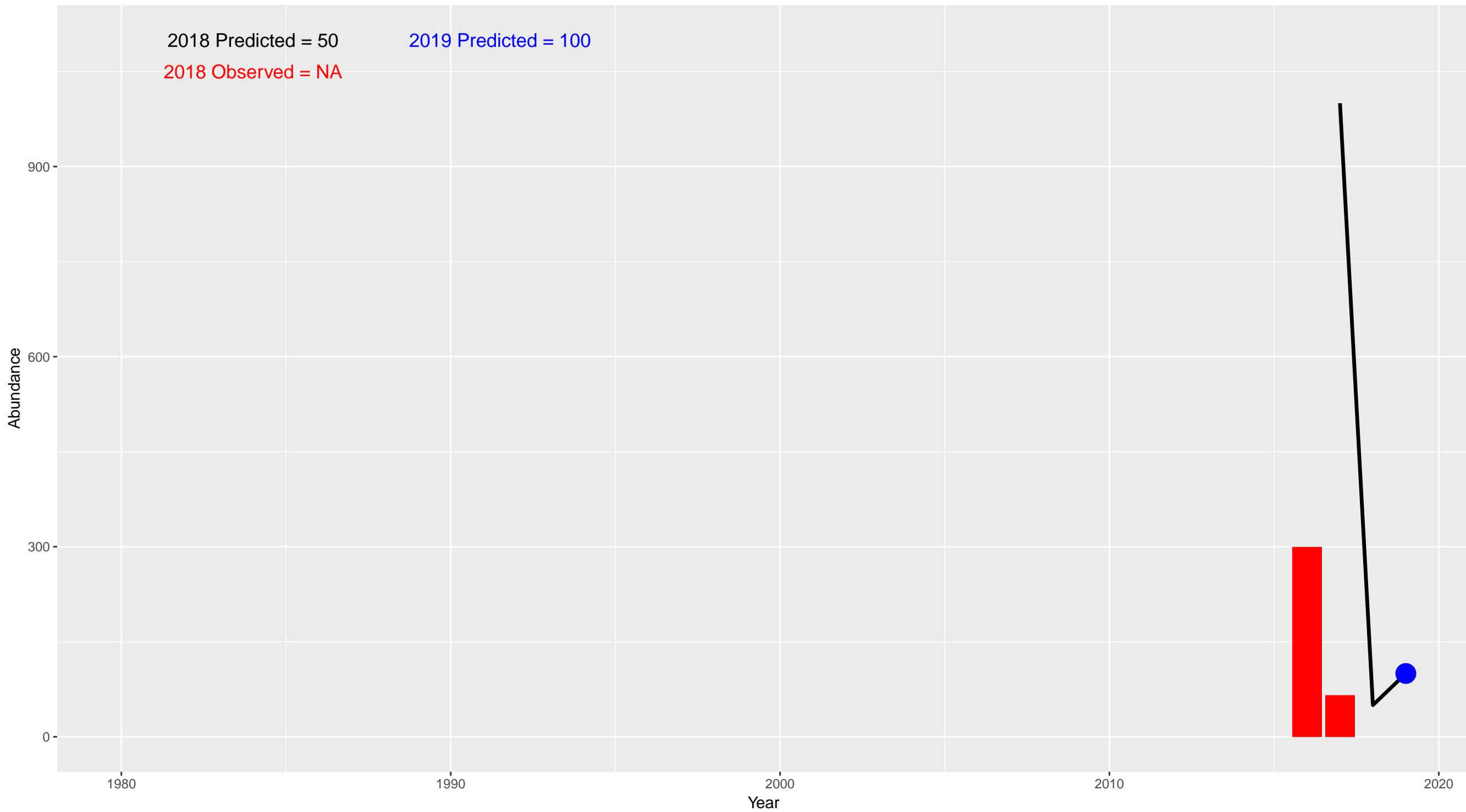
2018 Observed = NA



# Total Yakima Columbia River Sockeye

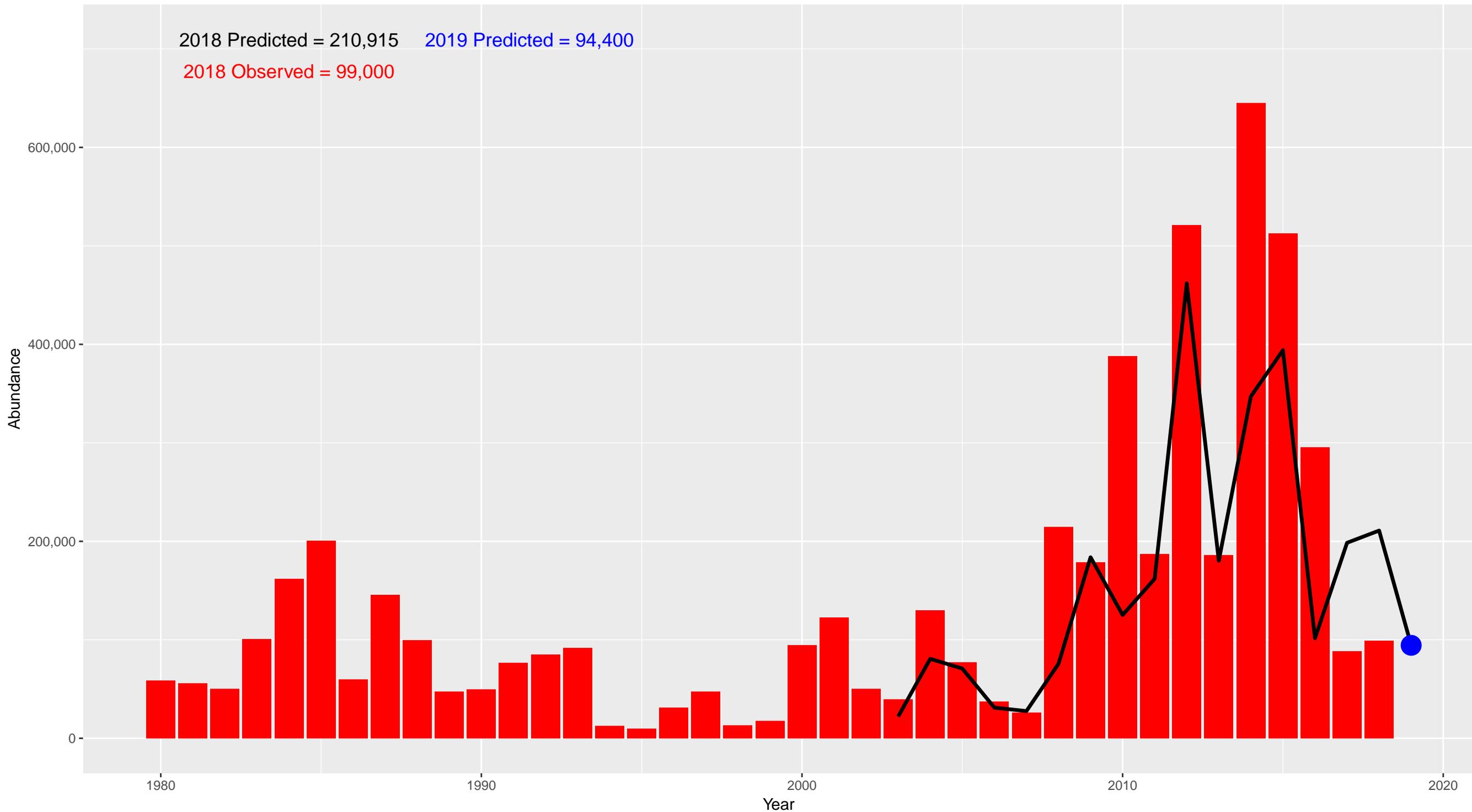


# Total Deschutes Columbia River Sockeye



# Total ` Columbia River Sockeye

2018 Predicted = 210,915    2019 Predicted = 94,400  
2018 Observed = 99,000

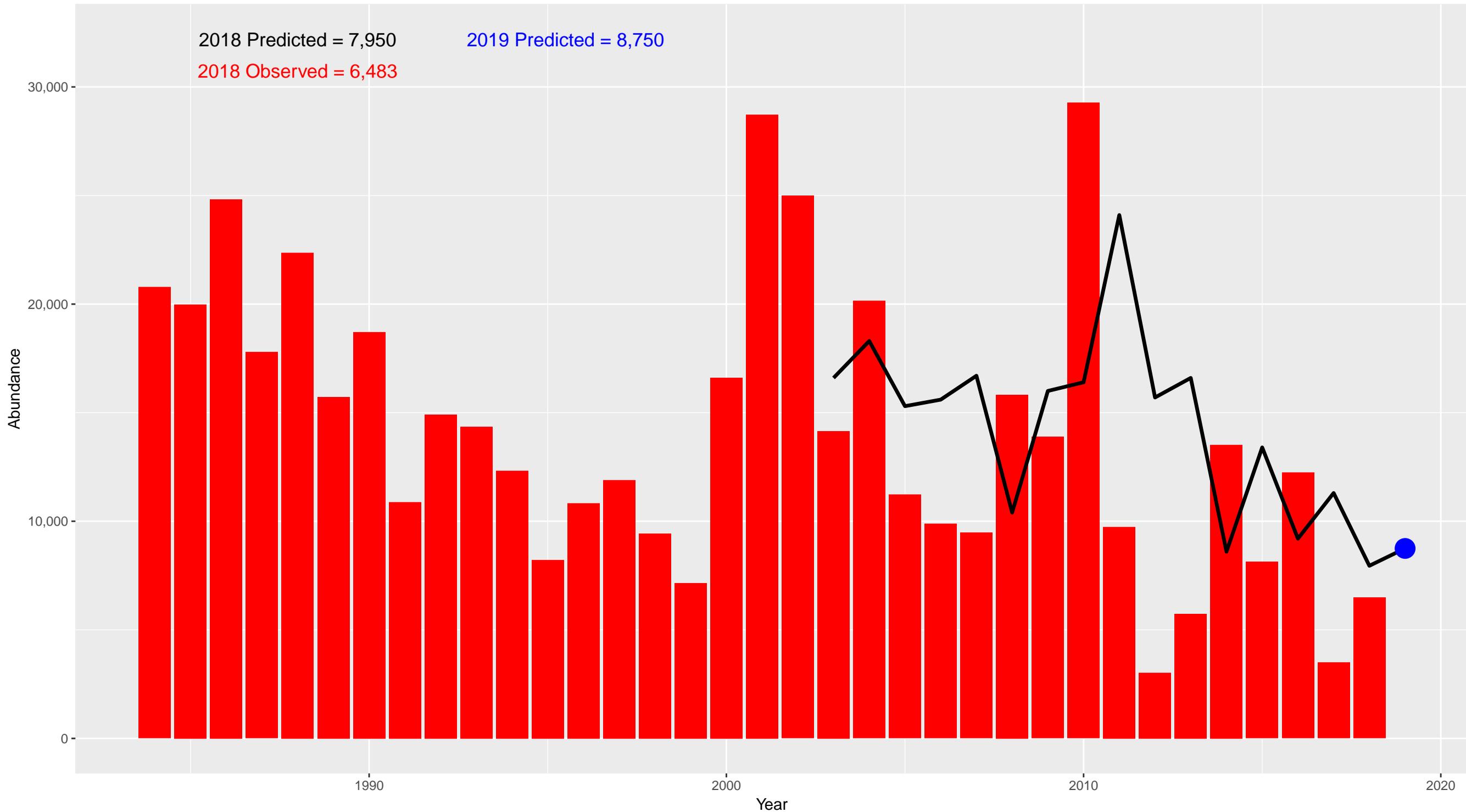


Total Skamania Summer Steelhead

2018 Predicted = 7,950

2019 Predicted = 8,750

2018 Observed = 6,483

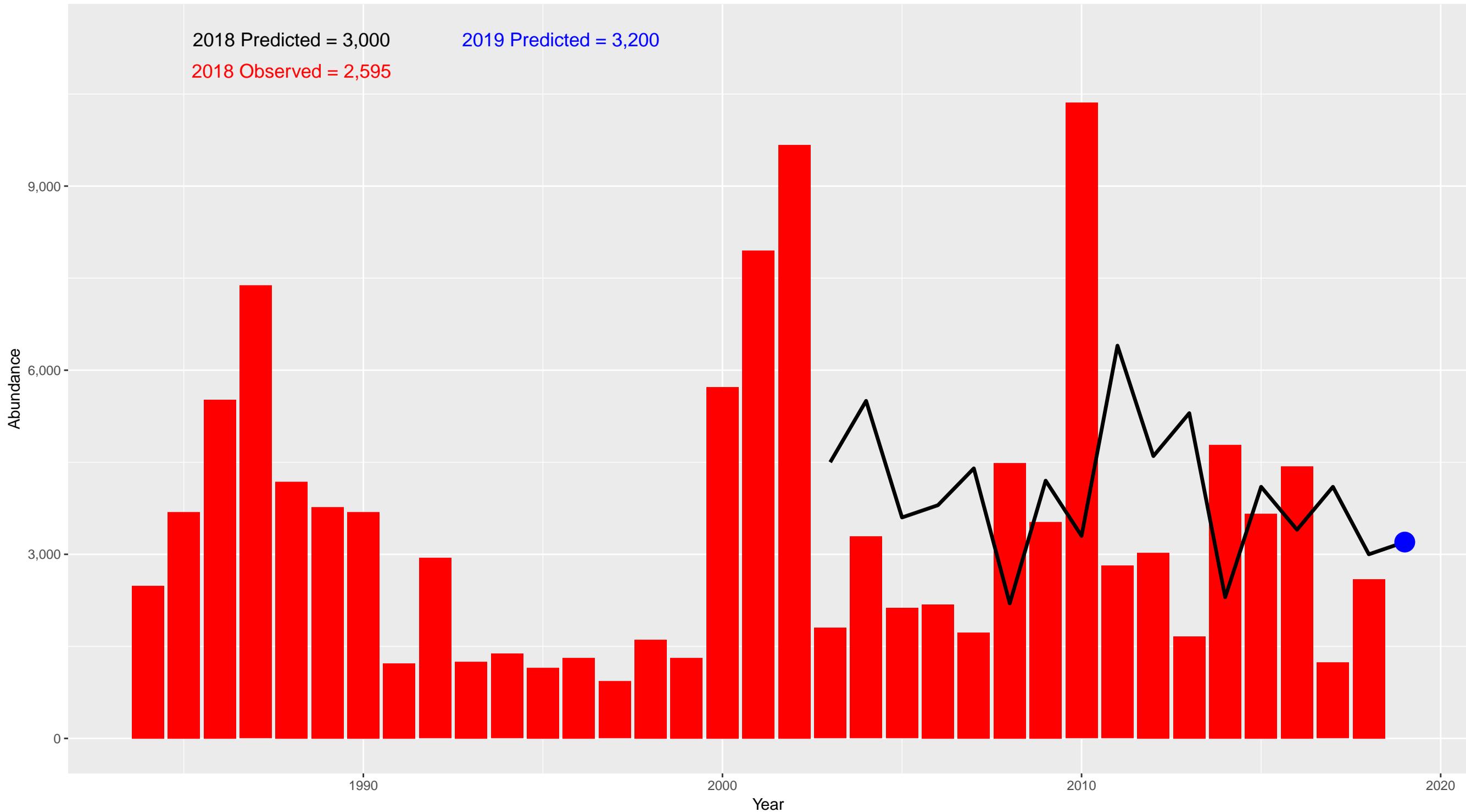


# Wild Skamania Summer Steelhead

2018 Predicted = 3,000

2019 Predicted = 3,200

2018 Observed = 2,595

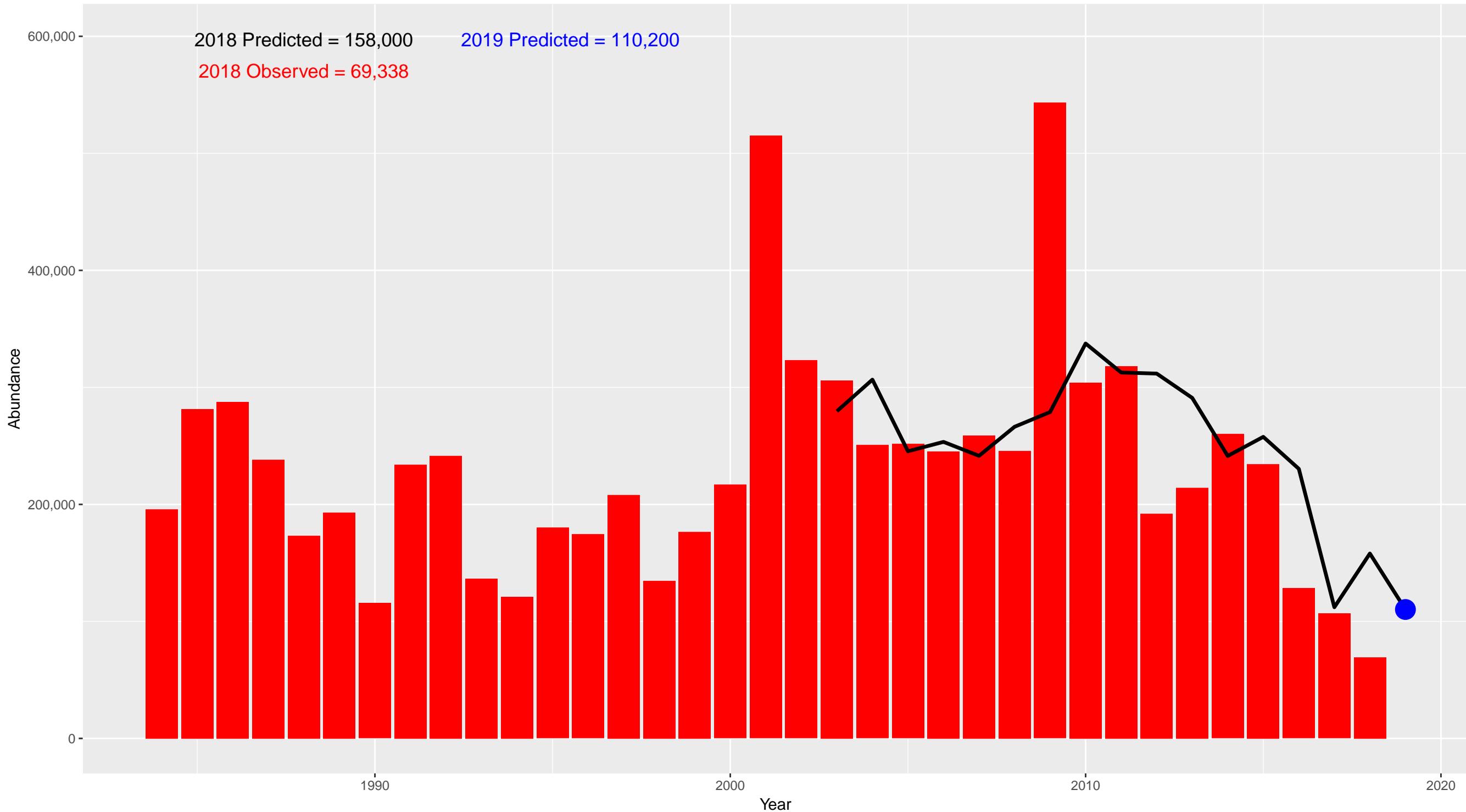


Total A Summer Steelhead

2018 Predicted = 158,000

2019 Predicted = 110,200

2018 Observed = 69,338

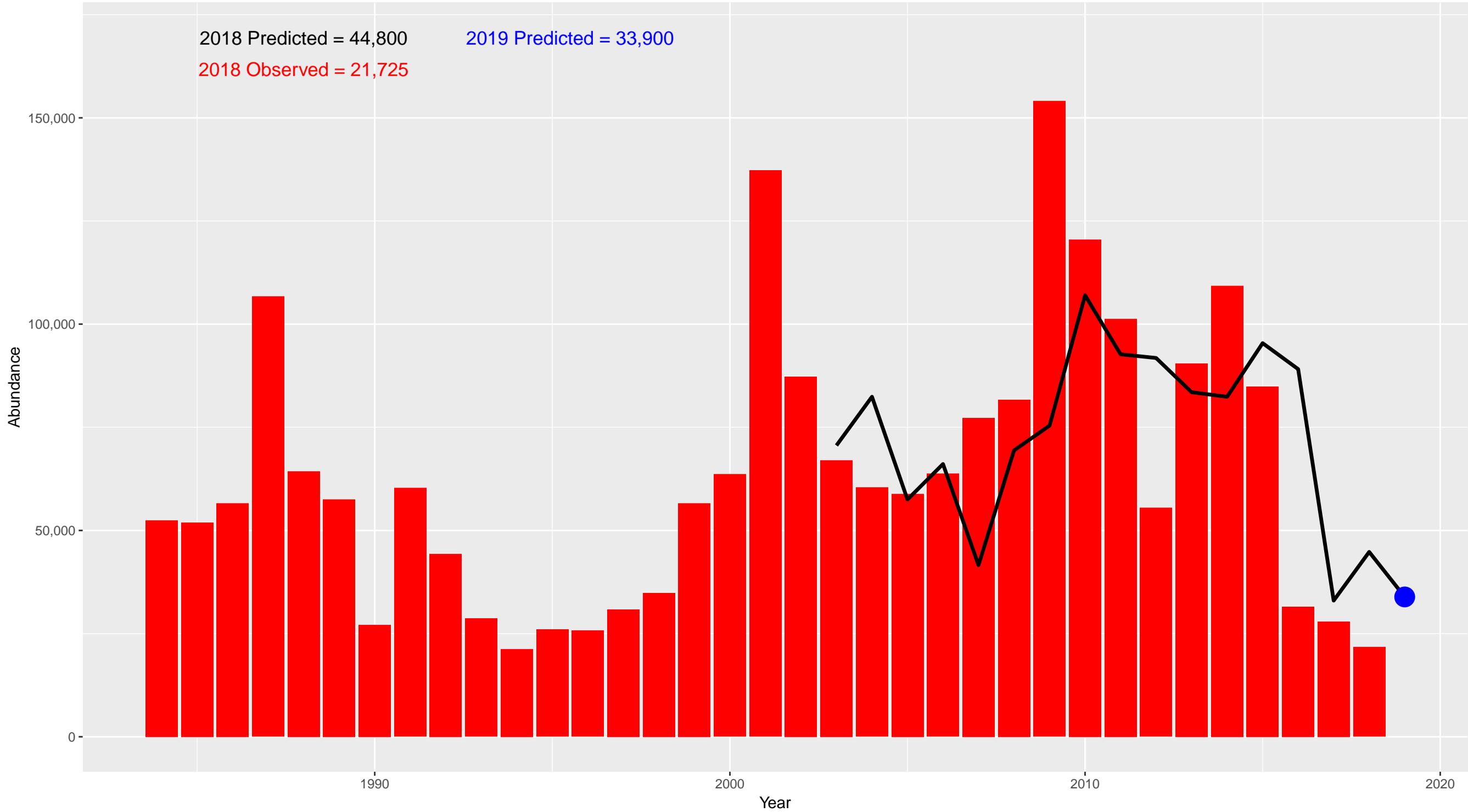


# Wild A Summer Steelhead

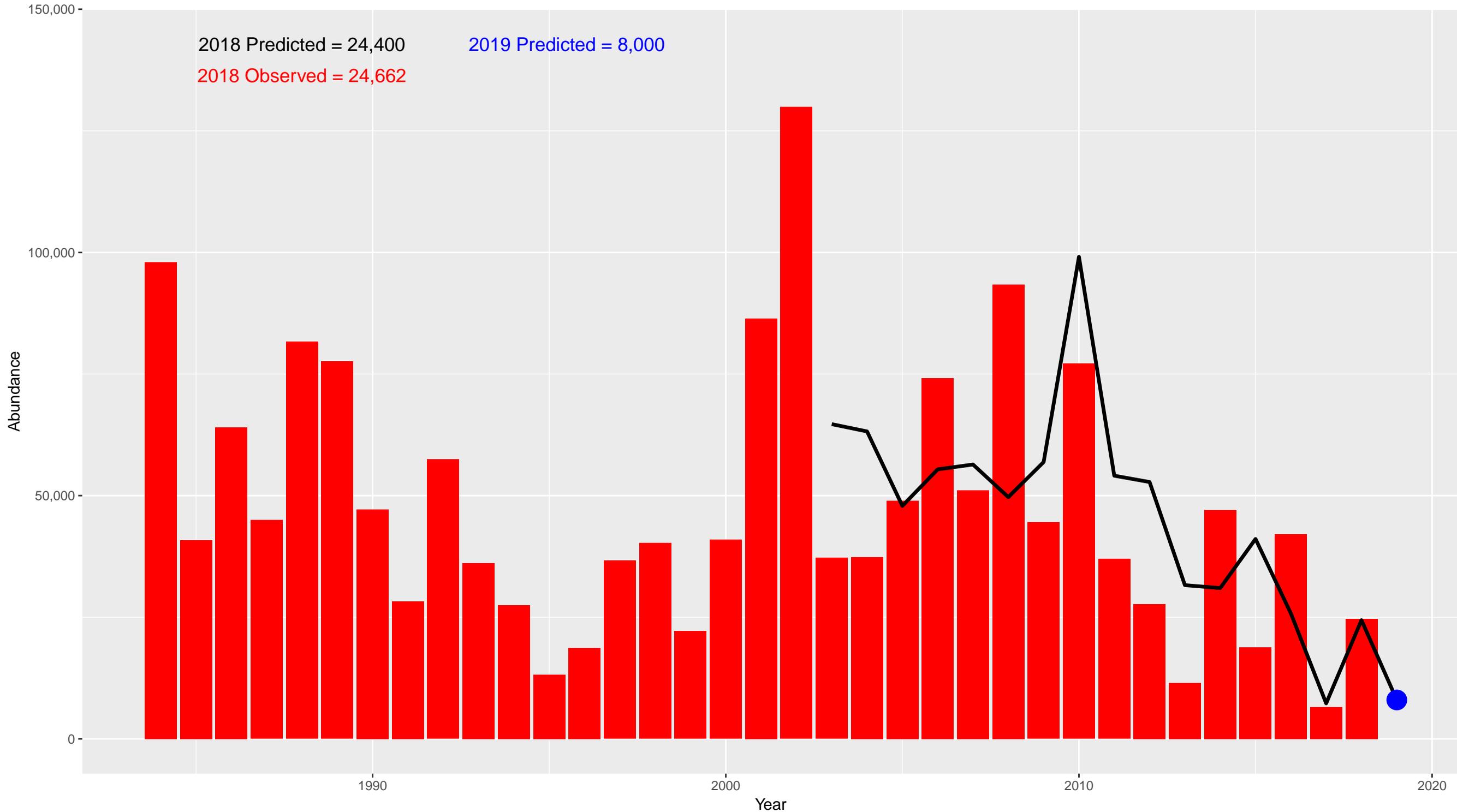
2018 Predicted = 44,800

2019 Predicted = 33,900

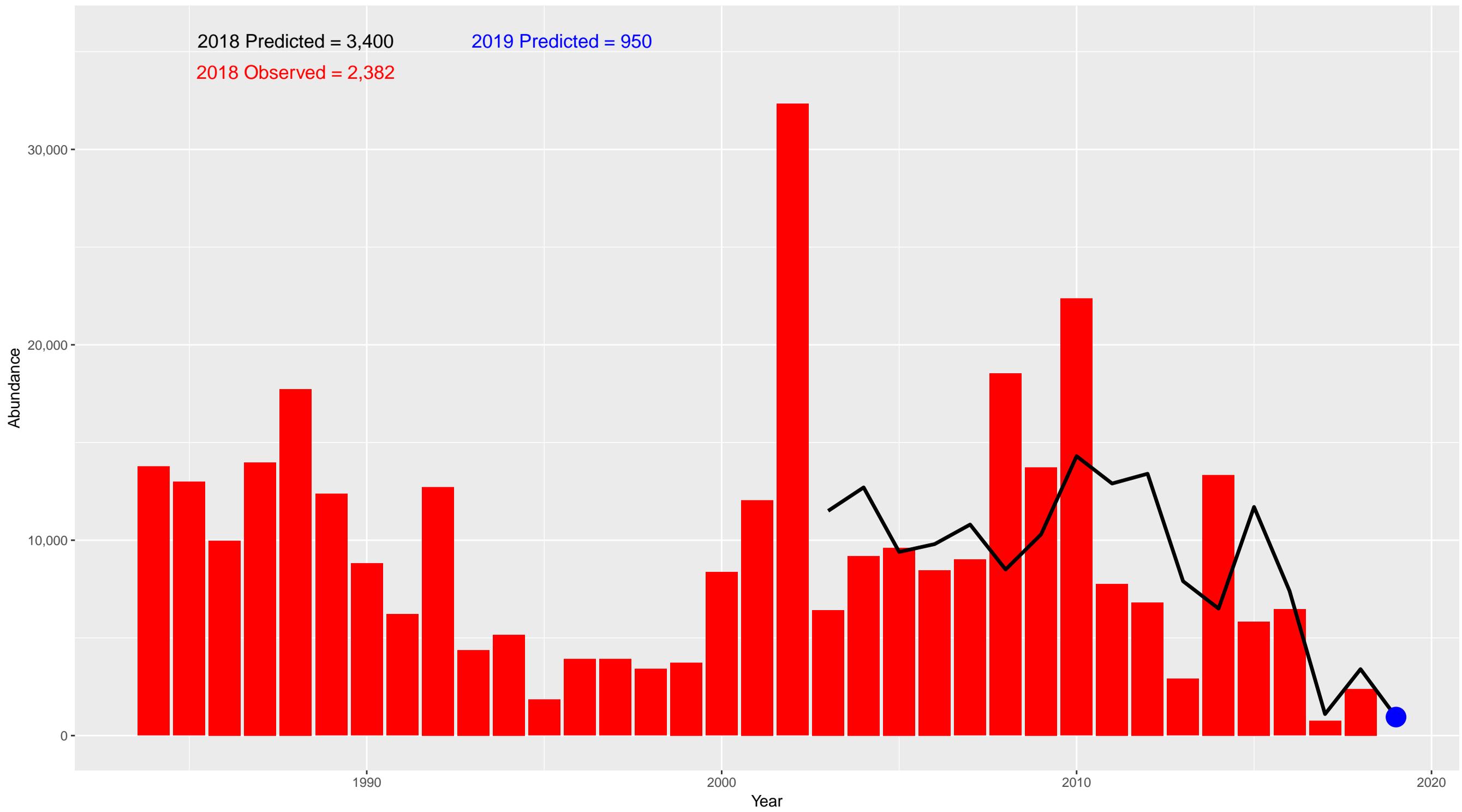
2018 Observed = 21,725



Total B Summer Steelhead



# Wild B Summer Steelhead

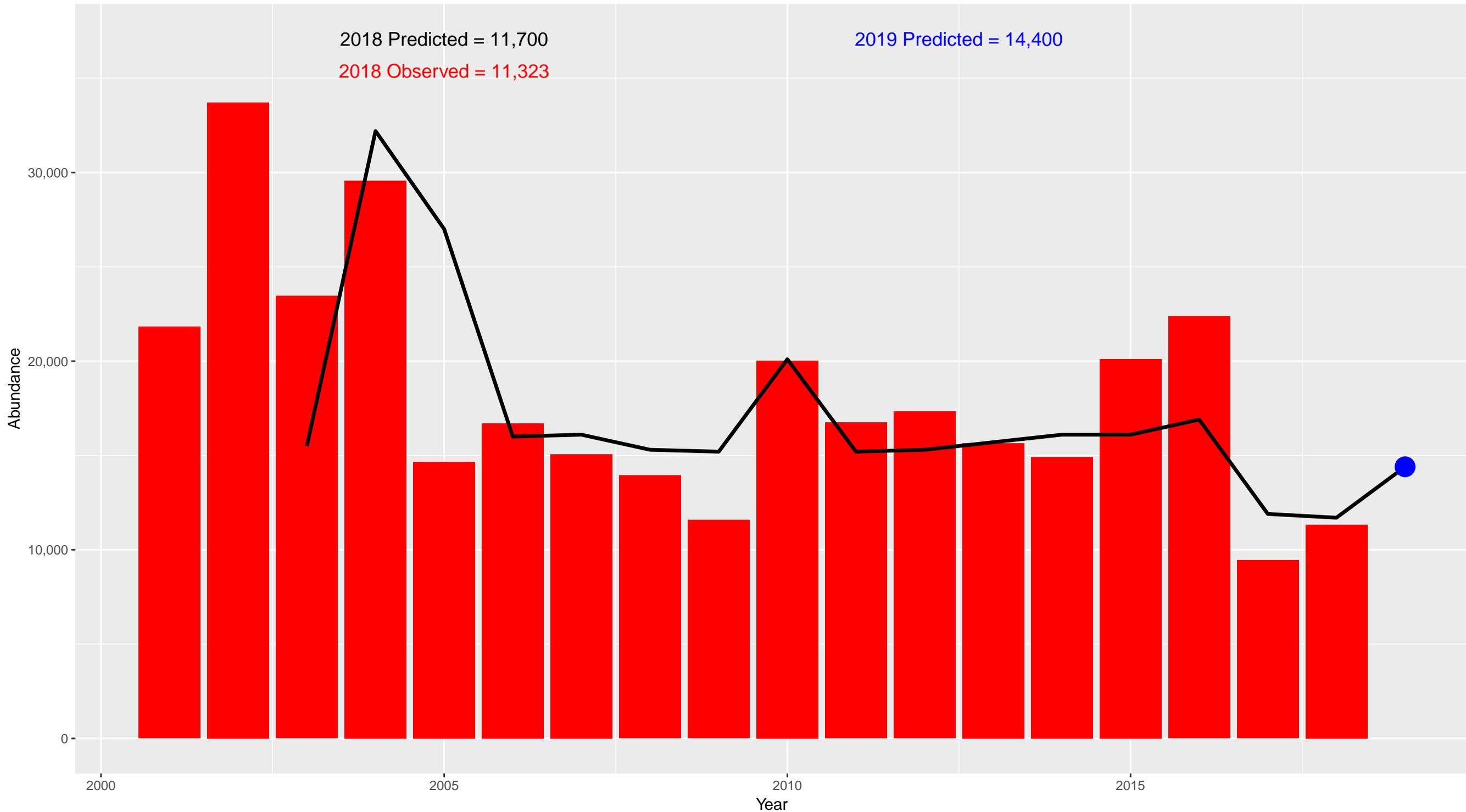


NA NA NA NA

2018 Predicted = 11,700

2018 Observed = 11,323

2019 Predicted = 14,400



Columbia River North of Falcon #1 - March 18, 2019

UPDATED 10:57AM 3/18/2019

	2018 Actual			
	Harvest	Season	URB Catch	Catch/URB
<b>Total Fall Chinook Run</b>	293,400			
<b>Sport</b>				
B10	11,450	Aug 1-24	3,010	3.8
TP - Lewis	4,980	Aug 1-Sept 2	4,390	1.1
Lewis - Bonn	5,190	Aug 1-Sept 12	3,120	1.7
Bonn - McN	970	Aug 1-Sept 12	80	12.1
<b>Commercial</b>				
Week 33	0	No fishery		
Week 34	3,050	2 periods	1,630	1.9
Week 35	4,330	2 periods	1,650	2.6
Sept	0	No fishery		
Coho TN	0	No fishery		
Select Area	6,450	Reduced season	70	92.1
		<b>Goal</b>		
URB - Sport	76%	70%		
URB - Comm	24%	30%		
URB - Total HR	9.4%	8.25%		
LRH - Sport	75%	NA		
LRH - Comm	25%	NA		
LRH - Total ER	34.5%	38%		
LRH - Total inriver ER	8.85%	NA		

Sport	2018 Fall Chinook Impact - Expected versus Actual					
	LCR tule impact			SRW harvest rate		
	Pre	Post	% of Pre	Pre	Post	% of Pre
B10	3.70%	6.32%	171%	1.74%	2.02%	116%
TP - Lewis	0.59%	0.21%	36%	1.35%	2.94%	218%
Lewis - Bonn	0.30%	0.16%	55%	2.16%	2.09%	97%
Bonn - McN				0.48%	0.05%	11%
<b>Commercial</b>						
Week 33	0.33%	0.00%	0%	0.51%	0.00%	0%
Week 34	0.49%	0.06%	12%	0.77%	1.10%	142%
Week 35	0.40%	1.05%	264%	0.78%	1.10%	142%
Sept						
Coho TN	0.11%	0.00%	0%	0.26%	0.00%	0%
Select Area	0.40%	1.04%	261%	0.20%	0.04%	20%
Total Sport	4.58%	6.70%	146%	5.73%	7.11%	124%
Total Comm	1.73%	2.15%	125%	2.51%	2.24%	89%
Total	6.31%	8.85%	140%	8.24%	9.35%	113%

# Columbia River Fall Chinook Fishery Model Summary

27-Mar-19

Ocean Option: March PFMC -Option 2  
 Columbia River Model Option: Model

2019 Preseason - Opt. 3C/Pre-Update; reduced TP, w/20% Set Aside

Management Guidelines	Goal/Guideline	SRW	Total URB
Harvest Rate	38.25%	36.09%	36.06%
Non-Treaty	8.25%	6.58%	6.58%
Treaty	30.0%	29.5%	29.5%
<b>% of Harvestable Surplus</b>			
Non-Treaty	50%	29%	
Treaty	50%	44%	
McNary Escapement	60,000	93,600	
LRH Ocean/river Exp. Rate	38%	36.5%	
Non-Treaty Wild B Index Steelhead	2%	2.0%	
Treaty Total B Index Steelhead	15%	15%	
Upriver Coho to Bonneville Dam	50%	65%	
Lower Columbia Chum	5%	0.03%	

Non-Treaty Catch Sharing			
SRW - Post-Update Impacts		Pre-Update Brights - Mainstem	
Impact	Percent	Mortalities	Harvest
Sport	5.77%	11,900	70%
Comm	2.48%	5,100	30%
<b>Total</b>		<b>17,000</b>	<b>11,900</b>
LRH - Pre-Update Impacts		Pre-Update Chinook - Mainstem	
Impact	Percent	Mortalities	Harvest
Sport	6.39%	21,200	69%
Comm	1.63%	9,500	31%
<b>Total</b>		<b>30,700</b>	<b>21,200</b>
SRW% Set Aside			
Impact		Aggregate	
Sport	4.57%	21%	Sport
Comm	2.01%	19%	Comm

	Total	LRH	LRW	BPH	URB	LRB	PUB	SAB	SRW	LRH	SRW	SRW	HR
<b>Ocean Harvest</b>	53,670	11,570	5,020	13,250	16,630	830	6,380						
<b>Columbia River Run</b>	350,800	55,210	14,200	48,150	160,060	7,950	62,130	3,100	8,600	8.0%	8,600	8.0%	6.4%
<b>Harvest Below Bonneville</b>	3,530	380	0	1,410	1,320	20	390	10	70	0.4%	70	0.4%	0.82%
Zone 4-5 Wk 34	4,670	500	20	1,760	1,730	50	610	10	90	0.6%	90	0.6%	1.08%
Zone 4-5 Wk 35	590	60	10	140	240	30	110	0	10	0.1%	10	0.1%	0.15%
Sept Z 4-5 Wk38-Wk40	670	80	60	10	410	0	110	0	20	0.1%	20	0.1%	0.26%
Oct Coho Tanglenet	6,250	4,060	0	250	270	0	90	1,580	10	0.4%	10	0.4%	0.17%
Select Areas	13,500	4,530	440	3,330	2,320	80	620	1,100	120	5.9%	120	5.9%	1.45%
Buoy 10 Kept + Mort	1,580	30	0	10	1,410	10	90	10	80	0.0%	80	0.0%	0.88%
TP to Lewis	3,330	120	0	170	2,480	170	390	0	130	0.2%	130	0.2%	1.55%
Lewis to Bonn	3,560	2,310	1,250	0	0	0	0	0	0	0.3%	0	0.3%	0.00%
Tributary Sport	<b>37,680</b>	<b>12,080</b>	<b>1,780</b>	<b>7,090</b>	<b>10,170</b>	<b>360</b>	<b>2,410</b>	<b>2,710</b>	<b>550</b>	<b>8.0%</b>	<b>550</b>	<b>8.0%</b>	<b>6.36%</b>
<b>Lower River Total</b>	229,270			36,580	149,890		42,800		8,050				
Bonneville Dam Passage													
<b>Harvest Above Bonneville</b>	2,790			1,110			1,680		60				0.69%
Zone 6 - Bonn to Hwy 395	82,950			19,930	47,190		15,830		2,540				29.5%
Treaty Comm. and C&S	6,260			6,260					0				
Hanford Reach Sport	93,600			93,600									
McNary Dam Passage													
Lower Granite Dam Passage													
<b>Escapement</b>	43,130			16,650		7,590	25,290		390				
Hatchery	23,930			13,040			13,020		240				
Natural	19,210			3,610	93,600	7,590	14,690		150				
<b>Hatchery Surplus</b>	10,150			6,040			10,600		240				
<b>Natural Surplus</b>	5,683			2,310	33,600								

## 2019 Fisheries Descriptions

Aug 18-24  
 Aug 25-31  
 Sept 15-28  
 Coho target  
 Full Season  
 nMSF Aug 1-20  
 nMSF Aug 1-27, CK clsd <Puget I. Aug 21  
 nMSF Aug 1-Sept 8  
 Coho full season  
 Reduced seasons  
 MSF  
 \*Additional coho limits considered inseason

1 Salmonid  
 Average season  
 Average season

# NORTH OF FALCON MEETING ("NORTHEAST OF MCNARY")

## Columbia River & Tributary Forecasts & Fishery Options

Clarkston, WA – March 28, 2019

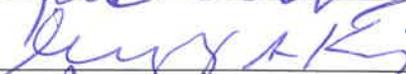
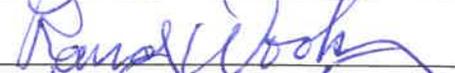
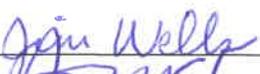
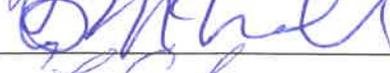
Name	Phone	Email	Address	Affiliation / Area
MIKE DAHLGER	509-714-8701	MIKE@ORIONTACKLE.com		
Michael JENKINS	509 330 2084	MikesBOAT@STJohn.com		
Lyle Draper	509-254-3903	Draper07@gmail.com	919 Cedar Dr	
Toby Wyatt	208 790-2128	twyatt1973@gmail.com	CLK	
Mitch Huckaby	208 791 6242	mitchehohuckaby@idfg.idaho.gov	Lew	
Mark Hosiński	208-816-2956	mhosinski@tsmt.org		
Roy Cooper	509-998-2361	rcooper@pullman.com	CLARKSTON WA 1321 SETLOW CT	
LEO WOLF	208 819 5803		1105 21 <sup>st</sup> Ave CLARKSTON WA	
Richard Scully	208-241-4095	scullyvj's PCable.com.net	2428-Seaport Dr Lewiston	
Chris Pinney	509-301-0105	wppinney@gmail.com	517 White Street Walla Walla WA	
TRAVIS WENDT	208-790-4113	wendtravis@gmail.com	1221 N ST LEWISTON, ID	
BRIAN SHINN	208-790-1725	bshinn@co.asotin.wa.us		
Chuck Neill	509-254-1204	chuckneill53@gmail.com		
Louis Stemma	509-758-7654			



Washington Department of Fish and Wildlife  
**2019 Ridgefield North of Falcon**

Sign-in Sheet for:  
 March 18, 2019  
 10am- 5pm

Region 5 Office, 5525 S 11<sup>th</sup> St, Ridgefield WA 98604

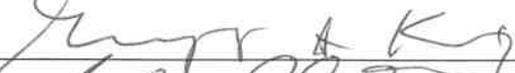
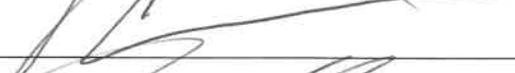
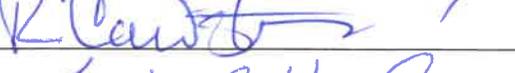
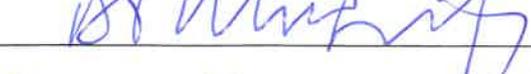
Name	Signature
Ken Wirtkela	
Lee Clark	
Greg King	
Kyle Hawes	
Jonathan Sawata	
Greg Johnson	
Bill Monroe Jr	
Randy Woodley	
Cameron Black	
Butch Smith	
LAUCE GRAY	
ROBERT SUDAR	
Lisa Brown	
Elliot Johnson	
Cameron Duff	
Jim Fowler	
Jim Wells	
BRIAN McLachlan	
LYLE CABE	



Washington Department of Fish and Wildlife  
**2019 North of Falcon**

Sign-in Sheet for:  
 April 2, 2019  
 10am- 2pm

WDFW Region 5 Office, 5525 S 11<sup>th</sup> St, Ridgefield WA 98642

	Name	Signature
1	Kelly Shortt	
2	Bryce Duvine	
3	Greg King	
4	Cody Clark	
5	Butch Smith	
6	Jim Coleman	
7	Kyle Hawes	
8	Steve Watrous	
9	Ron Roler	
10	Greg Johnson	
11	Danny Gibbs	
12	Les Clark	
13	Rodney Cowston	
14	Lisa Harlan	
15	Bob Rees	
16	David Moskowitz	
17	Jim Wells	
18	Jeremy Jording	

	Name	Signature
19	Tim Schoonover	
20	Roy Ezech	
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2019 Steelhead Regulations - Draft Proposal -April 2, 2019		August	September	October	November	December
<b>Columbia River</b>						
Below Bonneville Dam	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Bonneville Dam to The Dalles Dam	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
The Dalles Dam to John Day Dam	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
John Day Dam to McNary Dam	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
McNary Dam to Hwy 395 bridge in Pasco	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Hwy 395 bridge in Pasco Upstream to Hanford						
<b>Columbia River Tributaries</b>						
Cowlitz River-downstream of Lexington Drive/Sparks Road bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Lewis River-downstream of the confluence with the East Fork	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Wind River-downstream of Shipherd Falls	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Drano Lake	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead
White Salmon River-downstream of the county road bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Klickitat River-downstream of the Fisher Hill Bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead

July - All Areas - Daily limit 1, night closure for salmon and steelhead

**March 29, 2019**

**From:** Chris Donley, Region 1 Fish Program Manager

**To:** Kirt Hughes, Statewide Salmon and Steelhead Manager and Kyle Adicks, Intergovernmental Salmon Manager

**Re: Clarkston NE of McNary, North of Falcon Public Meeting**

The public meeting was held in Clarkston at the Walla Walla Community College auditorium from 6 to 8 PM, March 28. WDFW staff in attendance were Jeremy Trump, District 3 Fisheries Biologist and Chris Donley, Region 1 Fish Program Manager. Nineteen members of the public attended the meeting. Salmon and Steelhead statewide forecasts and proposed season were reviewed during the meeting (see 2019 NE of McNary PowerPoint-Clarkston).

The only comments we received from the public regarding season setting were around the Snake River spring Chinook fishery. Individuals in the crowd asked that there be fishery days allotted for both Little Goose Dam and Clarkston fishery areas. Amongst the 19 participants it was generally agreed to that that there should be opportunity afforded for both areas.

In general, the meeting went well. Most attendees seemed to understand our current challenges with fish abundance and were more curious about where they could fish versus why they could not fish in some areas.

Other questions fielded included:

- Details about smolt and adult predation by pinnipeds, birds and warmwater predators.
- Northern Pike distribution and removal efforts.
- How does the State do a creel survey (how does the math work)?
- When will ocean conditions get better?
- How many salmon and steelhead are stocked in Washington Rivers?
- How does US V OR work? How can more spring Chinook be allocated to the Snake River fishery?
- Why does the Commission want to remove the use of Barbless hooks in the Snake River?

## Ground Rules

1. Focus on the task at hand – *Stick to the agenda*
2. One person at a time – *Raise your hand to speak*
3. Allow for a balance of speaking time – respect time limits
4. Be courteous
  - Be tough on issues and questions, not on people and organizations
  - No personal attacks
5. Listen with respect
6. Keep side conversations to a minimum
7. Turn off cell phones/put them in the non-ring mode during meeting

NE McNary

3/27/19

<u>Name</u>	<u>Affiliation</u>
Ted Schmitt	CCA
JACK PICKARD	RR&GC
Bill Edelblute	Self
Paw Webb	RR+GC
Kim Kaegle	Self
IVAN METCALF	SELF
Chris Pimey	None
Joe Pizzarella	—
Packy Lockey	RRGC
Shannon Lockey	RRGC
Richard Sharp	RRGC
Harley Schuette	RRGC
Dakota Schneider	RRGC
Burt	"NA"
STAN BROGDON	CEP
John Foltz	SR&RB
Jacob Munden	Rising Sun Adventures
PHIL MUYCE	SELF

NE McNary

3/26/19

Name

Affiliation

Aaron Wiseman	Public
Rick R. Barnard	Fisherman
Andy Parker	Fisherman
BRIAN MULLIGAN	PUBLIC
Rick Stikwater	Public/CCA
GEORGE LANG	T/A
Alex Repp	Public
Randy Miller	Fisherman
Larry Campbell	"
Mike Thresher	Fisherman's Forum
Stuart Hurd	Hurd's Guide Service
Darren + Rachel Buchanan	Fisherman
GA. GRANT	Public
THOMAS BOLIN	PUBLIC
Tony Buhr	Weatchee World
Brad Wagner	Bobber Dawn Guide
Bob Lewis	Mack's Love Inc

Columbia River North of Falcon Meeting  
Hosted by Washington and Oregon Departments of Fish and Wildlife  
April 2, 2019  
10:00 AM - 1:00 PM  
WDFW Region 5 Office – Ridgefield, WA

**Agenda**

- Introductions (10:00 AM)
- 2019 Fishery Options (10:05 AM – 11:00 AM) (Review Handouts)
  - Summer Chinook
  - Sockeye
  - Summer Steelhead
  - Fall Chinook
  - Coho
- Sport/Commercial Break Outs (11:00 AM – 12:00 PM)
- Next Steps (12:15 PM – 1:00 PM)
  - Final preseason plan from today
  - Preseason plan and rules finalized April 11-15 at PFMC, Double Tree by Hilton Sonoma, Rohnert Park, California
  - 2019 Non-Treaty Columbia River Summer/Fall Fishery Allocation Agreement document will be finalized in May and includes:
    - ▶ Management intent for summer and fall season fisheries
    - ▶ Sport/commercial allocations
    - ▶ Preseason goals and expectations for sport and commercial fisheries
    - ▶ Steelhead fishery restrictions

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Columbia River North of Falcon Meeting  
WDFW – Ridgefield, WA  
April 2, 2019  
2019 Fishery Options

- Summer Chinook
  - No targeted summer Chinook fisheries
  - Incidental catch in steelhead sport fisheries (release mortalities) and SAFE
  
- Sockeye
  - 2019 forecast – 94,400
  - No targeted fisheries
  - Incidental catch (release mortalities) in steelhead sport fisheries
  
- Summer Steelhead (See Handout)
  - Fishery restrictions – similar to 2017
  - Staff will monitor the run status and fisheries in-season to determine if further restrictions are necessary
  
- Fall Chinook (see Model Handout)
  - Preseason planning does not allocate all available non-treaty SRW/URB impacts prior to the run update due to exceedance of non-treaty ESA impacts of URBs in 2017 (107%) and 2018 (113%)
  - Combined non-treaty SRW/URB allocation pre-update is 80% of 8.25% allocation (20% Set Aside)
  - 2010-2018 average prediction error for URBs is 28%

Recreational

- Staff proposed option (3C) presented below:
  - Blend of input from NOF #1
  - Based on precautionary approach and equitable sharing of URB impacts
  - Incorporates URB set-aside pre-update (21% vs 10% discussed at NOF#1)
  - Reserves Chinook impacts for Coho-directed opportunity at Buoy 10

<b>Fall Chinook Model Description – MR2019-Preseason-Option 3C w/20% Set Aside</b>					
	Chinook Retention	Chinook Regulations	Daily limit	Coho Retention	Other
Buoy 10	8/1 – 8/20	Non-MSF	2 fish/1 CHF	8/1 - 12/31	
Tongue Point to Warrior Rock	8/1 – 8/27	Non-MSF	1 salmonid*	8/1 - 12/31	Chinook closed from TP to Puget Island beginning 8/21
Warrior Rock to Bonneville	8/1 – 9/8	Non-MSF	1 salmonid*	8/1 - 12/31	
Zone 6	8/1 – TBD	Non-MSF	1 salmonid*	8/1 - 12/31	

\*Daily limit after Chinook retention closes switches to 2 fish

### Commercial

- Preseason model allocates 81% of available URB commercial impacts pre-update (19% set-aside)
  - Early fall fishery in Zone 4-5 August (5 days)
  - Potential for September (post-update) in Zones 4-5
- Coho
- Recreational: Standard retention seasons – potential increased daily limits to be addressed in-season
  - Commercial: Tangle net fishery – October
- Other Options
- WA staff were asked to model fisheries below Longview with a provision that guiding be limited to 5 days per week. For the Buoy 10 fishery, they estimated this would result in an approximate 10% reduction in Chinook catch. Further in-depth discussions would be needed before this would be considered or could be implemented.
  - Staff was asked to model Buoy 10 with mark-selective regulations during the month of August. This model output results in an un-equitable URB sharing with the Buoy 10 fishery taking the majority of the conservation burden for URBs and would add limited opportunity to those areas upstream of Tongue Point. This option would increase harvest of LRH hatchery fish and may increase risk of not meeting brood stock needs at some hatcheries.

*Oregon/Washington Departments of Fish and Wildlife  
April 2, 2019*

# Columbia River Fall Chinook Fishery Model Summary

27-Mar-19

Ocean Option: March PFMC -Option 2  
 Columbia River Model Option: Model

2019 Preseason - Opt. 3C/Pre-Update; reduced TP, w/20% Set Aside

Management Guidelines	Goal/Guideline	SRW	Total URB
Harvest Rate	38.25%	36.09%	36.06%
Non-Treaty	8.25%	6.58%	6.58%
Treaty	30.0%	29.5%	29.5%
% of Harvestable Surplus		<b>Total</b>	
Non-Treaty	50%	29%	
Treaty	50%	44%	
McNary Escapement	60,000	93,600	
LRH Ocean/river Exp. Rate	38%	36.5%	
Non-Treaty Wild B Index Steelhead	2%	2.0%	
Treaty Total B Index Steelhead	15%	15%	
Upriver Coho to Bonneville Dam	50%	65%	
Lower Columbia Chum	5%	0.03%	

Non-Treaty Catch Sharing			
SRW - Post-Update Impacts		Pre-Update Brights - Mainstem	
Impact	Percent	Mortalities	Harvest
Sport	5.77%	11,900	70%
Comm	2.48%	5,100	30%
			11,900
			5,100
LRH - Pre-Update Impacts		Pre-Update Chinook - Mainstem	
Impact	Percent	Mortalities	Harvest
Sport	6.39%	21,200	69%
Comm	1.63%	9,500	31%
			21,200
			9,500
SRW% Set Aside			
		20%	Aggregate
Sport	4.57%	21%	Sport
Comm	2.01%	19%	Comm

Ocean Harvest	LRH	LRW	BPH	URB	LRB	PUB	SAB	SRW	LRH	SRW	SRW	HR
<b>Total</b>	53,670	11,570	5,020	13,250	16,630	830	6,380					
<b>Columbia River Run</b>	350,800	55,210	14,200	48,150	160,060	7,950	62,130	3,100	8,600	8.0%	8.0%	6.4%
<b>Harvest Below Bonneville</b>												
Zone 4-5 Wk 34	3,530	380	0	1,410	1,320	20	390	10	70	0.4%	0.4%	0.82%
Zone 4-5 Wk 35	4,670	500	20	1,760	1,730	50	610	10	90	0.6%	0.6%	1.08%
Sept Z 4-5 Wk38-Wk40	590	60	10	140	240	30	110	0	10	0.1%	0.1%	0.15%
Oct Coho Tanglenet	670	80	60	10	410	0	110	0	20	0.1%	0.1%	0.26%
Select Areas	6,250	4,060	0	250	270	0	90	1,580	10	0.4%	0.4%	0.17%
Buoy 10 Kept + Mort	13,500	4,530	440	3,330	2,320	80	620	1,100	120	5.9%	5.9%	1.45%
TP to Lewis	1,580	30	0	10	1,410	10	90	10	80	0.0%	0.0%	0.88%
Lewis to Bonn	3,330	120	0	170	2,480	170	390	0	130	0.2%	0.2%	1.55%
Tributary Sport	3,560	2,310	1,250	0	0	0	0	0	0	0.3%	0.3%	0.00%
<b>Lower River Total</b>	<b>37,680</b>	<b>12,080</b>	<b>1,780</b>	<b>7,090</b>	<b>10,170</b>	<b>360</b>	<b>2,410</b>	<b>2,710</b>	<b>550</b>	<b>8.0%</b>	<b>8.0%</b>	<b>6.36%</b>
Bonneville Dam Passage	229,270			36,580	149,890		42,800		8,050			
<b>Harvest Above Bonneville</b>												
Zone 6 - Bonn to Hwy 395	2,790			1,110			1,680		60			0.69%
Treaty Comm. and C&S	82,950			19,930	47,190		15,830		2,540			29.5%
Hanford Reach Sport	6,260			6,260					0			
McNary Dam Passage	93,600			93,600								
Lower Granite Dam Passage									5,525			
<b>Escapement</b>												
Hatchery	43,130			16,650	7,590		25,290		390			
Natural	23,930			13,040			13,020		240			
	19,210			3,610	93,600	7,590	7,590		150			
<b>Hatchery Surplus</b>												
Natural Surplus	10,150			6,040	2,310		10,600		240			

## 2019 Fisheries Descriptions

Aug 18-24  
 Aug 25-31  
 Sept 15-28  
 Coho target  
 Full Season  
 nMSF Aug 1-20  
 nMSF Aug 1-27, CK clsd <Puget I. Aug 21  
 nMSF Aug 1-Sept 8  
 Coho full season  
 Coho full season  
 Reduced seasons  
 MSF  
 \*Additional coho limits considered inseason

1 Salmonid  
 Average season  
 Average season

2019 Steelhead Regulations - Draft Proposal -April 2, 2019		August	September	October	November	December
<b>Columbia River</b>						
Below Bonneville Dam	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Bonneville Dam to The Dalles Dam	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
The Dalles Dam to John Day Dam	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
John Day Dam to McNary Dam	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
McNary Dam to Hwy 395 bridge in Pasco	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Daily limit 1, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Hwy 395 bridge in Pasco Upstream to Hanford				Daily limit 2. Ringold Springs Hatchery only (ADRV).	Daily limit 2. Any hatchery steelhead.	Daily limit 2. Any hatchery steelhead.
<b>Columbia River Tributaries</b>						
Cowlitz River-downstream of Lexington Drive/Sparks Road bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Lewis River-downstream of the confluence with the East Fork	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
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Drano Lake	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
White Salmon River-downstream of the county road bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead
Klickitat River-downstream of the Fisher Hill Bridge	Closed to retention, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead	Daily Limit 1, night closure for salmon and steelhead

July - All Areas - Daily limit 1, night closure for salmon and steelhead

Model Summaries - Columbia River North of Falcon #2 - April 2, 2019

2019 Commercial Option OPTION A w/buffer Zone 4-5 Week 34, 35					2019 Commercial Option OPTION A1 w/buffer Zone 4-5 Week 33, 34, 35				
	Harvest	Season	URB Catch	Catch/ URB		Harvest	Season	URB Catch	Catch/ URB
<b>Commercial</b>									
Week 32 - Aug 4-10	0	No fishery			0	No fishery			
Week 33 - Aug 11-17	0	No fishery			280	1 day	170	1.6	
Week 34 - Aug 18-24	3,440	3 days	1,300	2.6	2,410	2+days	910	2.6	
Week 35 - Aug 25-31	4,550	2+days	1,700	2.7	5,130	2+days	1,910	2.7	
Sept placeholder	580	Placeholder	230	2.5	580	Placeholder	230	2.5	
Coho TN	660	October	400	1.7	660	October	400	1.7	
Select Area	6,150	Full Season	260	23.7	6,150	Full Season	260	23.7	
August Subtotal	7,990		3,000		7,820		2,990		

2019 Commercial Option OPTION A2 w/buffer Zone 4-5 Week 32					2019 Commercial Option OPTION A3 w/buffer Zone 4-5 Week - 2 days Week 33				
	Harvest	Season	URB Catch	Catch/ URB		Harvest	Season	URB Catch	Catch/ URB
<b>Commercial</b>									
Week 32 - Aug 4-10	280	1 day	170	1.6	0	No fishery			
Week 33 - Aug 11-17	280	1 day	170	1.6	570	2 day	350	1.6	
Week 34 - Aug 18-24	2,410	2+days	910	2.6	2,410	2+days	910	2.6	
Week 35 - Aug 25-31	4,680	2+days	1,740	2.7	4,680	2+days	1,740	2.7	
Sept placeholder	580	Placeholder	230	2.5	580	Placeholder	230	2.5	
Coho TN	660	October	400	1.7	660	October	400	1.7	
Select Area	6,150	Full Season	260	23.7	6,150	Full Season	260	23.7	
August Subtotal	7,650		2,990		7,660		3,000		

# July 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

# August 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# September 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# October 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

## SECTION 5 DATA STUDIES AND REPORTS

**CHUM, PINK, AND SOCKEYE SALMON  
CO-MANAGER RUNSIZE FORECASTS FOR THE 2019 RETURN YEAR**

**CHUM - SUMMER**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Puget Sound</b>				
Central Sound		1,381	1,381	R/S
South Sound		27,039	27,039	R/S
Hood Canal*		10,315	10,315	Ocean indicator regression
Strait of Juan de Fuca		1,684	1,684	Ocean indicator regression
<b>Puget Sound Total</b>		<b>40,419</b>	<b>40,419</b>	

\* Wild forecast includes supplementation returns.

**CHUM - FALL**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Puget Sound</b>				
Nooksack/Samish	21,840	74,896	96,736	R/S
Skagit	282	11,454	11,736	Fry based
Stillaguamish	435	4,758	5,193	Fry based
Snohomish	7,487	4,583	12,070	Fry based
Central Sound	51,504	75,933	127,437	R/S
South Sound	30,217	232,954	263,171	R/S
Hood Canal	349,412	169,233	518,645	R/S
Strait of Juan de Fuca	481	366	847	PDO regression
<b>Puget Sound Total</b>	<b>461,658</b>	<b>574,177</b>	<b>1,035,835</b>	

**CHUM - WINTER**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Puget Sound</b>				
South Sound	10,199	*	10,199	
<b>Puget Sound Total</b>	<b>10,199</b>	<b>0</b>	<b>10,199</b>	

\* Forecast not agreed to

**CHUM - FALL**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Coastal</b>				
Grays Harbor	5,167	66,792	71,959	PDO model harvest adjustment
Willapa	822	51,383	52,205	R/S and PDO adjustment
<b>Coastal Total</b>	<b>5,989</b>	<b>118,175</b>	<b>124,164</b>	

**PINK**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Puget Sound</b>				
Nooksack		24,476	24,476	Fry based
Skagit		114,769	114,769	Fry based
Stillaguamish		47,919	47,919	Fry based
Snohomish		128,362	128,362	Fry based
Green		141,130	141,130	Fry based
Puyallup		47,905	47,905	Fry based
Nisqually		25,380	25,380	Fry based
South Sound Misc.		143	143	R/S
Hood Canal	4,200	66,475	70,675	Fry and R/S Avg
Strait of Juan de Fuca	42	7,587	7,629	Ocean indicator regression
<b>Puget Sound Total</b>	<b>4,242</b>	<b>604,146</b>	<b>608,388</b>	

**SOCKEYE**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Puget Sound</b>				
Baker River		33,737	33,737	NPGO and sibling regression
Lake Washington	9,340	5,813	15,153	Sibling relationships
<b>Puget Sound Total</b>			<b>48,890</b>	

\* Forecast contains hatchery and wild production

**SOCKEYE**

	HATCHERY	WILD	TOTAL	FORECAST METHOD
<b>Columbia River</b>				
Wenatchee River		18,300	18,300	Adult-cohort relationships
Okanogan River		74,500	74,500	Adult-cohort relationships
<b>Columbia River Total</b>		<b>92,800</b>	<b>92,800</b>	

**Fraser River Forecasts (from Fisheries and Oceans Canada)**

Sockeye Salmon	4,795,000	p50
Pink Salmon	5,018,600	Fry based and salinity

# 2018 and 2019 Washington Coho Forecast Summary<sup>1</sup>

Last updated: 02/22/19

Production unit	2018 Hatchery	2019 Hatchery	2018 Wild	2019 Wild	2018 Total	2019 Total
Dungeness R	9,087	9,760	505	2,290	9,592	12,050
Elwha R	242	3,433	718	1,363	960	4,796
Eastern Strait (excl. Dung, Elwha)			800	2,301	800	2,301
Western Strait			6,368	6,499	6,368	6,499
West/East sub-total excl. Dung, Elwha			<b>7,168</b>	<b>8,800</b>	7,168	8,800
<b>West/East Strait sub-total</b>	<b>9,329</b>	<b>13,193</b>	<b>8,391</b>	<b>12,453</b>	<b>17,720</b>	<b>25,646</b>
Nooksack R	50,797	57,686	18,629	18,308	69,426	75,994
Lummi Ponds	10,459	2,104			10,459	2,104
7B net pens	0	0			0	0
Indian Slough Hatchery	0	0			0	0
Samish R			1,162	4,857	1,162	4,857
Misc 7&7A (incl. San Juans CoOps)			783	1,968	783	1,968
<b>Nook/Samish R sub-total</b>	<b>61,256</b>	<b>59,790</b>	<b>20,574</b>	<b>25,133</b>	<b>81,830</b>	<b>84,923</b>
<b>Skagit R sub-total</b>	<b>13,101</b>	<b>9,917</b>	<b>59,196</b>	<b>57,933</b>	<b>72,297</b>	<b>67,850</b>
<b>Stillaguamish R sub-total</b>	<b>0</b>	<b>2,234</b>	<b>18,950</b>	<b>23,820</b>	<b>18,950</b>	<b>26,054</b>
Snohomish R	7,092	7,709	65,925	62,600	73,017	70,309
Tulalip Bay	31,211	35,043			31,211	35,043
Area 8A Misc. Hatchery		899			0	899
<b>Snohomish R sub-total</b>	<b>38,303</b>	<b>43,651</b>	<b>65,925</b>	<b>62,600</b>	<b>104,228</b>	<b>106,251</b>
Lake Washington	12,984	10,790	2,018	2,770	15,002	13,560
Green River	48,032	68,680	3,320	3,001	51,352	71,681
Elliot Bay Net Pens		23,797			0	23,797
Misc. Area 10,11,10E		14,637	1,429	3,136	1,429	17,773
Puyallup R	17,985	32,220	4,964	9,349	22,949	41,569
<b>Mid-Sound sub-total</b>	<b>79,001</b>	<b>150,124</b>	<b>11,731</b>	<b>18,256</b>	<b>90,732</b>	<b>168,380</b>
Area 13A-K wild, exc. Deschutes			1,976	6,776	1,976	6,776
Area 13A Hatchery (Minter CR)	7,340	7,543			7,340	7,543
Nisqually R	952	10,298	1,268	4,816	2,220	15,114
Deschutes R			59	574	59	574
Area 13D net pens (Squaxin Island)	15,718	33,039			15,718	33,039
<b>Deep South Sound sub-total</b>	<b>24,010</b>	<b>50,880</b>	<b>3,303</b>	<b>12,166</b>	<b>27,313</b>	<b>63,046</b>
<b>Mid+Deep South Sound sub-total</b>	<b>103,011</b>	<b>201,004</b>	<b>15,034</b>	<b>30,422</b>	<b>118,045</b>	<b>231,426</b>
Area 9A (Port Gamble)	12,680	13,783	579	539	13,259	14,322
Area 12A - Quilcene R	49,605	52,237	995	800	50,600	53,037
Area 12A - Quilcene Net Pens		-		-	0	0
Area 12/12B		-	27,693	13,860	27,693	13,860
Area 12C/12D (exc. Skokomish R)		-	30,503	15,265	30,503	15,265
Skokomish R	20,690	20,510	1,334	11,015	22,024	31,525
Area 12/12B-12D/Skok. R sub-total	20,690	27,347	59,530	40,140	80,220	67,487
<b>Hood Canal sub-total</b>	<b>82,975</b>	<b>86,530</b>	<b>120,634</b>	<b>81,619</b>	<b>224,299</b>	<b>195,496</b>
<b>Puget Sound Total</b>	<b>307,975</b>	<b>416,319</b>	<b>308,704</b>	<b>293,980</b>	<b>637,369</b>	<b>737,646</b>
Willapa Bay	44,542	94,019	20,645	63,448	65,187	157,467
Grays Harbor	51,414	64,345	42,379	71,527	93,793	135,872
Quinalt R	29,622	26,904	25,442	13,888	55,064	40,792
Queets R	10,814	13,175	6,964	11,100	17,778	24,275
North Coast Indept. Tribes					0	0
Hoh R			5,816	6,963	5,816	6,963
Quillayute R summer	3,313	3,428	2,743	1,181	6,056	4,609
Quillayute R fall	16,505	16,953	10,557	14,607	27,062	31,560
<b>Coast total</b>	<b>156,210</b>	<b>218,824</b>	<b>114,546</b>	<b>182,714</b>	<b>270,756</b>	<b>401,538</b>

Production unit	2018 Hatchery	2019 Hatchery	2018 Wild	2019 Wild	2018 Total	2019 Total
Columbia Hatch/WA Wild Early <sup>2</sup>	152,523	527,976	4,519	9,846	157,042	537,822
Columbia Hatch/WA Wild Late <sup>2</sup>	111,774	340,897	8,393	18,286	120,167	359,183
Columbia Oregon Wild <sup>3</sup>	-	-	8,990	8,814	8,990	8,814
<b>Columbia total</b>	<b>264,297</b>	<b>868,873</b>	<b>21,902</b>	<b>36,946</b>	<b>286,199</b>	<b>905,819</b>
<b>Grand Total</b>	<b>728,482</b>	<b>1,504,016</b>	<b>445,152</b>	<b>513,640</b>	<b>1,194,324</b>	<b>2,045,003</b>

Notes:

1) Ocean Age 3 (OA3) abundance

2) Columbia Early and Late Production Unit hatchery forecast categories include hatchery production from all states, Columbia Early and Late Wild Production Unit forecasts contain Washington-origin stocks only.

3) Oregon Wild Production Unit category is summarized separately from Columbia Early and Late categories because it is considered by ODFW to account for entire fall coho return on Oregon side of river.

**2019 – 2020 Co-Managers' List of Agreed  
Fisheries  
(May 1, 2019 – April 30, 2020)**

*Robert F. [Signature]*

*4/22/2019*

*W. Mike Adair*

*4-22-19*

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**Part I. Treaty/Non-Treaty OCEAN Fisheries (FRAM #2719 (Chinook) & #1925 (Coho))**

Treaty Troll Quota	35,000 Chinook; 55,000 Coho
Non-treaty TAC	52,500 Chinook and 190,000 marked Coho.
NT Troll TAC	26,250 Chinook and 30,400 marked Coho.
Recreational TAC	26,250 Chinook and 159,600 marked Coho.

**1.1 Treaty Troll: Areas 2, 3, 4 & 4B**

5/1-6/30	Chinook directed fishery with sub quota of 17,500 Chinook. May 1 through June 30 or attainment of 17,500 Chinook sub quota, whichever comes first. All salmon except Coho. If the Chinook quota for the May-June fishery is not fully utilized, the excess fish may be transferred into the later all-salmon season on an impact-neutral basis for limiting stocks into the later all-salmon season. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season.
7/1-9/15	All salmon species, with quota of 55,000 Coho and sub quota of 17,500 Chinook plus any portion of uncaught Chinook rolled over from the May 1 through June 30 time period on an impact neutral basis. Chum release 8/1-8/31 Open from July 1 through September 15, or attainment of either the Coho quota or the Chinook sub quota, whichever comes first.

**1.2 Non-Treaty Troll: U.S./Canada border to Cape Falcon**

<p>5/6- thru earliest of 6/28 or pre-season Chinook sub-quota of 13,200 (no more than 5,000 of which may be caught in the area between the U.S./Canada border and the Queets River and no more than 1,800 of which may be caught in the area between Leadbetter Pt. and Cape Falcon)</p>	<p>All salmon except Coho with 13,200 Chinook quota; no more than 5,000 of which may be caught in the area between the U.S./Canada border and the Queets River and no more than 1,800 of which may be caught in the area between Leadbetter Pt. and Cape Falcon; Open seven days per week. May 6 – May 15, a landing and possession limit of 100 Chinook per vessel for the open period is in effect in the area between the U.S./Canada border and the Queets River and in the area between Leadbetter Point and Cape Falcon; May 16 – June a landing and possession limit of 50 Chinook per vessel per landing week (Thurs-Wed) is in effect in the area between the Queets River and Leadbetter Point and Cape Falcon. An in-season conference call will occur when it is projected that 60% of the overall Chinook quota has been landed or 60% of any sub-area quota has been landed to consider modifying the open period and landing and possession limits. Mandatory Yelloweye Rockfish Conservation Area, Columbia and Cape Flattery Control Zones closed. Trip limits, gear restrictions, and guidelines may be implemented or adjusted in-season. Vessels must land their fish within 24 hours of any closure of this fishery; under state law, vessels must report their catch on a state fish receiving ticket. Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW with area fished, total Chinook and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW with area fished, total Chinook and halibut catch aboard, and destination. Vessels fishing, or in possession of salmon while fishing north of Leadbetter Point must land and deliver all species of fish in a Washington port and must possess a Washington troll license. Vessels may not land fish east of Sekiu river or east of the Megler-Astoria bridge. For delivery to Washington ports south of Leadbetter Point, vessels must first notify WDFW with area fished, total Chinook and halibut catch aboard, and destination with approximate time of delivery. Vessels fishing, or in possession of salmon while fishing south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi. During any single trip, only one side of the Leadbetter Point line may be fished.</p>
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<p>7/1 thru earliest of 9/30 or pre- season Chinook sub-quota of 13,050 or Coho quota of 30,400.</p>	<p>All salmon with 13,050 Chinook quota and no more than 30,400 marked Coho quota. Open seven days per week. A landing and possession limit of 150 coho per vessel per landing week (Thurs-Wed) is in effect in all areas. All retained Coho must be marked with a healed adipose fin clip. No Chum retention north of Cape Alava, Washington beginning August 1. An in-season conference call will occur when it is projected that 60% of the overall Chinook quota has been landed or 60% of any subarea quota has been landed to consider modifying the open period and adding landing and possession limits. Mandatory Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones closed. Grays Harbor Control Zone closed beginning August 12. Trip limits, gear restrictions, and guidelines may be implemented or adjusted in-season. Vessels must land their fish within 24 hours of any closure of this fishery. Under state law, vessels must report their catch on a state fish receiving ticket.</p> <p>Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW with area fished, total Chinook, Coho, and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW with area fished, total Chinook, Coho, and halibut catch aboard, and destination. Vessels fishing, or in possession of salmon north of Leadbetter Point must land and deliver all species of fish in a Washington Port and must possess a Washington troll license. Vessels may not land fish east of Sekiu River or east of the Megler-Astoria bridge. For deliver to Washington ports, south of Leadbetter Point, vessels must first notify WDFW with area fished, total Chinook, Coho, and halibut catch aboard, and destination with approximate time of delivery. Vessels fishing, or in possession of salmon south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi. During any single trip, only one side of the Leadbetter Point line may be fished.</p>
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### 1.3 Non-Treaty Recreational

#### Area 1: Leadbetter Point to Cape Falcon (Oregon)

6/22-9/30 (79,800 Mark Selective Fishery Coho sub quota)	Open 7 days per week; 2 fish per day, only one of which may be a Chinook; retained Coho must have a healed adipose fin clip; Chinook minimum size limit 24 inches and Coho minimum size 16"; Chinook guideline: 7,150; closed in Columbia Control Zone. In-season management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon.
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#### Buoy 10

6/16-7/31	Open 7 days/week; Release all salmon Closed from the Megler-Astoria Bridge downstream.
8/1-8/20	Open 7 days/week; 2 fish per day, only 1 Chinook Chinook minimum size 24", Coho minimum size 16", Release all salmon other than Chinook and hatchery Coho. Coho must have a healed adipose fin clip.
8/21-9/30	Open 7 days/week; 2 fish per day (minimum size 12 inches), Coho must have a healed adipose fin clip. Release all salmon other than hatchery Coho. .
10/1-12/31	Open 7 days/week; 6 fish per day, up to 2 adults (minimum size 12 inches); Release all salmon other than hatchery Coho, retained Coho must have a healed adipose fin clip;
1/1-3/31	Open 7 days/week, Daily limit 6, Up to 2 adults, (minimum size 12"), Hatchery Chinook only.
North Jetty	Open 7 days per week when Area 1 or Buoy 10 area is open. When Buoy 10 area and Area 1 are open concurrently, the daily limit and minimum size restrictions follow the most liberal regulations of those areas.

#### Area 2: Queets River to Leadbetter Point

6/22-9/30 (59,050 Mark Selective Fishery Coho sub quota)	Open 7 days per week; 2 fish per day, only one of which may be a Chinook; retained Coho must have a healed adipose fin clip; Chinook minimum size limit 24 inches and Coho minimum size 16 inches; Chinook guideline: 12,700. In-season management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon. Grays Harbor Control Zone closed beginning August 12.
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**Area 2-1 (east of a line from Leadbetter Point to Cape Shoalwater): Willapa Bay**

7/1-7/31	Open concurrent with Area 2, when Area 2 is open for salmon. Area 2 rules apply.
8/1-1/31	6 fish limit, 2 adults, 12" min size limit. Release wild Chinook. 2 pole endorsement.

**Area 2-2 (east of line between tips of exposed jetties): Grays Harbor**

West of Buoy 13 line 7/1-8/21	Open concurrent with Area 2, when Area 2 is open for salmon. Area 2 rules apply.
East of Buoy 13 line, when open	All salmon required to be released may not be totally removed from the water, except anglers fishing from boats 30' or longer as listed on either their State or Coast Guard regulation are exempt. Single-point barbless hooks required.
East of Buoy 13 line 7/1-7/31	Closed.
East of Buoy 13 line 8/1-9/15	1 fish limit, 1 adults, 12" min size limit. Release wild Chinook and wild Coho. Open to salmon angling only in the area described as Humptulips – North Bay (the area conforms to the commercial SMCRA 2C).
East of Buoy 13 line 9/16-11/30	2 fish limit, 12" min size limit. Release Chinook. Open to salmon angling only in the area described as East Grays Harbor (the area conforms to the commercial SMCRA 2D).

**Westport Boat Basin and Ocean Shores Boat Basin**

8/16-1/31	6 fish limit, 4 adults; 12" min size limit. Release Chinook.
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**Area 3: Cape Alava to Queets River**

6/22-9/30 (4,050 Mark Selective Fishery Coho sub quota)	Open 7 days per week; 2 fish per day; retained Coho must have a healed adipose fin clip; Chinook minimum size limit 24 inches and Coho minimum size 16 inches; Chinook guideline: 1,100. In-season management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon.
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10/1-10/13 (100 Mark Selective Fishery Coho sub quota)	Open 7 days per week; 2 fish per day; retained Coho must have a healed adipose fin clip; Chinook minimum size limit 24 inches and Coho minimum size 16 inches; Chinook guideline: 100. In-season management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon.
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**Area 4: U.S./Canada border to Cape Alava and east to Sekiu River**

6/22-9/30 (16,600 Mark Selective Fishery Coho sub quota)	Open 7 days per week; 2 fish per day; retained Coho must have a healed adipose fin clip. No Chum retention beginning August 1. Chinook minimum size limit 24 inches and Coho minimum size 16 inches; Chinook guideline: 5,200; no Chinook retention east of Bonilla-Tatoosh line beginning August 1. Closed waters: east of a true north-south line running through Sail Rock in July; <b>Closed to salmon angling</b> inside the area bounded by a line from Kydaka Point to Shipwreck Point. In-season management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon.
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**Area 4A: Makah Bay Treaty Evaluation Marine Set Net Fishery**

Chinook	Trty	Open 6/15 through 8/31 in Area 4A, except closed inside an area bounded by a line running from Strawberry Rock Point (48° 19' 07"N, 124° 40' 00"W) to the group of rocks (48° 19' 46"N, 124° 40' 35"W) which are located off Hobuck Beach and a line to the mouth of Hobuck Creek (48° 19' 94"N, 124° 39' 66"W), to be implemented per agreement between the Makah Tribe and WDFW.
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**Part II. PUGET SOUND including STRAIT of JUAN de FUCA and SAN JUAN ISLANDS fisheries (All fisheries modeled in FRAM #2719 (Chinook) & #1925 (Coho))**

**2.1 Strait of Juan de Fuca Pre-terminal Areas**

**Areas 5, 6, 6C Treaty Troll (Ntrty net closed)**

**NOTE: Area 4B: 5/1-10/31 see Ocean Troll. For 11/1-12/31 & 1/1-4/15 see below.**

5/1-6/15	Closed
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6/16-9/30	<p>Open for salmon, Chum release; Freshwater Bay closed, south of Angeles Pt./Observatory Pt. line; Pt. Angeles Harbor closed west of line from tip of Ediz Hook to ITT Rayonier Dock; Hoko Bay closed inside the area bounded by a line from Kydaka Point to Shipwreck Point; Area 6 closed east of a line true north from Green Point; 1,000-foot closure around stream mouths.</p> <p>The catch estimates for this fishery modeled in FRAM are statistically-derived predictions, and are the best available pre- season estimates of catch in this fishery. In order to have the actual catch reflect run strength, however, these estimates will not be treated as a ceiling when the managers make in-season fishery management decisions.</p>
10/1-10/31	Closed.
11/1-4/15	<p>In Areas 4B, 5, 6, 6C the treaty troll fishery will be open from November 1, 2019 through April 15, 2020, or when the catch reaches the harvest ceiling of 8,500 Chinook, whichever comes first. 1,000-foot closures around stream mouths. Hoko Bay closed inside the area bounded by a line from Kydaka Point to Shipwreck Point for the month of November.</p> <p>The catch estimates for this fishery modeled in FRAM are statistically-derived predictions, and are the best available pre- season estimates of catch in this fishery. In order to have the actual catch reflect run strength, however, these estimates will not be treated as a ceiling when the managers make in-season fishery management decisions. The winter troll catch ceiling is 8,500 Chinook.</p>
4/16-4/30	Closed

**Areas 4B, 5, & 6C Treaty Net (Ntrty net closed)**

Note: The catch estimates for this fishery modeled in FRAM are statistically-derived predictions, and are the best available pre-season estimates of catch in this fishery. In order to have the actual catch reflect run strength, however, these estimates will not be treated as a ceiling when the managers make in-season fishery management decisions.

Chinook	<p>Open for setnet gear only, 6/16 through 8/17; 7 days a week; Hoko Bay closed, inside the area bounded by a line from Kydaka Point to Shipwreck Point; Freshwater Bay closed, south of Angeles Pt./Observatory Pt. line; 1,000-ft. closure around stream mouths.</p>
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Sockeye/Pink	Start to be determined by Fraser River Panel. The Co-managers have identified the following management actions to control by-catch of Chinook. Estimated by-catches are best estimates and are not quotas or ceilings. The priority for this fishery is to harvest the full Treaty share of Sockeye and pink salmon, while managing the fishery so as to not greatly exceed the projected incidental harvest of Chinook salmon. All Chinook by-catch in this fishery will be promptly reported by each Tribe to the NWIFC TOCAS database and reported to the U.S. section of the Fraser Panel at least weekly, including take home and ceremonial and subsistence (C&S). If in-season the Chinook by-catch in this fishery exceeds 1,300, the Tribes will consider management actions to limit the Chinook by-catch, such as time or area restrictions, while continuing the priority objective of harvesting Sockeye salmon. If in-season the fishery is projected to result in a total Chinook by-catch exceeding 3,300 Chinook, the Tribes will, effective with that scheduled fishery opening, prohibit any commercial sales of Chinook salmon, and any Chinook salmon landed must be delivered to the fishers' respective Tribe.
Coho	Open for gillnets starting at 6 days per week with in-season adjustments based on cumulative catch. Fishery will target Coho from the end of Fraser Panel control, through 10/12; 1,000 ft. closure around stream mouths. Hoko Bay closed, inside the area bounded by a line from Kydaka Point to Shipwreck Point.
Chum	Open for gillnets, starting at 6 days per week (day may be added if effort is low), 10/13 through 11/9; 1,000-foot closure around stream mouths. Hoko Bay closed, inside the area bounded by a line from Kydaka Point to Shipwreck Point.

**Area 5 Recreational**

**Kydaka Point Closure: Waters south of a line from Kydaka Point westerly approximately 4 miles to Shipwreck Point closed to salmon angling 7/1-8/15.**

5/1-6/30	Closed
7/1-9/30	2 fish limit, (Chinook 22" min size); release Chum, wild Coho and wild Chinook. Release all Chinook 8/16-9/30.
10/1-2/29	Closed
3/1-4/30	2 fish limit (Chinook 22" min size), release wild Coho and wild Chinook.

**Area 6 Recreational**

5/1-6/30	Closed
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7/1-9/30	2 fish limit, release Chinook, wild Coho, and Chum; except W. of true N/S line through "2" buoy near tip of Ediz Hook retention of marked Chinook allowed (Chinook 22" min size);. South of Angeles Pt. /Observatory Pt. line – closed to angling. Pt. Angeles Hbr. W. of line from tip of Ediz Hook to ITT Rayonier Dock – closed to salmon angling. Release all Chinook 8/16-9/30.
10/1-2/29	Closed
3/1-4/15	2 fish limit (Chinook 22" min size). Release wild Coho and wild Chinook.

## 2.2 Strait of Juan de Fuca Terminal Areas

### Area 6D Dungeness Bay Net

Note: The following applies to all 6D Dungeness Bay Coho fisheries (Tribal & WDFW): Co-managers agree to examine the feasibility of creating an in-season runsize update for the 6D coho fishery prior to the start of the 2019 season. If Co-managers agree on the usefulness of the update model, the update will be used in-season to evaluate the likelihood of achieving the hatchery egg take goal and guide subsequent management of the bay and river fisheries. Absent in-season conditions that support the likely achievement of egg take goals, Dungeness Bay fisheries may close early.

Chinook	All	Closed
Pink	Trty	Closed
	Ntrty	Closed
Coho	Trty	Open 9/21 through 10/31; Additional days beyond 10/31 may be considered; 9/21 through 10/10, seven days per week, fishing 7 am to 7 pm only, nets must be attended by fisher, Chinook and Chum release; 10/11 through 10/31 (or 11/5 should conditions allow), seven days per week, 24 hours per day; 1,500 ft closure around mouth of Dungeness River.
	Ntrty	Open Wk 38 (wb 9/15) through Wk 44 (wb 10/27) for skiff gillnet gear; 7AM – 7PM; Wk 38 Sa; Wk 39 T-F, Wks 40-44 M-F; Chinook and Chum NR, release by cutting ensnaring meshes; 1,500 ft. (1/4 nautical mile) closure around each river mouth, and 500ft closure around Meadowbrook Cr. mouth. Fishery may close early pending in-season information. Openings possible in Wk 45 (wb 11/3) based on in-season information.
Chum	All	Closed

**Dungeness River (Treaty and Recreational)**

**Note:** The following applies to all Dungeness River Coho fisheries (Tribal & WDFW): Co-managers will meet on, or prior to October 14, 2019 to review current in-season conditions and the results of an in-season runsize update if available. Absent in-season conditions that support the likely achievement of egg take goals, Dungeness River fisheries may remain closed. If flows are precluding coho from moving upriver to the hatchery, the Dungeness River fishery will remain closed until conditions allow coho movement upriver.

**Dungeness River Treaty (Ntrty net closed)**

Chinook	Trty	Closed
Pink	Trty	Closed
Coho	Trty	Commercial fishing up to 3 days/wk, to be determined in-season, for Coho only, is scheduled to open on 10/16 and will be restricted to areas below the Dungeness hatchery intake using species selective (hand-held) gear. Subsistence fishing using selective gear is scheduled to open on 10/16. Refer to the co-management agreement above for possible emergency closures.
Chum	Trty	Closed

**Elwha River Treaty (Ntrty net closed)**

Chinook	Trty	Closed except Ceremonial Harvest of 4 fish in July.
Coho	Trty	Closed
Chum	Trty	Closed

**Dungeness Bay Recreational**

5/1-9/30	Closed to salmon.
10/1-10/31	2 fish limit, hatchery Coho only.
11/1-4/30	Closed to salmon.

**Dungeness River Recreational**

mouth to the forks at Dungeness Forks Campground	10/16-11/30	4 fish limit, hatchery Coho only; 12" min size.
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**Elwha River Recreational**

Closed to salmon and gamefish
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**Hoko River Recreational**

mouth to cement bridge (mile 7.0) on Hoko/Ozette Hwy.	Closed to salmon
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**All other STRAIT OF JUAN DE FUCA REGION freshwater recreational closed to salmon angling.**

**2.3 San Juan Islands/Point Roberts Area**

**Areas 6, 7, & 7A Net**

Chinook	All	Closed
Sockeye	Trty	<p>Schedule to be determined. The Co-managers have identified the following management actions to track and control by-catch of Chinook. Estimated by-catches are best estimates and are not quotas. The priority for this fishery is to harvest the full treaty share of Sockeye salmon, while managing the fishery so as to not greatly exceed the projected incidental harvest of Chinook salmon. All Chinook by-catch in this fishery will be promptly reported by each Tribe to the NWIFC TOCAS database and reported to the U.S. Section of the Fraser Panel at least weekly, including take home and ceremonial and subsistence (C&amp;S).</p> <p>Prior to achieving a by-catch of 4,200 Chinook there will be no restrictions on the retention or sale of Chinook salmon. If, during the season, the Fraser Panel schedules a fishery that is projected to result in a total Chinook by-catch exceeding 4,200 fish, the Tribes will, effective with that scheduled fishery, prohibit any commercial sales of Chinook salmon, and any Chinook salmon landed must be delivered to the fisher's respective Tribe. Reef net wild coho, wild Chinook, and chum NR. Reef net may retain marked Chinook through 9/30. Further policy discussion may occur among the affected parties prior to the season.</p>

	Ntrty	Schedule to be determined. The Co-managers have identified the following management actions to track and control by-catch. Modeled by-catches are best estimates and are not quotas. All vessel operators must complete best fishing practices certification prior to fishing. PS: brailing required. Chinook, Coho, and Chum NR. Reef net wild Coho, Chum, and unmarked Chinook NR. Reef net: fishers may retain hatchery Chinook, with a cap of 300 for all gears through 9/30. Estimates of by-catch will be shared at least weekly in the U.S. Section of the Fraser River Panel. Purse seine and gillnet fisheries will be managed to ensure that the non-treaty impact does not exceed 1,974 total Chinook (120% of pre-season estimate).
Pink	Trty	Purse seine, gill net, and reef net: schedule dependent upon Fraser Panel. See Chinook and coho bycatch in-season actions description in sockeye section above. Reef net: wild coho, wild Chinook, and chum NR. Reef net may retain marked Chinook through 9/30.
	Ntrty	Schedule to be determined. All vessel operators must complete best fishing practices certification prior to fishing. PS: brailing required. Chinook, Coho, and chum NR. Reef net: Chum, wild Chinook, and wild Coho NR. See Chinook by-catch in-season actions description in Sockeye section above.
Coho	Trty	Reef net: 7 days/wk beginning at end of Fraser Panel management through 11/9; Chinook NR after 9/30; wild Coho NR through 9/30, then Coho retention. Chum NR through 9/30.
	Ntrty	Reef net: 7 days/wk beginning at end of Fraser Mgmt through Chum mgmt wk 41 (wb 10/6); Chinook NR after 9/30; unmarked-Coho release through 9/30, then Coho retention. Chum retention prohibited until after 9/30. All vessel operators must complete best fishing practices certification prior to fishing.
Chum	Trty	The Treaty fishery will open October 10 (dependent on run status updates from CDFO) and remain open. See attached 2019 7/7A Chum Fishing Plan. Reef nets open from end of Fraser Panel management through end of Chum management (11/9), 7 days/wk. Reef net release requirements listed in Coho fishery description, above.

	Ntrty	Dependent on update of run status from CDFO. PS and GN open wk 41 (wb 10/6) through wk 45 (wb 11/3). Open 10/11, 10/12, 10/14, 10/15 and will re-open through the end of the season on 10/18 or 10/19 based on conditions outlined in the attached agreement. Co-managers will meet via conference call on Thursday 10/17 to discuss catch to date. PS: brailing required, Chinook and Coho NR. GN: during wk 41, Chinook and Coho NR, live box required and limited soak times in effect. Reef nets open from end of Fraser Panel management through wk 45 (wb 11/3), 7 days/wk, must release all Chinook and unmarked Coho. All vessel operators must complete best fishing practices certification prior to fishing.
Subsistence	Trty	12/1 – 4/30 subsistence troll fishery (Chinook 22” min size). Bellingham Bay closed 4/1 – 4/30.

**Area 7 Recreational**

5/1-6/30	Closed
7/1-7/31	2 fish limit, (Chinook 22” min size); release wild Chinook; Bellingham and Samish Bay closed to salmon.
8/1-8/31	Closed to salmon angling.
9/1-9/30	2 fish limit, (Chinook 22” min size); Release Chinook.
10/1-1/31	Closed
2/1-4/15	2 fish limit, (Chinook 22” min size), release Coho and wild Chinook; Bellingham Bay and Samish Bay closed to salmon 4/1-4/30.

## 2.4 Nooksack/Samish Terminal Region

### Bellingham Bay (Areas 7B, 7C, 7D; 7A On-Reservation) Net

Chinook/Pink	Trty	<p>Areas 7B, &amp; 7D: August 1 through September 6, open weekly 4 PM Sunday to 4 PM Friday. Fishing pattern: 2,5,5,5,5,5.</p> <p>Area 7C: August 1 through September 13, open weekly 4 PM Sunday to 4 PM Friday. Fishing pattern: 2,5,5,5,5,5.</p> <p>Samish Bay is closed southeasterly of a line from Oyster Creek to the fisheries marker on Samish Island, except that hand pull gillnets may fish from 4 PM Sunday to 4 PM Wednesday south to a line from Oyster Creek to Fish Point on Samish Island, August 4 through September 11 Sunday 4 PM to Wednesday 4 PM, weekly. Fishing pattern: 3,3,3,3,3,3. 6 ½" mesh in 7C and off-reservation areas of 7B, except when open for sockeye in Area 7 and 7A.</p>
	Ntrty	<p>Areas 7B &amp; 7C: Wks 33 (wb 8/11) - 36 (wb 9/1); PS Coho NR through wk 35. GN fishing pattern: 3,4,4,5; PS fishing pattern: 1,1,1,1.</p>
Coho	Trty	<p>Area 7A on-reservation fishery: September 8 through October 2. Open weekly 4 PM Sunday to 4 PM Wednesday. Fishing pattern: 3,3,3,3.</p>
		<p>Areas 7B and 7D: September 8 through October 19, open Sunday 4 PM to Saturday 4 PM. Fishing pattern: 6,6,6,6,6,6.</p>
		<p>7C: On September 27, a Co-manager conference call will be held to determine the status of Samish Chinook escapement. If the escapement goal appears to be attainable, and through development of a Co-manager agreed in-season update methodology it is determined that there is a harvestable surplus of Samish Coho, then a Coho fishery will open September 29 to October 16, Sunday 4 PM to Wednesday 4 PM, weekly. Fishing pattern: 3,3,3.</p>
	Ntrty	<p>Area 7B: Wks 37 (wb 9/8) - 43 (wb 10/20); GN fishing pattern: 5,5,7,7,7,7,7 (24 hrs for all days); PS fishing pattern: 3,3,7,7,7,7,7.</p>
Chum	Trty	<p>Areas 7B &amp; 7D: Oct. 20 – Dec.11; open weekly 4 PM Sunday to 4 PM Wednesday; Fishing pattern: 3,3,3,3,3,3,3,3.</p>

	Ntrty	Area 7B: Wks 44 (wb 10/27) - 49 (wb 12/1); PS/GN; 7,5,5,5,5,5. Whatcom Creek Zone (east of line from Post Point to flashing red light at west entrance of Squalicum Harbor) open 7 days per week.
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**Nooksack River Treaty Net (Ntrty net closed)**

**Note: On a weekly basis, Nooksack Tribe commercial fisheries on the Nooksack River will open at 12:01 AM Sun, except that portion of the river between Marine Drive Bridge and the first turn (“Big Bend”) in the river upstream of the Slater Road Bridge (approximately ¼ mile upriver from the Slater Road Bridge), which will open at 4:00 PM Sunday. On a weekly basis the Nooksack Tribe’s commercial Chinook fisheries will close 4:00 PM Friday; Coho fisheries will close 4:00 PM Saturday and Chum fisheries will close 4:00 PM Wednesday.**

Chinook/Pink	4/5-6/15	April to mid-June: limited ceremonial and subsistence fishery will be managed for a total mortality of 17 NOR Chinook. A traditional fishery will occur 500 feet upriver from the Highway 9 bridge in the lower North Fork and 500 feet downriver from the Nugents Corner Boat Launch in the mainstem (the boat launch is located just down river from Nugent’s Corner Bridge) (RM 30.6 and 36.8). A total of 148 Chinook are projected in this fishery with an anticipated 5 NORs among the 148. This fishery is by permit only. Another fishery will occur in the lower Nooksack River between the Slater Road bridge and the river mouth (between RM 0.0 and 3.5). The lower river fishery will be selective and is projected to encounter 40NOR Chinook with an expected survival rate of 70% and an estimated mortality of 12 NOR Chinook.
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	8/1 - 9/7	<p>Open weekly 4 PM Sunday to 4 PM Saturday, August 1 through 4 PM September 7. Fishing pattern: 3,6,6,6,6,6. The river is divided into five zones during this period. These zones open in subsequent weeks, proceeding upriver, to protect migrating spring Chinook.</p> <p>Zone 1 is from Marine Drive Bridge to Slater Bridge.</p> <p>Zone 2 is from Slater Bridge to Hannegan Bridge In Lynden.</p> <p>Zone 3 is from Hannegan Bridge to Nugents Corner Bridge.</p> <p>Zone 4 is from Nugents Corner Bridge to the confluence of the north and south forks. The area in Zone 4, 1.3 miles downstream of the confluence (down to Nooksack Tribe blue colored automotive shop) will remain closed to protect holding Spring Chinook.</p>
Coho	9/8 – 10/19	<p>Open weekly 4 PM Sunday through 4 PM Saturday. Fishing pattern: 6,6,6,6,6,6. The area in Zone 4, 1.3 miles downstream of the north and south Fork confluence (down to Nooksack Tribe blue colored automotive shop) will remain closed through 4 PM September 23 to protect holding Spring Chinook.</p>
Chum	11/1-2 or 11/8-9 11/7-8 or 11/14-15	<p>Subsistence harvest only. The Lummi Nation and Nooksack Tribe will determine in-season which two days to hold this subsistence fishery.</p>
	10/20 – 12/11	<p>Commercial. Open weekly 4 PM Sunday to 4 PM Wednesday. Fishing pattern: 3,3,3,3,3,3,3,3.</p>

**Bellingham Bay Terminal Area Recreational**

5/1-8/15	Closed to Salmon
8/16-9/30	4 fish limit, 2 Chinook (Chinook 22" min size); Samish Bay closed.
10/1-11/31	Closed to Salmon.
2/1-3/31	Same as Area 7
4/1-4/30	Closed to Salmon

**Nooksack River Recreational; mainstem and North Fork**

from Lummi Indian Reservation boundary to yellow marker at the FFA high school barn in Deming	9/1 – 12/31	2 fish limit, plus 2 additional hatchery Coho; 12" min size. Release wild Chinook through 9/30.
from yellow marker at the FFA high school barn to confluence of North and South forks	10/1 – 12/31	2 fish limit, plus 2 additional hatchery Coho; 12" min size.

**Nooksack River Recreational, South Fork**

from mouth to Skookum Creek	10/1 – 12/31	2 fish limit, plus 4 additional hatchery Coho; 12" min size. Release Chumand release wild Chinook 10/1 – 10/15.
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**Nooksack River Recreational, North Fork**

Hwy 9 bridge to Maple Creek	10/1 – 11/30	2 fish limit, plus 2 additional hatchery Coho; 12" min size.
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**Samish River Recreational**

from mouth to I-5 Bridge	8/1 – 9/22	2 fish limit, 12" min size. Release wild Coho.
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**Dakota Creek Recreational**

mouth to Giles Road Bridge	10/1 – 12/31	2 fish limit, 12" min size. Release wild Chinook.
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**Whatcom Creek Recreational**

mouth to yellow markers below foot bridge below Dupont St. in Bellingham	8/1 – 12/31	6 fish limit, 2 adults; 12" min size.
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**All other NOOKSACK/SAMISH TERMINAL REGION freshwater recreational: Closed to salmon angling.**

## **2.5 Skagit Terminal Region**

**Terminal area fisheries will be managed so as not to exceed total projected incidental fishery mortalities of Skagit wild summer/fall Chinook. Treaty schedules may be changed in-season as necessary to meet management objectives and harvestable shares and to address river and weather conditions. Swinomish, Sauk-Suiattle, and Upper Skagit Tribes' fisheries will be managed so as not to exceed their individual shares based on the pre-season forecast and any in-season update that becomes available. The modeled inter-tribal catch distributions are forecasts only and do not set a precedent for future years.**

**The Skagit co-managers will utilize the same update models for Sockeye (Baker Trap method), Coho (Blakes/Spudhouse test fishery method), and Chum ISU (Bay/Jetty/Blakes test fishery method) consideration (with data from 2018 added) that have been used in recent years. Other models may be considered with co-manager agreement should they become available before the fishery.**

**NOTE: See appendix for details for the conduct, monitoring, reporting, assessment, and in-season co-manager actions upon which the following fisheries are agreed to. WDFW will share creel sampling and enforcement reports in-season as fisheries progress. The Skagit River recreational sockeye fishery, and upper river recreational Spring Chinook fishery will follow sampling plans provided in past years. Communication: Co-managers will share available information from the Area 4, 5, and 6 recreational fisheries (species, mark, size, catch, encounter) the second week of August. This information will be evaluated against pre-season expectation and provide co-managers with additional information which may be useful in management considerations.**

**Skagit Bay (Area 8) Net**

Note: Fishing schedules for Skagit Bay, Skagit River, and Baker River are pre-season projections. Schedules may be changed in-season as necessary to meet management objectives and harvestable shares.

Chinook	Area 8 – Trty	Swinomish Tribe may elect to take some or all of their C&S reserved Chinook in Area 8.
Spring Chinook	Area 8 – Trty	<u>Swinomish Tribe fishing pattern</u> : wk 19 (wb 5/5) thru wk 22 (wb 5/26);5,5,5,5. Additionally, Swinomish will fish the following schedule in 2020 during the timeframe of the 2019-2020 LOAF: wk 17 (wb 4/19/2020) thru wk 18 (wb 4/26/2020): 2,2. Once a 2020 spring Chinook forecast is available, Chinook impacts for these April 2020 fishing days will be modeled during the 2020-21 NOF/PFMC process such that they are applied to the correct biological return year. <u>Upper Skagit Tribe fishing pattern</u> : No scheduled fishery.
Sockeye	Area 8 – Trty	<u>Swinomish Tribe fishing pattern</u> : wk 26 (wb 6/23) thru wk 29 (wb 7/14); 3,5,5,5; Swinomish fishery will be managed so as not to exceed their individual Sockeye share based on the preseason forecast and any in-season update that becomes available. Additional fishing dependent on ISU. <u>Upper Skagit Tribe fishing pattern</u> : No scheduled fishery.
	Ntrty	Closed
Pink	Area 8 – Trty	<u>Swinomish Tribe fishing pattern</u> : No scheduled fishery. <u>Upper Skagit Tribe fishing pattern</u> : No scheduled fishery.
	Area 8 - Ntrty	Closed. May open pending co-manager agreement on ISU that indicates harvestable run size.
Coho	Trty	If ISU changes abundance status, treaty shares may be modified following co- manager discussions.
	Area 8 – Trty	<u>Swinomish Tribe fishing pattern</u> : wk 38 (wb 9/15) thru wk 41 (wb 10/6); 1,2,2,1. Swinomish tribe may elect to take some or all of their C&S reserved coho in Area 8. <u>Upper Skagit Tribe fishing pattern</u> : No scheduled fishery.
	Ntrty	Closed

Chum	Area 8 – Trty	<u>Swinomish Tribe fishing pattern</u> : No preseason harvestable. <u>Upper Skagit Tribe fishing pattern</u> : No preseason harvestable.
	Ntrty	Closed. May open pending co-manager agreement on ISU that indicates harvestable runsize.
Chum Test	Area 8	1 boat at Jetty 1 day/wk 44 (wb 10/27) & 45 (wb 11/3) and 1 boat in Bay 1 day/wk 44 (wb 10/27) & 45 (wb 11/3).
	Ntrty	Closed. May open pending co-manager agreement on ISU that indicates harvestable runsize.

**Skagit River Treaty Net (Ntrty net closed)**

Note: Fishers from the Sauk-Suiattle Tribe are invited to participate in the 2019 Swinomish salmon fishery in Skagit River Area 78C from the Mount Vernon bridge to the Spud House, pending Swinomish Senate resolution, subject to and in accordance with all provisions of fishing ordinances and regulations of the Swinomish Indian Tribal Community that apply to such fishery.

The Upper Skagit Tribe reserves the opportunity to take C&S reserved Chinook across the entire duration of this LOAF agreement, May 1, 2019 through April 30, 2020.

Chinook	Ceremonial and Subsistence – 1,000 fish (100 spring and 900 summer/fall) total: Swinomish (25 spring, 400 summer/fall), Sauk-Suiattle (25 spring, 100 summer/fall), and Upper Skagit (50 spring, 400 summer/fall) Tribes.
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Spring Chinook	Area 78C	<p><u>Swinomish Tribe fishing pattern:</u> wk 19 (wb 5/5) thru wk 22 (wb 5/26):5,5,5,5. Additionally, Swinomish will fish the following schedule in 2020 during the timeframe of the 2019-2020 LOAF: wk 17 (wb 4/19/2020) thru wk 18 (wb 4/26/2020): 2,2. Once a 2020 spring Chinook forecast is available, Chinook impacts for these April 2020 fishing days will be modeled during the 2020-21 NOF/PFMC process such that they are applied to the correct biological return year.</p> <p><u>Sauk-Suiattle Tribe fishing pattern:</u> wk 19 (wb 5/5) thru wk 21 (wb 5/19):3,3,3</p> <p><u>Upper Skagit Tribe fishing pattern:</u> wk 19 (wb 5/5) thru wk 22 (wb 5/26):1.0, 1.0, 0.833, 0.167. Additionally, Upper Skagit will fish the following schedule in 2020 during the timeframe of the 2019-2020 LOAF: wk 17 (wb 4/19/2020) thru wk 18 (wb 4/26/2020): 2,2. Once a 2020 spring Chinook forecast is available, realized Chinook impacts for these April 2020 fishing days will be modeled during the 2020-21 NOF/PFMC process such that they are applied to the correct biological return year.</p>
	Area 78D	<p><u>Upper Skagit Tribe fishing pattern:</u> wk 19 (wb 5/5) thru wk 22 (wb 5/26):1.0, 1.0, 0.833, 0.167. Additionally, Upper Skagit will fish the following schedule in 2020 during the timeframe of the 2019-2020 LOAF: wk 17 (wb 4/19/2020) thru wk 18 (wb 4/26/2020): 2,2. Once a 2020 spring Chinook forecast is available, realized Chinook impacts for these April 2020 fishing days will be modeled during the 2020-21 NOF/PFMC process such that they are applied to the correct biological return year.</p>
Sockeye	Ceremonial and Subsistence 200 fish Upper Skagit Tribe. Swinomish, Sauk-Suiattle, and Upper Skagit Tribes may elect to collect some of their allocation from the Baker River upstream fish trap.	

	Area 78C	<p>Swinomish, Sauk-Suiattle, and Upper Skagit Tribes' fisheries will be managed so as not to exceed their individual Sockeye shares based on the preseason forecast and any in-season update that becomes available.</p> <p><u>Swinomish and Sauk-Suiattle Tribes fishing pattern:</u> wk 26 (wb 6/23) thru wk 29 (wb 7/14):3,5,5,5; Additional fishing dependent on ISU.</p> <p><u>Upper Skagit Tribe fishing pattern:</u> wk 26 (wb 6/23) thru wk 29 (wb 7/14): 0.500,0.625,0.625,0.208.; Additional fishing dependent on ISU.</p>
Sockeye	Area 78D Area 78O	<p>Swinomish and Upper Skagit Tribes' fisheries will be managed so as to not exceed their individual Sockeye shares based on the preseason forecast and any in-season update that becomes available.</p> <p><u>Swinomish Tribe fishing pattern (Area 78D-4 and Baker River):</u> Wk 29 (wb 7/14): 1; Additional fishing dependent on ISU;</p> <p><u>Upper Skagit Tribe fishing pattern:</u> Areas 78D-2, 78D-3, 78D-4, and 78O (Baker River): wk 26 (wb 6/23) thru wk 29 (wb7/14): 0.500,0.625,0.625,0.208; Additional fishing dependent on ISU.</p>
Pink	Area 78C	<p><u>Swinomish and Sauk-Suiattle Tribes fishing pattern:</u> No scheduled fishery. Fishing dependent on ISU.</p> <p><u>Upper Skagit Tribe fishing pattern:</u> No scheduled fishery. Fishing dependent on ISU.</p>
	Area 78D	<p><u>Upper Skagit Tribe fishing pattern:</u> No harvestable surplus and no fisheries planned. Fishing dependent on ISU.</p>
Coho	<p>If ISU changes abundance status, treaty shares may be modified following co-manager discussions. Ceremonial and Subsistence 300 fish total Swinomish, Sauk-Suiattle, and Upper Skagit Tribes (100 each).</p>	
	Area 78C:	<p><u>Swinomish and Sauk-Suiattle Tribes fishing pattern:</u> Wk 38 (wb 9/15) thru wk 41 (wb 10/6): 1,2,2,1. Upper Skagit Tribe fishing pattern: wk 39 (wb 9/22) thru wk 43 (wb10/20): 0.458,0.667,1.0,0.333,0.167.</p>
	Area 78D	<p><u>Upper Skagit Tribe fishing pattern:</u> wk 39 (wb 9/22) thru wk 43 (wb 10/20): 0.458,0.667,1.0,0.333,0.167.</p>

Chum	Area 78C	<u>Swinomish and Sauk-Suiattle Tribes fishing pattern</u> : No pre-season harvestable. <u>Upper Skagit Tribe fishing pattern</u> : No pre-season harvestable.
	Area 78D	<u>Upper Skagit Tribe fishing pattern</u> : No pre-season harvestable.
River Test	Chinook	Area 78C - Blakes wk 19 (wb 5/5) thru wk 35 (wb 8/25);1 boat, 6 hours/wk.
	Sockeye	Area 78C – Blakes wk 24 (wb 6/9) thru wk 29 (wb 7/14); 1 boat, 12 hours/wk; Area 78D-3 - Upper Skagit - wk 23 (wb 6/2) thru wk 30 (wb 7/21);1 boat, 4 hrs/wk.
	Coho	Area 78C - Blakes Drift wk 38 (wb 9/15) thru wk 42 (wb 10/13), 12 hours/wk; Area 78C – Spudhouse Drift, Upper Skagit, wk 34 (wb 8/18) thru wk 42 (wb 10/13);1 boat, 12 hours/wk; Area 78D-3 Wk 35 (wb 8/25) thru wk 44 (wb 10/27);1 boat, 4 hours/wk.
	Chum	Area 78C - Blakes Drift wk 44 (wb 10/27) and wk 45 (wb 11/3);1 boat, 12 hours/wk.
	Steelhead (tangle net)	Area 78D-3 Wk 5 (wb 1/26/20) thru wk 17 (wb 4/21/20). Steelhead tagged and released.

**Swinomish Channel Treaty Net (Ntrty net closed)**

Coho	No separate openings. Area opens during Area 8 openings.
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**Area 8-1 Recreational**

5/1-7/31	Closed
8/1 – 10/31	2 fish limit, release Chinook.
11/1-1/31	Closed
2/1-4/30	2 fish limit, (Chinook 22" min size) release Coho and wild Chinook..

**Baker River/Lake Recreational**

mouth to Dam	Closed to salmon.	
Baker Lake	7/7-9/16	3 fish limit, Sockeye only, 18" min. size.

**Cascade River Recreational**

mouth to Rockport-Cascade Road Bridge	6/1 – 7/15	4 fish limit, only 2 may be adults, hatchery Chinook only, 12” min. size.
	9/16 – 11/30	4 fish limit, Coho only, 12” min. size.

**Skagit River Recreational**

Specific gear conflict closure dates have not been identified but recreational fishing for all species will close two days per week from the mouth to highway 530 bridge in Rockport during weeks 26-29 for Sockeye and weeks 39-41 for Coho.

Mouth to Hwy 536 at Mt. Vernon (Memorial HWY Bridge)	9/1 – 12/31	3 fish limit, release Chinook and Chum. 12” min size
from Memorial Hwy Bridge to Gilligan Creek	5/1-5/31	2 fish limit, hatchery Chinook only. (12” min. size)
	6/16-7/15	3 fish limit, Sockeye only (12” min size).
	9/1 – 12/31	3 fish limit, (12” min size). Release Chinook and Chum.
Mouth of Gilligan creek to Dalles Bridge at Concrete	9/1 – 12/31	3 fish limit, (12” min size). Release Chinook and Chum.
Dalles Bridge at Concrete to Hwy 530 Bridge at Rockport	9/1 – 12/31	3 fish limit, (12” min size). Release Chinook and Chum.
Hwy 530 Bridge at Rockport to Cascade River Rd	6/1 – 7/15	4 fish limit, (12” min size). Only 2 may be adults, Release wild Chinook.
	9/1 – 12/31	3 fish limit, (12” min size). Release Chinook and Chum.

**All other SKAGIT TERMINAL REGION freshwater recreational closed to salmon angling.**

## 2.6 Stillaguamish/Snohomish Terminal Region

### Area 8A Net

Chinook	Trty	Closed (Ceremonial set-aside of up to 100 Chinook, July-September period).
	Ntrty	Closed
Pink	Trty	Wk 36 (wb 9/01): 3 days per week
	Ntrty	Closed
Coho	Trty	Tulalip Tribes: (9/08 – 9/21, 9/29 – 10/19) 3 days per week; (9/22 – 9/28) 4 days per week. Manage for 50,000 escapement to the Snohomish River (see Snohomish River Natural Coho Rebuilding Plan), with ISU at weeks 39 and 40.
	Test	Closed
	Ntrty	Closed.
Chum	Trty	Closed
	Test	Closed
	Ntrty	Closed

### Area 8D Net

Chinook	Trty	BS, RH, GN gear outside Tulalip Bay may be open during the following periods: (5/05 – 5/30) 5 days per week (6/03 – 8/10) 3 ½ days per week: 12:01 PM Mon – 11:59 PM Thu (8/11 -9/07) 5 days per week  Setnets inside Tulalip Bay may be open during the following period: (5/05 – 9/07) 5 days per week
	Ntrty	Closed (see recreational SAF)
Coho	Trty	(9/08 – 10/26) BS, RH, GN gear outside Tulalip Bay may be open 4 days per week to target Tulalip hatchery Coho. Setnet may be open 5 days per week.

	Ntrty	Wk 39 (wb 9/22) - 45 (wb 11/3); PS Chinook NR; PS fishing pattern: 1,1,1,1,1,1,2; GN fish each night Sunday through Thursday night (5,5,5,5,5,5,5); also open daylight hours Tuesdays and Wednesdays (2,2,2,2,2,2,2). Closed east of the line from Mission Point to Hermosa Point.
Chum	Trty	(10/27 – 11/30) Open to target Tulalip hatchery Chum. Managed to allow for hatchery egg take needs based on Tulalip hatchery escapement updates and projections. All Area 8D fisheries will close concurrently as agreed to by Tulalip and WDFW to ensure egg take requirements are met.
	Ntrty	Wk 46 (wb 11/10) - 48 (wb 11/24); PS fishing pattern: 1,1,1; GN fishing pattern: 3,3,3 daylight hours. Closed east of the line from Mission Point to Hermosa Point. Managed to allow for hatchery egg take needs based on Tulalip hatchery escapement updates and projections. All Area 8D fisheries will close concurrently as agreed to by co-managers to ensure egg take requirements are met.

**Stillaguamish River Treaty Net (Ntrty net closed)**

Chinook	Ceremonial fishery only; Open 5/1 – 8/15; Up to 7 days per week; maximum catch of 15 Chinook; Open from mouth of Hatt Slough (RM 0) to Danielson Hole (RM 14).
Pink	C&S fishery only; Open 8/1 – 9/30; Up to 7 days per week; Open from mouth of Hatt Slough (RM 0) to Danielson Hole (RM 14).
Coho	Commercial fishery; Open 9/1 – 10/31; Up to 5 days per week; Open from mouth of Hatt Slough (RM 0) to Danielson Hole (RM 14).
Chum	C&S fishery only; Open 11/1 – 12/5; Up to 3 days per week; max catch of 300 Chum; Open from mouth of Hatt Slough (RM 0) to Danielson Hole (RM 14).

**Snohomish River Treaty Net (Ntrty net closed)**

Chinook, Pink, Coho, Chum	Closed
Coho Test	Closed

**Area 8-2 Recreational**

5/1-8/15	Closed
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8/16-9/15	2 fish limit, release Chinook and wild Coho. Open south of a line from Clinton to Mukilteo ferry terminals.
9/16-1/31	Closed
2/1-4/30	2 fish limit (Chinook 22" min size). Release Coho and wild Chinook.

**Tulalip Special Area Recreational Fishery**

Same as Area 8-2 Recreational, except during the period 6/1-9/23:	6/1-9/2	Open 12:01 AM Friday – 11:59 AM Monday each week. Closed June 15. Open within Tulalip Special Area boundaries only. Closed to all angling east of the line from Mission Point to Hermosa Point. 2 fish limit salmon, 2 pole endorsement (Chinook 22" min. size).
	9/7-9/29	Open Saturday and Sunday each week. Open within Tulalip Special Area boundaries only. Closed to all angling east of the line from Mission Point to Hermosa Point. 2 fish limit salmon, 2 pole endorsement (Chinook 22" min. size).

**Snohomish River Recreational**

mouth to confluence of the Skykomish and Snoqualmie rivers	9/1 – 9/30	1 fish limit, Coho only, 12" min. size. Continuation of fishery past Septemeber dependent on ISU.
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**Snoqualmie River Recreational**

mouth to Snoqualmie Falls	9/1 – 9/30	1 fish limit, adults only, Coho only, 12" min. size. Continuation of fishery past Septemeber dependent on ISU.
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**Skykomish River Recreational**

from mouth to Wallace River	5/25–7/31	4 fish limit, only 2 may be adults, hatchery Chinook only, 12" min. size.
mouth to confluence of North and South forks	9/1-9/30	1 fish limit, Coho only, 12" min. size. Continuation of fishery past September dependent on ISU..

**Wallace River Recreational**

mouth to 200' upstream of water intake of salmon hatchery	9/16 – 9/30	1 fish limit, 12" min. size. Coho only. Continuation of fishery past September dependent on ISU.
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**Stillaguamish River Recreational**

mouth to forks	9/16- 11/15	2 fish limit, Coho Only, 12" min size, selective gear rules.
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See appendix for gamefish season regulations.

**All other STILLAGUAMISH/SNOHOMISH TERMINAL REGION freshwater recreational closed to salmon angling.**

**2.7 Admiralty Inlet Area**

The co-managers have agreed to develop a comprehensive chum management plan over the course of the next three years. It is the intent of co-managers to address catches of Hood Canal Origin fall chum, including catches in marine areas 9, 10, and 11 in this comprehensive chum plan. Co-managers have agreed to review the balance of pre-terminal impacts to Hood Canal Origin chum between tribal and non-tribal fisheries beginning with the 2019 season. This information will identify any overly imbalanced condition that would require further co-manager discussion for future seasons in the interim period.

Area 9 Net

Chinook	Trty	Ceremonial and Subsistence – Up to 500 Chinook as agreed upon by those Tribes with U&A in Area 9, (PS and Hook & Line, release all Chum 6/1 – 9/30).
	Ntrty	Closed
Chum	Research	Wk 43 (wb 10/20) – 46 (wb 11/10) research fishery to develop stock composition/timing information. Research catch quota of up to 2,400 Chum. Reference 2019 Area 9 Chum Salmon Research Fishery Plan to be developed by NWIFC and tribal staff prior to beginning this research.

	Trty	The Area 9 fall chum fishery north of the HC bridge will open wk 43 (wb 10/20) through wk 45 (wb 11/3); fishing pattern: GN 3,4,3; and PS 4,3,3. Open area restricted to that portion of North Hood Canal bounded to the south by the Hood Canal Bridge and bounded to the north by a line from White Rock due east to landfall. Tribes with adjudicated U&A in the open section of Area 9 may choose to participate. Coho and Chinook model inputs have been modeled during NOF that anticipate the participation levels of 2018. If the fishery reaches a catch threshold of 30,000 chum salmon before 11/2, there will be a conference call among the participating Tribes to discuss any needed fishery management actions. Participating tribes agree to sample tissue for DNA analysis of their tribe's chum catch and wild coho bycatch to the extent practicable.
	Ntrty	Closed

**Area 9 Recreational**

5/1 – 7/24	Closed
7/25 – 8/15	2 fish limit, (Chinook 22" min size) release wild Coho, Chum and wild Chinook. Closed south and west of a line from Foulweather Bluff to Olele Point.
8/16 – 9/30	2 fish limit; release wild Coho, Chum and Chinook.
10/1 – 1/31	Closed.
2/1 – 4/15	2 fish limit, (Chinook 22" min size), release wild Coho and wild Chinook.
4/16 – 4/30	Closed

**Edmonds Pier Recreational**

Year-Round	2 fish limit, 1 Chinook (Chinook 22" min size), release Chum 8/1-8/31.
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**3.0 South Sound Region**

**3.1 Area 10 Sub region**

**Area 10 Net**

Chinook	Closed	
Sockeye	Trty	Fishery dependent upon ISU (Ballard lock counts)

	Ntrty	Closed
Pink	Trty	Closed (No pink salmon fishery proposed)
	Ntrty	Closed
Coho	Test	Gillnet: Wk 37 (wb 9/8) - wk 39 (wb 9/22); 3 boats, 3 sites; fishing pattern: 2,2,2.
	Trty	On-Reservation only; wk 38 (wb 9/15) – wk 43 (wb 10/20); gillnet/beach seine; 7 days/wk.  Off Reservation: Wk 36 (wb 9/1) – wk 40 (wb 9/29). Fishing schedule for Area 10 shall be set consistent with the MST agreement (1983).
	Ntrty	Closed
Chum	Test	Purse Seine: Wk 41 (wb 10/6) - wk 46 (wb 11/10); 1 site, fishing pattern: 1,1,1,1,1,1.
	Trty	Suquamish-Tulalip -Treaty allocation based on intertribal sharing agreement; wk 41 (wb 10/6) – wk 45 (wb 11/3) fishing pattern – ISU dependent; Fishing schedule for Area 10 shall be set consistent with the MST agreement (1983).  Suquamish- If Area 10 Suquamish allocation not obtained through week 45, Suquamish will continue to fish into week 46 (wb 11/10) with the following guidelines: week 46 catch not to exceed 3,500 or remaining allocation, and open area restricted to north of Jefferson Head and west of the north bound shipping lane. <u>Suquamish</u> – On-Reservation only (set net gear only): wk 42 (wb 10/13) – wk 50 (wb 12/8) up to 7 days per week dependent upon Chum return to the Grovers Creek Hatchery.
	Ntrty	Wk 42 (wb 10/13) - 45 (wb 11/3); PS Chinook and Coho NR; PS fishing pattern: 1,1,1,2; GN fishing pattern: 1,2,2,2. The area east of a line from Four Mile Rock south to Alki Point is closed. PS and GN restricted from fishing in modified closure areas 10(5) and 10(6) as described in WAC 220-354-080.

**Area 10A Treaty Net (Ntrty net closed): That portion of Elliott Bay east of the line from Pier 91 to the light at Duwamish Head.**

Chinook	Trty Test	Gillnet: Wk 29 (wb 7/14 <sup>th</sup> ) – Wk 31 (wb 7/28 <sup>th</sup> ); 7/17 <sup>th</sup> , 7/24 <sup>th</sup> & 7/31 <sup>st</sup> (Wednesday nights); 5 fishing sites (one boat per site). 8 PM to 8 AM. One night per week; 8 PM to
	Trty	Gillnet: Wk 32 (wb 8/4 <sup>th</sup> ) 8/7 <sup>th</sup> ; 8 PM to 8 AM. Based on ISU: Wk 33 (wb 8/11 <sup>th</sup> ) 8/14 <sup>th</sup> 8PM to 8 AM. Based on the ISU. (Any additional openings (after the 14 <sup>th</sup> ) will be discussed & agreed by the co-managers)
	Trty	Ceremonial and subsistence fisheries
Pink	Trty	Gillnet: Wk 35 (wb 8/25); with the fishing pattern Sunday thru Friday.
Coho	Trty	Gillnet: Fishery will open Wk 36 (wb 9/1 <sup>st</sup> ) – Wk 42 (wb 10/13 <sup>th</sup> ) with the fishing pattern Sunday thru Friday. (Fishery will close if the Duwamish/Green River ISU is executed and does not show harvestable coho. If the ISU shows harvestable coho the fishing pattern will be as stated above).
	Trty	Ceremonial and subsistence fisheries
Chum	Trty	Gillnet: Wk 43 (wb 10/20 <sup>th</sup> ) - Wk 48 (wb 11/24 <sup>th</sup> ); with the fishing pattern Sunday thru Friday.
	Trty	Ceremonial and subsistence fisheries

**Duwamish/Green River (Area 80B) Treaty Net (Ntrty net closed)**

Chinook	Trty	Gillnet: Wk 32 (wb 8/4 <sup>th</sup> ) 8/7 <sup>th</sup> ; 8 PM to 8 AM. Based on ISU: Wk 33 (wb 8/11 <sup>th</sup> ) 8/14 <sup>th</sup> 8PM to 8 AM. Based on the ISU. (Any additional openings (after
	Trty	Ceremonial and subsistence fisheries
Pink	Trty	Gillnet: Wk 35 (wb 8/25); with the fishing pattern Sunday thru Friday.

Coho	Trty Test (if executed)	Wk 37 (wb 9/8 <sup>th</sup> ) Coho ISU test fishery on the river (from the mouth of the East and West waterways up to 16 <sup>th</sup> Ave. Bridge). The 6 sites are as follows: East Waterway, West Waterway, Old Riverside Marina, Kellogg Island, 1 <sup>st</sup> Ave Bridge and 16 <sup>th</sup> Ave Bridge.
Coho	Trty	Gillnet: Fishery will open Wk 38 (wb Sept 15 <sup>th</sup> ) up to the 16 <sup>th</sup> Ave bridge. Starting on Wk 39 (wb Sept 22 <sup>nd</sup> ) the fishery will open up to the Boeing St Bridge. Starting Wk 40 (wb Sept 29 <sup>th</sup> ) the fishery will open up to the HWY 99 bridge. Fishing pattern will be Sunday thru Friday. (Fishery will closed if the treaty test ISU is executed and does not show harvestable coho. If the ISU shows harvestable coho the fishing pattern will be as stated above).
	Trty	Ceremonial and subsistence fisheries
Chum	Trty	Gillnet: Wk 44 (wb 10/27 <sup>th</sup> ) – Wk 48 (wb 11/24 <sup>th</sup> ) with the fishing pattern Sunday thru Friday
	Trty	Ceremonial and subsistence fisheries

**Area 10E Treaty Net (Ntrty net closed; see below for recreational SAF)**

Chinook	Trty	Wk 30 (wb 7/21) - wk 38 (wb 9/15); fishing pattern: 7 days/wk. Possible extension for Sinclair Inlet.
Coho	Trty	On-Reservation only; wk 38 (wb 9/15) - wk 43 (wb 10/20); gillnet/beach seine; 7 days/wk.
Chum	Trty	Wk 43 (wb 10/20) - wk 50 (wb 12/8); schedule dependent upon ISU.

**Lake Washington System (includes Lake, Lake Union, Ship Canal, & Lake Sammamish)**

**Areas 10F, 10G, 10C, 10D Treaty Net (Ntrty net closed)**

Sockeye	Wk 23 (wb 6/2 <sup>nd</sup> ) – Wk 32 (wb 8/4 <sup>th</sup> ) Based on ISU (lock counts).	
	Wk 23 (wb 6/2 <sup>nd</sup> ) – Wk 33 (wb 8/11 <sup>th</sup> ) Bio-sample program	
	Wk 25 (wb 6/16 <sup>th</sup> ) PSC test fishery	
	Ceremonial and subsistence fisheries	
Chinook	Closed.	
	Ceremonial and subsistence fisheries	

Coho	Coho fisheries in the four following areas are dependent upon the ISU (if lock counts project run size < 10,000 coho entering the lake), then the coho fishery will remain closed in all four areas including Lake Sammamish):	
	Ceremonial and subsistence fisheries	
	Lower ship canal (below Ballard Locks)	If the ISU is > than 10,000 the fishery could open as early as Wk 38 (wb 9/15 <sup>th</sup> ) – Wk 44 (wb 10/27 <sup>th</sup> ) with the fishing pattern up to 7 days per week (Sun – Sat).
	Upper ship canal (above Ballard Locks):	If the ISU is > than 10,000 the fishery could open as early as Wk 38 (wb 9/15 <sup>th</sup> ) – Wk 44 (wb 10/27 <sup>th</sup> ) with the fishing pattern Sunday thru Friday.
	North end Lake Washington (North of Hwy. 520 bridge):	If the ISU is > than 10,000 the fishery could open Wk 39 (wb 9/22 <sup>nd</sup> ) – Wk 46 (wb 11/10 <sup>th</sup> ) with the fishing pattern Sunday thru Friday.

**Lake Sammamish Treaty Net**

Chinook	Based on ISU – hatchery surplus.
	Ceremonial and subsistence fisheries
Coho	If the ISU is > than 10,000 the fishery could open Wk 41 (wb 10/6 <sup>th</sup> ) – Wk 47 (wb 11/17 <sup>th</sup> ) with the fishing pattern Sunday thru Friday.
	Ceremonial and subsistence fisheries

**Area 10 Recreational**

5/1-5/31	Closed
6/1-7/24	2 fish limit, release Chinook and Chum.
7/25-8/31	2 fish limit, (Chinook 22” min size), release wild Chinook and release Chum.
9/1-11/15	2 fish limit, release Chinook and release Chum through 9/15.
11/16-12/31	Closed
1/1-3/31	2 fish limit, (Chinook 22” min size), release wild Chinook..
4/1-4/30	Closed.

**Shilshole Bay (East of Meadow Point/West Point line) closed to salmon 7/1-8/31.**

**Outer Elliott Bay (E of West Pt. /Alki Pt line to Pier 91/Duwamish Head line) closed to salmon 7/1-8/31.**

Inner Elliott Bay (E of Pier 91/Duwamish Head line) closed to salmon 7/1-8/31.

**Area 10 Piers Recreational**

Seacrest Pier, Pier 86, Waterman Pier, Bremerton Boardwalk, Illahee State Park Pier	Year-Round	2 fish limit, 1 Chinook (22" min size), release Chum 8/1-9/15.
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**Elliott Bay Recreational SAF**

5/1- 6/30	Same as Area 10.
7/1- 8/1	Closed
8/2 – 8/5 (noon)	2 fish limit. Inner Elliot bay waters open east of a line from Pier 91 to Duwamish head. Additional openings contingent upon ISU model results.
8/6 – 8/31	Closed
9/1- 4/30	Same as Area 10.

**Sinclair Inlet Recreational SAF**

5/1-6/30	Same regulations as Area 10.
7/1-9/30	Open S of Manette Bridge, S of line drawn true W from Battle Point, and W of line drawn true S from Point White; 3 fish limit, (Chinook 22" min size), release wild Chinook and wild Coho, release Chum 8/1-9/15, 2 pole endorsement.
10/1-4/30	Same regulations as Area 10.

**Green River Recreational**

WDFW and MIT commit to developing and executing a monitoring plan to assess Chinook encounter rates and non-retention mortality rates in both directed Chinook fisheries and non-Chinook directed fisheries within the system prior to the beginning of the 2019 river fishery. The implementation of either portion of the plan is contingent on available funding. The portion of the plan to estimate encounter rates is likely to cost significantly less than the portion to estimate mortality rates and will be prioritized due to the higher likelihood there will be sufficient funds available to cover its implementation.

From an east-west line extending through the southernmost tip of Harbor Island to Tukwila International Boulevard/Old Hwy. 99	8/20 – 12/31	Daily limit 6. No more than 3 adults may be Coho and Chum, 12” min size, release Chinook.
Tukwila International Boulevard/Old Hwy. 99 to the South 212nd Street Bridge	8/20 – 12/31	Daily limit 6. No more than 3 adults may be Coho and Chum, only 1 Chinook, 12” min size.
South 212 <sup>th</sup> Street Bridge to Auburn-Black Diamond Road Bridge	9/16 – 12/31	Daily limit 6. No more than 3 adults may be Coho and Chum, 12” min size, release Chinook. Closed within 150’ of the mouth of Big Soos Creek (from the eastbound Bridge of highway 18 to Auburn Blackk Diamond Rd. Bridge
from Auburn-Black Diamond Rd Bridge to Tacoma Headworks Dam	11/1 – 12/31	Daily limit 6. No more than 3 adults may be Coho and Chum, 12” min size, release Chinook, Closed waters - within 150’ of the mouth of Keta (Crisp) Creek.

Chinook fishery is dependent upon ISU and co-manager agreement.

The 2019/2020 WDFW sport pamphlet will reflect the following season end dates for trout and other game fish fall/winter season.

Mouth to Tacoma Headworks Dam: Dec. 31

#### **Soos Creek Recreational**

Closed to salmon.

#### **Lake Washington Recreational**

August-October	Closed to salmon.  Re-opening dependent upon ISU (lock counts) and co-manager agreement. Potential fishery starting date to be determined: Coho: 12” min. size. 4 fish limit, Coho only.
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#### **Lake Sammamish Recreational**

10/1 – 11/30	Fishery dependent upon ISU (lock counts) and co-manager agreement. 4 fish limit, Coho only. 12” min size.
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12/1 – 5/31	Landlocked salmon rules apply. Hatchery Coho may be retained as part of the trout daily limit. 12-inch minimum size.
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**All other SOUTH SOUND AREA 10 REGION freshwater: Closed to salmon angling**

**3.2 Area 11 Sub region**

**Area 11 Net**

Chinook	All	Closed
Pink	Trty	Closed due to poor Pink Forecast.
	Ntrty	Closed
Coho	Trty:	Commercial fishery opens Wk 36 (wb 9/1) – Wk 42 (wb 10/13) Gillnets 7 nights a week. Beach Seines daylight hours only, 7 days/week.
	Ntrty:	Closed
Chum	Trty:	Commercial fishery open Wk 43 (wb 10/20) - Wk 45 (wb 11/3); gillnets 7 nights/wk, could close at any time. Beach seine daylight hours only, 7 days/wk.
	Ntrty	Wk 42 (wb 10/13) - 45 (wb 11/3); PS Chinook and Coho NR; PS fishing pattern: 1,1,1,2; GN fishing pattern: 1,2,2,2. <u>PS and GN restricted from fishing in modified closure areas 11(2) as described in WAC 220-354-080.</u>

**Area 11A Net Treaty Net (Ntrty net closed)**

Chinook	Closed
Coho	Commercial fishery open Wk 36 (wb 9/1) – Wk 42 (wb 10/13)
Chum	Commercial fishery open Wk 43 (wb 10/20) – Wk 53 (wb 12/29) 3 nights/wk.

**Puyallup River (Area 81B) Treaty Net (Ntrty net closed)**

Chinook	Spring Chinook	Ceremonial and Subsistence
	Summer – Fall	Commercial fishery Wk 33 (wb 8/11) and Wk 34 (wb 8/18) fishing pattern: 6 hours. TBD
Coho	Commercial fishery Wk 36 (wb 9/1) - Wk 42 (wb 10/13) fishing pattern: 1,2,2,2,2,2,2.	

Chum	Test fishery Wk 43 (wb 10/20) - Wk 44 (wb 10/27) 1 day/wk, drift net only.
Winter Chum	Commercial fishery Wk 45 (wb 11/3) – Wk 53 (wb 12/29) 1 to 3 days a week. Opening may be postponed to week 47 depending on In Season Information to protect Fall Chum.

**White River Treaty Net**

Coho	Gillnet fishery will open Wk 36 (wb 9/1 <sup>st</sup> ) – wk 42 (wb 10/13 <sup>th</sup> ) with the fishing pattern: 1,2,2,2,2,2,2 from Puyallup/White River confluence upstream to Stewart St. Bridge.
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Ceremonial and subsistence fisheries open up to 7 days/wk.

**Area 11 Recreational**

5/1-6/31	Closed	
7/1-9/30	2 fish limit (Chinook 22" min. size), only 1 Chinook, release wild Chinook; Commencement Bay (E. of Cliff House Restaurant/Sperry Ocean Dock line) closed to salmon through 7/31.	
10/1 – 12/31	Closed	
1/1-4/30	2 fish limit (Chinook 22" min size), release wild Chinook, Commencement Bay (E. of Cliff House Restaurant/Sperry Ocean Dock line) closed to salmon 4/1-4/30.	
Dash Point Dock, Point Defiance Boathouse Dock, Les Davis Pier, Des Moines Pier and Redondo Pier	Year-Round	2 fish limit, 1 Chinook (Chinook 22" min size).

**Puyallup River Recreational**

from 11 <sup>th</sup> St. Bridge to E. Main Bridge	8/15 – 12/31	Closed Sundays 8/15-8/31. Closed Sunday – Tuesday 9/1-10/31. 6 fish limit, 2 adults, 12” min size, release Chum and wild Chinook.
From E. Main Bridge to Carbon R.	8/15 – 12/31	6 fish limit, 2 adults, 12”min size, release chum and wild Chinook.

**Carbon River Recreational**

From mouth to Voight Creek	9/1 – 11/31	6 fish limit, 2 adults, 12” min size, release Chum and wild Chinook.
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**All other SOUTH SOUND AREA 11 REGION freshwater recreational Closed to salmon angling.**

**3.3 Area 13 Sub region**

**Fox Island/Ketron Island (Area 13)**

Chinook	Treaty	8/1-9/15, 7 days/wk
	Ntrty	Closed
Coho	Treaty	9/15 – 10/20, 7 days/wk
	Ntrty	Closed
Chum	Treaty	Closed unless opened by Medicine Creek Treaty Tribes’ agreement
	Ntrty	Closed

**Area 13 Treaty Net (Ntrty net closed)**

Chinook	Closed
Pink	Closed
Coho	Closed
Chum	Closed

**Carr Inlet (Area 13A) Treaty Net <sup>1</sup>(Ntrty net closed)** <sup>1</sup>Based on Medicine Creek Treaty Tribal proposal annual regulations. Individual Tribal regulations may deviate from this schedule.

Chinook	8/1 – 9/21, 7 days/wk, opens in sections.
Coho	9/15 – 10/26, 7 days/wk, opens in sections.
Chum	10/27 – 12/7, 7 days/wk, opens in sections.

**Chambers Bay (Area 13C) Treaty Net<sup>1</sup> (Ntrty net closed)**

Chinook	7/28 – 10/12; Beach seines Sunday noon to Tuesday noon. Set nets Wednesday noon to Friday noon.
Coho	10/13 – 11/2; Beach seines Sunday noon to Monday noon. Set nets Monday noon to Tuesday noon.
Chum	Closed for conservation.

**Area 13D Treaty Net (Ntrty net closed)**

Chinook	7/15 - 9/9 or earlier date dependent on in-season management needs; 7 days/wk
Coho	9/10 - 10/31 or earlier date dependent on in-season management needs.
<b>Dana Pass (13D-1)</b>	7 days/wk
<b>Pickering Pass (13D-2)</b>	7 days/wk
<b>Peale Pass (13D-3)</b>	7 days/wk
<b>Southern Case (13D-4)</b>	7 days/wk
Chum	Open approximately 10/7 2-4 days per week; managed by weekly escapement updates (~10/7).
<b>Area 13E Net</b>	Closed to all fishing

**Budd Inlet (Area 13F) Treaty Net (Ntrty net closed)**

Chinook	7/15-9/9 or earlier date dependent on in-season management needs; 7 days/wk 9/10-9/22 extended opening dependent on in-season monitoring to meet hatchery escapement needs.
Coho	Closed
Chum	Open approximately 11/4, 2-4 days per week, managed by weekly in-season updates

**Eld Inlet (Area 13G) Treaty Net (Ntrty net closed)**

Chinook	7/15-9/9; opening dependent upon in-season data, outer portion only.
Coho	Closed

Chum	Open approximately 11/4, 2-4 days per week, managed by weekly escapement updates
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**Totten Inlet (Area 13H) Treaty Net (Ntrty net closed)**

Chinook	8/1-9/9; schedule dependent on in-season data
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Coho	Closed
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Chum	Open approximately 10/7, 2-4 days per week; managed by weekly escapement updates
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**Little Skookum Inlet (Area 13I) Treaty Net (Ntrty net closed)**

Chinook	8/1-9/9; schedule dependent upon in-season data
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Coho	Closed
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Chum	Open approximately 11/4, 2-4 days per week; managed by weekly escapement updates
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**Hammersley Inlet (Area 13J) Treaty Net (Ntrty net closed)**

Chinook	8/1-9/9 or earlier date dependent on in-season management needs
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Coho	Closed
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Chum	Open approximately, 10/7 - 12/31, 2-4 days/wk; managed by weekly escapement updates
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**Northern Case Inlet (Area 13K) Treaty Net (Ntrty net closed)**

Chinook	7/15-9/9
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Coho	9/10-10/31 or earlier date dependent on in-season management needs
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Chum	Open approximately 10/7 -12/31; 2-4 days/wk; managed by weekly escapement updates
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**Nisqually River (Area 83D) Treaty Net (Ntrty net closed)**

Chinook/Pink	<p>Gill Net 1 day (24hrs) wk 32 (wb 8/4) then 2 days (48 hrs) per wk during the following weeks: wk 33 (wb 8/11) through wk 35 (wb 8/25) then 32 hrs wk 36 (wb 9/1).</p> <p>Selective gear staff driven testing. 1-7 days/wk, wk 31 (wb 7/21) through wk 40 (wb 9/29) or until 450 adult Chinook are encountered.</p> <p>Change In Ratio data collection staff driven TN 1-3 days/wk, wk 35 (wb 8/25) through wk 45 (wb 11/3) or when 110 Chinook or 200 Coho are encountered. Release all fish.</p>
Coho	<p>Gill Net 2 days wk 41 then 3 days/wk wks 42 (wb 10/7) through wk 47 (wb 11/17).</p> <p>Change In Ratio data collection staff driven TN 1-3 days/wk, wk 35 (wb 8/25) through wk 45 (wb 11/3) or when 110 Chinook or 200 Coho are encountered. Release all fish.</p>
Chum	<p>Gill Net 2 days/wk during the following weeks: wk 48 (wb 11/24) through wk 53 (wb 12/29). Yelm Escapement ISU must reach 181 live count on or before January 2nd to proceed fishing 2-3 days/wk, wk 2 (wb 1/5) through wk 4 (wb 1/19). Prior to wk 53 and absent Yelm Live Count of 181, the Boat ISU will be used wk 51 and wk 52 to inform management decisions. Fishing boundary: Mouth of Nisqually River up to approximate RM 5 at the confluence of Clear Creek and Mainstem.</p>

**McAllister Creek (Area 83F) Treaty Net (Ntrty net closed)**

Chinook/Pink	Gill Net up to 5 days/wk during the following weeks: wk 31 (wb 7/28) through wk 42 (wb 10/13). Freshwater courses.
Coho	Closed.
Chum	Closed.

**Area 13 Recreational**

5/1-4/30	2 fish limit (Chinook 20" min. size), release wild Coho and wild Chinook. 2 pole endorsement. Minter Creek mouth closed 4/16 - 9/15; Lower Budd Inlet closure zone 7/16-10/31.
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**Fox Island Pier Recreational**

Year-Round	2 fish limit, 1 Chinook (Chinook 22" min size), release Coho. Closed 9/1-10/30.
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**Chambers Creek Estuary Recreational**

downstream of markers 400' below Boise-Cascade Dam to Burlington Northern Railroad Bridge	7/1 – 11/15	6 fish limit, 2 adults; 12" min size, release wild Chinook, wild Coho, and Chum.
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**Deschutes River Recreational**

Capitol Lake (from outlet to 400' below lowest Tumwater Falls (Deschutes River) fish ladder).	7/1 – 10/15	Closed
from Old Hwy 99 Bridge on Capitol Blvd in Tumwater upstream	6/1 – 7/30/2020	6 fish limit, 2 adults, 12" min size, release wild Coho.

**Kennedy Creek Recreational**

mouth to northbound Hwy. 101 Bridge	10/1 – 11/30	6 fish limit, 2 adults, 12" min size, release wild Coho.
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**McLane Creek Recreational**

from a line 50' north of and parallel to the Mud Bay Rd. Bridge to a line 100' upstream of and parallel to the south bridge on Hwy.101	Same as Area 13	Same as Area 13.
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**Minter Creek Recreational**

mouth to 50' downstream of hatchery rack	9/15 – 12/31	6 fish limit, 4 adults of which 2 are Chinook or Coho release wild Coho, 12" min size.
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**Nisqually River Recreational**

mouth to the military tank crossing bridge, one mile upstream of the mouth of Muck Creek	7/1 – 11/15	6 fish limit, 2 adults, 12" min. size; release Chum and wild Chinook. Closed Sundays.
	11/16-1/31	Closed to salmon angling. May open pending Yelm Escapement ISU. If ISU reaches 181 live count on or before January 2 <sup>nd</sup> , open to Chum: 6 fish limit, 2 adults, release Coho and wild Chinook, 12" min size.  Prior to wk 53 and absent Yelm Live Count of 181 the Boat ISU will be used to inform management decisions. Chum opening co-manager agreement.
McAllister Cr. - mouth to Olympia-Steilacoom Rd Bridge	7/1 – 11/30	6 fish limit, 2 adults, 12" min size. Release Coho and Chum.

**All other SOUTH SOUND AREA 13 REGION freshwater recreational closed to salmon angling.**

**4.0 Hood Canal Region (All fisheries modeled in FRAM #2719 (Chinook) & #1925 (Coho))**

Hood Canal Mainstem (Areas 12, 12B, 12C, 12D)

**Treaty: 1,000 feet closure around streams that are closed to net fishing. Beach seines and hook and line gear release Chum through 9/30 (through 10/10 if within 500' of western shore of Areas 12B and 12C).**

**Nontreaty: See WAC 220-47-307 for Nontreaty exclusion zones.**

Chinook/Pink	Trty	Areas 12, 12B and 12D: Closed
		Area 12C: Gillnets and Beach Seines wb 7/21 - wb 7/28 3 d/wk; Gillnets wb 8/4-8/18 4d/wk; Beach Seines wb 8/4-8/25 4d/wk . Beach Seines Release chum 8/1-8/31 And Gillnets Restricted to 7" min. mesh starting 8/1 per the SCSCI.
		Area 12H: Open wb 7/14 through 9/14; hook and line gear continuous; beach seines and dipnets daylight hours Mon and Wed each week; possible in- season modifications; Chum release.
	Ntrty	Area 12H (12C): Hoodsport Hatchery Zone Only, Wks 31 (wb 7/28) – 36 (wb 9/1); 10,000 Chinook quota.BS fishing pattern: 2,2,2,2,2,2; release all Chum per the SCSCI.; Release all Chum per the SCSCI.
Coho	Trty	Area 12: Open 9/25 through 10/12 for gillnets. Beach seines for Coho only (release all Chinook and Chum through 9/30) may start no earlier than 9/16. Both gear types open 5 days/wk.
		Area 12B: Open 10/1 through 10/19 for gillnets; 500-foot closure along western shore through 10/10; beach seines for Coho only (release all Chinook and Chum through 9/30) may start no earlier than 9/16. Both gear types open 5 days/wk.
		Area 12C: a) Gillnets: 10/1-10/19 7 d/wk. b) Beach Seines: 10/1-10/20 7 d/wk. DAYLIGHT HOURS ONLY. c) 500 foot beach closure from Ayock Pt. to approx. 2,000 feet south of Lilliwaup (at the large house, north of Octopus Hole) through 10/10 for both gear types.

Coho	Trty	Area 12D (west of Madrona Pt. - local name): Open for gillnets no earlier than 10/1. Weekly schedules identical to Area 12C.
	Ntrty	Closed
Chum	See comanager agreed-to Hood Canal MOU in appendix.	
	Trty	Area 12: Open 10/13 through 11/20; 7 d/wk
		Area 12B: Open 10/20 through 11/20; 7 d/wk; except north of an East-West line from Zelatched Point to Seal Rock open through 11/27.
		Area 12C: Open 10/20 through 11/27; 7 d/wk.
		Area 12D: Closed.
		Area 12H: Hook and line gear open from 10/13 through 11/23; beach seines open Tuesday and Thursday of each week; possible in-season adjustments to 3 days/wk. Starting 11/3, hatchery escapement control measures will go into effect.
	Ntrty	Areas 12 and 12B: Wks 42 (wb 10/13) - 47 (wb 11/17): PS Chinook and Coho NR; PS fishing pattern: 1,1,1,2,1,1; GN fishing pattern: 1,2,2,2,2 daylight hours. Hazel Point closed to PS in weeks 42-47 and closed to GN in weeks 42 and 45-47.
Area 12C: Fisheries scheduled Wks 45 (wb 11/3) - 48 (wb 11/24): PS Chinook and Coho NR; PS fishing pattern: 2,1,1,1; GN fishing pattern: 2,2,2,2 daylight hours. Fishing is contingent upon the results of the agreed-to ISU.		
Hoodsport Hatchery Zone (12H): Beach seine fishery wks 45-48; fishing pattern: 2,2,2,2. Fishing is contingent upon the results from the agreed-to ISU.		
	Area 12D Closed	

**Port Gamble (Area 9A)**

No gillnet may be operated within the boundaries as described: From the head/mouth of Port Gamble Bay along both the eastern and western shores, along the southeastern edge of Pt. Julia and then north of a straight line drawn to west to the southern edge of the old mill site designated by markers (map in appendix).

Chinook	All	Closed
Coho	Trty	Open wb 8/11 through wb 10/26; 7 days/wk; gillnet only. Ceremonial Harvest of 20 Chinook in August.
Coho	Ntrty	Open Wks 34 (wb 8/19) - 44 (wb 10/28) skiff GN limited to 100 fathoms length and 60 meshes in depth; 7 days/wk; Chinook NR; Chum NR through 9/30; release NR fish by cutting ensnaring meshes. The beach area of the Port Gamble Indian Reservation, between Pt. Julia and the boundary marker at the south end of the reservation - closed to all fishing.
Chum	Trty	Open 10/27 through 11/23; 7 days/wk; gillnet only.
	Ntrty	Closed

**Quilcene / Dabob (Area 12A)**

Coho	Trty	Open 8/21 through 10/12; Chum and Chinook release from hook and line and beach seine gear through 9/30; beach seines 5 days/wk, daylight hours. Hook and line fisheries for Coho only, open continuously. Gillnets closed until Summer Chum escapement exceeds 1,500, then (1) GN day/wk; when escapement reaches 2,500 (2) GN day/wk; when escapement reaches 3,500 GN will be determined. Beach seine advance notification required prior to fishing.
	Ntrty	Beach seine open wks 34 (wb 8/18) – 40 (wb 9/29); Limited participation; Chinook and Chum NR; fishing pattern 3,5,5,5,5,5; GN closed unless Treaty GN opening. Fishery will be managed consistent with SCSCI.
Chum	Trty	Open to set and drift gillnets wb 10/13 through 11/20, South of an E-W line through Pt. Whitney.
	Ntrty	Closed

**Big Quilcene River (Area 82F) Treaty (Ntrty net closed)**

Coho	Openings to be determined in-season, for Coho only, from 9/1 through 10/12. Closed below Rogers St. From Rogers St. to U.S. Hwy 101, dipnets, hook and line gear only, release all other salmon. The hatchery area, from U.S. Hwy 101 to the Quilcene Hatchery rack, may be opened for short periods to take surplus Coho. Hand held gear only (dipnets, hand lines, etc.).
Chum	Closed

**Skokomish River (Area 82G) Treaty (Ntrty net closed) Purdy Creek (Area 82J) Treaty Net (Ntrty net closed)**

**Note: The Skokomish Tribe will continue to sample all agreed to fisheries in order to provide weekly in-season updates (i.e. CWT, species, mark status, and mark rates). The WDFW will provide weekly in-season updates for Chinook returns to the George Adams Hatchery rack. Note: Hook and line gear and beach seines release Chum through 10/15 above Hwy 106 Bridge.**

**Skokomish River – Mouth to HWY 106 Bridge (Area 82G) Treaty**

Coho	Open 10/06 – 11/02, 7 days/wk.
Chum	Open wb 11/03 through 11/30, 7 days/wk.

**Skokomish River – HWY 106 Bridge to HWY 101 Bridge (Area 82G) Treaty**

Chinook	Open wb 8/04 - wb 8/25, 3 days/wk.
Coho	Open wb 10/06 – wb 10/27, 7 days/wk.
Chum	Open wb 11/03 through wb 11/24; 7 days/wk.

**Purdy Creek (Area 82J)**

Note: Treaty Net 250 feet from the confluence/mouth of Purdy Creek to the HWY 101 Bridge (fishing nets may not be attached to any abutment or railings on the HWY 101 Bridge).

Chinook	Gill Nets only: Open Saturdays only beginning July 06 – August 10. In-season adjustments will occur to ensure weekly broodstock targets are achieved.
Chum	Gill Nets, Dip Nets and Hook & Line: Open 11/10 as necessary to reach tribal share.

**Misc. Hood Canal Rivers (Dosewallips, Duckabush, Hamma Hamma, Tahuya, Dewatto, Union)**

All species	Closed to commercial harvest.
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**Area 12 Recreational**

**Note: Release all Chum from 8/1 to 10/15, per the SCSCI. 7/1-10/15: All waters within channels created by exposed tidelands including - the free flowing waters of the Skokomish River downstream (north) of the City of Tacoma PUD overhead transfer powerlines are CLOSED to fishing for finfish; the State and Tribe will meet and resolve issues prior to a fishery occurring in this area. Mouth closures apply to Dosewallips, Duckabush, Dewatto, and Hamma Hamma Rivers.**

5/1-6/30	Closed
7/1-7/31	Closed North of Ayock.
7/1-9/30	South of Ayock Pt. – 4 fish limit, (Chinook 20" min size); release Chum and wild Chinook. 2 pole endorsement.
8/1-9/30	North of Ayock Pt. – 4 fish limit, release Chinook and Chum. Closed Tarboo Bay north of Broad Spit 9/16-9/30. Hook measuring ½ inch or less from point to shank from 8/1-8/15.
10/1-12/31	4 fish limit, 2 Chinook (Chinook 22" min size). Release wild Chinook, release Chum through 10/15. Closed in Tarboo Bay N of Broad Spit. 2 pole endorsement 10/1-10/31 South of Ayock.
1/1-4/30	2 fish limit, (Chinook 22" min size), release wild Chinook.

**Quilcene/Dabob Bay Recreational**

5/1-7/31	Same as Area 12
8/1-8/30	4 fish limit, Coho only
9/1-4/30	Same as Area 12

**Hoodsport Hatchery Zone Recreational, Same as Area 12 (above) except:**

7/1-12/31	4 fish limit, no minimum size; Release wild Chinook and release Chum 7/1-10/15. 2 pole endorsement 7/1-10/31.
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**Dewatto River Recreational**

mouth to Dewatto-Holly Rd. Bridge	Closed to salmon.
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**Dosewallips River Recreational**

mouth to ONP boundary	11/1 – 12/15	2 fish limit, 12" min size, Chum only.
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**Duckabush River Recreational**

mouth to ONP Boundary	11/1 – 12/15	2 fish limit, 12" min size, Chum only.
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**Quilcene River Recreational**

Rodgers St. to Hwy 101 Bridge	8/16 – 10/31	6 fish limit, 4 adults, 12" min size, Coho only. Night closure.
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**Skokomish River Recreational**

The State and Tribe will meet and resolve issues prior to a fishery occurring.

**Tahuya River Recreational**

Closed to salmon

**All other HOOD CANAL REGION freshwater recreational closed to salmon angling**

## **2018 – 2019 List Of Agreed Fisheries Appendix**

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## 1.1 2019 7/7A Chum Fishing Plan

04/15/2019

Chum salmon fisheries in Areas 7 and 7A will be regulated to comply with Chapter 6 of Annex IV of the United States – Canada Pacific Salmon Treaty (PST 2019). Chapter 6 of the PST specifies that U.S. commercial fisheries for Chum salmon in Areas 7 and 7A will not occur prior to October 10. Further, per Chapter 6 Chum salmon fisheries in Areas 7 and 7A will be regulated to comply with a base harvest ceiling of 125,000 Chum salmon, unless a critically low level of abundance is identified for those stocks migrating through Johnstone Strait (“Inside Southern Chum salmon”). Paragraph 9 (a-b) specifies run sizes below 1.0 million as critical (estimated by Canada). For run sizes below the critical threshold, the U.S. catch of Chum salmon in Areas 7 and 7A will be limited to those taken incidentally to other species and in other minor fisheries, and shall not exceed 20,000 pieces. When the Fraser River chum run-size is greater than 1.6 million, the US share shall be 160,000 chum.

In 2013, the co-managers enacted a fishing plan intended to result in the full harvest of chum salmon allowed to be caught in Area 7/7A under the existing Chapter 6 of the PST. Adoption of these annual pre-season chum fishing plans for Area 7/7A has resulted in the full harvest of the U.S. share in recent years (Table 1).

Table 1. U.S. 7/7A chum catches, 2009-2018

Year	NT catch	Treaty catch	Total U.S. catch	Total U.S. Share <sup>A</sup>	Uncaught share	Overage	Paid Back
2009	16,406	7,667	24,073	20,000 <sup>B</sup>	N/A	0	
2010	6,062	17,342	23,404	20,000 <sup>B</sup>	N/A	0	
2011	24,084	36,401	60,485	130,000	69,515	0	
2012	32,157	40,709	72,866	130,000	57,134	0	
2013	30,239	49,411	79,650	130,000	50,350	0	
2014	60,135	86,436	146,571	130,000	0	16,571	
2015	59,754	65,303	125,057	130,000	4,943	0	4,943
2016	66,531	51,705	118,236	130,000	11,764	0	11,764
2017	56,830	66,366	123,196	130,000	6,804	0	
2018	37,806	28,605	66,411	N/A <sup>C</sup>	N/A	0	

<sup>A</sup> Between 2009-2018, the base US share was 130,000 chum per year. Starting in 2019, the base US share shall be 125,000 chum per year.

<sup>B</sup> In 2009 and 2010, the Inside Southern Chum run size was below the critical threshold of 1.0 million; thus, per Chapter 6 of the PST the harvest ceiling was 20,000 additional chum following the notice from Canada that the run size was below the critical threshold.

<sup>c</sup> In 2018 the inside Southern chum was above the critical threshold, allowing the US to open fisheries. However, Fraser River chum were below the critical threshold of 900,000, which required the US to close 7/7A chum fisheries.

To continue to promote fishing opportunity that allows both the treaty and non-treaty fleets to catch their full shares, the co-managers will use the management approach below for the 2019 season.

- Tribal and non-tribal reef net fisheries will remain open continuously from the end of Fraser management to the end of the chum season or until their respective shares are harvested, whichever comes first. Reef nets will release all chum, unmarked coho and unmarked Chinook through September 30. Release all Chinook beginning October 1.
- Tribal purse seine (PS) and gillnet (GN) fisheries will open on Wednesday October 10 and remain open continuously until the end of the season or until the treaty share is harvested, whichever comes first.
- Non-tribal PS and GN fisheries will open on Friday October 11, Saturday October 12, Monday October 14, and Tuesday October 15.
- Non-treaty purse seine and gillnet fisheries will be evaluated relative to the thresholds below based on non-treaty chum catch reported on the in-season co-manager conference call scheduled for Thursday, October 17, 2018. Non-treaty fisheries will re-open on the prescribed dates and remain open continuously until the end of the season or until the non-treaty share is harvested, whichever comes first.

Table 2. 2019 Treaty Indian and All Citizen Chum Fishing Schedule for Marine Areas 7 and 7A

	10 Oct	11 Oct	12 Oct	13 Oct	14 Oct	15 Oct	16 Oct	17 Oct
	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
TI and AC Reef Net								
TI Gill Net and Purse Seine								
AC Gill Net and Purse Seine								
Co-Manager Conference Call								

- If total non-treaty catch is:
  - <29,000; non-treaty fishery will reopen Friday, October 18.
  - >29,000; non-treaty fishery will reopen Saturday, October 19.

In-season the co-managers will:

- exchange data on by-catch throughout the season, and take appropriate management actions should levels of by-catch greatly exceed expectations.

- meet by conference call and adjust schedules if needed in response to in-season notification by Canada's Department of Fisheries and Oceans that chum salmon returns are below the critical thresholds identified in Chapter 6, paragraph 9 of the Pacific Salmon Treaty.

#### Conduct of Scientific Research

Should the tribes and/or WDFW seek to open limited fisheries in an attempt to collect tissue samples from Area 7 West, Area 7 East and Area 7A for Genetic Stock Identification analysis, fishery plans will be exchanged among the Area 7/7A tribal and state co-managers for discussion, in an effort to reach agreement. These fishery plans will include clear objectives, and will be clearly defined and closely regulated. US Southern Panel members will notify their Canadian counterparts of this intent in an expeditious manner. As described in PST Chapter 6, paragraph 9(b), catches taken for the purpose of GSI sampling will not count toward the 20,000 catch limit allowed when critical thresholds are not being met.

## 1.2 Lummi Nation's Nooksack River Spring Chinook Radio Tag Study

This proposal communicates Lummi's interest in conducting a research fishery in the Nooksack River not to exceed 1% ER, as per section 7 (Research and Monitoring) of the Chinook Management Plan. The Lummi Natural Resources Department has received funding to implement a radio tag study to evaluate spatial distribution, temporal distribution and post-release mortality of natural and hatchery origin South Fork Nooksack spring Chinook entering the Nooksack River between April and June.

No data currently exist on holding area preferences or Nooksack River-specific thermal preferences of SF Chinook, which has a significant bearing on future broodstock collection efforts and habitat restoration projects. Additionally, it is hypothesized that a seasonal thermal barrier may be creating vulnerability to SF Chinook by affecting entry to the South Fork Nooksack which may be delaying spawn timing and inducing temperature related pre-spawn mortality.

A secondary benefit of this project may be the ability to demonstrate that removal of surplus adult North Fork Nooksack Chinook HORs during the spring selective drift fishery does not affect the Chinook recovery programs in the Nooksack basin by inducing significant mortality to released HOR and NOR South Fork Chinook and NOR North Fork Chinook.

In this study we intend to gather baseline data that will guide the efforts of the South Fork Chinook recovery program operated at Skookum Creek Hatchery and habitat restoration projects throughout the Nooksack River.

A tangle net (4.75" gill net mesh size) will be used to capture Chinook in the Nooksack River below the Slater Road Bridge. Three boats are used in this process: The primary fishing boat to deploy and manage the net, a tail boat to control the tail board end of the net, and a recovery boat. All natural origin Chinook, all suspected SF hatchery Chinook (CWT only), and some hatchery origin NF/MF Chinook (identified with a mark) will be tagged with radio transmitters and tracked using ground and aerial surveys on a weekly basis. A portion of the marked hatchery Chinook will be harvested for C&S use.

Up to 50 Lotek MCFT2 radio transmitters will be deployed each year using esophageal deployment. All released fish will receive a metal jaw tag with a unique identification number, will be tissue sampled for genetic stock assignment, be measured for fork length, sampled for scales, and sexed. For evaluating temporal and spatial distribution, weekly ground surveys in road-accessible areas of the main stem and forks will be conducted. Ground surveys will be used for accurately estimating entry timing to sub-basins, estimating spawn timing, pinpointing preferred holding areas, and recovering tags from mortalities. Weekly aerial surveys will be used to track spatial distribution throughout the entire Nooksack basin.

For 2019, this radio tag study will be limited to no more than 10 natural origin encounters. Applying the co-manager agreed 30% release mortality to these 10 encounters results in 3 natural origin mortalities. These 3 mortalities result in a 0.82 ER on natural-origin Nooksack spring Chinook. Five steelhead are also anticipated to be encountered during this research. Applying an 18.5% release mortality rate, the

same rate as applied to steelhead released during the Lummi spring Chinook C&S fishery with tangle-net gear, results in approximately one steelhead mortality as a result of these research efforts.

### 1.3 Skagit Encounter Monitoring During Recreational Coho Season

#### Objectives:

The objective of the creel is to estimate the Chinook encounter rate, and estimate encounters/retained catch during the fishery for all other species by mark type if applicable. We will also evaluate the distribution of effort within pamphlet reaches.

#### Methods:

Sampling will occur across the reach of the Skagit River that is open to coho, from the mouth to Marblemount during the months of September and October when chinook encounters may occur. Sampling will occur 5 days a week, on weekend days plus three randomly selected week days. Sampling will be random, and sampling effort will be conducted in equal proportions to angling effort. In order to assess effort distribution, on one day a week selected randomly, the number of anglers participating in the fishery will be estimated by counting vehicles and boat trailers in the fishery. The fishery effort counts will be broken into reaches that coincide with reach breaks in the sport rules pamphlet, thus effort for each reach can be calculated in relative proportion to all other reaches. The creeler will be randomly assigned to sample the reaches at the same proportion as effort calculated across the season.

At the end of the season, total encounters and fish retained can be tallied by reach. To estimate total encounters the percentage of effort sampled will be estimated by a simple ratio of coho catch observed retained from the sampling during the fishery, divided by the catch record card estimate. The total encounter rate or catch of the species of interest can then be solved for. The description is as follows:

#### Description of ratio estimate method

Total Coho Catch =X

Creeled Coho Catch =Y

Total catch of interested species A=A

Creeled species B catch=B

So  $A/B=X/Y$ . Solved for  $A=(X/Y)*B$

#### Description of Reaches Surveyed:

Mouth to Memorial Highway

Memorial Highway to Gilligan Creek

Gilligan Creek to Dalles Bridge in Concrete

Dalles Bridge to Hwy 530 Bridge in Rockport

Hwy 530 Bridge to Marblemount Bridge

Cascade River mouth to Rockport-Cascade Road

## 1.4 Lower Skagit River Spring Chinook Selective Fishery Proposal

### Proposal

The proposal is to conduct a spring Chinook mark selective sport fishery in the Skagit River from the Memorial Highway Bridge located in Mt. Vernon at river mile 11.4 to Gilligan Creek located at river mile 28.9. The fishery will open May 1, and close May 31, unless the wild Chinook or steelhead impacts limits are met prior to the anticipated end date. The daily limit will be two ad-clipped Chinooks only per day per angler, no retention of any other species allowed consistent with current gamefish regulations. Time and gear restrictions will include no fishing at night, and barbless hooks required.

### Fishery Guidelines

#### *Spring Chinook:*

Because a mark selective spring Chinook fishery in the lower Skagit has never been conducted, and the last spring chinook fishery occurred 40+ years ago, no contemporary data is available to estimate expected catch or impacts on wild fish from sport fisheries. From treaty catch data on fisheries conducted in the month of May, the percent of hatchery chinooks expected encountered would be 84.2%. The forecast for hatchery fish is for 4112 3-5 age hatchery fish of which 67.1% are marked. The wild forecast is for 2000 3-5 age fish. And total terminal spring return is 6112. Thus the mark rate in the fishery is expected to be 56.6%. (Spreadsheet available on request) For 2019, we will use as a proxy for the expected total encounter rate to be 10%. That equates to 611 fish encountered, of which 15.8% (96 fish) would be wild. A hooking mortality rate of 10% is used for freshwater sport fisheries on fish encountered. The terminal area impacts will be limited to 96 encounters on wild Chinooks, which equates to a 0.48% total impact rate.

#### *Wild steelhead:*

Both pre spawn and post spawn (kelts) Steelhead are expected to be encountered in this fishery at some unknown rate. The Skagit River Steelhead Fishery Resource Management Plan defines a tiered harvest regime, in which the total allowable wild harvest rate depends upon total wild terminal abundance. The pre-season forecast for Skagit wild steelhead abundance was 6567, so fisheries are planned such that the total harvest rate would not exceed 20%, 10% in non-treaty fisheries for the 2018-19 steelhead year.

The expected non treaty harvest rate in all non-targeted steelhead fisheries planned or executed in the July 1, 2018 - June 30, 2019 time frame is ~0.30. 8.0% has been set aside (but is expected to be much lower) for the Skagit Catch and Release steelhead fishery. To stay well within the harvest rate bounds allowed, the terminal area impacts will be limited to 328 encounters on wild steelhead, which equates to a 0.5% total impact rate. The actual calculated impact rate on steelhead post season will be lower, but undetermined at this point, due to some percentage of those fish being kelts.

## **Skagit Creel Census and Monitoring Plan**

To assess angler effort, catch, total harvest and impacts to other stocks and species WDFW will conduct a creel survey on the Skagit River during the selective Chinook fishery. A two-stage sampling design will be used to conduct the creel survey. Days of the month will be divided into two strata, weekdays and weekends. Each stratum has a fishing day length of approximately 16 hours that will be divided into two substrata, an early and late period. On weekend days, creel surveyors will sample both days and both the early and late periods. On weekdays, sampling will occur also both time periods, on three randomly selected days per week.

During the creel survey two pieces of information will be collected, angler effort and catch data. Effort counts will be made by counting the number of boat trailers and/or cars at the known access sites within the fishery boundary twice a day. In addition tie in counts will be conducted twice a week via jet sled to estimate/verify total effort. Information collected from angler interviews include number in party, angler type (i.e., boat or shore), whether or not anglers have completed their trip, start and stop time, number of trailers and cars associated with the party, and the number of fish kept and released by species and mark.

Methods used to expand effort and angler catch data to estimate total effort and harvest are outlined in WDFW Methods Manual-Creel Information from Sport Fisheries (Hahn 2000). Total catches and impacts to wild stocks will be calculated on a weekly basis. Impacts to stocks of concern nearing maximum impact levels will be immediately communicated to concerned parties and an emergency closure of the fishery will occur to avoid further impacts.

## **1.5 Pacific Salmon Commission Chum Technical Committee 2019 Juan de Fuca Strait Chum Salmon Sampling Program**

The Pacific Salmon Commission Southern Panel has again identified the establishment of a chum sampling program for the Strait of Juan de Fuca as a top research priority for proposals through the Southern Endowment Fund for 2019. The Chum Technical Committee submitted a proposal to continue the Strait of Juan de Fuca GSI sampling program which was begun in 2016, and this proposal was once again selected for funding. The sampling program will follow the same methodology as in 2016, 2017 and 2018. Therefore, the analysis of potential impacts to ESA-listed Puget Sound steelhead and Puget Sound Chinook, described below, remains unchanged from previous years.

### **Sampling Program Objectives:**

For stock reconstruction for Southern BC and Washington Chum salmon, one significant data gap is the diversion of chum populations through the Southern Route via Juan de Fuca Strait. This project will work towards addressing that data gap by sampling this migration route in both US and Canadian waters to determine:

- Spatial & temporal stock composition of chum salmon migrating through the Southern Diversion route,
- Provide sampling platform for stock identification, migration rate studies etc.
- Develop time series of Catch per Unit effort data to pair with the Johnstone Strait Test Fishery to determine the diversion rates of various chum populations.

This multi-year program is a structured sampling program in Juan de Fuca Strait (Canadian Area 20 and US Area 5). This research involves chartering a Purse Seine vessel to fish 4 days/week starting the 1<sup>st</sup> week of October for 5 weeks (2 vessel-days on each side of the international boundary). Catch per Unit Effort information is collected as well as biological samples for stock identification purposes. All fish are released except for the 400 samples/week (a total of 2,000 chum) that are collected during the program.

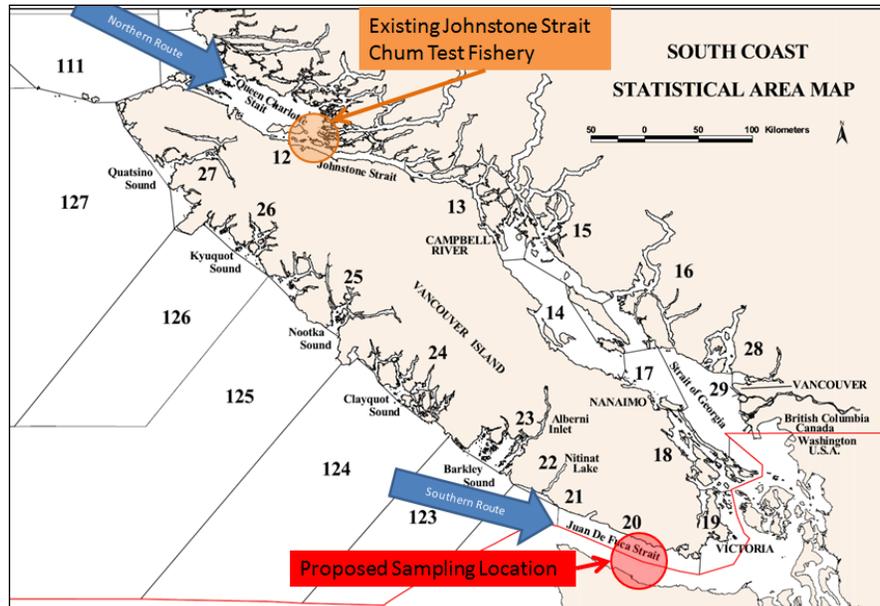


Figure 1. Map of Vancouver Island with migration pathways and proposed sampling location.

**Sampling Program Methodology:**

**Gear:** In order to reduce selectivity, a Purse Seine vessel will be chartered to conduct the sampling following a typical Test Fishery pattern (Fig 2). The vessel will fish using a standard WCVI Seine net (300 fathom 6 ½ Strips) that will be constructed for this program.

**Timing:** The sampling program will cover the main fall chum migration time period through the month of October. The vessel will fish a total of 4 days per week (2 days in Canadian waters and 2 days in U.S. waters) over a 5 week period starting the first week of October.

**Location:** The 2 days per week of fishing in U.S. waters will occur entire within Catch Area 5. The charter vessel will complete a minimum of 6 sets/day fishing along a North-South line perpendicular to the coast of Vancouver Island across to Washington State. Set locations will be established along that line based on past sockeye samplings conducted by the Pacific Salmon Commission. There will be flexibility in the set location especially during this pilot phase of the program to determine optimum set locations (i.e. the fish maybe predominantly shore-oriented so most of the effective fishing effort would be near-shore).

**Monitoring:** An observer trained by DFO will be onboard at all times during fishing operations. The observers’ duties will include collection and recording of all catch data, such as date, time, set location, number of sets, and catch by set and species. Data collected will be recorded on paper set logs and entered into an electronic logbook for real-time data transmission using a satellite system. This satellite system will also provide the Vessel Monitoring System (VMS) for real time monitoring of vessel positioning to a predetermined frequency. Enumeration procedures:

- Once the bunt is dried up alongside or at the stern of the vessel fish will be sampled by dip-netting a portion of the catch out of the net.
- The remaining fish will be counted by species as they swim out of the bunt over the breast line.
- Lowering and raising the breast line controls the speed with which the fish swim out of the net.

- The observer will count all chum salmon while crew members will count any salmon and steelhead by-catch.
- All fish will be released except those being sampled.
- All catch data including biological samples will be entered and stored and accessible over the web through the Fishery Operating System (FOS).

**Sampling:** A total of 400 chum will be sampled for biological information in each week (200/ week on the Canadian side and 200/week on the U.S. side). Sampling will be done across sets attempting to sample proportionate to the CPUE. Information collected will be:

- Scale samples for age determination
- Length samples (Post Orbital Fork)
- Sex composition
- Tissue samples for DNA extraction DNA tissue samples will be collected as adipose tissue and mounted on Whatman paper. Alternatively, samples can be collected and preserved in 95% ethanol.

If required, other species may also be sampled following similar protocols.

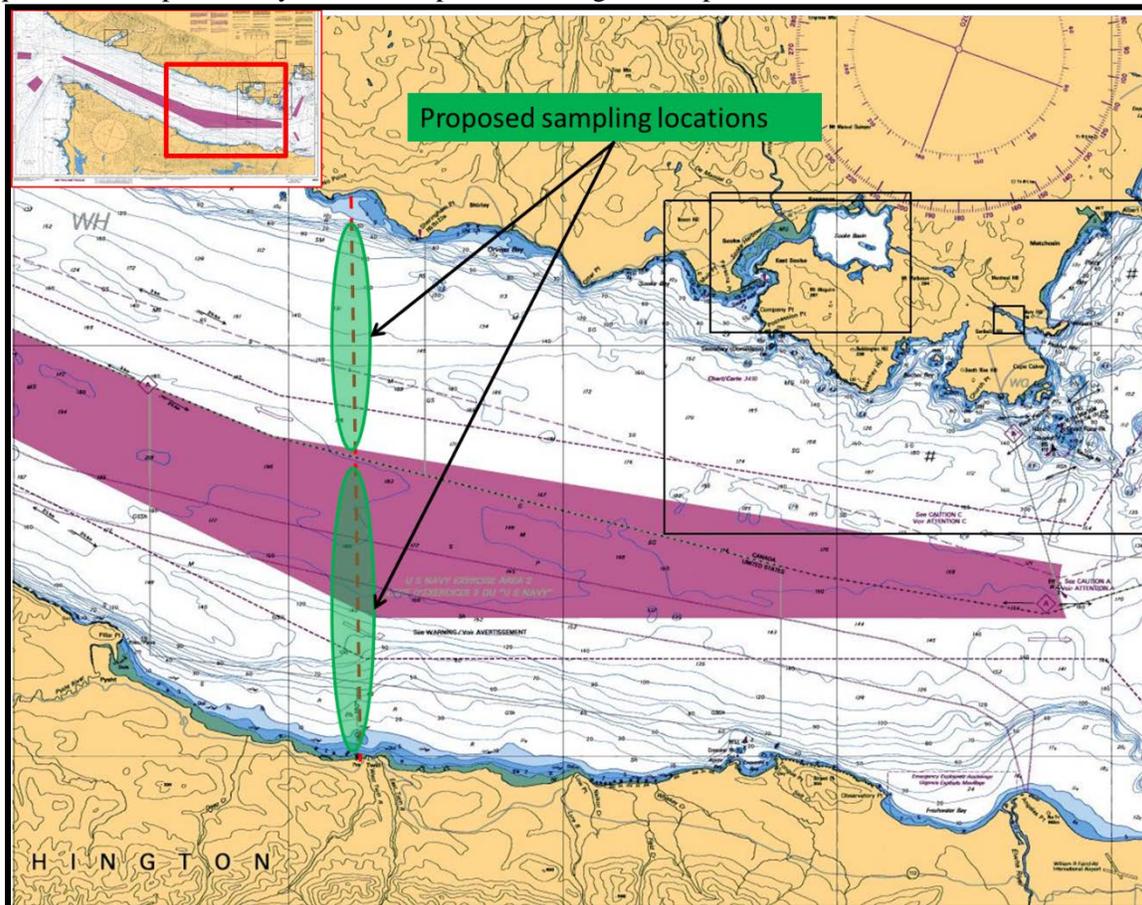


Figure 2. Proposed initial sampling locations for program initiation following similar pattern to past sampling programs for sockeye by the Pacific Salmon Commission. Fishing in US waters will be limited to Catch Area 5.

**Mitigation Measures to Minimize the Potential for Take:**

Sampled chum will be dip-netted out the seine. The remainder of the fish in the seine (including any potential listed fish) will not be brought aboard the vessel, but rather released directly from the seine while still in the water, by submerging the cork line.

**Take Estimation and Reporting:**

Table 1 shows the number of observed encounters with potentially ESA-listed salmonids during years 2016, 2017 and 2018 of this research, which were below the anticipated take analysis presented here. The same fishing protocols will be used during the 2019 operations. Therefore, the following take estimates (developed in 2016) represent very conservative impact expectations for the 2019 research.

Table 1. Observed encounters of potentially ESA-listed salmonids in the Juan de Fuca Strait Chum Salmon Sampling Program during 2016, 2017 and 2018.

	Observed Encounters (all released)		
	Adult Chinook	Immature Chinook	Steelhead
2016	0	21	1
2017	3	27	0
2018	0	69	0

**Puget Sound Steelhead:** Based on fish tickets from 5 recent years (2011-2015), October and November steelhead catches in all commercial fisheries within Areas 4B and 5 ranged from zero (in 2013, 2014 & 2015), to one (in the 2012 troll fishery), to three (in 2011 gillnet fisheries). Therefore, we would conservatively expect our research activities to encounter less than 10 adult steelhead in total, with all being released alive with minimal actual handling. Since all steelhead will be released without being brought aboard the vessel, a 20% release mortality will be assumed. This mortality rate is higher than the 10% rate assumed for recreational hook & line fisheries, but lower than the release mortality rates assumed for adult Chinook (33%) or Coho (26%) assumed for purse seine fisheries where the fish are brought aboard the vessel prior to being released. A 20% assumed release mortality rate suggests that this sampling program could potentially result in 2 dead steelhead of unknown production origin and listing status during 2019 operations. Steelhead that are potentially encountered in Area 5 may not be part of the listed Puget Sound ESU.

**Puget Sound Chinook:** Typically, only immature "blackmouth" Chinook should be present in Area 5 during October and November. Based on WDFW estimates of Chinook encounters in October mark-selective fisheries in Area 5, we anticipate encountering less than 200 immature Chinook in the course of this research during 2019. Should any immature Chinook become entrained in the seine, smaller ones would likely escape through the mesh. Any entrained Chinook will be released over the cork line along with the excess chum. As with steelhead, no Chinook are expected to be brought aboard the vessel. Therefore, a lower release mortality rate than the rate that is usually assumed for immature Chinook that are hauled aboard purse seiners (45%) is appropriate. Assuming a release mortality rate of 30% suggests that this research might result in a total of 60 incidental mortalities of immature Chinook in Area 5 during October and early November. Based on FRAM modeling of those impacts, total adult equivalent (AEQ) mortalities expected in this research sampling program during 2019, by stock, are shown in Table 2.

Table 2. Total Adult Equivalent (AEQ) mortalities of all Chinook stocks estimated to occur incidentally in the Juan de Fuca Strait Chum Salmon Sampling Program during 2019.

<b>Stock</b>	<b>AEQ mortalities</b>
UnMarked Nooksack/Samish Fall	1
Marked Nooksack/Samish Fall	19
Marked Mid PS Fall Fing	1
UnMarked South Puget Sound Fall Fing	2
Marked South Puget Sound Fall Fing	26
UnMarked Fraser River Late	3
UnMarked Lower Columbia Naturals	1

The potential net increases in total 2019 exploitation rates of Puget Sound Chinook stocks managed under the Co-manager Comprehensive Management Plan for Puget Sound Chinook are shown in Table 3.

Table 3. FRAM-derived estimates of increases in total 2019 Exploitation Rates (over those occurring in fisheries) of Puget Sound Chinook stocks anticipated to result from incidental release mortalities in the Juan de Fuca Strait Chum Salmon Sampling Program, rounded to the nearest one-hundredth of one percent.

Stock	Increase in Total ER
<b>Spring/Early:</b>	
Nooksack (n) - Total	0.00%
Skagit (n) - Total	0.01%
White	0.00%
Dungeness	0.00%
<b>Summer/Fall:</b>	
Skagit - Total	0.01%
Stillaguamish (n) - Total	0.00%
Snohomish (n) - Total	0.00%
Lake Wa. (Cedar R.)	0.01%
Green	0.01%
Puyallup	0.01%
Nisqually	0.04%
Western Strait-Hoko	0.00%
Elwha	0.00%
Mid-Hood Canal tribs. (n)	0.00%
Skokomish	0.08%

These low exploitation rates, when combined with the other research fishing activities consulted under the 2019 Chinook Harvest Management Plan (to our knowledge), still fall well below the level reserved for this type of research activity, as described in the 2010 Co-manager Comprehensive Management Plan for Puget Sound Chinook:

*Mortality associated with certain monitoring and research activities (e.g. test fisheries and update fisheries), that primarily inform in-season harvest management decisions, will be accounted with other fishery related mortality under the ER ceilings defined for each MU. **Mortality associated with other research and monitoring, which have broader applicability to stock assessment, will not be accounted under the ER ceilings, Mortality in this latter category will not exceed a level equivalent to 1% of the estimated annual abundance (i.e. 1% ER), for any MU.***

## **1.6 2019 Area 9 (NHC sub-area) Treaty Commercial Chum Fishing Plan**

### Pre-Season Planning:

The 2019-20 Co-Managers' List of Agreed Fisheries (LOAF) states in *Part 2, Section 2.7* (Admiralty Inlet Area) that "The Area 9 fall Chum fishery north of the HC bridge will open wk 43 (wb 10/20) through wk 45 (wb 11/3); fishing pattern: GN 3,4,3; and PS 4,3,3. Open area restricted to that portion of North Hood Canal bounded to the south by the Hood Canal Bridge and bounded to the north by a line from White Rock due east to landfall. Tribes with adjudicated U&A in the open section of Area 9 may choose to participate. Coho and Chinook model inputs have been modeled during NOF that anticipate the participation levels of 2018. If the fishery reaches a catch threshold of 30,000 Chum salmon before 11/2, there will be a conference call among the participating Tribes to discuss any needed fishery management actions. Participating tribes agree to sample tissue for DNA analysis of their tribe's Chum catch and wild Coho bycatch to the extent practicable."

During the North of Falcon salmon planning process, expected Coho and Chinook impacts for all five tribes with treaty fishing rights in the proposed fishing zone were modeled in pre-season FRAM model runs.

### Objective:

The purpose of this management plan is to provide a management framework for this Area 9-NHC treaty commercial Chum fishery to improve coordination, compliance, safety, and management of the fishery.

### Eligible Tribes:

Jamestown S'Klallam Tribe, Lower Elwha Klallam Tribe, Port Gamble S'Klallam Tribe, Skokomish Tribe, and Suquamish Tribe.

### Fishery Area:

That portion of Area 9 north of the Hood Canal Bridge and south of a line true east from White Rock to landfall on the Kitsap Peninsula.

Fishery Period: Management weeks 43 through 45

### Proposed Weekly Fishery Schedule:

Week 43 (GN 3, PS 4)

Week 44: (GN 4, PS 3)

Week 45: (GN 3, PS 3)

Gillnets Open –

Week 43: 8:00 am Sunday through 8:00 am Wednesday,

Week 44: 8:00 am Sunday through 8:00 am Thursday,

Week 45: 8:00 am Sunday through 8:00 am Wednesday.

Purse Seines Open – Daylight Hours Only.

Week 43: 8:00 am Wednesday through 8:00 pm Saturday,

Week 44: 8:00 am Thursday through 8:00 pm Saturday,

Week 45: 8:00 am Thursday through 8:00 pm Saturday.

**Expected Total Season Boat-Days:**

Total Season Gillnet Effort\* = 153

Total Season Purse Seine Effort\* = 10

\* As modeled in the 2019 preseason FRAM model runs.

**By-catch inputs for Coho and Chinook FRAM modeling:**

Over the 2017 and 2018 seasons the average gillnet Coho encounter was 0.56 fish per boat-day, this average was rounded up to one Coho encounter per boat-day for estimating potential Coho mortalities. Resulting gillnet retention of 153 was expanded for drop-off mortality (2%), and purse seine retention of 10 Coho was added. Pre-season FRAM modeled input totaled 166 Coho. Chinook have not been encountered in this fishery, thus model input remains at 1 as a placeholder.

**Other Restrictions:**

Purse seine release of Chinook;

Purse seine opening shall be scheduled to occur on the same days and times for all participating Tribes;

Gillnet openings shall be scheduled to occur on the same days and times for all participating Tribes;

All catch shall be recorded on treaty commercial fish tickets.

**Central/South Sound Tribal Agreements:**

Estimated interceptions of South/Central Sound origin Chum shall be considered a pre-terminal interception and will be deduct from the South/Central Sound computed Treaty share of harvestable Chum entering Area 10 using weekly stock composition (Table 1).

**In-Season Coordination, Catch Monitoring, and Conference Calls:**

A conference call will be held at (1:00 pm) on (Monday) of each fishing week to report and review the effort and catches to date, as well as anticipated effort and catches, to help ensure a successful fishery for all parties. If the fishery reaches a catch threshold of 30,000 Chum salmon before 11/2, there will be a conference call among the participating Tribes to discuss any needed fishery management actions. Each participating tribe shall monitor the catch and bycatch of its fishers and be prepared to report these numbers on that week's in-season conference call.

Broodstock collection at the Little Boston Hatchery (Port Gamble Bay) shall be monitored to ensure that Fall Chum broodstock collection goals will be met. If the hatchery is not meeting its broodstock collection needs, then harvest management actions will be taken to ensure a sufficient passage of Chum salmon to the hatchery.

Catch Sampling:

The participating tribes plan to continue collecting Chum tissue samples for weekly stock composition data. A sampling design to distribute the collection of 200 weekly samples over the geographic area being fished will be coordinated among the participating tribes.

Enforcement:

Each participating tribe shall maintain an enforcement presence to ensure that its fishers comply with this management plan and their individual tribal fishery regulations.

Region of Origin	Weekly Portion of Total Catch		
	WK 43	WK 44	WK 45
Data source (GSI 2011, 2013, 2014, 2015, 2016, 2017)			
Total catch estimate	TBD	TBD	TBD
<b>Hood Canal</b> (average %/wk)	0.881	0.865	0.909
<b>South Sound</b> ( average %/wk)	0.113	0.114	0.072
<b>North Sound</b> (average %/wk)	0.000	0.011	0.004
<b>PS Lates</b> (average %/wk)	0.001	0.000	0.008
<b>Other (non-local)</b> (average %/wk)	0.006	0.009	0.008

**Table 1.** Portion of weekly harvest to attribute to Puget Sound regions of origin for the purpose of fulfilling obligations under the Inter-Tribal Allocation Agreement for South/Central Sound stocks; the total weekly harvest will be determined by in-season landings. These values were derived from the gsi data analyzed to date resulting in average regional contribution rate by week. Under the Inter-Tribal Allocation Agreement for South/Central Sound stocks, Area 9 is a pre-terminal fishery and treaty interceptions of South/Central Sound origin fish will be deducted from the treaty share of harvestable Chum entering Area 10.

## 1.7 2019 Nisqually Tribe Selective Fishing Experiment

### Nisqually Indian Tribe

The Nisqually Indian Tribe will be implementing the first year of our search for selective gear to be used in our traditional in-river chinook fishery. We have previously implemented tangle-net gear in previous years with mixed results. The approach for the 2019 season will be to experiment with several different types to evaluate their future consideration for an in-depth assessment in 2020. We will not attempt to evaluate short-term release mortality in 2019, but will focus that research on mortality on a couple of successful gear type coming out of this experiment in 2020. Due to the unknown nature of the release mortality associated the tested gear types, we will limit the experiment to the first 450 chinook encountered. Assuming 100% mortality (worst case scenario), it will keep us under the agreed to ER set-aside of 2% (approximately 1.8% 2019 based on final PFMC model Chin2419).

The following agreed to language will provide direction for our work in 2019:

***A study plan for this effort will be presented prior to the 2019 preseason planning process with estimates of mortality associated with this critical activity, including gear types to be considered. This Plan will inform the preseason planning process. All Stock Management Plan goals will be met with the additional annual encounters of 900 adult chinook (marked + unmarked) for the entire colonization phase (NOTE: specific implementation language being developed and will not impact any fisheries management actions outside of the Nisqually River). Elements of the experimental fishing plan will include the following:***

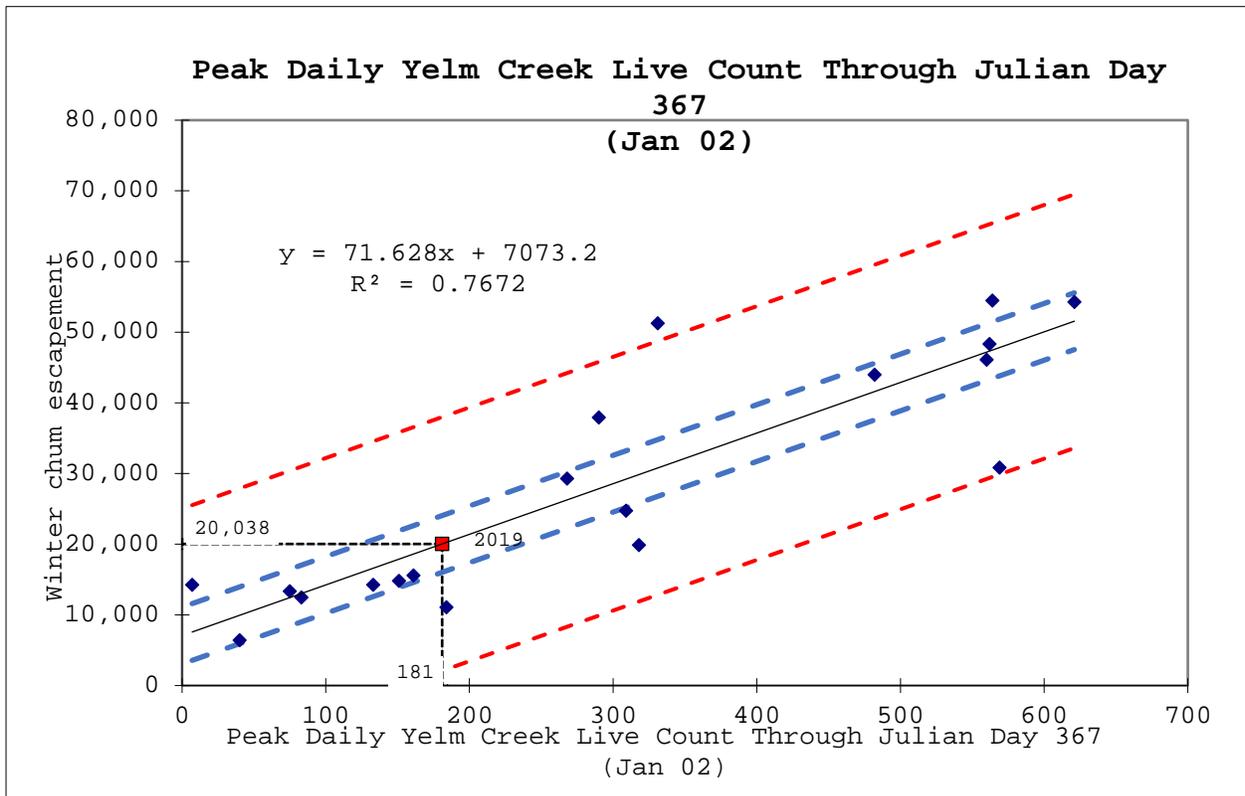
- ***Criteria to evaluate success of program***
- ***Identify feasible gears (tangle net, beach seines, circular seines, mesh sizes, etc?)***
- ***Different strategies for different locations***
- ***Implementation details***
- ***Methodology to estimate short term mortality associated with tested gear types.***
- ***Final report - Strategy to establish HR in fishery for selected gear type(s)***

1. Evaluation criteria – we will be looking at multiple gear types to and consider their usefulness using the following criteria:
  - a. Ability to be implemented by fishers
  - b. Ability to harvest fish successfully
  - c. Ability to release unmarked fish
  - d. Likelihood of acceptance by the fishing community
2. We will look at the following gear types intended to be low impact and deployed by 1-2 fishers and have similar physical footprints to traditional gear:
  - a. Tangle net – we will be considering a more precise use of this gear type
  - b. Cedar/willow traditional weir

- c. Pound trap
  - d. Throw nets/cast nets
  - e. Dip net
3. The co-managers commit to work with NMFS SFD staff prior to the test fishery implementation in 2019 to further develop the assessment elements for this year.
  4. We will look at these gears in tide water below I-5 and the main-stem above I-5 to the Clear Creek hatchery.
  5. This will be staff driven with some fisher assistance.
  6. We will not be estimating short term mortality in the first year – focus on identifying useful gear types.
  7. We will provide a report of our findings during the 2020 pre-season planning process. The co-managers will provide an opportunity for a post experiment briefing prior to the drafting of the final report. This will either be a meeting or a call to share preliminary findings.
  8. We will prepare a plan for continuing this experiment including identification of selected gear types for further study and a plan to evaluate short term release mortality.

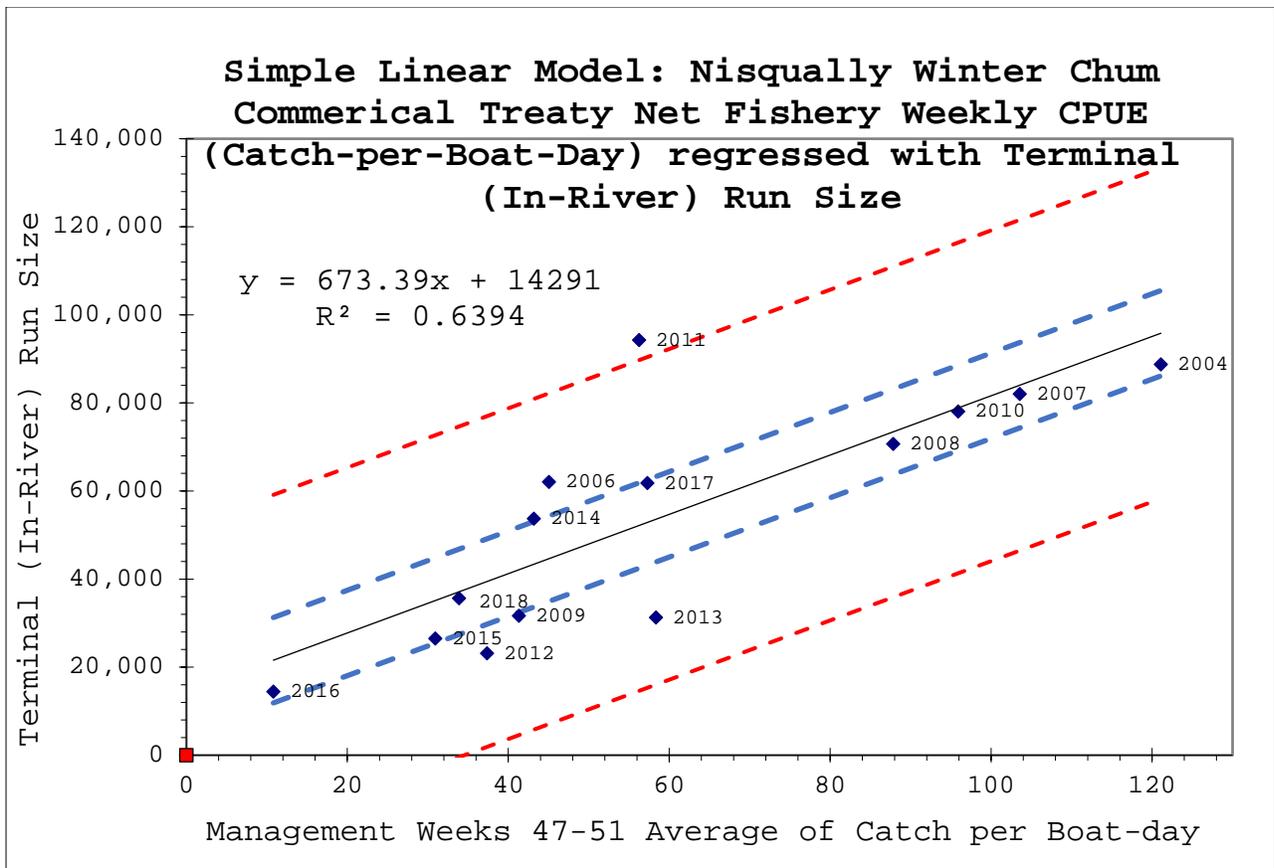
## 1.8 Nisqually Winter Chum Escapement vs. Yelm Creek Live Count Regression Model

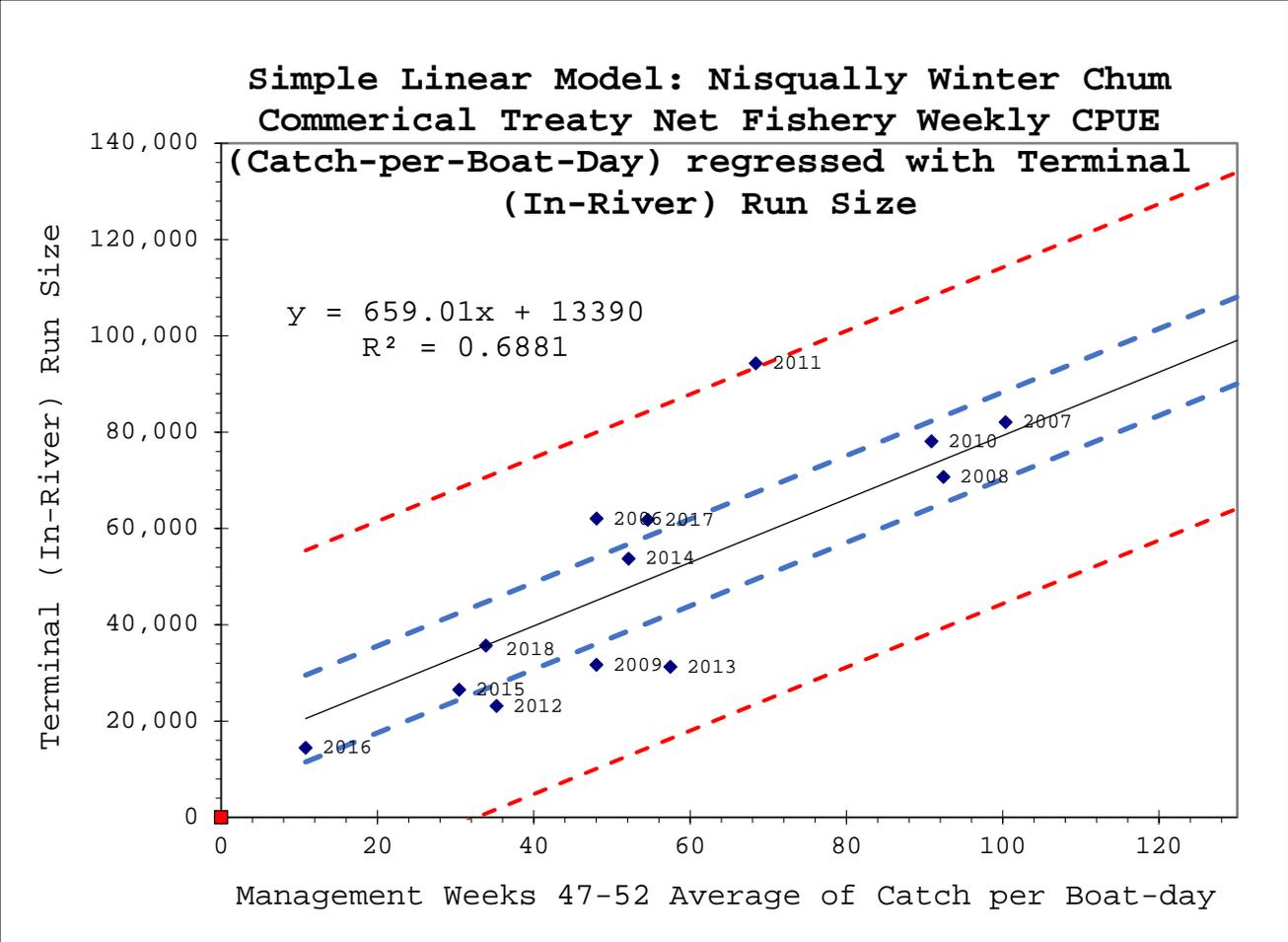
The Nisqually Indian Tribe and NWIFC staff have built an in-season update model that predicts escapement using historical and current live counts in Yelm Creek, a small tributary at River Mile 13.5 in the Nisqually River. Live counts have been consistently surveyed weekly for over 40 years in Yelm Creek and recent years since 1990 have been regressed with total escapement for an escapement prediction tool. We plan to use this tool to predict an escapement with the management intent to escape 2,000 fish over the escapement goal of 18,000.



Simple Linear Model: Nisqually Winter Chum Commercial Treaty Net Fishery Weekly CPUE (Catch-per-Boat-Day) regressed with Terminal (In-River) Run Size

The Nisqually Boat ISU is a CPUE model using catch per boat day fished during the recent 14 years (void 2005) regressed with the total runsize for a runsize prediction tool. We plan to use this tool to inform in season management prior to week 53 absent 181 live fish counted in Yelm Creek. Week 51 and week 52 graphed below.





## 1.9 Green River Management Objectives

For 2019, WDFW, the Muckleshoot Tribe, and Suquamish Tribe will manage the unmarked returns to the Green River for 1,200 natural origin adults on the spawning grounds. This management action will occur through a combination of fisheries actions modeled in FRAM/TAMM<sup>i</sup> and transportation of unmarked adult Chinook (excluding double index tagged fish) from hatchery facilities within the Green River basin to the spawning grounds.

Terminal fisheries directed at the Green River stock are managed based upon an in-season update (ISU) with a test fishery during statistical weeks 29-31 in Elliott Bay that updates the terminal run-size (marked and unmarked adult returns). Terminal fisheries are contingent on confirmation of the pre-season forecast. Initial results from this ISU will be available during statistical week 31 (the 1st week of August). The co-managers will make in-season decisions consistent with the projected run size and natural escapement estimates. NOAA Fisheries will be informed of any subsequent management actions taken by the state and tribal co-managers that deviate from the pre-season fishery structure in the 2019 List of Agreed to Fisheries.

The 2019 FRAM/TAMM model run (Chin2719) projects that 2,954 natural origin recruits (NORs) will escape fisheries and return to the Green River. Of these NORs, 2,161 will spawn naturally in the Green River with the remaining 793 trapped at Soos Creek Hatchery weir between week 31-44 (August – late October) with a peak between week 36-42 (early September – mid October). The co-managers do not expect any NOR adults will be transferred to the spawning grounds, but will continue to evaluate escapements through the season and take actions as warranted.

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<sup>1</sup> This is based on Chin2719

## **1.10 Monitoring pre-spawn mortality of Chinook salmon in the Green-Duwamish River: 2019**

The Green-Duwamish River (hereafter Green) basin is one of the most highly urbanized basins in western Washington. Water temperatures in the Green River consistently exceed 21 °C during the fall Chinook freshwater entry period and have exhibited high levels of pre-spawn mortality. Severely degraded habitat and high levels of pre-spawn mortality are among the hypothesized reasons for declines in productivity of this population.

The Muckleshoot Indian Tribe has collected five years of telemetry and thermal data on Chinook in the Green River. The objectives of this research are to document the migratory characteristics of Chinook in the Green River with respect to freshwater entry timing and thermal exposure as well as evaluate pre-spawn mortality both on and off the spawning grounds as related to migratory characteristics.

The Muckleshoot Indian Tribe would like to cover the 2019 tagging for this research under the 1% ER research allowance allowed under the 2010 Puget Sound Harvest Management Plan. This plan states that mortality associated with other research and monitoring, which have broader applicability to stock assessment, will not be accounted under the ER ceilings, mortality in this latter category will not exceed a level equivalent to 1% of the estimated annual abundance (i.e. 1% ER), for any management unit.

Chinook are captured in the Duwamish River turning basin (river mile 5.3) with a beach seine in approximate proportion to freshwater entry timing. To estimate mortality for the 2019 research needs, average and maximum encounters and mortalities were calculated based on 2014-2018 observations.

The average encounter rate is 2.2% with a maximum encounter rate of 3.3% in 2014. The projected terminal run size is 25,379 adult Chinook which means that 558-838 adult Chinook will be encountered during 2018. It is important to note that terminal run sizes were much smaller during 2014 and 2015, which resulted in more required effort to tag at least 250 adult Chinook, than when terminal run sizes are larger and a lower effort is required.

The average mortality rate of encountered Chinook is 2.6% with a maximum mortality rate of 4.8% in 2016. Under average conditions, we expect to encounter 558 adult Chinook which will result in 15 total adult mortalities. However, under the worst case scenario, we could handle as many as 838 adult Chinook and experience a 4.8% mortality rate, resulting in 40 total adult mortalities.

In 2018, natural origin adult Chinook are expected to make up 19.1% of the terminal abundance, resulting in 3-8 adult natural origin adult Chinook mortalities. Under the worst case scenario (8 NOR mortalities), total natural origin mortalities make up only 0.16% terminal harvest rate. The corresponding ER would be lower after accounting for mortalities in pre-terminal fisheries. This research fits well under the 1% ER allowance for this type of stock assessment work which has broader application to the management and conservation of the Green River stock.

## 1.11 Green/Duwamish coho salmon in-season update model

The Muckleshoot Indian Tribe conducted a coho test fishery during statistical week 36 from 2003-2010, 2016, and 2018. This test fishery was revived in 2016 due to the unprecedentedly low run sizes projections for many stocks in Puget Sound, including the Green River stock. This test fishery uses gill net catches from six sites in the lower Duwamish River between the mouth in the East and West Waterway and the 16<sup>th</sup> Avenue Bridge. One net (300 feet of 5 inch mesh webbing) is fished at each site from 7 PM to 7 AM. Coho from each net are enumerated and combined with the terminal run size to project returns for the current year.

This in-season update methodology models escapement as a function of test fishery catches. Initial modeling examined multiple metrics to predict escapement. These metrics included the maximum catch among the six sites and the geometric mean of the n (n = 2, 3, 4, and 6) largest catches (Table 1). These models were fit in R using a general linear model with a Poisson distribution. The model with the lowest Akaike’s Information Criteria value was used to project the in-season run size.

Table 1. Available data for the Green River in-season update model. TRS is the terminal run size and projected is the projection from the model.

Year	Max	2	3	4	All	TRS	Projected
2003	71	70.5	69.3	62.9	29.4	80,414	64,220
2004	709	543.7	327.7	248.9	154.2	168,411	169,680
2005	44	37.5	28.2	24.1	17.0	75,060	60,017
2006	69	59.9	45.4	37.4	24.1	85,494	62,838
2007	98	77.3	69.4	59.3	37.4	52,101	65,126
2008	88	46.9	32.8	27.4	19.5	65,951	61,184
2009	52	39.5	32.0	28.8	22.5	43,021	60,260
2010	34	33.5	33.3	29.3	23.5	32,396	59,522
2016	182	96.3	53.0	37.3	25.5	52,146	65,893
2018	43	35.9	33.4	28.6	17.8	78,089	70,648

Over the ten years of available data, the average projection was 9.2% greater than the observed terminal run size (Table 1).

## 1.12 Puyallup River Management Objectives

For 2019, WDFW, the Puyallup Tribe, and Muckleshoot Tribe will manage the returns to the Puyallup River for a total of 1,170 adults with at least 750 natural origin adults on the spawning grounds. This management action will occur through a combination of fisheries actions modeled in FRAM/TAMM<sup>ii</sup> and transportation of unmarked adult Chinook (excluding double index tagged fish) from hatchery facilities within the Puyallup River basin to the spawning grounds.

Terminal fisheries directed at the Puyallup River stock are managed based upon a pre-season forecast and modeled through the FRAM/TAMM. The 2019 FRAM/TAMM model run (Chin2719) projects that 1,115 natural origin recruits (NORs) will escape fisheries and return to the Puyallup River with an additional 1,580 hatchery origin recruits straying to the spawning grounds for a total natural escapement of 2,695. The co-managers do not expect any NOR adults will need to be transferred to the spawning grounds, but will continue to evaluate escapements through the season and take actions as warranted.

<sup>1</sup> This is based on Chin2719

### **1.13 2019-2020 Warm Water Test Fishery**

This proposal put forth is designed to prosecute a test fishery that will collect a third year of information on the feasibility and potential impacts of a directed fishery (C&S and commercial) on warm-water fishes in the Lake Washington basin. The results of this test fishery will inform management moving forward with a full scale commercial fishery as well as a number of secondary considerations. To date, the tribe has collected data from January 2017 – June 2017, March 2018 – June 2018, and March 2019-April 2019 to inform potential impacts to listed salmonids.

One major consideration is to determine the impact on ESA listed salmonids. This test fishery is scheduled to encompass times we can minimize impacts to ESA listed salmonids. Chinook adults typically start migrating into the lake in mid-June with spawning concluding the first week of November. The timing of the test fishery proposed, May-June 15, 2019 and January –April 2020, will eliminate impacts on migrating adult Chinook. This test fishery will only occur in Lake Sammamish to eliminate impacts to adult migratory Chinook and steelhead. Using large mesh gillnets will eliminate impacts on age-0 Chinook and any potential steelhead smolts migrating out to sea. The probability of encountering an adult wild steelhead is very low to zero. If one is encountered, it would likely be a wild stray fish from a neighboring watershed such as the Green River. Steelhead surveys in the Sammamish River tributaries, including Lake Sammamish, were discontinued at the end of 2003 after five years of surveys in which no steelhead or steelhead redds were observed. Therefore, no risk of encounters exists in Lake Sammamish. There are very few remaining steelhead spawning in the Cedar River. From 2009 through 2015, redd-based escapement estimates for the Cedar River have averaged just over two (2) steelhead per year and no steelhead redds were observed during 2017. Further, several of these redds may be the result of large cutthroat trout that are known to overlap with steelhead.

The Lake Sammamish test fishing area will be divided into 2 zones (zone 7-8). Each fisher will locate nets in a single zone a maximum of four 300 foot gillnets deployed. Up to 6 fishers will participate in this effort. The gillnet mesh will range from 3 ½ to 6 inch stretch mesh. Fishing will occur from one to four nights per week. Nets will be initially set on Monday and be retrieved no later than Friday and checked often to further minimize interactions with steelhead. Any steelhead caught will be immediately released (ancillary to this project we have successfully tagged and released multiple walleye). The cold water in the lake during this period will help reduce mortality of any released fish.

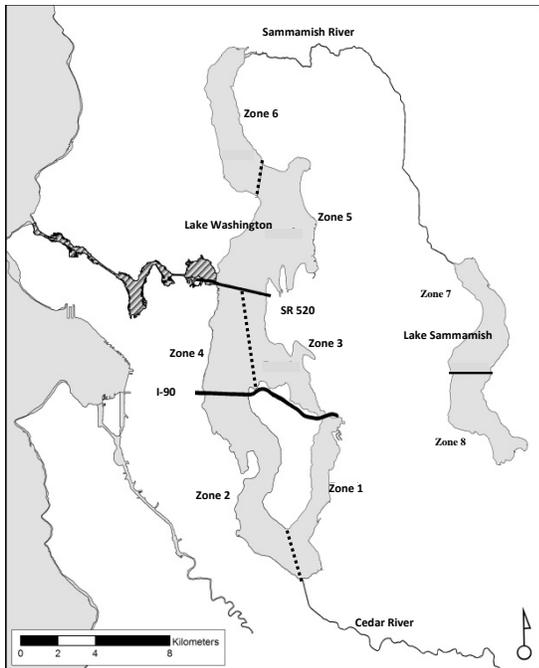


Figure 1. Proposed warmwater test fishery zones (7-8) in Lake Sammamish.

A second consideration is that catch rates of targeted species (i.e. smallmouth bass, walleye) may be high enough to result in an economically viable fishery. The test fishery proposed will address this issue. Data collected will inform managers of areas and times that a tribal net fishery could be economically viable as well as areas to avoid/target minimizing bycatch and optimizing harvest.

Prosecuting this test fishery will allow us to address a number of other issues that will benefit salmonid management in the Lake Washington basin. A new predator, walleye, which likely has negative impacts to salmonids, has been introduced and a lack of information is available on adult diets and distribution in Lake Sammamish is available. A second highly invasive predator, northern pike, was captured during the first year of our test fishery. We will instrument up to 15 walleye (or northern pike) with multi-year acoustic transmitters during this time to assess their overlap with migrating juvenile salmonids in addition to locating areas these invasive predators may be targeted in subsequent fisheries. Instrumented walleye (or pike) will be monitored with a network of fixed station acoustic receivers through the Lake Washington and Sammamish basin. This network is used to monitor the migratory behavior of smolting Coho salmon as well as returning adult Sockeye and Chinook salmon. We will use the overlap of juvenile Coho and walleye as a model of the potential interactions with ESA listed Chinook.

Take estimation and reporting

We believe there is a very small to zero potential impact for this test fishery to interact with adult steelhead in Lake Washington and no potential for interaction with adult migratory Chinook. Even with that we have designed this test fishery to minimize these interactions. Should there be an encounter, steelhead or Chinook will be handled carefully by trained professional staff and as much biological data will be taken as possible. Lengths, fin clips for genetic analyses, marks, and locations. Further, should staff believe survival upon release is questionable; the steelhead will be retained and reported as ceremonial and subsistence treaty catch.

Understanding the potential for interaction with the public, we propose monthly reporting on this test fishery to NOAA. These reports will contain gear used, area fished, and effort. Further, any natural adult steelhead or Chinook encountered will be immediately reported. This test fishery will be immediately shut down if and when a third natural origin adult steelhead is encountered or fifth natural origin adult Chinook.

## 1.14 Relative Abundance and Diet of Piscivorous Fishes In the Lake Washington Shipping Canal During Late Spring and Early Summer

4/14/2019

**Objective 1:** Describe the relative abundance and size structure of piscivorous fishes inhabiting the Lake Washington Shipping Canal (LWSC) during the salmon smolt out-migration period.

**Objective 2:** Determine the relative proportion of juvenile salmonids in the stomach contents of piscivorous fishes that inhabit different habitat types within the LWSC.

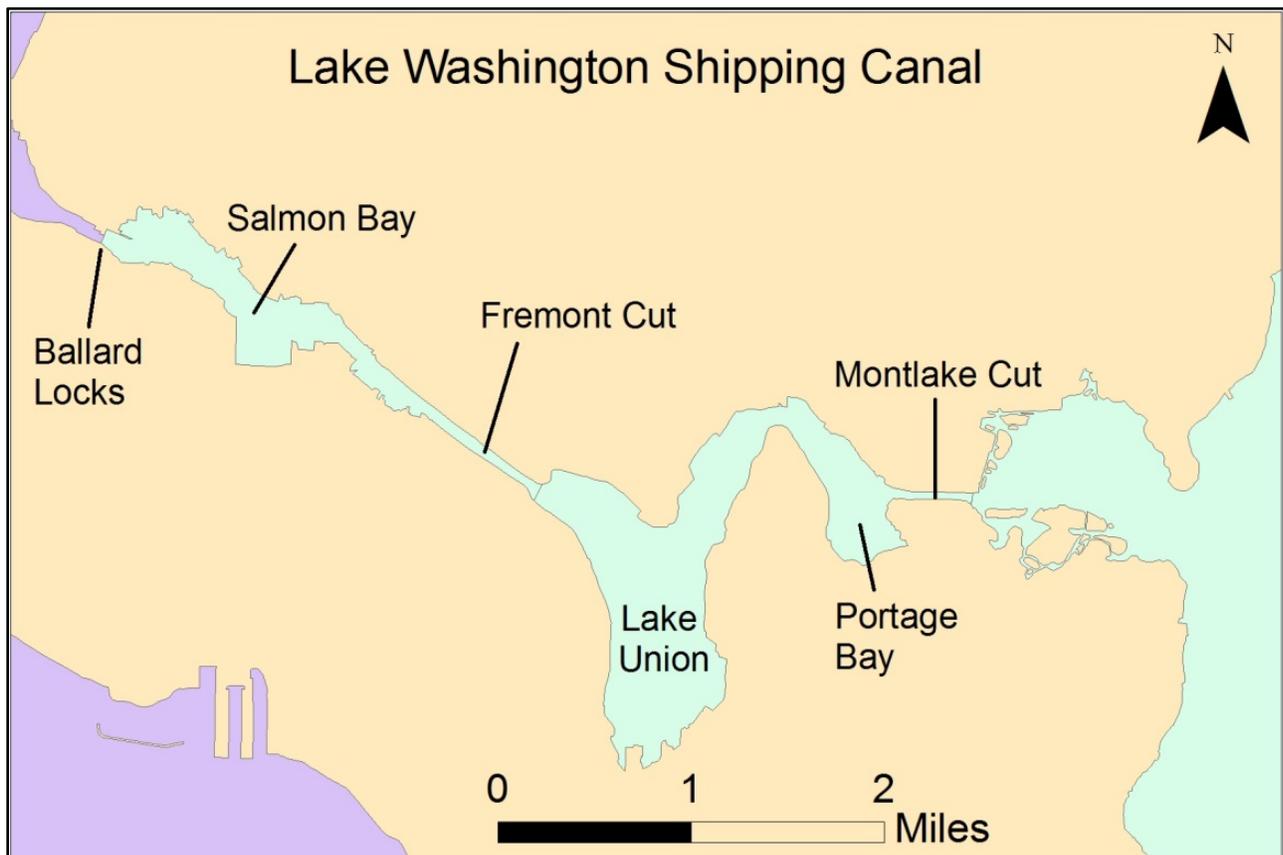


Figure 1. The Lake Washington Ship Canal (1040 acres) includes Salmon Bay (directly upstream of the locks), the Fremont Cut, Lake Union (includes Portage Bay), and the Montlake Cut.

### Study Area

The LWSC includes Salmon Bay, Fremont Cut, Lake Union (including Portage Bay), and the Montlake Cut (Figure 1). Previous sampling work in the LWSC indicates the majority of bass reside in north Lake Union, Portage Bay and the Fremont Cut during April - June.

## Methods

Gill netting will occur over multiple sampling days between early-May and early-July, 2019. Variable-mesh monofilament gill nets will be set during the salmon smolt out-migration period within the study area (Figure 1). Nets will be deployed at night with 12-16 hour set times. A range of mesh sizes (2-inch, 2.5-inch, 3-inch, and 4-inch) will be used in an effort to capture a broad range of fish species and sizes. All species will be measured to the nearest millimeter. Stomachs of predatory fishes >150 mm TL will be pumped using gastric lavage; stomach contents will be stored in a -80F freezer until they can be processed by NMFS (Roger Tabor).

## ESA Considerations

The Puget Sound Chinook Harvest Management Plan (PSCHMP; NMFS 2010) as extended allows for limited take of listed species during research activities within each Management Unit (MU): "Mortality associated with certain monitoring and research activities (e.g. test fisheries and update fisheries), that primarily inform in-season harvest management decisions, will be accounted with other fishery related mortality under the ER ceilings defined for each MU. Mortality associated with other research and monitoring, which have broader applicability to stock assessment, will not be accounted under the ER ceilings. Mortality in this latter category will not exceed a level equivalent to 1% of the estimated annual abundance (i.e. 1% ER), for any MU." As such, there is limited take for Puget Sound Chinook available to this proposed project under the PSCHMP, in combination with other projects within the MU. Steelhead take for research purposes has historically been covered separately, but was written into the NMFS 2016-17 biological opinion for the Puget Sound salmon fisheries, which effectively extend the 2010 PSCHMP.

Similar studies conducted in recent years indicate that this monitoring effort will remove many piscivorous fish from the LWSC that would otherwise prey on juvenile Chinook and PS steelhead, and will therefore benefit these species. The study is not likely to result in the take of listed anadromous species (PS Chinook and PS steelhead), and estimated take values are provided below:

1. Steelhead adults: The probability of encountering an adult steelhead is low. Adult steelhead were not encountered during previous sampling efforts (conducted in 2017 and 2018) in the LWSC. Spawning ground surveys indicate that few (if any) steelhead spawn in the Lake Washington watershed, and steelhead adults are not expected to be migrating through the LWSC during the proposed sampling period. The take is estimated as zero juvenile steelhead.
2. Steelhead juveniles: The probability of encountering a juvenile steelhead is low. Juvenile steelhead were not encountered during previous sampling efforts (conducted in 2017 and 2018) in the LWSC. Spawning ground surveys indicate that few (if any) steelhead spawn in the Lake Washington watershed, and the number of steelhead smolts migrating through the LWSC is expected to be low. Any steelhead smolt migrants that may be present will not be affected by the sampling gear as the proposed gillnet mesh size is too large to entangle juveniles (2 to 4 inch stretch mesh). The take is estimated as zero juvenile steelhead.
3. Chinook adults: Chinook adults typically begin migrating through the LWSC in mid-June with the peak migration period occurring in mid to late August (Figure 5). Relatively small numbers of adult Chinook would be migrating through the LWSC while the proposed sampling would occur, however some adult Chinook may encounter the sampling gear as they migrate through the action area. Chinook adults migrating through the LWSC are likely to use deep-water offshore habitats where sampling gear is less likely to be deployed. Most sampling effort will occur in near-shore or off-channel, weedy habitats where adult Chinook are less likely to migrate. Adult Chinook were not encountered during previous sampling efforts (conducted in 2017 and 2018) in the LWSC. Due to the early timing of the proposed sampling and the off-channel areas where sampling will occur, the number of adult Chinook encountering

sampling gear will likely be small. A combined gear take of 5 Chinook adults (NOR and/or HOR) is estimated.

4. Chinook juveniles: Juvenile Chinook will actively be migrating through the LWSC during the proposed sampling period (early-May through early-July). Small numbers of juvenile Chinook smolts may encounter the sampling gear, however the mesh size (2 to 4 inch stretch mesh) is too large to entangle a Chinook juvenile and poses very little threat. Juvenile Chinook were not encountered during previous sampling efforts (conducted in 2017 and 2018) in the LWSC. The take is estimated as zero juvenile Chinook.

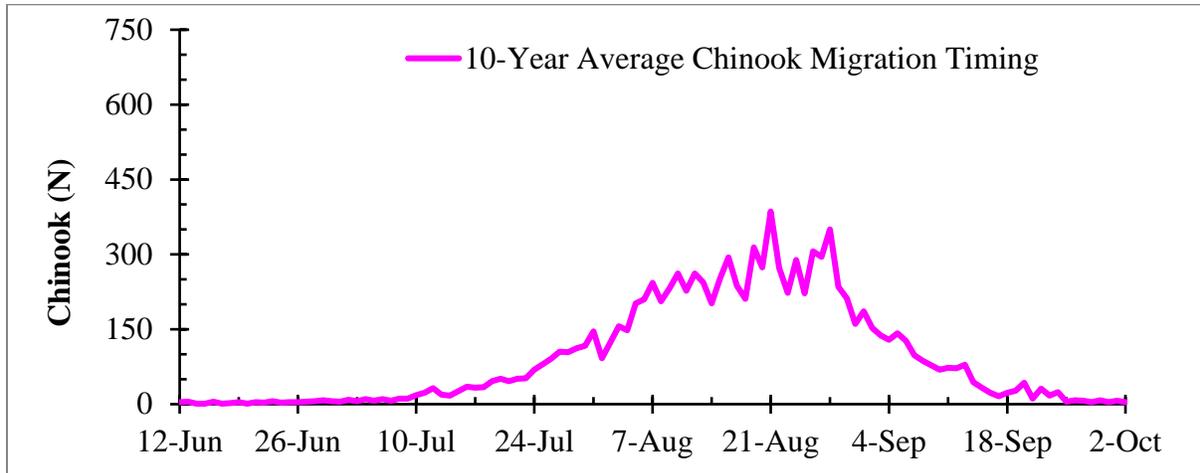


Figure 5. Recent ten-year average Chinook migration timing through the Ballard Locks.

As outlined above, the PSCHMP as extended provides coverage allotment for take of both Puget Sound Chinook and steelhead. Expected steelhead take is zero fish (bullets 1 and 2 above). Chinook take (HOR and NOR combined) may not exceed a level equivalent to 1% of the estimated annual abundance (i.e. 1% ER). Average total abundance for Lake Washington Chinook was 7952 adults during a recent (2010-2017) 8-year time period (Table 1). The estimated take of 5 adult Chinook represents an exploitation rate of 0.06% ( $5/7952=0.0006$ ), which is well below the 1% ER limit.

Year	Total Abundance	Natural Abundance	Source
2017	6550	1225	Final New BP pre-season
2016	6873	1550	Unofficial New BP pre-season
2015	4903	688	Unofficial New BP pre-season
2014	4598	672	New BP Aug 2017 post-season
2013	9663	2628	New BP Aug 2017 post-season
2012	15721	2173	New BP Aug 2017 post-season
2011	7189	1039	New BP Aug 2017 post-season
2010	8122	876	New BP Aug 2017 post-season
Average	7952	1356	

Table 1. Total (HOR and NOR) abundance and natural abundance of Lake Washington Chinook.

In summary, project impacts are significantly below the 1% allotment for Chinook annual abundance provided for in the PSCHMP. The estimated take of HOR and NOR combined is 5 adults, and 0 smolts, which is 0.06% of annual abundance.

### 1.15 2019 Stillaguamish River Sport Gamefish Rules

2019 in-river sport gamefish seasons were reduced to minimize impacts on Stillaguamish Chinook which are forecast at 376 wild and 567 hatchery.

2019 gamefish rules are as follows;

- Statewide gamefish rules; open unless closed, Saturday before Memorial Day through Oct 31<sup>st</sup>, 2 fish limit, 8 inch minimum size.
- Exceptions to statewide gamefish rules;
  - Mainstem Stillaguamish
    - Below Marine Drive,
      - Open year-round, trout minimum size 14", daily limit 2, night closure and anti-snagging rule Aug 1-Nov 30.
    - From Marine Drive to forks,
      - Closed May 1<sup>st</sup> through Sept. 15<sup>th</sup>
      - Open Sept 16<sup>th</sup> through Nov 30<sup>th</sup>, catch and release except up to 2 hatchery steelhead may be retained, selective gear rules (no bait), night closure.
      - Open Dec. 1 through Jan 31, 2020, minimum size 14".
      - Closed to fishing from the diversion dam downstream of I-5, downstream 200 feet.
  - Pilchuck Creek,
    - from mouth to Hwy. 9 Bridge,
      - Closed May 1-Sept. 15<sup>th</sup>
      - Open Sept. 16<sup>th</sup> through Jan 31<sup>st</sup> 2020, selective gear rules (no bait) from Sept 16<sup>th</sup> through Nov. 30<sup>th</sup>.
  - North Fork Stillaguamish,
    - From mouth to Swede Heaven Bridge,
      - Closed May 1-Sept 16<sup>th</sup>
      - Open Sept. 16<sup>th</sup> through Nov. 30<sup>th</sup>, fly-fishing only, catch and release except up to 2 hatchery steelhead may be retained.
      - Open Dec. 1 through Jan 31<sup>st</sup>, trout minimum size 14".
      - Additional opening in the Whitehorse Hatchery terminal area, from mouth of French Creek to the Swede Heaven Bridge, Feb 1<sup>st</sup> through Feb 15<sup>th</sup>, minimum size 14".
      - Night closure Sept 16<sup>th</sup> through Nov. 30<sup>th</sup>.
      - Fishing from a floating device prohibited upstream of the Hwy 530 Bridge, motors prohibited downstream of the Hwy 530 Bridge.
    - From Swede Heaven Bridge to North Fork Falls,
      - Closed May 1 through Sept 15<sup>th</sup>
      - Open Sept. 16<sup>th</sup> through Nov. 30<sup>th</sup>, catch and release except up to 2 hatchery steelhead may be retained, selective gear rules (no bait).

- North Fork Tributaries,
  - Boulder River from mouth to Boulder Falls,
    - Closed May 1 through Sept 15<sup>th</sup>
    - Open September 16<sup>th</sup> through Oct 31<sup>st</sup>, catch and release except up to 2 hatchery steelhead may be retained, selective gear rules (no bait).
  - Squire Creek,
    - Closed May 1 through Sept 15<sup>th</sup>
    - Open Sept. 16<sup>th</sup> through Oct 31<sup>st</sup>, catch and release except up to 2 hatchery steelhead may be retained, selective gear rules (no bait).
- South Fork Stillaguamish,
  - From mouth to 400' below Granite Falls fishway outlet,
    - Closed May 1 through Sept. 15<sup>th</sup>
    - Open Sept 16<sup>th</sup> through Jan 31<sup>st</sup>, minimum size 14".
    - Sept 16<sup>th</sup> through Nov 30<sup>th</sup>, night closure and anti-snagging rules.
  - From Mountain Loop Hwy upstream,
    - Open Sat before Memorial Day through Nov 30<sup>th</sup>.
- South Fork Tributaries,
  - Canyon Creek,
    - Closed May 1 through Sept. 15<sup>th</sup>

Open Sept. 16<sup>th</sup> through Jan 31<sup>st</sup>, catch and release except up to 2 hatchery steelhead may be retained, selective gear rules (no bait).

## **1.16 2019 Co-Management Agreement for Hood Canal Chum Salmon Fisheries.**

### 2019 Co-Management Agreement for Hood Canal Chum Salmon Fisheries.

The Hood Canal Treaty Tribes (Skokomish Tribe, Port Gamble S'Klallam Tribe, Jamestown S'Klallam Tribe and Lower Elwha Klallam Tribe) and the Washington Department of Fish and Wildlife (WDFW) have reached agreement on application of an in-season abundance estimation (ISU) process for the 2019 season. All parties to this agreement have responsibility for ensuring their fisheries management actions are appropriate to ensure harvest of available shares. Both the treaty Indian and non-Treaty chum salmon fishing schedules are described in the List of Agreed Fisheries (April 2019). For the 2019 Hood Canal chum salmon season, the Hood Canal Tribes and WDFW agree:

- 1) To exchange information and meet (if necessary) prior to June 29, 2019 to update the dataset to be used in conjunction with the "early" and "extended" ISU methods recommended by Tribal and WDFW biometricians, as described in the memorandum dated July 10, 2012 (2012 memorandum) with the purse seine catch and effort data window periods subsequently modified by co-manager agreement. Any additional analyses to inform/modify the ISU models must be agreed-to by both parties by this date.
- 2) Those waters of Area 12 east of the Area 12/12B boundary and south of a line projected 94° true from Hazel Point to the light on the opposite shore will be closed to purse seines for the entirety of the season. WDFW managed gillnet fisheries will be authorized in this area during management weeks 43 and 44.
- 3) Waters within 1,000 ft of fish bearing streams in marine area 9A (Port Gamble Bay) are closed to fishing.
- 4) That on-water enforcement will be sufficient to ensure compliance with all regulations.
- 5) To convene a conference call no earlier than 1:00 pm on Friday, November 1, 2019 to discuss results of the "early season" ISU model; s the independent predictor variable, and will be used on Friday, November 8<sup>th</sup>, not before that date, to determine any remaining fishing opportunity.
  - a. During the call co-managers would apply the "early" CPUE ISU method recommended by Tribal and WDFW biometricians to catch and effort estimates obtained from the Hood Canal non-Treaty Purse Seine fishery operating from October 20 through October 31; the resulting run size would then be the basis for calculating total allowable catch shares of Hood Canal fall chum for managing Treaty and non-Treaty Hood Canal fall chum fisheries through November 7<sup>th</sup>.
  - b. The "extended" model using data collected from October 20<sup>th</sup> through November 7<sup>th</sup> will be applied only if non-Treaty purse seine data is available after October 31st. The "extended model" will use NT PS CPUE as the independent predictor variable, and will

be used on Friday, November 8<sup>th</sup>, not before that date, to determine any remaining fishing opportunity.

Authorized Signatures:

The following parties agree to the above for the management of the 2019 Hood Canal chum salmon season, and the undersigned persons have authority to enter into this agreement:



Jamestown S'Klallam Tribe

4-15-19

Date



Lower Elwha Klallam Tribe

4-15-19

Date



Port Gamble S'Klallam Tribe

4/15/19

Date



Skokomish Tribe

4-15-19

Date



Washington Department of Fish and Wildlife

4-15-19

Date

## 1.17 2019 South South Chum In-Season Management Process

Prior to running the first ISU model, the assumed South Sound runsize will be the pre-season agreed forecast of South Sound NORs and HORs (295,916 and 147,808, respectively). Unlike previous years, the 2019 forecast does not include the non-local chum that are intercepted in Areas 10 and 11. This non-local contribution will therefore need to be estimated using the procedures described here. First, the maximum allowable harvest rate on South Sound chum will be evaluated by subtracting the aggregate South Sound NOR escapement goal from the South Sound NOR forecast. For 2019, the NOR escapement goal will be an average (72,275) of the existing even- and odd-year aggregate escapement goals (80,200 and 64,350, respectively). The goal will then be doubled (to 144,550) for the purpose of calculating the non-treaty maximum allowable NOR harvest rate. This currently estimated to be 51%. Applying that harvest rate to the combined NOR and HOR forecasts provides the total catch share of South Sound chum stocks, but the number of interceptions of non-local chum associated with accessing this catch share in Area 10/11 must still be estimated and included in the non-treaty target catch quota. From GSI-based assumptions developed previously, the mean proportion (2007-2017) of non-local chum in Area 10/11 catches is currently estimated to be 27% of the catch (Table 1). The Area 10/11 catch share of South Sound chum must therefore be expanded (by dividing it by 1 minus 0.27) in order to set the total non-treaty Area 10/11 catch quota (155,460, based on the pre-season forecasts).

Table 1. Estimated proportions of non-local chum in the catches of Area 10 and 11 based on catches from TOCAS and current GSI assumptions. New GSI stock composition information from the 2018 Area 10/11 fishery is expected to become available before chum management begins. The assumed proportion of non-locals associated with the Area 10/11 catch shares may be revised accordingly.

	<b>Area 10 Estimated SS Catch</b>	<b>Area 11 Estimated SS Catch</b>	<b>Area 10 Total Catch</b>	<b>Area 11 Total Catch</b>	<b>Area 10+11 Estimated SS Catch</b>	<b>Area 10+11 Total Catch</b>	<b>Percent non- local of 10+11 Total Catch</b>
<b>2009</b>	63,996	54,550	84,091	63,738	118,546	147,829	20%
<b>2010</b>	111,051	86,297	175,600	110,883	197,347	286,483	31%
<b>2011</b>	127,966	53,845	183,023	65,781	181,810	248,804	27%
<b>2012</b>	102,917	74,474	209,577	107,465	177,392	317,042	44%
<b>2013</b>	120,345	89,870	171,444	109,569	210,215	281,013	25%
<b>2014</b>	101,094	72,735	157,418	92,754	173,829	250,172	31%
<b>2015</b>	166,938	59,509	217,651	69,240	226,447	286,891	21%
<b>2016</b>	97,292	44,808	119,838	50,544	142,101	170,382	17%
<b>2017</b>	156,679	79,644	219,267	96,209	236,323	315,476	25%
<b>2018</b>	109,689	39,863	164,764	49,931	149,552	214,695	30%
<b>Average</b>							<b>27%</b>

Once the ISU models become available in-season, the process changes and requires an additional step. The South Sound chum runsize estimates that are generated by the ISU models represent the combined

total abundance of the whole South Sound run plus the non-local chum accessible to being intercepted in Areas 10/11. The non-locals will therefore need to be separated from the in-season South Sound chum runsize estimate in order to re-evaluate the maximum allowable South Sound NOR harvest rate so that catch shares of South Sound chum can be adjusted. To do that, an estimate of the non-local proportion of the total South Sound runsize (19%) will be applied. This proportion is based on the mean ratio (2011-2017) between the reconstructed South Sound runsizes that include non-local interceptions and those that exclude non-locals by use of GSI-based assumptions (Table 2).

Table 2. Estimated proportions of non-locals in the reconstructed South Sound runsizes. The 2018 run reconstruction (both GSI-enhanced and traditional) should be available before chum management begins. The assumed proportion of non-locals in the South Sound runsize may be revised accordingly.

<b>Year</b>	<b>SS GSI Run Size</b>	<b>SS Run Size</b>	<b>% Non Local</b>
<b>2011</b>	439,448	548,484	20%
<b>2012</b>	438,062	611,675	28%
<b>2013</b>	499,720	597,762	16%
<b>2014</b>	475,525	589,762	19%
<b>2015</b>	416,868	503,501	17%
<b>2016</b>	356,146	401,462	11%
<b>2017</b>	473,730	584,264	19%
		<b>Average</b>	<b>19%</b>

The South Sound component of the ISU abundance will thus be calculated as 81% of the ISU estimate (1 minus 0.19), and then split into natural and hatchery components using the pre-season forecast NOR proportion (67%). The maximum allowable harvest rate on South Sound NORs will be re-assessed each time the runsize is updated, and the catch shares of South Sound chum will be reset based on that rate. Finally, as with the forecast-derived catch shares, these South Sound chum shares must again be expanded by the number of expected interceptions of non-local chum (once again by dividing by 1 minus 0.27) in order to set the total non-treaty Area 10/11 catch quota.

The total treaty allocation will be set in a similar manner, with the following two differences. The allowable harvest rate calculation will not include doubling the escapement goal. Also, non-local contributions will be estimated based only on the portion of the treaty share that is allocated to Areas 10 and 11.

## 1.18 Comprehensive Chum Management Plan Components and Objectives

### Stock Assessment

- Update Forecasts – the forecast methodologies need to be updated in each management area or for each river system to accurately predict the management unit.
  - *Management-unit-specific forecasts will require management-unit-specific age data from multiple return years. For those systems where age data is lacking, scales samples will need to be collected from terminal fisheries and/or spawning escapements for a number of years. Also, full reconstruction of all recruits will require estimates of stock composition in all pre-terminal mixed-stock chum fisheries. Sampling plans for can be developed prior to the 2019 management period. Run reconstructions going back to the mid-1990s will be corrected using GSI data this year. Existing mean stock composition data can be implemented now, and additional GSI analyses can be incorporated as they become available.*
- Update Escapement Goals – Many river systems in Puget Sound have escapement goals that have not been updated since the 60s or 70s. Contemporary estimates of MSH for each river system should be calculated to update escapement goals where possible. This can be done after run reconstructions going back to the mid-90s are corrected using GSI data (i.e. enough years of data to parameterize stock-recruit functions).
  - *Like forecasts, spawner-recruit functions will require system specific time series of age compositions spanning multiple years as well as multiple years of GSI-corrected reconstructed runs. The process for updating escapement goals will be developed during 2019, and a timeline for completing escapement goal updates for each management unit will be determined. Spawner-recruit functions, as well as habitat-based or production-goal-based approaches to establishing escapement objectives should be considered.*

### Fisheries Management

- Refine Management Units – Individual populations in North Puget Sound and South Puget Sound have failed to make their escapement goals consistently over the past decade. Management units should be established at the finest resolution possible based on existing GSI data from commercial and test fisheries, run reconstruction rules, run timing, etc. to protect weak stocks to allow for escapements to achieve MSH.
  - *The resolution of GSI analyses are dependent on the degree to which populations are genetically discernable, which is a factor of both intrinsic population genetics as well as the completeness of the GSI baseline. Prior to the 2019 chum management period, an evaluation of WDFW SNPs chum baseline will be made, and a plan for collecting additional genetic samples from terminal populations will be developed, with a focus on un-sampled and under-sampled populations.*

- Develop Abundance-Based Breakpoints – Fisheries will be managed to pass more fish to the terminal areas in years of low abundance. In years of higher abundance larger pre-terminal opportunities will be provided for. Appropriate breakpoints for the refined management units should be based on past observations of returns as well as reasonable predictions of future run sizes.
  - *Establishing appropriate abundance-based fishery management breakpoints will require the same GSI-corrected run reconstructions that are needed for revising forecasts and updating escapement goals. Such breakpoints will also be dependent upon the revised forecasts and the updated escapement goals, so completion of this task must follow development of those tools.*
- Conservation Measures to Protect Weak Stocks – Thresholds will be defined for each management unit below which critical harvest measures will apply. Harvest rates or other measures to minimize impacts will be applied fairly and consistently across preterminal areas consistent with the intent to pass more fish to terminal area fisheries and escapement during years of low abundance.
  - *Policy meetings will need to be conducted in the first year to establish harvestable objectives and maximum allowable impacts for critical stocks that are designed to achieve rebuilding. Existing management plans and agreements as well as GSI-corrected run reconstructions will need to be reviewed for equitability of impacts across fisheries.*

#### Monitoring and Research

- Fisheries should be sampled for GSI data. Samples should be representative of the fishery to allow accurate estimation of stock composition in the fishery.
  - *Sampling plans will be developed prior to 2019 chum returns.*
- Hatchery programs should also be sampled for GSI to understand the impacts of fisheries on supplementation programs.
  - *Sampling plans will be developed prior to 2019 chum returns.*
- Test fisheries should continue to be conducted for inseason management (i.e. estimating run sizes) and GSI collection. Additional test fisheries should be considered where they may improve the understanding of stock composition in a management area or where a refined management unit may warrant a new inseason estimation. These may include mark-recapture experiments in addition to GSI sampling.
  - *A technical evaluation of potential new test fisheries will be undertaken prior to 2019 in-season chum management.*
- Genetic samples should be collected from terminal areas to improve the resolution of genetic stock identification. Emphasis should be placed on unsampled river systems. Note: this is likely a lower priority as GSI is unlikely to be able to resolve stocks at the individual watershed level.

- *Prior to the 2019 chum management period, an evaluation of WDFW SNPs chum baseline will be made, and a plan for collecting additional genetic samples from terminal populations will be developed.*

#### Habitat and Hatcheries

- Habitat plans for each river system will provide recommendations for protecting existing fish habitats and projects to restore functioning habitats. Emphasis will be placed on habitat protections and restoration that will increase MSH for a population.
  - *Co-manager habitat biologists will be consulted to begin development of habitat plans.*
- Co-Managers will review existing hatchery production and develop plans for increased production using existing capacity as well as funding proposals to increase hatchery capacity and production. Increased production is designed to meet the needs for treaty tribal harvest and non-tribal fisheries.
  - *Co-manager hatchery biologists will be consulted to begin development of increased hatchery production plans.*

## **1.19 2019 Skokomish Fall Chinook Late-Timed Performance Report and Program Plan**

### **Introduction**

In 2018, the Washington Department of Fish and Wildlife and the Skokomish Tribe continued to implement a program at George Adams Hatchery to evaluate the development of a late spawning mode from the extant hatchery Chinook population, as part of a strategy to recover fall Chinook in the Skokomish River. We hypothesize that the river entry and sexual maturity timing of this later mode would be more conducive to environmental conditions in the Skokomish River than the current hatchery stock. The late-timed fall Chinook hatchery program currently provides for 330,000 eggs to be taken after October 1 with the peak of the late egg take being approximately five weeks later than the current peak, which is the third week of September. The current release goal is 200,000 fingerlings in May at a size of 70 fish per pound, consistent with release body size and timing of the regular program. In addition, two releases of 50,000 fish in April at 80 fpp are planned into the North Fork Skokomish and Vance Creek.

The success of this program will be predicated on achieving Objective 1 of the 2015 Addendum to the 2014 Fall Chinook Management Plan in the Skokomish River, to develop the late-timed mode through consistent hatchery returns. To that end WDFW made the first release of progeny of late-timed spawners in 2015 and secured the program egg take goal of 330,000 for the upcoming BY 2018 release. The co-managers expect to continue with this program through the 2019 spawning cycle.

The contribution of this program to the ultimate goal of recovery will depend on Objective 2, the ability of these fish to colonize natural spawning habitat and produce natural-origin returns at sustainable levels. Importantly, in order to achieve success in the long term, naturally spawning late-timed fish must exhibit population productivity rates that exceed replacement. A detailed discussion of appropriate program size and various strategies for achieving a minimum of 10% natural spawners from the late-timed program are given in the 2015 addendum. The purpose of this document is to describe a plan for putting late-timed returns and their progeny on the natural spawning grounds. Supplementation with both adult and smolt releases provides the most efficient means providing natural spawners from the late-timed program while maintaining a manageable program size.

### **Production**

Reliance on passive colonization through straying would require a program size as high as 550 to 750 thousand eggs (see Task 1-4 of the 2015 Addendum late-timed fall Chinook Program Plan). Such a program would result in large surplus returns of adults to the hatchery with no role in the broodstock program. Moreover, passive colonization would be likely to occur on a timescale inconsistent with objectives for the numerical expansion of the late-timed stock.

The co-Managers adopted a more efficient approach through active supplementation, with a program size of 330,000. This program bolsters hatchery program strays with active seeding of key habitats through a combination of off-station juvenile releases and transport of adult hatchery returns to the spawning grounds (Table 1). The program return to the hatchery

continues to be supported with the original 200,000 release. Additionally, both adult and juvenile releases are used to recruit more adults to the natural spawning grounds. Adult release groups (ARG) are derived from excess unripened broodstock at the hatchery.

**Table 3. Skokomish late Fall Chinook Program plan.**

Program Component	Release location	Supplementation strategy	Release number	Release size	Timing	Mark
Hatchery Late	Purdy Creek	Fingerling (SRG)	200,000	70 fpp	May	Unclipped, GA Late cwt
Natural Late	Nouth Fork (RM 13.3)	Fingerling (SRG)	50,000	80 fpp	April	Unclipped, NF Late cwt
	South Fork (RM 2.2)	Adult (ARG) <sup>a/</sup>	200	0.1 fpp	Oct	Site-specific Floy
	Vance Creek (RM 3.0) <sup>b/</sup>	Fingerling (SRG)	50,000	80 fpp	April	Unclipped, Vance Late cwt
		Adult (ARG) <sup>a/</sup>	200	0.1 fpp	Oct	Site-specific Floy
<b>Total release</b>			<b>300,000</b>			
<b>Egg take goal</b>			<b>330,000</b>			

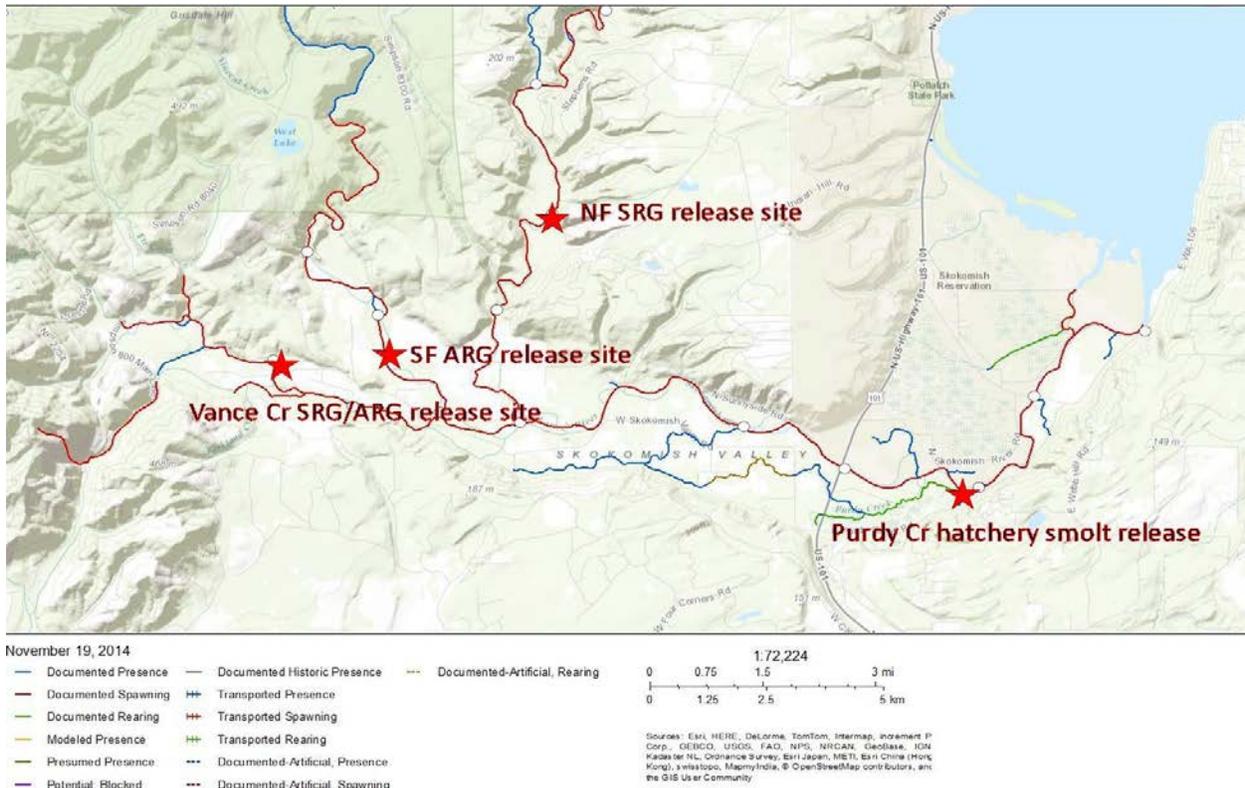
<sup>a/</sup> Adult releases are planned from hatchery adult surpluses from late maturing fish and will be dependent on availability

<sup>b/</sup> Up to three locations have been identified for ARG and SRG releases in Vance Creek below RM 3.0 to distribute spawners

The hatchery late-timed Chinook program goal for release location, timing and size is the same as for the regular timed release into Purdy Creek, at 70fpp in May. Given the volatility of the south fork Skokomish and mainstem, the co-managers had originally identified Vance Creek and the North Fork as the best locations for both adult and smolt releases. However, further consideration of other reintroduction and supplementation programs currently underway in the North Fork led to a decision to focus all adult releases of late-timed fall Chinook into Vance Creek and the South Fork (Figure 1).

Two smolt release groups (SRG) of 50,000 each are produced for two locations in the Skokomish River basin where environmental conditions are most conducive to successful natural production. These groups would be reared at McKernan on well water in order to reduce their imprinting to Purdy Creek, and maximize imprinting to release sites. These groups are released just prior to smolting in order to allow some degree of acclimation and imprinting to potential spawning locations. These releases therefore occur slightly earlier and potentially at smaller size due to their stage of development, which is currently expected to be in April, at approximately 80fpp. All three juvenile release groups are unclipped and uniquely coded wire tagged.

Program goals must be achieved in the following order. The 200k egg take for the hatchery portion of the program must be met before adults are surplus and transported to release sites. Moreover, the 220k egg take must also be met before eggs can be set aside for smolt releases. As surplus adults and eggs in excess of those needed to produce the 220k are acquired, release sites would be prioritized, 1) South Fork, 2) Vance Creek, 3) North Fork, up to the total program size outlined in Table 1.



**Figure 1. Proposed locations for off-station releases of late-timed fall Chinook in the Skokomish Basin.**

## Marking and Monitoring

In order to assess the success of late-timed Chinook program returns to George Adams hatchery, WDFW currently coded wire tags (CWT) the 200k hatchery release with a unique code. Assessments of off-station smolt release groups (SRG's) is also be contingent on unique CWT codes. Each of these three groups, in addition to the regular double index tag (DIT) groups, will be recovered at the hatchery, on the spawning grounds, and in fisheries providing critical information on survival, fidelity, and susceptibility to fisheries. In fall of 2015 WDFW added staff to continue spawning surveys in October in the mainstem and south fork and increase the frequency of carcass surveys. However, we recommend doubling the survey frequency to provide a more thorough schedule for maximizing recoveries.

In order to monitor behavior and distribution of adult releases, an external mark will be necessary; adult releases should be marked with floy tags, color-coded based on release site and uniquely numbered for each individual. Observations of live fish and carcass recoveries will be used to assess the effectiveness of this release strategy. However, existing resources can only provide a cursory assessment.

## Additional Resources

In order to implement this program, the co-managers will require additional resources (Table 3). While some of this work can be accomplished with existing staff, additional time and resources

will be needed. This budget includes minimal resources outlined in the 2015 Plan, plus additional costs of rearing, marking, and transporting smolt release groups, as well as monitoring adult returns of off-station supplementation fish outlined in this plan. It does not include any of the monitoring costs identified for monitoring productivity for natural spawning fish or for genetic analysis.

An additional three months of hatchery specialist 2 time will be needed in order to conduct broodstocking, sampling and spawning of the late-timed fall Chinook hatchery program and to mark and transport adult release groups (ARG) and smolt release groups (SRG) to release sites. Four months of field technician time and 5,500 in equipment and transportation will be needed to conduct the October/November spawning and carcass surveys. Two months of Biologist 4 time will provide for supervision, analysis, and reporting on the performance of this program. A significant portion of the anticipated budget will be incurred through the cost of coded wire tagging, with \$40,500 needed each year to tag 300,000 Chinook.

**Table 4. Budget for the 2018/19 implementation of late-timed Chinook program in the Skokomish River.**

	<b>Unit cost</b>	<b>Units</b>	<b>Total</b>
<b>Fish Culture</b>			
Hatchery specialist 2	\$5,000	3	\$15,000
Rearing	\$1,000	3	\$3,000
Tagging	\$125/1000	300,000	\$40,500
Transport			\$2,000
<b>Field Assessment</b>			
Scientific technician 2	\$5,000	4	\$20,000
Sampling equipment and supplies			\$2,500
Vehicle mileage / motor pool			\$3,000
<b>Analysis and Reporting</b>			
Biologist 4	\$8,000	2	\$16,000
GIS analyst (IT Specialist 4)	\$8,506	1.5	\$12,759
<b>Total</b>			<b>\$114,759</b>

## References

2015 Addendum to the 2014 Fall Chinook Management Plan in the Skokomish River. Washington Department of Fish and Wildlife and Skokomish Tribe. Olympia, Washington. October 2015.

1.20 Area 9A Setnet Closure Area



## 1.21 Puget Sound Chinook Mark-Selective Sport Fisheries Sampling and Monitoring Plan Attachment A

Based on agreements between the State of Washington and the Northwest Treaty Tribes, the Washington Department of Fish and Wildlife (WDFW) has been conducting recreational mark-selective Chinook fisheries (MSFs) in the marine catch areas of Puget Sound since 2003. This attachment outlines the general intent, data needs, sampling and monitoring plans, estimation methodologies, and reporting schedules associated with these fisheries.

### *Fishery Intent*

Agreed-to Chinook salmon MSFs (see attached Fishery Management Plans for specific fisheries and dates) will be conducted in Marine Areas 5-13 during the summer and winter seasons to provide recreational fishing opportunity directed at hatchery Chinook salmon, while limiting impacts on wild stocks of conservation concern, particularly Endangered Species Act (ESA)-listed Puget Sound Chinook salmon. Sampling and monitoring programs will be implemented along with these fisheries in order to provide the information necessary to evaluate and plan potential future Chinook salmon MSFs. Prior to next fishing season, WDFW and the tribes will jointly review and analyze results of the sampling and monitoring programs for these fisheries to evaluate the effectiveness at achieving the intended objectives.

### *Data Needs for Evaluating the Fishery*

Monitoring, sampling and reporting programs will be implemented by WDFW for the purpose of providing the data necessary to estimate the impact of these MSFs on unmarked Chinook salmon and to support the evaluation of future MSFs.

These monitoring and sampling programs are designed to provide data to estimate the following parameters:

- Mark rate in the fishery – marked and unmarked encounters will be estimated using test fishing, salmon trip reports (STR) or dockside sampling programs.
- Number of marked Chinook salmon retained – estimated using dockside sampling programs
- Number of unmarked Chinook salmon retained – estimated using dockside sampling programs
- Number of marked Chinook salmon released – estimated using dockside sampling and test fishing or STR programs
- Number of unmarked Chinook salmon released – estimated using dockside sampling and test fishing or VTR programs
- Number of Chinook salmon encounters of sublegal size - estimated using dockside sampling and test fishing or STR programs
- Stock composition of mortalities – estimated using coded-wire tag (CWT) data collected during dockside sampling
- Mortalities of marked and unmarked double-index tagged (DIT) and other CWT stocks

The co-managers agree to implement these fisheries with the understanding that the capability to estimate stock-specific unmarked fish mortalities is preserved. Methods for estimating unmarked mortalities of DIT-CWT stocks within these MSFs have been determined jointly by the co-managers, considering recommendations of the Selective Fisheries Evaluation Committee of the Pacific Salmon Commission. WDFW will be responsible for reporting the necessary fishery information and data to the Pacific States Marine Fishery Commission that allows these estimates to be generated.

Estimates of total fishery related mortalities, including the total exploitation rate or the Southern US exploitation rate, that represents the management objective for Puget Sound Chinook salmon management units under the co-managers' Harvest Management Plan, will be made by combining the mortality estimate for each Marine Area's mark-selective fishery with mortality estimates in other selective and non-selective fisheries. To ensure that all information necessary to make these estimates is collected, plans for sampling and monitoring of all fisheries will be included as a component of the co-managers' annual pre-season agreement.

### *Sampling Components*

#### Dockside Sampling

WDFW samplers collect biological data and information regarding effort and catch by conducting angler interviews at assigned access sites. During interviews, samplers acquire data on the number of anglers fishing in each boat, the Marine Catch Area(s) fished, trip duration, trip intent (targeted species) and fish encounter composition (kept and/or released by species). When an interviewed party possesses Chinook or coho salmon, samplers inspect the fish for CWTs using wand detectors and collect snouts from CWT-positive individuals for later lab processing. Samplers also take length measurements and collect scale samples from landed Chinook salmon. Lastly, samplers attempt to obtain information on fishing method in order to inform test-fishing methodologies.

#### Effort Surveys

##### *On-the-Water Surveys*

On-the-water Interviews (Boat Surveys) are conducted to provide information on the proportion of effort in a fishery originating from certain access sites. During these surveys, samplers attempt to intercept all anglers on the water in a given fishery and determine where they intend to tie up or exit the fishery upon completing their trip. This provides us with a list of sites (ramps/launches) used to access the fishery as well as information on the relative amount of use (number of anglers) each site receives. Based on this information we designate a "sample-frame" of 5-6 of the highest use access sites for each fishery, from which we select sample sites for dockside creel sampling. Information from the boat surveys also allows us to estimate the total effort that originates from non-sampled sites and include it in our estimates.

##### *Aerial Surveys*

Aerial effort surveys are conducted in fisheries where Boat Surveys are infeasible due to large survey areas and unsafe boating conditions. During these surveys flights are conducted to count the total number of boats on the water in a fishery. The sample-frame (sites where we station samplers) consists of the three to four access sites expected to be of highest use in the fishery. Paired with interviews conducted at these sites, the aerial surveys provide information on the proportion of total fishery effort that originates from non-sampled sites, enabling expansion of observed dockside counts to fishery-wide totals.

## Size/Mark-status Composition Estimates

### *Test Fishing*

Test fishing is used to obtain accurate estimates of the size and mark-status composition of the Chinook salmon population being targeted by a fishery. When included in the sampling design for a given fishery, it is conducted for the duration of the fishery. Test fishers spend approximately five days per week on the water attempting to mimic the behavior of the recreational fishing fleet. Fishing method information from dockside interviews is used to inform the methods used by test fishers and efforts are focused at locations that mirror choices made by the at-large private fleet. For each salmon brought to the boat, test fishers record the encounter number, time sampled, species and mark-status. For all Chinook salmon, test fishers record the fork length and total length and collect DNA and scale samples.

### *Voluntary Trip Reports*

Salmon Trip Reports (STRs) are completed and returned by a subset of private and charter fleet anglers to obtain additional information on Chinook salmon encounter rates by size class and mark-status. Anglers are asked to record the date, number of anglers, target species, Marine Catch Area, and for each Chinook or Coho salmon hooked, whether the fish was kept or released, legal or sublegal sized, and marked (adipose clipped) or unmarked.

## ***Sampling and Monitoring Plans***

For complete details regarding the following sampling plans and associated assumptions, see the WDFW Methods Report (WDFW 2012).

### Full Murthy

The Full Murthy sampling design is the most intensive of the four sampling plans. It utilizes intensive dockside sampling, on-the-water effort surveys and test fishing data to provide precise estimates of Chinook salmon catch and effort, along with total encounters and associated mortalities. STRs are also collected to be used as supplements to test fishing data, if necessary.

Dockside sampling is conducted on five days during each week. Sampling strata are divided into weekday (Monday through Thursday) and weekend (Friday, Saturday and Sunday) strata. During each week,  $n=2$  out of  $N=4$  days are randomly selected for sampling from the Monday through Thursday stratum. In addition, every Friday, Saturday, and Sunday is sampled. Samplers are stationed at two ramps on each of the selected sampling days. Samplers achieve 100% sampling coverage at the assigned ramps from approximately dawn until dark in order to intercept all boats. All anglers and fish exiting the fishery through the sampled sites will be counted. Any boats that are missed at the sampled sites will be counted and recorded on the sampling forms.

Sites from the sample frame for a given fishery are selected for sampling via a weighted-random site selection process (probability proportional to size). Initially, site selection is based on site size measures calculated from on-the-water survey data obtained during the previous year's fishery. Once the initial surveys are completed during the current year, updated size measures of sites in our sample frame are calculated based on the current year's data.

### Reduced Murthy

The Reduced Murthy sampling design is a scaled-back version of the Full Murthy sampling design. It utilizes intensive dockside sampling, on-the-water effort surveys and test fishery or STR data, depending on the fishery.

The main difference between the Reduced Murthy and Full Murthy is a reduced dockside sampling frequency. Dockside sampling is conducted on  $n=6$  out of  $N=14$  days during each two week period. Sampling strata are divided into weekday (Monday through Thursday) and weekend (Friday, Saturday and Sunday) strata. During each two-week period,  $n=2$  out of  $N=8$  days are randomly selected for weekday sampling. In addition,  $n=2$  out of  $N=3$  days are randomly selected for sampling during each weekend. Samplers are stationed at two ramps on each of the selected sampling days. Samplers achieve 100% sampling coverage at the assigned ramps from approximately dawn until dark in order to intercept all boats. All anglers and fish exiting the fishery through the sampled sites will be counted. Any boats that are missed at the sampled sites will be counted and recorded on the sampling forms.

Sites from the sample frame for a given fishery are selected for sampling via a weighted-random site selection process (probability proportional to size). Initially, site selection is based on site size measures calculated from on-the-water survey data obtained during the previous year's fishery. Once the initial surveys are completed during the current year, updated size measures of sites in our sample frame are calculated based on the current and previous year's data.

Unlike the Full Murthy sampling design, where test fishing is a mandatory component, some fisheries sampled with the Reduced Murthy sampling design will utilize a test fishery while others will use STR data to estimate the size and mark-status composition of the targeted Chinook salmon population. For details regarding a specific fishery, see the attached management plan for that fishery.

#### Aerial Access

The Aerial Access sampling design is a modified version of the Reduced Murthy sampling design that uses aerial effort surveys in place of on-the-water effort surveys. Dockside sampling frequencies are the same as those for the Reduced Murthy, however, instead of sampling at two sites (selected from the sampling-frame) on each sample day; samplers are stationed at all sites designated in the sample-frame (three to four sites of moderate to high effort). For each flight, the sample fraction is estimated by pairing the aerial total boat counts with the sample-frame total for boats active during the flight period (determined from dockside interviews). This allows for an expansion of estimates to account for out-of-frame effort.

As with the Reduced Murthy, fisheries monitored using the Aerial Access design may or may not include a test fishery. Those with no test fishery will use STRs to provide an estimate of the size and mark-status composition of the targeted Chinook salmon population.

#### Baseline

The Baseline sampling design is a less intensive monitoring program that includes dockside sampling and interviews and the collection of STR data. Baseline sampling is opportunistic in nature, with overall sampling effort allocated across space and time in a manner that maximizes the number of angler interviews obtained per sample effort. While dockside sampling procedures remain the same as in other sampling designs, the frequency of sample days may be slightly reduced. The main difference between Baseline and other, more intensive, sampling designs is the absence of effort surveys. Due to this, Baseline sampling data cannot be used to produce in-season or immediate post-season estimates absolute catch and effort. These estimates become available at a later date through the WDFW Catch Record Card system, allowing further fishery evaluation including total Chinook salmon encounters and associated mortalities by size and mark-status.

#### *Estimation Methods*

For fisheries monitored using the Full Murthy, Reduced Murthy and Aerial Access sampling designs, WDFW will produce periodic in-season and post-season estimates of catch and effort. To estimate total

Chinook salmon encounters and associated mortalities by size and mark-status category, WDFW will use the agreed-to 'bias-corrected M2' methodology (Conrad & McHugh 2008, WDFW 2012).

Fishery-total catch and effort estimates for fisheries monitored using the Baseline sampling design will be available approximately 1 to 1½ years after the close of the fishery, via the WDFW Catch Record Card system. Once these estimates are available, the appropriate methods for estimation of total encounters and mortalities will be determined using the decision support schematic provided in the 'CRC for Encounters' report (WDFW & NWIFC 2013). For fisheries with adequate sample sizes of STR encounters, this involves the 'bias-corrected M2' approach, as mentioned above. In situations where STR sample sizes are insufficient, total encounters and mortalities will be estimated using an 'M1' approach, where the size and mark-status composition of the Chinook salmon population is estimated using dockside sampling data (see WDFW & NWIFC 2013 for details).

### ***Reporting***

For some fisheries, WDFW will provide the co-managers with in-season updates of fishery performance (see attached Fishery Management Plans for details).

Following each summer and winter season, WDFW will compile a comprehensive post-season report for all Chinook MSFs conducted in Marine Areas 5-13. These reports will include a summary of the information collected as part of each fishery's sampling and monitoring program. In addition, for fisheries sampled using the Full Murthy, Reduced Murthy and Aerial Access sampling designs, the reports will also include:

- Weekly estimates of effort and number of Chinook salmon caught and released, by mark-status
- Estimates of total Chinook salmon encounters and associated mortalities by size and mark-status
- Comparisons of total encounters with pre-season FRAM modeled projections
- Comparisons of mortalities with pre-season FRAM modeled projections
- Estimated fishery-total mortalities of marked and unmarked DIT Chinook salmon, by stock and age

### ***References***

- Conrad R and McHugh P. 2008. Assessment of Two Methods for Estimating Total Chinook Salmon Encounters in Puget Sound/Strait of Juan de Fuca Mark-Selective Chinook Fisheries. Northwest Fishery Resource Bulletin, Manuscript Series Report No 2. <http://wdfw.wa.gov/publications/00492>
- Washington Department of Fish and Wildlife (WDFW). 2012. Methods Report: Monitoring Mark-Selective Recreational Chinook Fisheries in the Marine Catch Areas of Puget Sound (Areas 5 through 13). Revised Draft Report: January 30, 2012. Olympia, Washington. <http://wdfw.wa.gov/publications/01357/>
- Washington Department of Fish and Wildlife (WDFW) and Northwest Indian Fisheries Commission (NWIFC). 2013. Estimating Total Chinook Encounters using Catch Record Card-Based Estimates of Harvest. Draft Report: November 26, 2013. Olympia, Washington.

## 1.22 2019 Summer Mark-Selective Sport Fishery Marine Area 5

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 5 during the 2019 summer season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 5 will occur from **July 1, 2019 through August 15, 2019**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

The preseason prediction of total legal-sized Chinook salmon encounters in Area 5 is **8,294** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above). WDFW will ensure that the fishery does not exceed **9,953** predicted legal-sized Chinook salmon encounters.

### Sampling Design and Estimation Methodologies

WDFW will employ the 'Reduced Murthy' sampling design to monitor the Area 5 summer MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). WDFW will employ the appropriate number of staff during the Area 5 summer MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season catch and effort estimates by Friday **July 19, 2019**.

WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 5 summer MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wired tagged stocks as described in Attachment A.

## 1.23 2019 Summer Mark-Selective Sport Fishery Marine Area 6

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 6 during the 2019 summer season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 6 will occur from **July 1, 2019 through August 15, 2019**, only in the portion of the area west of a true north/south line through buoy #2 near the tip of Ediz Hook. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 6 summer MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 6 summer MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 6 summer MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 6 MSF, in addition to estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wired tagged stocks as described in Attachment A will be provided at a later date, as Catch Record Card estimates become available (see Attachment A).

## 1.24 2019 Summer Mark-Selective Sport Fishery Marine Area 7

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 7 during the 2019 summer season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 7 will occur from **July 1, 2019 to July 31, 2019**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon.

### Fishery Controls

The preseason prediction of total legal sized Chinook salmon encounters in Area 7 is **3,622** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above).

### Sampling Design and Estimation Methodologies

WDFW will employ the 'Aerial Access' sampling design to monitor the Area 7 summer MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 7 summer MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season catch and effort estimates by Friday **July 19, 2019**.

WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 7 summer MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged and other coded-wire tagged stocks as described in Attachment A.

## 1.25 2019 Summer Mark-Selective Sport Fishery Marine Area 9

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement Chinook salmon mark-selective fisheries (MSFs) in Marine Area 9 during the 2019 summer season. These fisheries will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of these fisheries on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate these mark-selective fisheries.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 9 will occur between **July 25 and August 15, 2019**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

The preseason modeled expected catch is **3,491** Chinook salmon in Area 9 (FRAM Chin2719). WDFW will manage this fishery not to exceed the above catch quota.

### Sampling Design and Estimation Methodologies

WDFW will employ the 'Full Murthy' sampling design to monitor the Area 9 summer MSFs and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 9 summer MSFs in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will provide the co-managers with preliminary weekly in-season estimates of effort, landed catch, and encounters starting **Friday August 2, 2019**. WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 9 summer MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other CWT stocks as described in Attachment A.

## 1.26 2019 Summer Mark-Selective Sport Fishery Marine Area 10

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement Chinook salmon mark-selective fisheries (MSFs) in Marine Area 10 during the 2019 summer season. These fisheries will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of these fisheries on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate these mark-selective fisheries.

### Fishery Regulations

The summer Chinook salmon MSF in Marine 10 will occur between **July 25 and August 30, 2019**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

The preseason modeled expected catch is **3,057** Chinook salmon in Area 10 (FRAM Chin2719). WDFW will manage these fisheries not to exceed the above catch quota.

### Sampling Design and Estimation Methodologies

WDFW will employ the 'Full Murthy' sampling design to monitor the Areas 10 summer MSFs and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 10 summer MSFs in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will provide the co-managers with weekly in-season estimates of effort, landed catch, and encounters beginning **Friday August 2, 2019**. WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 10 summer MSFs, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A.

## 1.27 2019 Summer Mark-Selective Sport Fishery Marine Area 11

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 11 during the 2019 summer season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 11 will occur from **July 1, 2019 through September 30, 2019**, although the season could close earlier to stay within the Chinook catch quota specified in the *Fishery Controls* section below. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

The preseason modeled expected catch is **2,805** Chinook salmon in Area 11 (FRAM Chin2719). WDFW will manage this fishery not to exceed the above catch quota.

### Sampling Design and Estimation Methodologies

WDFW will employ the 'Reduced Murthy' sampling design to monitor the Area 11 summer MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). WDFW will employ the appropriate number of staff during the Area 11 summer MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season estimates of effort, landed catch, and encounters beginning **July 19, 2019**.

WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 11 summer MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of double index-tagged (DIT) and other CWT stocks as described in Attachment A.

## 1.28 2019 Summer Selective Sport Fishery Marine Area 12

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 12 during the 2019 summer season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 12 will occur from **July 1, 2019 through September 30, 2019**, only in the portion of the area located south of Ayock Point. Anglers will be allowed a daily limit of up to four salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 12 summer MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 12 summer MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 12 summer MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 12 MSF, in addition to estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other CWT stocks as described in Attachment A will be provided at a later date, as Catch Record Card estimates become available (see Attachment A).

## **1.29 2019 Summer Mark-Selective Sport Fishery Marine Area 13**

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 13 during the 2019 summer season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The summer Chinook salmon MSF in Marine Area 13 will occur from **May 1, 2019 through September 30, 2019**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 13 summer MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 13 summer MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will compile a comprehensive post-season report for all summer Chinook salmon MSFs conducted in Marine Areas 5-13 by February 1, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 13 summer MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 13 MSF, in addition to estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wired tagged stocks as described in Attachment A will be provided at a later date, as Catch Record Card estimates become available (see Attachment A).

### 1.30 2019-20 Winter Mark-Selective Sport Fishery Marine Area 5

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 5 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 5 will occur from **March 1 to April 30, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

#### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 5 winter MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 5 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 5 winter MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 5 MSF, in addition to estimates of marked and unmarked mortalities of double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A will be provided at a later date, as estimates from Catch Record Card become available (see Attachment A).

### 1.31 2019-20 Winter Mark-Selective Sport Fishery Marine Area 6

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 6 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery-origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 6 will occur from **March 1 to April 15, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

The preseason prediction of total Chinook salmon encounters in Area 6 is **3,860** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above). Co-managers will initiate an in-season call sometime during the week starting **March 22, 2020** to discuss fishery progress. If at any time during the fishery in-season estimates indicate that total encounters for the fishery will significantly exceed this preseason modeled estimate, WDFW will modify the fishery to control impacts on stocks of concern.

#### Sampling Design and Estimation Methodologies

WDFW will employ the 'Aerial Access' sampling design to monitor the Area 6 winter MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 6 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 6 winter MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 6 MSF, in addition to estimates of marked and unmarked mortalities of Double index-tagged and other coded-wire tagged stocks as described in Attachment A will be provided at a later date as estimates from Catch Record Card become available (see Attachment A).

### **1.32 2019-20 Winter Mark-Selective Sport Fishery Marine Area 7**

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 7 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 7 will occur from **February 1, 2020 to April 15, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

The preseason prediction of total Chinook salmon encounters in Area 7 is **9,752**, and the predicted total unmarked encounters (legal-unmarked plus sublegal-unmarked) is **3,380** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above). However, if in-season estimates indicate that total Chinook salmon encounters, total unmarked encounters, or legal-unmarked encounters are projected to be at 80% of the preseason modeled encounters, WDFW will initiate co-manager discussion regarding potential fishery actions. WDFW will ensure the fishery does not exceed 4,057 total unmarked Chinook encounters and/or 11,702 total Chinook encounters.

#### Sampling Design and Estimation Methodologies

WDFW will employ the 'Aerial Access' sampling design to monitor the Area 7 winter MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 7 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season catch and effort estimates by **February 21, 2020**.

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 7 winter MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other CWT stocks as described in Attachment A.

### 1.33 2019-20 Winter Mark-Selective Sport Fishery Marine Areas 8-1 and 8-2

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement Chinook salmon mark-selective fisheries (MSFs) in Marine Areas 8-1 and 8-2 during the 2019-2020 winter season. This fisheries will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of these fisheries on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate these mark-selective fisheries.

#### Fishery Regulations

The winter Chinook salmon MSFs in Marine Areas 8-1 and 8-2 will occur from **February 1, 2019 through April 30, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

The preseason prediction of total Chinook salmon encounters in Area 8-1 and 8-2 is **4,330** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above). However, if in-season estimates indicate that total Chinook salmon encounters, total unmarked encounters, or legal-unmarked encounters are projected to be at 80% of the preseason modeled encounters, WDFW will initiate co-manager discussion regarding potential fishery actions. WDFW will ensure that the fishery does not exceed **5,196** predicted total Chinook salmon encounters.

#### Sampling Design and Estimation Methodologies

WDFW will employ the 'Reduced Murthy' sampling design to monitor the Area 8-1 and 8-2 winter MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). WDFW will employ the appropriate number of staff during the Area 8-1 and 8-2 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season catch and effort estimates starting Friday **February 21, 2020**.

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring programs during the Area 8-1 and 8-2 winter MSFs, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other CWT stocks as described in Attachment A.

### **1.34 2019-20 Winter Mark-Selective Sport Fishery Marine Area 9**

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 9 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 9 will occur from **February 1 to April 15, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

The preseason prediction of total encounters in Area 9 is **4,677** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above). However, if in-season estimates indicate that total Chinook salmon encounters, total unmarked encounters, or legal-unmarked encounters are projected to be at 80% of the preseason modeled encounters, WDFW will initiate co-manager discussion regarding potential fishery actions. WDFW will ensure that the fishery does not exceed **5,613** predicted total Chinook salmon encounters.

#### Sampling Design and Estimation Methodologies

WDFW will employ the 'Aerial Access' sampling design to monitor the Area 9 winter MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 9 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season catch and effort estimates beginning Friday **February 21, 2020**.

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 9 winter MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A.

### 1.35 2019-20 Winter Mark-Selective Sport Fishery Marine Area 10

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 10 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 10 will occur from **January 1, 2019 through March 31, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

The preseason prediction of total Chinook salmon encounters in Area 10 is **2,933** (FRAM Chin2719). WDFW plans to manage this fishery as a season, beginning and ending on the agreed-to dates (above). However, if in-season estimates indicate that total Chinook salmon encounters, total unmarked encounters, or legal-unmarked encounters are projected to be at 80% of the preseason modeled encounters, WDFW will initiate co-manager discussion regarding potential fishery actions. WDFW will ensure that the fishery does not exceed **3,520** predicted total Chinook salmon encounters.

#### Sampling Design and Estimation Methodologies

WDFW will employ the 'Reduced Murthy' sampling design to monitor the Area 10 winter MSF and estimate total encounters and associated mortalities of legal, sublegal, marked and unmarked Chinook salmon (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using test fishing data. WDFW will employ the appropriate number of staff during the Area 10 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will provide the co-managers with bi-weekly in-season catch and effort estimates beginning the week ending **January 17, 2020**.

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 10 winter MSF, a full analysis of impact estimates (total encounters and mortalities by size and mark-status), and estimates of marked and unmarked mortalities of double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A.

### 1.36 2019-20 Winter Mark-Selective Sport Fishery Marine Area 11

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 11 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook MSF in Marine Area 11 will occur from **January 1, 2019 to April 30, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

#### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 11 winter MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 11 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 11 winter MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 11 MSF, in addition to estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A will be provided at a later date, as Catch Record Card estimates become available (see Attachment A).

## 1.37 2019-2020 Winter Mark-Selective Sport Fishery Marine Area 12

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 12 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 12 will occur from **October 1, 2019 to April 30, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 12 winter MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 12 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

### Reporting Schedule

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 12 winter MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 12 MSF, in addition to estimates of marked and unmarked mortalities of double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A will be provided at a later date, as Catch Record Card estimates become available (see Attachment A).

### 1.38 2019-20 Winter Mark-Selective Sport Fishery Marine Area 13

The Northwest Treaty Tribes and the Washington Department of Fish and Wildlife (WDFW) have reached agreement to implement a Chinook salmon mark-selective fishery (MSF) in Marine Area 13 during the 2019-2020 winter season. This fishery will be implemented consistent with management objectives defined by the co-managers' Puget Sound Chinook Harvest Management Plan, the WDFW-Tulalip management plan for hatchery origin fish, and established principles concerning the allocation of harvestable salmon and the exercise of treaty rights. The co-managers will seek to minimize or eliminate any unintended effects of this fishery on individual treaty fisheries, including dislocation and/or disruption. Therefore, treaty fisheries will not be modified in order to accommodate this mark-selective fishery.

#### Fishery Regulations

The winter Chinook salmon MSF in Marine Area 13 will occur from **October 1, 2019 to April 30, 2020**. Anglers will be allowed a daily limit of up to two hatchery Chinook salmon. All sub-area closures included in the 2019-20 Co-Managers' List of Agreed Fisheries will remain in effect for the agreed-to dates.

#### Fishery Controls

WDFW will manage this fishery as a season, beginning and ending on the agreed-to dates (above).

#### Sampling Design and Estimation Methodologies

Sampling efforts will be conducted consistent with the 'Baseline Sampling Design' (see Attachment A). The size and mark-status composition of the targeted Chinook salmon population will be estimated using Salmon Trip Reports (STRs). Total Chinook salmon encounters and associated mortalities resulting from the Area 13 winter MSF will be estimated using the 'CRC for Encounters' methodology, described in Attachment A. WDFW will employ the appropriate number of staff during the Area 13 winter MSF in an effort to meet or exceed the sampling rate goal of 20%.

#### Reporting Schedule

WDFW will compile a comprehensive post-season report for all winter Chinook salmon MSFs conducted in Marine Areas 5-13 by November 30, 2020. This report will include a summary of the information collected as part of our sampling and monitoring program during the Area 13 winter MSF. A full analysis of impact estimates (total encounters and mortalities by size and mark-status) resulting from the Area 13 MSF, in addition to estimates of marked and unmarked mortalities of Double index-tagged (DIT) and other coded-wire tagged stocks as described in Attachment A will be provided at a later date, as Catch Record Card estimates become available (see Attachment A).

### **1.39 Draft Charter Boat Sampling Program for Puget Sound Marine Recreational Salmon Fisheries**

Based on agreements between the State of Washington and the Northwest Treaty Tribes, the Washington Department of Fish and Wildlife (WDFW) has been conducting recreational mark-selective Chinook salmon fisheries (MSFs) in the marine catch areas of Puget Sound since 2003. Attachment A provides the general intent, data needs, sampling and monitoring plans, estimation methodologies, and reporting schedules associated with these fisheries.

As an addition to Attachment A, this document describes the proposed sampling plan specific to charter vessels participating in recreational mark-selective Chinook salmon fisheries and/or Chinook salmon non-retention (NR) fisheries in the marine areas of Puget Sound.

#### ***Data Needs for Evaluating the Fishery***

A sampling program for charter vessels will be implemented, in addition to the sampling program for private boats, for the purpose of providing the data necessary to estimate impacts of MSFs and/or NR fisheries on unmarked Chinook salmon and to support the evaluation of future such fisheries. In addition to conducting dockside sampling to collect biological information on landed catch, WDFW will coordinate collection of salmon encounter information and angler effort counts with membership of the Charter Association of Puget Sound and other charter operators in Puget Sound. Participants in this program will provide the data described below to enable an overall assessment of Chinook salmon MSFs and NR fisheries in Puget Sound. Additionally, in a coordinated effort with charter boat operators, WDFW samplers will ride along aboard charter boats to enumerate salmon encounters and collect biological data on encountered Chinook, as detailed further below.

The charter boat sampling program is designed to provide data that, in combination with the data collected during private boat sampling, will enable estimation of the following parameters:

- Number of Chinook salmon encounters (retained and released), by size class (legal/sublegal) and mark status (marked/unmarked): estimated using salmon trip report (STR) logbooks, WDFW-staffed charter ride-along trips, and dockside sampling programs.
- Mark rate in the fishery: estimated using salmon trip report (STR) logbooks, WDFW-staffed charter ride-along trips, and dockside sampling programs.
- Stock composition of mortalities: estimated using coded-wire tag (CWT) data collected during dockside sampling.
- Mortalities of marked and unmarked double-index tagged (DIT) and other CWT stocks.

#### ***Sampling Components***

##### Dockside Sampling

WDFW samplers collect biological data and information regarding effort and catch by conducting angler interviews at assigned access sites. Samplers will record on their sampling form whether the boat sampled is a charter vessel or private boat. During interviews, samplers acquire data on the number of anglers fishing in each boat, the Marine Catch Area(s) fished, trip duration, trip intent (targeted species) and fish encounter composition (kept and/or released by species). When an interviewed party possesses Chinook or coho salmon, samplers inspect the fish for CWTs using wand detectors and collect snouts from CWT-positive individuals for later lab processing. Samplers also take length measurements and collect scale samples from landed Chinook.

### On-water Effort Surveys

On-the-water interviews (Boat Surveys) are conducted to provide information on the proportion of effort in a fishery originating from certain access sites. During these surveys, samplers record the vessel type (charter or private boat). Samplers attempt to intercept all anglers on the water in a given fishery and determine where they intend to tie up or exit the fishery upon completing their trip. This provides WDFW with a list of sites (ramps/launches) used to access the fishery as well as information on the relative amount of use (number of anglers) each site receives. Based on this information we designate a “sample-frame” of 5-6 of the highest use access sites for each fishery, from which we select sample sites for dockside creel sampling. Information from the boat surveys also allows us to estimate the total effort that originates from non-sampled sites and include it in our estimates.

### Salmon Trip Reports

Salmon trip reports (STRs) will be completed and returned by charter operators on at least a weekly basis to obtain additional information on Chinook encounter rates by size class and mark-status. The information recorded will include the date, number of anglers, target species, Marine Catch Area, and for each Chinook or coho hooked, whether the fish was kept or released, legal or sublegal sized, and marked (adipose clipped) or unmarked. Electronic submission of these data will be possible via WDFW’s new STR smartphone application in the future, and paper forms will still be available for charter operators to use as well. Charter operators can also take a photo of the STR and e-mail it to [STR@dfw.wa.gov](mailto:STR@dfw.wa.gov). The sooner the data can be provided to WDFW the sooner the data can be utilized for in-season management, when applicable.

### Charter Boat Ride-alongs:

In coordination with charter boat operators, WDFW observers will ride along aboard charter boats, collecting the following data for each observed encounter on the boat: date, Marine Catch Area fished, species hooked, result of hookup (fish kept, released, or dropped off), mark status, and size class (legal vs. sublegal). Also WDFW ride-along samplers will collect biological data, including length and scale samples, on each observed Chinook salmon that is encountered.

### Reporting

At the conclusion of the 2019 season, WDFW will compile all data collected from charter boats and volunteer reports from other participating anglers. A summary of data collected and estimates of total angler effort for each fishery will be documented and available for review by December 1, 2019.

As described in Attachment A, following each summer and winter season, WDFW will compile a comprehensive post-season report for all Chinook salmon MSFs conducted in Marine Areas 5-13. These reports will include a summary of the information collected as part of each fishery’s sampling and monitoring program, for both charter boats and private boats. In addition, for fisheries sampled using the Full Murthy, Reduced Murthy and Aerial Access sampling designs, the reports will also include:

- Weekly estimates of effort and number of Chinook salmon caught and released, by mark-status
- Estimates of total Chinook salmon encounters and associated mortalities by size and mark-status
- Comparisons of total encounters with pre-season FRAM modeled projections

- Comparisons of mortalities with pre-season FRAM modeled projections
- Estimated fishery-total mortalities of marked and unmarked DIT Chinook salmon, by stock and age.

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<sup>ii</sup> This is based on Chin2719

**PRESEASON REPORT I**  
**STOCK ABUNDANCE ANALYSIS**  
**AND**  
**ENVIRONMENTAL ASSESSMENT PART 1**  
**FOR 2019 OCEAN SALMON FISHERY**  
**REGULATIONS**

REGULATION IDENTIFIER NUMBER 0648-BI05



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## LIST OF ACRONYMS AND ABBREVIATIONS

ABC	acceptable biological catch
ACL	annual catch limit
BY	brood year
CDFW	California Department of Fish and Wildlife
CoTC	Coho Technical Committee (of the PSC)
Council	Pacific Fishery Management Council
CRFMP	Columbia River Fishery Management Plan
CWT	coded-wire tag
EA	Environmental Assessment
EEZ	exclusive economic zone (from 3-200 miles from shore)
EIS	Environmental Impact Statement
EMAP	Environmental Monitoring and Assessment Program
ESA	Endangered Species Act
ESU	evolutionarily significant unit
$F_{ABC}$	exploitation rate associated with ABC
$F_{ACL}$	exploitation rate associated with ACL (= $F_{ABC}$ )
FMP	fishery management plan
$F_{MSY}$	maximum sustainable yield exploitation rate
FNMC	Far-North-Migrating Coastal
$F_{OFL}$	exploitation rate associated with the overfishing limit (= $F_{MSY}$ , MFMT)
FONSI	Finding of No Significant Impacts
FRAM	Fishery Regulatory Assessment Model
GAM	generalized additive models
ISBM	individual stock-based management
Jack CR	Columbia River jacks (coho)
Jack OC	Oregon coastal and Klamath River Basin jacks (coho)
Jack OPI	Jack CR + Jack OC (coho)
KMZ	Klamath management zone (ocean zone between Humbug Mountain and Horse Mountain where management emphasis is on Klamath River fall Chinook)
KOHM	Klamath Ocean Harvest Model
KRFC	Klamath River fall Chinook
KRTT	Klamath River Technical Team
LCN	lower Columbia River natural (coho)
LCR	lower Columbia River (natural tule Chinook)
LRB	lower Columbia River bright (Chinook)
LRH	lower Columbia River hatchery (tule fall Chinook returning to hatcheries below Bonneville Dam)
LRW	lower Columbia River wild (bright fall Chinook spawning naturally in tributaries below Bonneville Dam)
MCB	Mid-Columbia River bright (bright hatchery fall Chinook released below McNary Dam)
MFMT	maximum fishing mortality threshold
MOC	mid-Oregon coast
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSM	mixed stock model
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NA	not available
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOC	north Oregon coast

## LIST OF ACRONYMS AND ABBREVIATIONS (continued)

NPGO	North Pacific Gyre Oscillation
NSIG	National Standard 1 Guidelines
OCN	Oregon coast natural (coho)
OCNL	Oregon coast natural lake (coho)
OCNR	Oregon coast natural river (coho)
ODFW	Oregon Department of Fish and Wildlife
OFL	overfishing limit
OPI	Oregon Production Index (coho salmon stock index south of Leadbetter Point)
OPIH	Oregon Production Index public hatchery
OPITT	Oregon Production Index Technical Team
OY	Optimum Yield
PDO	Pacific Decadal Oscillation
PFMC	Pacific Fishery Management Council (Council)
PRIH	Private hatchery
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RK	Rogue/Klamath (coho)
RMP	Resource Management Plan (for exemption from ESA section 9 take prohibitions under limit 6 of the 4(d) rule)
ROPI	Rogue Ocean Production Index (Chinook)
SAB	Select Area brights (bright fall Chinook destined for Select Area sites on the lower Columbia River)
S <sub>ABC</sub>	spawning escapement associated with ABC
S <sub>ACL</sub>	spawning escapement associated with ACL (= S <sub>ABC</sub> )
SCH	Spring Creek Hatchery (tule fall Chinook returning to SCH)
SHM	Sacramento Harvest Model
SI	Sacramento Index
SJF	Strait of Juan de Fuca
S <sub>MSY</sub>	MSY spawning escapement
S <sub>OFL</sub>	spawning escapement associated with the overfishing limit (= S <sub>MSY</sub> )
SOC	south Oregon Coast
SRFC	Sacramento River fall Chinook
SRS	Stratified Random Sampling
SRWC	Sacramento River winter Chinook
STEP	Salmon Trout Enhancement Program
STT	Salmon Technical Team (formerly the Salmon Plan Development Team)
TAC	Technical Advisory Committee ( <i>U.S. v. Oregon</i> )
URB	Upriver bright (naturally spawning bright fall Chinook primarily migrating past McNary Dam)
VSI	visual stock identification
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

## INTRODUCTION

This is the second report in an annual series of four reports prepared by the Salmon Technical Team (STT) of the Pacific Fishery Management Council (Council) to document and help guide ocean fishery salmon management off the coasts of Washington, Oregon, and California. The report focuses on Chinook, coho, and pink salmon stocks that have been important in determining Council fisheries in recent years, and on stocks listed under the Endangered Species Act (ESA) with established National Marine Fisheries Service (NMFS) ESA consultation standards. This report will be formally reviewed at the Council's March 2019 meeting.

This report provides 2019 salmon stock abundance forecasts, and an analysis of the impacts of 2018 management measures or regulatory procedures, on the projected 2019 abundance. This analysis is intended to give perspective in developing 2019 management measures. This report also constitutes the first part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2019 ocean salmon management measures. An EA is used to determine whether an action being considered by a Federal agency has significant impacts. This part of the EA includes a statement of the purpose and need, a summary description of the affected environment, a description of the No-Action Alternative, and an analysis of the No-Action Alternative effects on the salmon stocks included in the Council's Salmon Fishery Management Plan (FMP).

The STT and Council staff will provide two additional reports prior to the beginning of the ocean salmon season to help guide the Council's selection of annual fishery management measures: Preseason Report II and Preseason Report III. These reports will analyze the impacts of the Council's proposed alternatives and adopted fishery management recommendations, respectively. Preseason Report II will constitute the second part of the EA, and will include additional description of the affected environment relevant to the alternative management measures considered for 2019 ocean salmon fisheries, a description of the alternatives, and an analysis of the environmental consequences of the alternatives. Preseason Report II will also analyze the potential impacts of a reasonable range of alternatives, which will inform the final fishery management measures included in Preseason Report III. Preseason Report III will describe and analyze the effects of the Council's final proposed action, including cumulative effects. Together, these parts of the EA will provide the necessary components to determine if a finding of no significant impact (FONSI) or Environmental Impact Statement (EIS) is warranted.

Chapter I provides a summary of stock abundance forecasts. Chapters II and III provide detailed stock-by-stock analyses of abundance, a description of prediction methodologies, and accuracy of past abundance forecasts for Chinook and coho salmon, respectively. Chapter IV summarizes abundance and forecast information for pink salmon. Chapter V provides an assessment of 2018 regulations applied to 2019 abundance forecasts. Appendices provide supplementary information as follows: Appendix A provides a summary of Council stocks and their management objectives; Appendix B contains the Council's current harvest allocation schedules, and Appendix C contains pertinent data for Oregon Production Index (OPI) area coho. Appendix D summarizes the change in Sacramento River Winter Chinook management that was implemented beginning in 2018. For NEPA purposes, Chapters I-IV of this document describe the affected environment and Chapter V provides a description and analysis of the No-Action Alternative.

### *Purpose and Needs*

The purpose of this action, implementation of the 2019 ocean salmon fishery management measures, is to allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP, the Pacific Salmon Treaty (PST), and consultation standards established for ESA-listed salmon stocks. In achieving this purpose, management measures must take into account the allocation of harvest among different user groups and port areas. Without this action, 2018

management measures would be in effect, which do not consider changes in abundance of stocks in the mixed stock ocean salmon fisheries. Therefore, this action is needed to ensure constraining stocks are not overharvested, and that harvest of abundant stocks can be optimized and achieve the most overall benefit to the nation.

The Salmon FMP also establishes nine more general harvest-related objectives:

1. Establish ocean exploitation rates for commercial and recreational salmon fisheries that are consistent with requirements for stock conservation objectives and annual catch limits (ACLs), specified ESA consultation standards, or Council-adopted rebuilding plans.
2. Fulfill obligations to provide opportunity for Indian harvest of salmon as provided in treaties with the United States, as mandated by applicable decisions of the Federal courts, and as specified in the October 4, 1993 opinion of the Solicitor, Department of Interior, with regard to federally-recognized Indian fishing rights of Klamath River Tribes.
3. Maintain ocean salmon fishing seasons supporting the continuance of established recreational and commercial fisheries, while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial fisheries that are fair and equitable, and in which fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.
4. Minimize fishery mortalities for those fish not landed from all ocean salmon fisheries as consistent with achieving optimum yield (OY) and bycatch management specifications.
5. Manage and regulate fisheries so that the OY encompasses the quantity and value of food produced, the recreational value, and the social and economic values of the fisheries.
6. Develop fair and creative approaches to managing fishing effort, and evaluate and apply effort management systems as appropriate to achieve these management objectives.
7. Support the enhancement of salmon stock abundance in conjunction with fishing effort management programs to facilitate economically viable and socially acceptable commercial, recreational, and tribal seasons.
8. Achieve long-term coordination with the member states of the Council, Indian tribes with federally-recognized fishing rights, Canada, the North Pacific Fishery Management Council, Alaska, and other management entities which are responsible for salmon habitat or production. Manage consistent with the PST and other international treaty obligations.
9. In recommending seasons, to the extent practicable, promote the safety of human life at sea.

These objectives, along with the consultation standards established under the ESA, provide "sideboards" for setting management measures necessary to implement the Salmon FMP, which conforms to the terms and requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the National Standard 1 Guidelines (NS1G).

Implementation of 2019 management measures will allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP and consultation standards established for ESA-listed salmon stocks.

The reauthorization of the MSA in 2006 established new requirements to end and prevent overfishing through specification of overfishing limits (OFL), acceptable biological catch (ABC), ACLs and accountability measures (AMs). Because OFLs, ABCs, and ACLs are based on annual abundance forecasts, Preseason Report I also specifies OFLs, ABCs, and ACLs for 2019 fisheries.

## CHAPTER I: DESCRIPTION OF THE AFFECTED ENVIRONMENT

The action area for this proposed action is the exclusive economic zone (EEZ), 3 to 200 nautical miles, off the West Coast of the U.S. (California, Oregon, and Washington).

The affected environment relevant to establishing the 2019 ocean salmon fishery management measures consists of the following components:

- Target Species – Chinook, coho, and pink salmon,
- ESA-listed salmon stocks; and
- Socioeconomic aspects of coastal communities, federally-recognized Tribes, and states.

A description of the historical baseline for these components of the affected environment is presented in the Review of 2018 Ocean Salmon Fisheries (PFMC 2019). The current status (2019 ocean abundance forecasts) of the environmental components expected to be affected by the 2019 ocean salmon fisheries regulation alternatives (FMP salmon stocks, including those listed under the ESA) are described in this report (Part 1 of the 2019 salmon EA); the Review of 2018 Ocean Salmon Fisheries (PFMC 2019) provides an historical description of the salmon fishery-affected environment, including stock status and socioeconomic impacts, and represents the current status of the socioeconomic component of the affected environment.

The No-Action alternative was assessed in the 2018 NEPA process for ocean salmon regulations (Preseason Reports II and III; PFMC 2018b and 2018c). In those analyses, proposed management measures were determined to have no significant impacts on several components of the affected environment. These components included:

- Non-target species – Pacific Halibut, groundfish (NMFS 2003; PFMC 2006, 2018a)
- Marine mammals – pinnipeds, killer whales (NMFS 2003, 2008; PFMC 2006, 2018a)
- Seabirds (NMFS 2003; PFMC 2006, 2018a)
- Ocean and coastal habitats, ESA critical habitat, and Essential Fish Habitat (EFH) (NMFS 2003; PFMC 2006, 2018a)
- Biodiversity and ecosystem function (NMFS 2003; PFMC 2006, 2018a)
- Unique characteristics of the geographic area (NMFS 2003; PFMC 2006, 2018a)
- Cultural, scientific, or historical resources such as those eligible for listing in the National Register of Historic Places (NMFS 2003; PFMC 2006, 2018a)
- Public health or safety (NMFS 2003; PFMC 2006, 2018a)

The 2019 No-Action alternative is the same as the 2018 action, therefore it is expected to have no significant impacts on these elements of the environment. Thus, this document includes analysis of the impacts of the No Action alternative on salmon stocks identified in the FMP, the component of the environment for which conditions have changed such that the effects in 2019 are different.

The component of the affected environment that is described in this document consists only of the salmon stocks identified in the FMP (Appendix A). The 2019 forecast abundance of the FMP salmon stocks represents this component of the affected environment. The surviving stock after fishery-related mortality is generally referred to as spawning escapement (S), and the proportion of the stock that succumbs to fishing-related mortality is generally referred to as the exploitation rate (F); these are the metrics that constitute conservation objectives for FMP stocks, and by which effects of the alternatives to this part of the affected environment are evaluated. Thus, application of management measures (alternatives) to the abundance forecasts (affected environment) results in projected exploitation rates and spawning escapements (effects).

A description of the other components of the affected environment considered for 2019 ocean salmon fishery regulation alternatives, including socioeconomic components and updated additional information on the biological components of the environment, will be presented in Preseason Report II, to be issued after the March Council meeting.

### ***ABUNDANCE FORECASTS***

Abundance forecasts in 2019 are summarized for key Chinook and coho salmon stocks in Tables I-1 and I-2, respectively. A cursory comparison of preseason forecast and postseason abundance estimates for selected stocks is presented in Figures II-2, 3, 4 and III-1. More detailed analyses of this subject are covered in Chapters II (Chinook) and III (coho). Information on pink salmon abundance and forecasts is contained in Chapter IV. Council Salmon FMP conservation objectives are presented in Appendix A; allocation objectives are presented in Appendix B.

In addition to the key stocks with abundance forecasts listed in Tables I-1 and I-2, Council management decisions for the 2019 ocean salmon fishing seasons may be constrained by other stocks, such as those listed under the ESA or subject to PSC agreements, which may not have abundance forecasts made, or do not have abundance forecasts available in time for inclusion in this report. These include the following Evolutionarily Significant Units (ESUs): Central Valley Spring Chinook, California Coastal Chinook, Lower Columbia River (LCR) natural tule Chinook, Snake River Fall Chinook; Central California Coast coho, Southern Oregon/Northern California Coast coho, and Interior Fraser (including Thompson River) coho.

### ***ACCEPTABLE BIOLOGICAL CATCH, ANNUAL CATCH LIMITS, AND OVERFISHING LIMITS***

Amendment 16 to the Salmon FMP, approved in December 2011, was developed to comply with the requirements of the 2006 MSA reauthorization, including specification of acceptable biological catch (ABC), annual catch limits (ACLs), overfishing limits (OFLs), and Scientific and Statistical Committee (SSC) recommendations for ABC. Amendment 16 established that ABC and ACLs were required for two stocks, Sacramento River fall Chinook (SRFC) and Klamath River fall Chinook (KRFC), which serve as indicator stocks for the Central Valley Fall and Southern Oregon/Northern California Chinook complexes, respectively. Other stocks in the FMP are not required to have ACLs either because they were components of these two stock complexes, were ESA-listed, were hatchery stocks, or were managed under an international agreement. Since publication of Amendment 16, ABC and ACL specifications have been added to the Salmon FMP for Willapa Bay natural coho.

ABCs and ACLs are not specified for stocks that are managed under an international agreement as there is a statutory exception in the MSA to the requirement for ACLs, and the NS1Gs state that ABCs are not required if stocks meet this international exception. The NS1Gs allow the flexibility to consider alternative approaches for specifying ACLs for stocks with unusual life history characteristics like Pacific salmon, and particularly for species listed under the ESA and hatchery stocks. For hatchery stocks, broodstock goals serve as conservation objectives rather than specifying ACLs. For ESA-listed stocks, biological opinions and associated consultation standards describe necessary controls to ensure their long-term conservation.

Preseason OFLs are determined for all non-ESA-listed and non-hatchery stocks with an estimate of  $F_{MSY}$  (or Maximum Fishing Mortality Threshold, MFMT) and sufficient information available to make abundance forecasts.

#### **Acceptable Biological Catch**

For salmon, ABC is defined in terms of spawner escapement ( $S_{ABC}$ ), which is determined annually based on stock abundance, in spawner equivalent units (N) and the exploitation rate  $F_{ABC}$ .

$$S_{ABC} = N \times (1 - F_{ABC})$$

The ABC control rule defines  $F_{ABC}$  as a fixed exploitation rate reduced from  $F_{MSY}$  to account for scientific uncertainty. The degree of the reduction in  $F$  between  $F_{ABC}$  and  $F_{MSY}$  depends on whether  $F_{MSY}$  is directly estimated (tier 1 stock) or a proxy value is used (tier 2 stock). For tier 1 stocks,  $F_{ABC}$  equals  $F_{MSY}$  reduced by five percent. For tier 2 stocks,  $F_{ABC}$  equals  $F_{MSY}$  reduced by ten percent.

Tier-1:  $F_{ABC} = F_{MSY} \times 0.95$ .

Tier-2:  $F_{ABC} = F_{MSY} \times 0.90$ .

### **Annual Catch Limit**

ACLs are also defined in terms of spawner escapement ( $S_{ACL}$ ) based on  $N$  and the corresponding exploitation rate ( $F_{ACL}$ ), where the exploitation rate is a fixed value that does not change on an annual basis.

$F_{ACL}$  is equivalent to  $F_{ABC}$  and

$$S_{ACL} = N \times (1 - F_{ACL}),$$

which results in  $S_{ACL} = S_{ABC}$  for each management year.

During the annual preseason salmon management process,  $S_{ACL}$  is estimated using the fixed  $F_{ACL}$  exploitation rate and the preseason forecast of  $N$ . Thus, fishery management measures must result in an expected spawning escapement greater than or equal to this preseason estimate of  $S_{ACL}$ .

### **Overfishing Limit**

For salmon, OFL is defined in terms of spawner escapement ( $S_{OFL}$ ), which is consistent with the common practice of using spawner escapement to assess stock status for salmon.  $S_{OFL}$  is determined annually based on stock abundance, in spawner equivalent units ( $N$ ) and the exploitation rate  $F_{OFL}$ .

$F_{OFL}$  is defined as being equal to  $F_{MSY}$  (or MFMT) and

$$S_{OFL} = N \times (1 - F_{MSY}).$$

### **STATUS DETERMINATION CRITERIA**

Amendment 16 also included new status determination criteria (SDC) for overfishing, approaching an overfished condition, overfished, not overfished/rebuilding, and rebuilt. These criteria are:

- Overfishing occurs when a single year exploitation rate exceeds the maximum fishing mortality threshold (MFMT), which is based on the maximum sustainable yield exploitation rate ( $F_{MSY}$ );
- Approaching an overfished condition occurs when the geometric mean of the two most recent postseason estimates of spawning escapement, and the current preseason forecast of spawning escapement, is less than the minimum stock size threshold (MSST);
- Overfished status occurs when the most recent 3-year geometric mean spawning escapement is less than the MSST;
- Not overfished/rebuilding status occurs when a stock has been classified as overfished and has not yet been rebuilt, and the most recent 3-year geometric mean spawning escapement is greater than the MSST but less than  $S_{MSY}$ ;
- A stock is rebuilt when the most recent 3-year geometric mean spawning escapement exceeds  $S_{MSY}$ .

Comparison of stock status to criteria for overfishing, overfished, not overfished/rebuilding, and rebuilt were reported in the annual SAFE document, Review of 2018 Ocean Salmon Fisheries (PFMC 2019).

Approaching an overfished condition relies on current year preseason forecasts and Council adopted fishing regulations for the upcoming season in order to calculate projected spawning escapement. In this report, because the actual regulations for the upcoming season are not yet known, the calculations are based on preseason forecasts and Council-adopted regulations from the year prior. Thus, the stock status in this report is described as being *at risk* of approaching an overfished condition. Once the regulations for the upcoming season are adopted and spawning escapement is projected, the status description will be updated and provided in the Preseason-III report. All SDC rely on the most recent estimates available, which in some cases may be a year or more in the past because of incomplete broods or data availability; however, some status descriptions reported in the SAFE document may be updated if more recent spawning escapement or exploitation rate estimates become available between the time the SAFE document and this document are published.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 1 of 3)

Production Source and Stock or Stock Group	Preseason Abundance Forecasts						Methodology for 2019 Prediction and Source
	2014	2015	2016	2017	2018	2019	
<b>Sacramento River</b>							
Fall (Sacramento Index)	634.7	652.0	299.6	230.7	229.4	379.6	Log-log regression of the Sacramento Index on jack escapement from the previous year, accounting for lag-1 autocorrelated errors. STT.
Winter (age-3 absent fishing)	--	--	--	--	1.6	1.9	Stochastic life cycle model applied to natural- and hatchery-origin production. STT.
<b>Klamath River (Ocean Abundance)</b>							
Fall	299.3	423.8	142.2	54.2	359.2	274.2	Linear regression analysis of age-specific ocean abundance estimates on river runs of same cohort. STT.
<b>Oregon Coast</b>							
North and South/Local Migrating	--	--	--	--	--	--	None.
<b>Columbia River (Ocean Escapement)</b>							
Upriver Spring <sup>a/</sup>	227.0	232.5	188.8	160.4	166.7	99.3	Log-linear sibling regressions of cohort returns in previous run years. Columbia River TAC.
Willamette Spring	58.7	55.4	68.7	38.1	53.8	40.2	Age-specific linear regressions of cohort returns in previous run years. ODFW. Forecast includes adult fish only.
Sandy Spring	5.5	5.5	NA	3.6	5.3	5.5	Recent 3-year average. ODFW.
Cowlitz Spring	7.8	11.2	25.1	17.1	5.2	1.3	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Kalama Spring	0.5	1.9	4.9	3.1	1.5	1.4	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Lewis Spring	1.1	1.1	1.0	0.7	3.7	1.5	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Upriver Summer <sup>b/</sup>	67.5	73.0	93.3	63.1	67.3	35.9	Log-linear sibling regressions or average return (4-ocean fish). Columbia River TAC subgroup.
URB Fall	973.3	500.3	589.0	260.0	200.1	158.4	Columbia River Fall Chinook: Age-specific average cohort ratios or sibling regressions. Columbia River TAC subgroup and WDFW.
SCH Fall	115.1	160.5	89.6	158.4	50.1	46.0	
LRW Fall	34.2	18.9	22.2	12.5	7.6	13.7	
LRH Fall	110.0	94.9	133.7	92.4	62.4	54.5	
MCB Fall	360.1	113.3	101.0	45.6	36.4	56.7	

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 2 of 3)

Production Source and Stock or Stock Group		Preseason Abundance Forecasts						Methodology for 2019 Prediction and Source
		2014	2015	2016	2017	2018	2019	
<b>Washington Coast</b>								
Willapa Bay Fall	Natural	2.9	3.8	3.3	4.2	3.8	4.3	Return per spaw ners applied to 3-6 year olds (brood years 2013-16) adjusted by brood year performance.
	Hatchery	29.5	31.0	36.2	34.3	40.3	23.8	
Grays Harbor Fall	Natural	--	--	--	--	16.4	NA	Past year based on a 4-year average recruits for age-3, and recruits per spaw ner adjusted by brood performance for age-4, 5, 6.
	Hatchery	--	--	--	--	4.8	NA	Past year based on a 10-year average recruits per spaw n for age 3 and log linear regressions for age-4 on Age-2 and 3; age-5 on age-2, 3, and 4 for all stocks; and age- 6 on age-5.
Quinault Spring/Summer	Natural	NA	NA	NA	NA	NA	NA	Hatchery: Past year based on ten-year average recruits per spaw ner for age-3; log linear regressions for age-4 on age-2 and 3; age-5 on age-2, 3, 4 for all stocks; and age-6 on age-5.
	Hatchery	--	--	--	--	4.8	NA	
Quinault Fall	Natural	6.0	8.1	5.5	5.9	5.2	NA	
	Hatchery	10.3	4.0	5.3	4.4	3.1	NA	
Queets Spring/Sum	Natural	0.5	0.4	0.5	0.5	0.5	0.6	Based on recent 5 year average.
Queets Fall	Natural	3.6	4.3	4.9	3.7	3.3	NA	Past year based on recent year mean and cohort relationship.
	Hatchery	0.9	1.5	1.7	0.9	0.6	NA	Past year based on returns per smolt release.
Hoh Spring/Summer	Natural	0.9	0.8	0.9	1.0	1.1	1.0	Recent 3 year mean adjusted by previous performance.
Hoh Fall	Natural	2.5	2.6	1.8	2.7	2.6	2.5	Recent 5 year mean adjusted by previous performance, age 3 & 4 adjusted by regressions.
Quillayute Spring	Hatchery	2.0	1.7	1.8	2.2	2.1	2.1	Spring: Recent 5 year mean adjusted by previous performance.
Quillayute Sum/Fall	Natural	7.6	8.5	7.5	7.6	8.0	7.9	Summer: Recent 3 year mean for all ages. Fall: Recent 5 year means; adjusted for previous 5 year forecast performance.
Hoko <sup>cl</sup>	Natural	2.7	3.3	2.9	1.5	1.5	2.8	Includes supplemental. 2018 recruits for age-3 is recent 5-year average return, age 4-6 is sibling regression.
<b>North Coast Totals</b>								
Spring/Summer	Natural	1.4	1.2	1.4	1.5	1.6	1.7	
Fall	Natural	19.7	23.5	19.7	19.9	19.1	NA	
Spring/Summer	Hatchery	2.0	1.7	1.8	2.2	2.1	2.1	
Fall	Hatchery	11.2	5.5	7.0	5.3	3.7	NA	

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 3 of 3)

Production Source and Stock or Stock Group		Preseason Abundance Forecasts						Methodology for 2019 Prediction and Source
		2014	2015	2016	2017	2018	2019	
<b>Puget Sound summer/fall<sup>d/</sup></b>								
Nooksack/Samish	Hatchery	43.9	38.6	27.9	21.2	24.6	21.3	Three year average return rate.
East Sound Bay	Hatchery	1.2	1.2	0.7	0.8	0.7	0.3	Three year average return rate.
Skagit <sup>e/</sup>	Natural	18.0	11.8	15.1	15.8	13.3	13.6	<u>Natural</u> : Hierarchical Bayesian model to estimate the spaw ner-recruit dynamics. <u>Hatchery</u> : Recent 4-year average terminal smolt to adult return rate to estimate ages 2 -5.
	Hatchery	0.3	0.6	0.4	0.4	0.3	0.3	
Stillaguamish <sup>f/</sup>	Natural	1.6	0.5	0.5	1.5	1.6	0.9	Natural plus Hatchery. Multiple regression environmental model (EMPAR).
Snohomish <sup>f/</sup>	Natural	5.3	4.2	3.3	3.4	3.5	3.7	Escapement w ithout fishing. Multiple regression environmental model (EMPAR).
	Hatchery	5.4	3.3	5.0	4.8	6.5	7.2	Terminal Run (to 8-2), w ith ocean fishing, Recent 4-year geomean age at return rates applied to releases.
Tulalip <sup>f/</sup>	Hatchery	4.7	1.3	1.4	5.3	7.5	12.7	Three year geomean escapement w ithout fishing.
South Puget Sound	Natural	4.8	3.8	4.5	4.7	4.8	8.4	<u>Natural</u> : Puyallup R. average return per spaw ner applied to brood years contributing ages 3-5. For Nisqually, 5 year average age specific return/spaw ner. For Green, 3-year geometric return rates. <u>Hatchery</u> : Variety of recent year average return rates and sibling relationships.
	Hatchery	96.7	62.4	43.1	80.4	123.6	99.9	
Hood Canal <sup>e/</sup>	Natural	3.5	3.1	2.3	2.5	3.9	1.2	Natural fish based on the Hood Canal terminal run reconstruction-based relative contribution of the individual Hood Canal management units in the 2014-2018 return years.
	Hatchery	80.6	59	42.7	48.3	57.6	66.0	Brood 2015 fingerling lbs released from WDFW facilities in 2016, multiplied by the average of post-season estimated terminal area return rates for the last 5 years (2014-2018).
Strait of Juan de Fuca Including Dungeness spring run <sup>e/</sup>	Natural	3.8	4.9	3.7	3.1	6.0	8.3	Natural and hatchery. Dungeness and Elw ha hatchery estimated by recent return rates times average releases. Dungeness w ild estimated by smolts times average hatchery return rate. Elw ha w ild estimated using 9 year hatchery/w ild breakouts from otolith and CWT.

a/ Since 2005, the upriver spring Chinook run includes Snake River summer Chinook.

b/ Since 2005, the upriver summer Chinook run includes only upper Columbia summer Chinook, and not Snake River summer Chinook.

c/ Expected spaw ning escapement w ithout fishing.

d/ Unless other wise noted, forecasts are for Puget Sound run size (4B) available to U.S. net fisheries. Does not include fish caught in troll and recreational fisheries.

e/ Terminal run forecast.

f/ Includes a mixture of runsize types including escapement w ithout fishing and terminal run. 2019 values are escapement w/out fishing for Tulalip and Snohomish natural, and terminal runsize for Stillaguamish and Snohomish hatchery.

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 1 of 2)

Production Source and Stock or Stock Group		Preseason Ocean Abundance Forecasts						Methodology for 2019 Prediction and Source
		2014	2015	2016	2017	2018	2019	
<b>OPI Area Total Abundance</b> (California, Oregon Coasts, and Columbia River)		1,213.7	1,015.0	549.2	496.2	349.0	1,009.6	Abundance of all OPI components based on cohort reconstruction including all fishery impacts using Mixed Stock Model (MSM); prior to 2008 only fishery impacts south of Leadbetter Point were used (traditional OPI accounting). OPITT, see Chapter III for details.
OPI Public	Hatchery	983.1	808.4	396.5	394.3	294.1	933.5	OPIH: Columbia River jacks adjusted for delayed smolt releases and total OPI jacks regressed on 1970-2018 adults. Columbia/Coastal proportions based on jacks; Columbia early/late proportions based on jacks; Coastal N/S proportions based on smolts.
Columbia River Early		526.6	515.2	153.7	231.7	164.7	545.0	
Columbia River Late		437.5	261.8	226.9	154.6	121.5	360.6	
Coastal N. of Cape Blanco		4.8	6.9	5.5	3.5	3.3	12.0	
Coastal S. of Cape Blanco		14.2	24.4	10.4	4.5	4.6	15.9	
Lower Columbia River	Natural	33.4	35.9	40.0	30.1	21.9	36.9	Oregon: recent two year average return; Washington: natural smolt production multiplied by 2016 brood marine survival rate. Abundance is subset of early/late hatchery abundance above.
Oregon Coast (OCN)	Natural	230.6	206.6	152.7	101.9	54.9	76.1	Rivers: Generalized additive model (GAM) relating ocean recruits to parental spawners and marine environmental variables. See text in Chapter III for details. Lakes: recent three year average abundance.
<b>Washington Coast</b>								Washington Coast stocks: A variety of methods were used for 2019, primarily based on smolt production and survival. See text in Chapter III for details.
Willapa	Natural	58.9	42.9	39.5	36.7	20.6	63.4	
	Hatchery	41.0	57.7	28.1	55.0	44.5	94.0	
Grays Harbor	Natural	108.8	142.6	35.7	50.0	42.4	71.5	
	Hatchery	65.4	46.6	22.9	36.4	51.4	64.3	
Quinault	Natural	25.0	44.2	17.1	26.3	25.4	13.9	
	Hatchery	24.7	24.9	19.8	29.4	29.6	26.9	
Queets	Natural	10.3	7.5	3.5	6.5	7.0	11.1	
	Hatchery	15.7	11.3	4.5	13.7	10.8	13.2	
Hoh	Natural	8.9	5.1	2.1	6.2	5.8	7.0	

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 2 of 2)

Production Source and Stock or Stock Group		Preseason Ocean Abundance Forecasts						Methodology for 2019 Prediction and Source	
		2014	2015	2016	2017	2018	2019		
Quillayute Fall	Natural	18.4	10.5	4.5	15.8	10.6	14.7	For all Washington Coast stocks: A variety of methods were used for 2019, primarily based on smolt production and survival. See text in Chapter III for details.	
	Hatchery	12.6	8.0	6.4	17.6	16.5	17.0		
Quillayute Summer	Natural	2.0	1.2	0.3	1.5	2.7	1.2		
	Hatchery	3.2	2.2	1.4	3.4	3.3	3.4		
North Coast Independent Tributaries	Natural	15.2	11.7	1.9	6.5	4.1	8.1		
	Hatchery	11.6	11.9	2.5	0.2	7.9	12.5		
<i>WA Coast Total</i>	<i>Natural</i>	<i>247.5</i>	<i>265.6</i>	<i>104.6</i>	<i>149.5</i>	<i>118.7</i>	<i>191.0</i>		
	<i>Hatchery</i>	<i>174.2</i>	<i>162.6</i>	<i>85.6</i>	<i>155.6</i>	<i>164.1</i>	<i>231.3</i>		
<b>Puget Sound</b>									
Strait of Juan de Fuca	Natural	12.5	11.1	4.4	13.1	7.2	8.8		For all Puget Sound stocks: A variety of methods were used for 2019, primarily based on smolt production and survival. See text in Chapter III and Joint WDFW and tribal annual reports on Puget Sound Coho Salmon Forecast Methodology for details.
	Hatchery	17.3	11.1	3.9	15.4	10.6	16.8		
Nooksack-Samish	Natural	20.8	28.1	9.0	13.2	20.6	25.1		
	Hatchery	61.7	50.8	28.8	45.6	61.3	59.8		
Skagit	Natural	112.4	121.4	8.9	11.2	59.2	57.9		
	Hatchery	15.8	19.5	4.9	7.6	13.1	9.9		
Stillaguamish	Natural	32.5	31.3	2.8	7.6	19.0	23.8		
	Hatchery	6.0	0.0	0.0	1.5	0.0	2.2		
Snohomish	Natural	150.0	151.5	20.6	107.3	65.9	62.6		
	Hatchery	78.2	53.9	16.7	62.0	38.3	43.7		
South Sound	Natural	62.8	63.0	9.9	20.2	15.0	30.4		
	Hatchery	150.7	180.2	27.1	102.4	103.0	180.4		
Hood Canal	Natural	82.8	61.5	35.3	115.6	59.5	40.1		
	Hatchery	47.6	108.4	83.5	74.9	84.5	87.9		
<i>Puget Sound Total</i>	<i>Natural</i>	<i>473.8</i>	<i>467.9</i>	<i>91.0</i>	<i>288.3</i>	<i>246.4</i>	<i>248.8</i>		
	<i>Hatchery</i>	<i>377.3</i>	<i>423.9</i>	<i>165.0</i>	<i>309.3</i>	<i>310.8</i>	<i>400.7</i>		

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## CHAPTER II: AFFECTED ENVIRONMENT - CHINOOK SALMON ASSESSMENT

### CHINOOK STOCKS SOUTH OF CAPE FALCON

#### Sacramento River Fall Chinook

The SRFC stock comprises a large proportion of the Chinook spawners returning to Central Valley streams and hatcheries. SRFC are designated as the indicator stock for the Central Valley fall Chinook stock complex, which was established under FMP Amendment 16 to facilitate setting and assessing compliance with ABC and ACLs, as required by the 2006 revision of the MSA. The Sacramento Index (SI) is the aggregate-age index of adult SRFC ocean abundance.

#### *Predictor Description*

The SI is the sum of (1) adult SRFC ocean fishery harvest south of Cape Falcon, OR between September 1 and August 31, (2) adult SRFC impacts from non-retention ocean fisheries when they occur, (3) the recreational harvest of adult SRFC in the Sacramento River Basin, and (4) the SRFC adult spawner escapement (Table II-1, Figure II-1).

The SI forecasting approach uses jack escapement estimates to predict the SI and accounts for autocorrelated errors. In practice, this means that if, in the previous year, the modeled SI value was larger than the SI postseason estimate for that year, the current year forecast is adjusted downward to account for that error. Conversely, if the modeled SI value in the previous year was less than the postseason estimate of the SI for that year, the current year SI forecast would be adjusted upward to compensate for that error.

The forecast of the log-transformed SI was made using the model

$$\log SI_t = \beta_0 + \beta_1 \log J_{t-1} + \rho \varepsilon_{t-1},$$

where  $\log SI_t$  and  $\log J_{t-1}$  are log-transformed SI and jack escapement values, respectively;  $t$  is the year for which the SI is being forecast;  $\beta_0$  is the intercept;  $\beta_1$  is the slope;  $\rho$  is the autocorrelation coefficient; and  $\varepsilon_{t-1}$  is the difference between the modeled value of the log SI for year  $t-1$  and the postseason estimate of log SI in year  $t-1$ . The  $\log SI_t$  is back-transformed to the arithmetic scale and corrected for bias in this transformation,

$$SI_t = e^{\log SI_t + 0.5\sigma^2},$$

where  $\sigma^2$  is the variance of the normally distributed error component of the fitted model (referred to as the “innovation” variance). A more detailed description of the forecast approach can be found in Appendix E of the 2014 Preseason Report I (PFMC 2014a).

#### *Predictor Performance*

The performance of past SI forecasts is displayed graphically in Figure II-4. For 2018, the postseason estimate of the SI was 223,854, which is 98 percent of the preseason forecast of 229,432.

A control rule, adopted as part of Amendment 16 to the salmon FMP, is used annually to specify the maximum allowable exploitation rate on SRFC (Appendix A, Figure A-1). The allowable exploitation rate is determined by the predicted number of potential adult spawners in the absence of fisheries, which is defined for SRFC as the forecast SI. The FMP allows for any ocean and river harvest allocation that meets the exploitation rate constraints defined by the control rule. The regulations adopted in 2018 were expected to result in 151,009 hatchery and natural area adult spawners and an exploitation rate of 34.2 percent.

Postseason estimates of these quantities were 105,739 hatchery and natural area adult spawners and an exploitation rate of 52.8 percent (Table II-1).

### *Stock Forecast and Status*

Sacramento Index forecast model parameters were estimated from SI data for years 1983-2018 and jack escapement data for years 1982-2017. A total of 41,184 SRFC jacks were estimated to have escaped to Sacramento River basin hatcheries and natural spawning areas in 2018. This jack escapement and the estimated parameters

$$\begin{aligned}\beta_o &= 7.53758, \\ \beta_1 &= 0.5466653, \\ \rho &= 0.7726405, \\ \epsilon_{t-1} &= -0.740665, \\ \sigma^2 &= 0.1457727,\end{aligned}$$

result in a 2019 SI forecast of 379,632.

Figure II-2 graphically displays the 2019 SI forecast. The model fit (line in Figure II-2) was higher than the 2018 postseason estimate of the SI. As a result, the 2019 SI forecast value is adjusted downward from the fitted model.

The forecast SI applied to the SRFC control rule (Appendix A, Figure A-1) results in an allowable exploitation rate of 67.9 percent which produces, in expectation, 122,000 hatchery and natural area adult spawners. Therefore, fisheries impacting SRFC must be crafted to achieve, in expectation, a minimum of 122,000 adult spawners in 2019.

### *OFL, ABC, and ACL*

The OFL, ABC, and ACL are defined in terms of spawner escapement ( $S_{OFL}$ ,  $S_{ABC}$ , and  $S_{ACL}$ ), and are calculated using potential spawner abundance forecasts and established exploitation rates. For SRFC,  $F_{MSY} = 0.78$ , the proxy value for Tier-2 Chinook stocks that do not have estimates of this rate derived from a stock-specific spawner-recruit analysis. The OFL for SRFC is  $S_{OFL} = 379,632 \times (1-0.78) = 83,519$ . Because SRFC is a Tier-2 stock,  $F_{ABC} = F_{MSY} \times 0.90 = 0.70$ , and  $F_{ACL} = F_{ABC}$ . The ABC for SRFC is  $S_{ABC} = 379,632 \times (1-0.70) = 113,890$ , with  $S_{ACL} = S_{ABC}$ . These preseason estimates will be recalculated with postseason abundance estimates (when available) to assess ACL and OFL compliance.

### **Sacramento River Winter Chinook**

ESA-listed endangered SRWC are harvested incidentally in ocean fisheries, primarily off the central California coast. A two-part consultation standard for endangered SRWC was first implemented in 2012, and later updated in 2018.

The first component of the consultation standard is the season and size limit provisions that have been in place since the 2004 Biological Opinion. These provisions state that the recreational salmon fishery between Point Arena and Pigeon Point shall open no earlier than the first Saturday in April and close no later than the second Sunday in November. The recreational salmon fishery between Pigeon Point and the U.S.–Mexico Border shall open no earlier than the first Saturday in April and close no later than the first Sunday in October. The minimum size limit shall be at least 20 inches total length. The commercial salmon fishery between Point Arena and the U.S.–Mexico border shall open no earlier than May 1 and close no later than September 30, with the exception of an October fishery conducted Monday through Friday between Point

Reyes and Point San Pedro, which shall end no later than October 15. The minimum size limit shall be at least 26 inches total length.

The second component of the consultation standard is specified by a control rule that limits the maximum age-3 impact rate (allowable as a preseason forecast) for the area south of Point Arena, California (Appendix A, Figure A-3). The control rule specifies the maximum allowable age-3 impact rate on the basis of a forecast of the SRWC age-3 escapement in the absence of fisheries.

### *Predictor Description*

The forecast of the age-3 escapement absent fishing (abundance) is based on a SRWC life cycle model that is stratified by age, sex, and origin (hatchery and natural). Juvenile survival rates spanning outmigration in freshwater and early ocean residence are applied to hatchery- and natural-origin juvenile production estimates. The age-3 escapement absent fishing is then forecasted by applying age- and sex-specific maturation rates and the age-3 natural mortality rate. The forecast is stochastic and thus the age-3 escapement absent fishing is represented by a distribution. The median of this distribution is applied to the control rule to specify the maximum allowable age-3 impact rate. A complete description of the abundance forecasting approach can be found in O'Farrell et al. (2016). The abundance forecasting approach used here is the Base model described in the aforementioned report.

### *Predictor Performance*

The forecast of SRWC age-3 escapement absent fishing was implemented for the first time in 2018. A postseason estimate for 2018 is not available.

### *Stock Forecast and Status*

The forecast of SRWC age-3 escapement absent fishing is 1,924. Application of the control rule results in a maximum age-3 impact rate of 15.7 percent for the area south of Point Arena in 2019 (Table II-2).

## **Klamath River Fall Chinook**

### *Predictor Description*

For Klamath River fall Chinook, linear regressions are used to relate September 1 ocean abundance estimates of age-3, age-4, and age-5 fish to that year's river run size estimates of age-2, age-3, and age-4 fish, respectively (Table II-3). Historical abundance estimates were derived from a cohort analysis of CWT information (brood years 1979-2014). The y-intercept of the regressions is constrained to zero, which gives the biologically reasonable expectation that a river run size of zero predicts an ocean abundance remainder of zero for the same cohort. The abundance of age-2 fish is not forecasted because no precursor to age-2 fish of that brood is available. Ocean fisheries harvest nominal numbers of age-2 KRFC.

### *Predictor Performance*

Since 1985, the preseason ocean abundance forecasts for age-3 fish have ranged from 0.33 to 3.09 times the postseason estimates; for age-4 fish from 0.37 to 2.60 times the postseason estimates; and for the adult stock as a whole from 0.34 to 2.43 times the postseason estimates (Table II-4). The September 1, 2017 age-3 forecast (330,000) was 0.83 times its postseason estimate (397,568). The age-4 forecast (28,400) was 2.58 times its postseason estimate (11,008); and the age-5 forecast (800) was 16.0 times its postseason estimate (50). The preseason forecast of the adult stock as a whole was 0.88 times the postseason estimate.

Management of KRFC harvest since 1986 has attempted to achieve specific harvest rates on fully-vulnerable age-4 and age-5 fish in ocean and river fisheries (Table II-5). The Council has used a combination of quotas and time/area restrictions in ocean fisheries in an attempt to meet the harvest rate

objective set each year. Since 1992, fisheries have been managed to achieve 50/50 allocation between tribal and non-tribal fisheries. Tribal and recreational river fisheries have been managed on the basis of adult Chinook quotas.

The FMP describes a control rule used annually to specify the maximum allowable exploitation rate on KRFC (Appendix A, Figure A-2). The allowable exploitation rate is determined by the predicted number of potential spawners, which is defined as the natural area adult escapement expected in the absence of fisheries. The FMP allows for any ocean and river harvest allocation that meets the exploitation rate constraints defined by the control rule.

The 2018 salmon fishery regulations were expected to result in 40,700 natural-area spawning adults and an age-4 ocean harvest rate of 11.5 percent. Postseason estimates of these quantities were 53,624 natural-area adult spawners and an age-4 ocean harvest rate of 22.6 percent (Table II-5 and Table II-6).

### *Stock Forecast and Status*

The 2019 forecast for the ocean abundance of KRFC as of September 1, 2018 (preseason) is 167,504 age-3 fish, 106,119 age-4 fish, and 599 age-5 fish.

Late-season commercial ocean fisheries in 2018 (September through November) were estimated to have harvested 157 adult KRFC, including 129 age-4. Late-season recreational ocean fisheries were estimated to have harvested 31 adult KRFC, all of which were age-4. For the two fisheries combined, this equates to a 0.2 percent age-4 ocean harvest rate, which will be deducted from the ocean fishery's allocation in determining the 2019 allowable ocean harvest.

The forecast of potential spawner abundance is derived from the ocean abundance forecasts, ocean natural mortality rates, age-specific maturation rates, stray rates, and the proportion of escapement expected to spawn in natural areas. The 2019 KRFC potential spawner abundance forecast is 87,893 natural-area adults. This potential spawner abundance forecast applied to the KRFC control rule results in an allowable exploitation rate of 53.7 percent, which produces, in expectation, 40,700 natural-area adult spawners. Therefore, fisheries impacting KRFC must be crafted to achieve, in expectation, a minimum of 40,700 natural-area adult spawners in 2019.

### *OFL, ABC, and ACL*

The OFL, ABC, and ACL are defined in terms of spawner escapement ( $S_{OFL}$ ,  $S_{ABC}$ , and  $S_{ACL}$ ), and are calculated using potential spawner abundance forecasts and established exploitation rates. For KRFC,  $F_{MSY} = 0.71$ , the value estimated from a stock-specific spawner-recruit analysis (STT 2005). The OFL for KRFC is  $= 87,893 \times (1-0.71) = 25,489$ . Because KRFC is a Tier-1 stock,  $F_{ABC} = F_{MSY} \times 0.95 = 0.68$ , and  $F_{ACL} = F_{ABC}$ . The ABC for KRFC is  $S_{ABC} = 87,893 \times (1-0.68) = 28,126$ , with  $S_{ACL} = S_{ABC}$ . These preseason estimates will be recalculated with postseason abundance estimates (when available) to assess ACL and OFL compliance.

### **Other California Coastal Chinook Stocks**

Other California coastal streams that support fall Chinook stocks which contribute to ocean fisheries off Oregon and California include the Smith, Little, Mad, Eel, Mattole, and Russian rivers, and Redwood Creek. Except for the Smith River, these stocks are included in the California coastal Chinook ESU, which is listed as threatened under the ESA. Current information is insufficient to forecast the ocean abundance of these stocks; however, the NMFS ESA consultation standard restricts the KRFC age-4 ocean harvest rate to no more than 16.0 percent to limit impacts on these stocks. In 2018, the age-4 ocean harvest rate was estimated to be 22.6 percent. The Klamath River spring, Smith River, Rogue River, Umpqua River,

and other Oregon Chinook stocks south of the Elk River are components of the Southern Oregon/Northern California (SONC) Chinook complex, and as such, specification of ACLs is deferred to KRFC, the indicator stock for the SONC Chinook complex.

### **Oregon Coast Chinook Stocks**

Oregon coast Chinook stocks are categorized into three major subgroups based on ocean migration patterns: the North Oregon Coast (NOC) Chinook aggregate, the Mid Oregon Coast (MOC) Chinook aggregate, and the South Oregon Coast (SOC) Chinook aggregate. Although their ocean harvest distributions overlap somewhat, they have been labeled as far-north, north, or south/local migrating, respectively.

#### *Far-North and North Migrating Chinook (NOC and MOC groups)*

Far-north and north migrating Chinook stocks include spring and fall stocks north of and including the Elk River, with the exception of Umpqua River spring Chinook. Based on CWT analysis, the populations from ten major NOC river systems from the Nehalem through the Siuslaw Rivers are harvested primarily in ocean fisheries off British Columbia and Southeast Alaska, and to a much lesser degree in Council area and terminal area (state waters) fisheries off Washington and Oregon. CWT analysis indicates populations from five major MOC systems, from the Coos through the Elk Rivers, are harvested primarily in ocean fisheries off British Columbia, Washington, Oregon, and in terminal area fisheries. Minor catches occur in California fisheries, and variable catches have been observed in southeast Alaska troll fisheries.

NOC and MOC Chinook stocks are components of the Far-North-Migrating Coastal (FNMC) Chinook complex, which is an exception to the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for stocks in the FNMC complex.

#### *Predictor Description*

Quantitative abundance predictions are made for all three of the coastal Chinook groups (NOC, MOC, and SOC), but are not used in annual development of Council area fishery regulations. Quantitative forecasts of abundance are based on sibling regression analyses from individual basins' escapement assessment data and scale sampling, which occur coast-wide. Forecast data for the NOC are used in the PSC management process in addition to terminal area management actions.

Natural spawner escapement is assessed yearly from the Nehalem through Sixes rivers. Peak spawning counts of adults are obtained from standard index areas on these rivers and monitored to assess stock trends (PFMC 2019, Chapter II, Table II-5 and Figure II-3). Natural fall Chinook stocks from both the NOC and MOC dominate production from this subgroup. Also present in lesser numbers are naturally-produced spring Chinook stocks from several rivers, and hatchery fall and/or spring Chinook released in the Trask, Nestucca, Salmon, Alsea, and Elk rivers.

Basin-specific forecasts constitute the overall aggregate forecasts and are derived in conjunction with annual PSC Chinook model input and calibration activities; however, they were not available at publication time.

#### *Predictor Performance*

There was no information available to evaluate performance of predictors for NOC and MOC stocks.

#### *Stock Forecast and Status*

##### *North Oregon Coast*

Since 1977, the Salmon River Hatchery production has been tagged for use primarily as a PSC indicator stock for the NOC stock component. Because these fish are primarily harvested in fisheries north of the Council management area, the STT has not reviewed the procedure by which this indicator stock is used in estimating annual stock status. The 2018 NOC density from standard survey areas (Nehalem R. through the Siuslaw R.) was a decrease from 2017 (PFMC 2019, Appendix B, Table B-11).

Based on the density index of total spawners, the generalized expectation for NOC stocks in 2019 is below recent years' average abundance. Specifically, the 2018 spawner density in standard survey areas for the NOC averaged 90 spawners per mile, the lowest since 2010.

### *Mid Oregon Coast*

Since 1977, the Elk River Hatchery production has been tagged for potential use as a PSC indicator stock for the MOC stock aggregate. Beginning in 2019, Elk River Hatchery production was included as a PSC indicator stock. Age-specific ocean abundance forecasts for 2019 are not currently available, but are being developed. The STT has not undertaken a review of the methods used by Oregon Department of Fish and Wildlife (ODFW) staff in developing these abundance forecasts.

The 2018 MOC density from standard survey areas (Coos and Coquille basins) averaged 114 adult spawners per mile, an increase from 2017 (PFMC 2019, Appendix B, Table B-11). Fall Chinook escapement goals are currently under development for the South Umpqua and Coquille basins of the MOC.

### *South/Local Migrating Chinook (SOC group)*

South/local migrating Chinook stocks include Rogue River spring and fall Chinook, fall Chinook from smaller rivers south of the Elk River, and Umpqua River spring Chinook. These stocks are important contributors to ocean fisheries off Oregon and northern California. Umpqua River spring Chinook contribute to a lesser degree to fisheries off Washington, British Columbia, and southeast Alaska.

SOC stocks are components of the Southern Oregon/Northern California (SONC) Chinook complex, and as such, specification of ACLs is deferred to KRFC, the indicator stock for the SONC complex.

### **Rogue River Fall Chinook**

Rogue River fall Chinook contribute to ocean fisheries principally as age-3 through age-5 fish. Mature fish enter the river each year from mid-July through October, with the peak of the run occurring during August and September.

### *Predictor Description*

Carcass recoveries in Rogue River index surveys covering a large proportion of the total spawning area were available for 1977-2004. Using Klamath Ocean Harvest Model (KOHM) methodology, these carcass numbers, allocated into age-classes from scale data, were used to estimate the Rogue Ocean Population Index (ROPI) for age-3 to age-5 fish. A linear regression was developed using the escapement estimates (all ages) in year  $t$  based on seining at Huntley Park (1976-2004) to predict the ROPI in year  $t+1$  (1977-2005).

Beginning in 2015, a revised predictor was used which relies on the Huntley Park escapement estimate and dispenses with the use of the carcass counts. Linear regressions are used to relate May 1 ocean abundance estimates of age-3, age-4, age-5, and age-6 Rogue fall Chinook to the previous year's river run size estimates of age-2, age-3, age-4, and age-5 fish, respectively. Historical May 1 ocean abundance estimates were derived from a cohort analysis of 1988-2006 brood years. May 1 ( $t$ ) ocean abundances were converted to September 1 ( $t-1$ ) forecasts by dividing the May ( $t$ ) number by the assumed September 1 ( $t-1$ ) through May 1 ( $t$ ) survival rate of 0.5 age-3, 0.8 age-4, 0.8 age-5, and 0.8 age-6. River run size estimates are derived

from a flow-based expansion of standardized seine catches of fall Chinook at Huntley Park (RM 8). The y-intercept of the regressions is constrained to zero.

The 2018 Huntley Park escapement estimate and the resulting 2019 ROPI forecast of 383,500 consists of age-3 (305,400), age-4 (69,200) and age-5-6 (8,900) fish.

#### *Predictor Performance*

The ROPI is based on cohort reconstruction methods with index values predicted from regression equations. Because postseason estimates of the ROPI are not available, it is not possible to assess predictor performance.

#### *Stock Forecast and Status*

The 2019 ROPI is above recent years' average (Table II-7).

#### **Other SOC Stocks**

Umpqua and Rogue spring Chinook contribute to ocean fisheries primarily as age-3 fish. Mature Chinook enter the rivers primarily during April and May and generally prior to annual ocean fisheries.

Natural fall Chinook stocks from river systems south of the Elk River and spring Chinook stocks from the Rogue and Umpqua rivers dominate production from this subgroup. Substantial releases of hatchery spring Chinook occur in both the Rogue and Umpqua rivers, although also present in lesser numbers are hatchery fall Chinook, primarily from the Chetco River.

These stocks are minor contributors to general season mixed-stock ocean fisheries. Standard fall Chinook spawning index escapement data were available for the smaller SOC rivers (Winchuck, Chetco, and Pistol rivers). These had been used for assessment of the conservation objective for the SOC stocks prior to 2015. The 2018 average density from standard survey areas was 14 adult spawners per mile, the lowest since 2008 (PFMC 2018, Appendix B, Table B-8). Beginning in 2015, for the SOC Chinook stock complex, the conservation objective is assessed using the escapement estimate of naturally produced fall Chinook at Huntley Park on the Rogue River (PFMC 2019, Appendix B, Table B-10, Chapter II, Table II-5 and Figure II-3).

### **CHINOOK STOCKS NORTH OF CAPE FALCON**

#### **Columbia River Chinook**

Columbia River fall Chinook stocks form the largest contributing stock group to Council Chinook fisheries north of Cape Falcon. Abundance of these stocks is a major factor in determining impacts of fisheries on weak natural stocks critical to Council area management, particularly ESA-listed Lower Columbia River (LCR) natural tule Chinook. Abundance predictions are made for five major fall stock units characterized as being hatchery or natural production, and originating above or below Bonneville Dam. The upriver brights (URB) and lower river wild (LRW) are primarily naturally-produced stocks, although the upriver brights do have a substantial hatchery component. The lower river hatchery (LRH) tule, Spring Creek Hatchery (SCH) tule, and Mid-Columbia Bright (MCB) are primarily hatchery-produced stocks. The MCB include the Lower River Bright (LRB) stock as a small naturally-produced component. LRB spawn in the mainstem Columbia River near Beacon Rock and are believed to have originated from MCB hatchery strays. The tule stocks generally mature at an earlier age than the bright fall stocks and do not migrate as far north. Minor fall stocks include the Select Area Bright (SAB), a stock originally from the Rogue River.

Upper Columbia River summer Chinook also contribute to Council area fisheries, although like URB and LRW, most ocean impacts occur in British Columbia (B.C.) and Southeast Alaska (SEAK) fisheries. Upper

Columbia River summer Chinook have both natural and hatchery components, and originate in areas upstream from Rock Island Dam.

URB and upper Columbia summer Chinook are exempt from the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for these two stocks. ESA consultation standards serve the purpose of ACLs for ESA-listed stocks like LRW Chinook. Broodstock goals serve the purpose of ACLs for hatchery-origin stocks like LRH, SCH, and MCB.

### *Predictor Description*

Preseason forecasts of Columbia River fall and summer Chinook stock abundance, used by the STT to assess the Council's adopted fishery regulations, are based on age-specific and stock-specific forecasts of annual ocean escapement (returns to the Columbia River). These forecasts are developed by WDFW and a subgroup of the *U.S. v Oregon* Technical Advisory Committee (TAC). Columbia River return forecast methodologies used for Council management are identical to those used for planning Columbia River fall season fisheries, although minor updates to Council estimates of inriver run size may occur prior to finalization of the inriver fishery plans, based on the results of planned ocean fisheries.

The 2019 return of summer and each fall Chinook stock group is forecasted using relationships between successive age groups within a cohort. The database for these relationships was constructed by combining age-specific estimates of escapement and inriver fishery catches for years since 1964 (except for MCB, which started in the 1980s). Typically, only the more recent broods are used in the current predictions. Fall Chinook stock identification in the Columbia River mixed-stock fisheries is determined by sampling catch and escapement for CWTs and visual stock identification (VSI). Age composition estimates are based on CWT data and scale reading of fishery and escapement samples, where available. These stock and age data for Columbia River fall Chinook are the basis for the return data presented in the *Review of 2018 Ocean Salmon Fisheries* (Appendix B, Tables B-15 through B-20). The 2018 returns for summer Chinook and the five fall Chinook stocks listed in this report may differ somewhat from those provided in the *Review of 2018 Ocean Salmon Fisheries*, since ocean escapement estimates may have been updated after that report was printed.

Summer and fall Chinook ocean escapement forecasts developed for the March Council meeting do not take into account variations in marine harvest. The STT combines the initial inriver run size (ocean escapement; Table II-8) with expected Council area fishery harvest levels and stock distribution patterns to produce adjusted ocean escapement forecasts based on the proposed ocean fishing regulations. These revised forecasts are available at the end of the Council preseason planning process in April and are used for preseason fishery modeling in the Columbia River.

### *Predictor Performance*

Performance of the preliminary inriver run size estimation methodology can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table II-8; Figure II-4). The recent 10-year average March preliminary preseason forecasts as a percentage of the postseason estimates are 109 percent for URB, 107 percent for LRW, 117 percent for LRH, 146 percent for SCH, and 110 percent for MCB. None of the fall Chinook stocks had a notable bias in the recent time series of March preliminary forecasts, although all were slightly over-forecasted in March. The recent 5-year average March preliminary preseason forecasts as a percentage of the postseason estimates for summer Chinook is 100 percent.

### *Stock Forecasts and Status*

The preliminary forecast for 2019 URB fall Chinook ocean escapement is 158,400 adults, about 106 percent of last year's return of 149,000 and about 37 percent of the recent 10-year average of 427,600. This forecast is about 79 percent of the 200,100 forecast in 2018 and is well below the strong returns that occurred during 2010-2016. This forecasted ocean escapement should allow for moderate ocean and in-river fisheries while achieving the FMP  $S_{MSY}$  conservation objective of 39,625 natural area spawners in the Hanford Reach, Yakima River, and areas above Priest Rapids Dam.

The forecast for the 2019 ocean escapement of ESA-listed Snake River wild fall Chinook is 8,600 adults.

Ocean escapement of LRW fall Chinook in 2019 is forecast at 13,700 adults, about 85 percent of the recent 10-year average return of 16,100. The forecast is about 165 percent of last year's actual return of 8,300. The spawning escapement goal of 5,700 in the North Fork Lewis River is expected to be achieved this year.

The preliminary forecast for 2019 ocean escapement of LRH fall Chinook is for a return of 54,500 adults, about 108 percent of last year's return of 50,400 and 60 percent of the recent 10-year average of 90,400. Based on this abundance forecast, the total allowable LCR natural tule exploitation rate for 2019 fisheries is no greater than 38.0 percent under the matrix developed by the Tule Chinook Workgroup in 2011, which is used by NMFS in developing ESA guidance for this stock (Appendix A Table A-6).

The preliminary ocean escapement forecast of SCH fall Chinook in 2019 is 46,000 adults, about 159 percent of last year's return of 28,900 and 57 percent of the 10-year average of 80,800.

The preliminary forecast for the 2019 ocean escapement of MCB fall Chinook is 56,700 adults, about 158 percent of last year's return of 36,000 and about 52 percent of the recent 10-year average of 108,600.

The preliminary forecast for summer Chinook in 2019 is 35,900 adults, approximately 85 percent of last year's return of 42,100 and about 44 percent of the recent 5-year average of 81,300. This ocean escapement should allow opportunity for both ocean and in-river fisheries while exceeding the FMP  $S_{MSY}$  conservation objective of 12,143 escapement above Rock Island Dam.

### **Washington Coast Chinook**

Washington Coast Chinook consist of spring, summer, and fall stocks from Willapa Bay through the Hoko River. Based on limited CWT analysis, these populations are harvested primarily in ocean fisheries off British Columbia and Southeast Alaska, and to a lesser degree in Council-area fisheries off Washington and Oregon.

Washington Coast Chinook stocks are components of the FNMC Chinook complex, which is an exception to the ACL requirements of the MSA because it is managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for stocks in the FNMC complex.

### *Predictor Description and Past Performance*

Council fisheries have negligible impacts on Washington coast Chinook stocks and information to assess past performance is unavailable. However, abundance estimates are provided for Washington Coastal fall stocks in subsequent pre-season fishery impact assessment reports prepared by the STT (e.g., Pre-season Report III).

### *Stock Forecasts and Status*

The 2019 Willapa Bay natural fall Chinook terminal runsize forecast is 4,309, which is above the FMP  $S_{MSY}$  conservation objective of 3,393. The hatchery fall Chinook terminal runsize forecast is 23,807.

The 2019 Grays Harbor spring Chinook terminal runsize forecast is 581, which is below the FMP  $S_{MSY}$  conservation objective of 1,400. The natural fall Chinook terminal runsize forecast was not available at the time of publication. The FMP  $S_{MSY}$  conservation objective is 13,326. The fall hatchery terminal runsize forecast was also not available at the time of publication.

The 2019 Quinault River natural fall Chinook terminal runsize forecast was not available at the time of publication. The fall hatchery terminal runsize forecast was also not available at the time of publication.

The 2019 Queets River spring Chinook terminal runsize forecast is 642, which is below the FMP  $S_{MSY}$  conservation objective of 700. The natural fall Chinook terminal runsize forecast was not available at the time of publication. The FMP  $S_{MSY}$  conservation objective is 2,500. The fall hatchery terminal runsize forecast was also not available at the time of publication.

The 2019 Hoh River natural spring/summer Chinook spawning escapement forecast is 1,023, which is above the FMP  $S_{MSY}$  conservation objective of 900. The natural fall Chinook forecast is 2,536, which is above the FMP  $S_{MSY}$  conservation objective of 1,200.

The 2019 Quillayute River hatchery spring Chinook ocean escapement forecast is 2,091 and the natural summer/fall Chinook forecast is 7,946 (1,301 summer and 6,645 fall). The FMP  $S_{MSY}$  conservation objectives are spawning escapements of 1,200 summer Chinook and 3,000 fall Chinook.

The 2019 Hoko River terminal runsize forecast is 2,809, which is above the FMP  $S_{MSY}$  conservation objective of 850.

## **Puget Sound Chinook**

Puget Sound Chinook stocks include all fall, summer, and spring stocks originating from U.S. tributaries in Puget Sound and the eastern Strait of Juan de Fuca (east of Salt Creek, inclusive). Puget Sound Chinook consists of numerous natural Chinook stocks of small to medium-sized populations and substantial hatchery production. The Puget Sound ESU was listed under the ESA as threatened in March 1999.

Council-area fishery impacts to Puget Sound Chinook stocks are generally very low, on the order of 5 percent or less. NMFS issued a biological opinion in 2004 concluding that Council-area fisheries were not likely to jeopardize listed Puget Sound Chinook, and exempting these fisheries from the ESA section 9 take prohibition as long as they are consistent with the terms and conditions in the opinion. This opinion does not cover Puget Sound fisheries. In recent years, the comanagers have developed annual fishery management plans for Puget Sound and NMFS has issued one-year biological opinions for these plans exempting them from ESA section 9 take prohibitions. These opinions take into account the combined impacts of ocean and Puget Sound fisheries. Puget Sound stocks contribute to fisheries off B.C., are present to a lesser degree off SEAK, and are impacted to a minor degree by Council-area ocean fisheries. Because Council-area fishery impacts to Puget Sound Chinook stocks are minor, ocean regulations are not generally used to manage these stocks

### *Predictor Description*

Methodologies for estimates are described in the annual Puget Sound management reports (starting in 1993, reports are available by Puget Sound management unit, not by individual species). Forecasts for Puget Sound stocks generally assume production is dominated by age-4 adults. The STT has not undertaken a review of the methods employed by state and tribal staffs in preparing these abundance forecasts. Run-size expectations for various Puget Sound stock management units are listed in Table I-1.

### *Predictor Performance*

Performance of the preliminary river run size estimation methodology can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates. Table II-9 compares preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook.

### *Stock Forecasts and Status*

ACLs are undefined in the FMP for ESA-listed stocks like Puget Sound Chinook, and are deferred to ESA consultation standards.

### **Spring Chinook**

Puget Sound Spring Chinook abundances remain depressed.

### **Summer/Fall Chinook**

The 2019 preliminary natural Chinook return forecast is 36,200 and the preliminary hatchery Chinook return forecast is 207,800. The 2018 preseason natural Chinook return forecast was 33,100 and the hatchery Chinook return forecast was 220,800 (includes supplemental category forecasts).

Since ESA listing and development of the Resource Management Plan (RMP), fishery management for Puget Sound Chinook has changed from an escapement goal basis to the use of stock-specific exploitation rates and “critical abundance thresholds.” This new approach is evaluated on an annual basis through the RMP.

## **STOCK STATUS DETERMINATION UPDATES**

Sacramento River fall Chinook and Klamath River fall Chinook were found to meet the criteria for being classified as overfished in the PFMC *Review of 2017 Ocean Salmon Fisheries*, released in February 2018. These two stocks remain overfished at the current time, based on escapement estimates detailed in the PFMC *Review of 2018 Ocean Salmon Fisheries*, released in February 2019.

## **SELECTIVE FISHERY CONSIDERATIONS FOR CHINOOK**

As the North of Falcon region has moved forward with mass marking of hatchery Chinook salmon stocks, the first mark selective fishery for Chinook salmon in Council waters was implemented in June 2010 in the recreational fishery north of Cape Falcon. In 2011 and 2012, the mark selective fishery in June was 8 and 15 days, respectively. In 2013 and 2014, the North of Falcon mark selective recreational fishery started in mid-May in Neah Bay and La Push subareas, then opened in all areas in late May or June. In 2015, the mark selective Chinook quota was 10,000 fish in the mid-May to mid-June fishery. There were no mark selective fisheries for Chinook in Council waters in 2016, 2017, and 2018. For 2019 preseason planning, selective fishing options for non-Indian fisheries may be under consideration in the ocean area from Cape Falcon, Oregon to the U.S./Canada border. Observed mark rates in previous mark selective fisheries north of Cape Falcon ranged from 53 to 71 percent. Similar mark rates are expected in this area for 2019.

TABLE II-1. Harvest and abundance indices for adult Sacramento River fall Chinook (SRFC) in thousands of fish. (Page 1 of 2)

Year	SRFC Ocean Harvest South of Cape Falcon <sup>a/</sup>				River Harvest	Spawning Escapement			Sacramento Index (SI) <sup>c/</sup>	Exploitation Rate (%) <sup>d/</sup>
	Troll	Sport	Non-Ret <sup>b/</sup>	Total		Natural	Hatchery	Total		
1983	246.6	86.3	0.0	332.9	18.0	91.7	18.6	110.2	461.1	76
1984	266.2	87.0	0.0	353.1	25.9	120.2	38.7	159.0	538.1	70
1985	355.5	158.9	0.0	514.4	39.1	210.1	29.3	239.3	792.8	70
1986	619.0	137.5	0.0	756.4	39.2	218.3	21.8	240.1	1,035.7	77
1987	686.1	173.1	0.0	859.2	31.8	175.2	19.8	195.1	1,086.1	82
1988	1,163.2	188.3	0.0	1,351.5	37.1	200.7	26.8	227.5	1,616.1	86
1989	602.8	157.1	0.0	759.9	24.9	127.6	24.9	152.6	937.3	84
1990	507.3	150.4	0.0	657.8	17.2	83.3	21.7	105.1	780.0	87
1991	300.1	89.6	0.0	389.7	26.0 <sup>e/</sup>	92.8	26.0	118.9	534.6	78
1992	233.3	69.4	0.0	302.8	13.3 <sup>e/</sup>	59.9	21.7	81.5	397.6	79
1993	342.8	115.3	0.0	458.1	27.7 <sup>e/</sup>	112.8	24.6	137.4	623.2	78
1994	303.5	168.8	0.0	472.3	28.9 <sup>e/</sup>	135.0	30.6	165.6	666.7	75
1995	730.7	390.4	0.0	1,121.0	48.2	253.8	41.5	295.3	1,464.6	80
1996	426.8	157.0	0.0	583.8	49.2	269.1	32.5	301.6	934.7	68
1997	579.7	210.3	0.0	790.0	56.3	281.6	63.3	344.8	1,191.1	71
1998	292.3	114.0	0.0	406.3	69.8 <sup>e/</sup>	176.0	69.9	245.9	722.1	66
1999	289.1	76.2	0.0	365.3	68.9 <sup>e/</sup>	357.6	42.2	399.8	834.0	52
2000	421.8	152.8	0.0	574.6	59.5 <sup>e/</sup>	370.0	47.6	417.5	1,051.6	60
2001	284.4	93.4	0.0	377.9	97.4	539.4	57.4	596.8	1,072.0	44
2002	447.7	184.0	0.0	631.7	89.2 <sup>e/</sup>	684.2	85.6	769.9	1,490.8	48
2003	501.6	106.4	0.0	608.0	85.4	414.6	108.4	523.0	1,216.3	57
2004	621.8	212.6	0.0	834.5	46.8	206.2	80.7	286.9	1,168.2	75
2005	367.9	127.0	0.0	494.9	64.6	214.9	181.1	396.0	955.5	59
2006	149.9	107.7	0.0	257.7	44.9	196.5	78.5	275.0	577.6	52
2007	120.0	32.0	0.0	152.0	14.3 <sup>e/</sup>	70.1	21.3	91.4	257.7	65
2008	3.2	0.9	0.0	4.1	0.1 <sup>e/</sup>	47.3	18.0	65.4	69.6	6
2009	0.0	0.2	0.1	0.3	0.0 <sup>e/</sup>	24.9	15.9	40.9	41.1	1
2010	11.2	11.4	0.3	22.8	2.7 <sup>e/</sup>	91.1	33.2	124.3	149.8	17

TABLE II-1. Harvest and abundance indices for adult Sacramento River fall Chinook (SRFC) in thousands of fish. (Page 2 of 2)

Year	SRFC Ocean Harvest South of Cape Falcon <sup>a/</sup>			River Harvest	Spawning Escapement			Sacramento Index (SI) <sup>c/</sup>	Exploitation Rate (%) <sup>d/</sup>	
	Troll	Sport	Non-Ret <sup>b/</sup>		Total	Natural	Hatchery			Total
2011	46.6	22.8	0.0	69.4	18.2 <sup>e/</sup>	77.9	41.5	119.3	207.0	42
2012	183.2	93.4	0.3	276.8	65.8 <sup>e/</sup>	166.2	119.2	285.4	628.0	55
2013	290.9	114.3	0.0	405.2	57.5 <sup>e/</sup>	305.6	101.2	406.8	869.6	53
2014	240.6	62.4	0.0	303.0	35.7 <sup>e/</sup>	168.3	44.2	212.5	551.2	61
2015	100.1	24.5	0.0	124.6	16.9 <sup>e/</sup>	74.8	39.3	114.1	255.6	55
2016	62.9	28.9	0.0	91.8	23.9 <sup>e/</sup>	56.3	33.4	89.7	205.3	56
2017	38.7	31.9	0.0	70.7	22.1 <sup>e/</sup>	18.0	24.8	42.7	135.5	68
2018 <sup>f/</sup>	53.5	48.5	0.0	102.0	16.1 <sup>e/</sup>	71.9	33.8	105.7	223.9	53

a/ Ocean harvest for the period September 1 (t-1) through August 31 (t).

b/ Mortalities estimated from non-retention ocean fisheries (e.g., coho-only fisheries, non-retention GSI sampling). In 2008, there were 37 estimated mortalities as a result of non-retention fisheries that have been rounded to 0 in this table.

c/ The SI is the sum of (1) SRFC ocean fishery harvest south of Cape Falcon between September 1 and August 31, (2) SRFC impacts from non-retention ocean fisheries when they occur, (3) the recreational harvest of SRFC in the Sacramento River Basin, and (4) the SRFC spawner escapement.

d/ Total ocean harvest, non-retention ocean fishery mortalities, and river harvest of SRFC as a percentage of the SI.

e/ Estimates derived from CDFW Sacramento River Basin angler survey. Estimates not marked with a footnote are inferred from escapement data and the mean river harvest rate estimate.

f/ Preliminary.

TABLE II-2. Sacramento River winter Chinook escapement, allowable age-3 impact rates, and management performance.

Year	Escapement <sup>a/</sup>	3-yr GM Escapement <sup>b/</sup>	Abundance Forecast <sup>c/</sup>	Age-3 impact rate south of Point Arena, CA		
				Maximum Allow able (%) <sup>d/</sup>	Preseason Forecast (%)	Postseason Estimate (%)
2000	--	--	-	-	-	21.4
2001	8,224	--	-	-	-	23.3
2002	7,464	--	-	-	-	21.8
2003	8,218	--	-	-	-	10.3
2004	7,869	7,960	-	-	-	24.8
2005	15,839	7,844	-	-	-	17.2
2006	17,290	10,080	-	-	-	15.1
2007	2,541	12,917	-	-	-	17.8
2008	2,830	8,862	-	-	-	0.0
2009	4,537	4,991	-	-	-	0.0
2010	1,596	3,195	-	-	-	e/
2011	824	2,737	-	-	-	28.3
2012	2,671	1,814	-	13.7	13.7	12.6
2013	6,084	1,520	-	12.9	12.9	18.8
2014	3,015	2,375	-	15.4	15.4	15.8
2015	3,439	3,659	-	19.0	17.5	e/
2016	1,546	3,981	-	19.9	12.8	11.6
2017	975	2,521	-	15.8	12.2	17.1 <sup>f/</sup>
2018	2,638	1,731	1,594	14.4	8.5	NA <sup>g/</sup>
2019	NA	1,584	1,924	15.7	NA	NA

a/ Escapement includes jacks and adults spawning in natural areas and fish used for broodstock at Livingston Stone National Fish Hatchery.

b/ Geometric mean of escapement for the three prior years (e.g., 2017 GM computed from 2014-2016 escapement).

c/ Abundance forecast is defined as the predicted age-3 escapement in the absence of fisheries.

d/ Allow able impact rates from 2012-2017 were determined by a control rule utilizing the three-year geometric mean of escapement. Beginning in 2018, allow able impact rates were determined by a new control rule utilizing the abundance forecast.

e/ Insufficient data for postseason estimate.

f/ Preliminary. Incomplete cohort data (age-4 escapement unavailable).

g/ Not estimated. Incomplete cohort data (age-3 and age-4 escapement unavailable).

TABLE II-3. Klamath River fall Chinook ocean abundance (thousands), harvest rate, and river run size estimates (thousands) by age. (Page 1 of 2).

Year (t)	Ocean Abundance Sept. 1 (t-1)			Annual Ocean Harvest Rate Sept. 1 (t-1) - Aug. 31 (t)		Klamath Basin River Run (t)				
	Age-3	Age-4	Total	Age-3	Age-4	Age-2	Age-3	Age-4	Age-5	Total Adults
1981	493.2	57.0	550.2	0.21	0.53	28.2	64.1	14.4	1.8	80.3
1982	561.1	133.4	694.5	0.30	0.52	39.4	30.1	33.9	2.6	66.6
1983	313.3	114.2	427.5	0.19	0.60	3.8	35.9	20.7	0.9	57.5
1984	157.3	82.8	240.1	0.08	0.38	8.3	21.7	24.4	1.1	47.2
1985	374.8	56.9	431.7	0.11	0.24	69.4	32.9	25.7	5.8	64.4
1986	1,304.4	140.8	1,445.2	0.18	0.46	44.6	162.9	29.8	2.3	195.0
1987	781.1	341.9	1,123.0	0.16	0.43	19.1	89.7	112.6	6.8	209.1
1988	756.3	234.8	991.0	0.20	0.39	24.1	101.2	86.5	3.9	191.6
1989	369.8	177.2	547.1	0.15	0.36	9.1	50.4	69.6	4.3	124.3
1990	176.1	104.0	280.1	0.30	0.55	4.4	11.6	22.9	1.3	35.9
1991	69.4	37.2	106.6	0.03	0.18	1.8	10.0	21.6	1.1	32.7
1992	39.5	28.2	67.7	0.02	0.07	13.7	6.9	18.8	1.0	26.7
1993	168.5	15.0	183.5	0.05	0.16	7.6	48.3	8.2	0.7	57.2
1994	119.9	41.7	161.7	0.03	0.09	14.4	37.0	26.0	1.0	64.0
1995	787.3	28.7	816.0	0.04	0.14	22.8	201.9	18.3	2.6	222.8
1996	192.3	226.3	418.6	0.05	0.16	9.5	38.8	136.7	0.3	175.8
1997	140.2	62.8	203.0	0.01	0.06	8.0	35.0	44.2	4.6	83.7
1998	154.8	44.7	199.5	0.00	0.09	4.6	59.2	29.7	1.7	90.6
1999	129.1	30.5	159.5	0.02	0.09	19.2	29.2	20.5	1.3	51.0
2000	617.1	44.2	661.3	0.06	0.10	10.2	187.1	30.5	0.5	218.1
2001	356.1	133.8	489.9	0.03	0.09	11.3	99.1	88.2	0.1	187.3
2002	513.6	98.9	612.5	0.02	0.15	9.2	94.6	62.5	3.7	160.8
2003	401.1	192.2	593.3	0.08	0.21	3.8	94.3	96.8	0.9	191.9
2004	159.4	105.2	264.7	0.12	0.35	9.6	33.1	40.5	5.3	78.9
2005	190.0	38.1	228.1	0.02	0.20	2.3	43.8	17.5	3.9	65.2
2006	90.6	63.4	154.0	0.01	0.10	26.9	18.5	41.6	1.3	61.4
2007	376.9	33.6	410.5	0.06	0.21	1.7	113.7	16.8	1.6	132.1
2008	68.0	81.4	149.4	0.00	0.10	25.2	18.6	50.2	1.7	70.6
2009	240.7	21.1	261.8	0.00	0.00	11.9	78.6	16.4	5.6	100.6
2010	192.8	62.1	254.9	0.01	0.04	16.6	46.1	44.3	0.4	90.9

TABLE II-3. Klamath River fall Chinook ocean abundance (thousands), harvest rate, and river run size estimates (thousands) by age. (Page 2 of 2).

Year (t)	Ocean Abundance Sept. 1 (t-1)			Annual Ocean Harvest Rate Sept. 1 (t-1) - Aug. 31 (t)		Klamath Basin River Run (t)				
	Age-3	Age-4	Total	Age-3	Age-4	Age-2	Age-3	Age-4	Age-5	Total Adults
2011	240.2	64.6	304.7	0.03	0.08	84.9	59.0	41.0	2.0	102.0
2012	799.0	74.3	873.3	0.03	0.08	21.4	243.9	49.3	2.1	295.3
2013	438.3	194.4	632.6	0.04	0.20	14.4	55.2	108.8	1.1	165.0
2014	216.5	180.7	397.2	0.03	0.17	22.3	57.8	98.7	3.9	160.4
2015	110.6	61.0	171.6	0.02	0.22	6.1	36.7	34.0	7.1	77.8
2016	32.7	24.8	57.5	0.01	0.09	2.8	8.6	15.5	0.5	24.6
2017	63.4 <sup>a/</sup>	9.8	73.2	0.02 <sup>a/</sup>	0.04	20.3	24.4	7.3	1.6	33.2
2018	397.6 <sup>b/</sup>	11.0 <sup>a/</sup>	408.6	NA <sup>c/</sup>	0.23 <sup>a/</sup>	11.1	86.7	5.6	0.0	92.3

a/ Preliminary: incomplete cohort data (age-5 unavailable).

b/ Preliminary: incomplete cohort data (age-4 and age-5 unavailable).

c/ Not estimated: incomplete cohort data (age-4 and age-5 unavailable).

TABLE II-4. Comparisons of preseason forecast and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 1 of 4)

Year (t)	Preseason Forecast <sup>a/</sup>	Postseason Estimate	Pre/Postseason
	Sept. 1 (t-1)	Sept. 1 (t-1)	
	<b>Age-3</b>		
1985	113,000	374,822	0.30
1986	426,000 <sup>b/</sup>	1,304,409	0.33
1987	511,800	781,122	0.66
1988	370,800	756,261	0.49
1989	450,600	369,828	1.22
1990	479,000	176,122	2.72
1991	176,200	69,424	2.54
1992	50,000	39,502	1.27
1993	294,400	168,473	1.75
1994	138,000	119,915	1.15
1995	269,000	787,309	0.34
1996	479,800	192,272	2.50
1997	224,600	140,153	1.60
1998	176,000	154,799	1.14
1999	84,800	129,066	0.66
2000	349,600	617,097	0.57
2001	187,200	356,128	0.53
2002	209,000	513,604	0.41
2003	171,300	401,112	0.43
2004	72,100	159,446	0.45
2005	185,700	189,976	0.98
2006	44,100	90,606	0.49
2007	515,400	376,922	1.37
2008	31,600	68,003	0.46
2009	474,900	240,713	1.97
2010	223,400	192,760	1.16
2011	304,600	240,160	1.27
2012	1,567,600	799,014	1.96
2013	390,700	438,264	0.89
2014	219,800	216,499	1.02
2015	342,200	110,592	3.09
2016	93,400	32,668	2.86
2017	42,000	63,360	0.66
2018 <sup>c/</sup>	330,000	397,568	0.83
2019	167,500	--	--

TABLE II-4. Comparisons of preseason forecasts and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 2 of 4)

Year (t)	Preseason Forecast <sup>a/</sup>	Postseason Estimate	Pre/Postseason
	Sept. 1 (t-1)	Sept. 1 (t-1)	
	<b>Age-4</b>		
1985	56,900	56,908	1.00
1986	66,300	140,823	0.47
1987	206,100	341,875	0.60
1988	186,400	234,751	0.79
1989	215,500	177,245	1.22
1990	50,100	103,951	0.48
1991	44,600	37,171	1.20
1992	44,800	28,169	1.59
1993	39,100	15,037	2.60
1994	86,100	41,736	2.06
1995	47,000	28,726	1.64
1996	268,500	226,282	1.19
1997	53,900	62,820	0.86
1998	46,000	44,733	1.03
1999	78,800	30,456	2.59
2000	38,900	44,176	0.88
2001	247,000	133,801	1.85
2002	143,800	98,927	1.45
2003	132,400	192,180	0.69
2004	134,500	105,246	1.28
2005	48,900	38,079	1.28
2006	63,700	63,383	1.01
2007	26,100	33,615	0.78
2008	157,200	81,408	1.93
2009	25,200	21,124	1.19
2010	106,300	62,092	1.71
2011	61,600	64,568	0.95
2012	79,600	74,289	1.07
2013	331,200	194,379	1.70
2014	67,400	180,662	0.37
2015	71,100	60,983	1.17
2016	45,100	24,826	1.82
2017	10,600	9,820	1.08
2018 <sup>c/</sup>	28,400	11,008	2.58
2019	106,100	--	--

TABLE II-4. Comparisons of preseason forecasts and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 3 of 4)

Year (t)	Preseason Forecast <sup>a/</sup>	Postseason Estimate	Pre/Postseason
	Sept. 1 (t-1)	Sept. 1 (t-1)	
	<b>Age-5</b>		
1985	NA	11,113	NA
1986	NA	6,376	NA
1987	5,300	19,414	0.27
1988	13,300	14,632	0.91
1989	10,100	9,612	1.05
1990	7,600	7,767	0.98
1991	1,500	2,774	0.54
1992	1,300	1,444	0.90
1993	1,100	1,759	0.63
1994	500	1,468	0.34
1995	2,000	3,805	0.53
1996	1,100	788	1.40
1997	7,900	9,004	0.88
1998	3,300	2,382	1.39
1999	2,000	2,106	0.95
2000	1,400	1,051	1.33
2001	1,300	258	5.04
2002	9,700	6,933	1.40
2003	6,500	1,915	3.39
2004	9,700	17,184	0.56
2005	5,200	6,859	0.76
2006	2,200	5,236	0.42
2007	4,700	2,911	1.61
2008	1,900	2,900	0.66
2009	5,600	7,059	0.79
2010	1,800	517	3.48
2011	5,000	2,753	1.82
2012	4,600	5,110	0.90
2013	5,700	3,944	1.45
2014	12,100	7,623	1.59
2015	10,400	13,283	0.78
2016	3,700	1,144	3.23
2017	1,700	2,024	0.84
2018 <sup>c/</sup>	800	50	16.00
2019	600	--	--

TABLE II-4. Comparisons of preseason forecasts and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 4 of 4)

Year (t)	Preseason Forecast <sup>a/</sup>	Postseason Estimate	Pre/Postseason
	Sept. 1 (t-1)	Sept. 1 (t-1)	
<b>Total Adults</b>			
1985	169,900 <sup>d/</sup>	442,843	0.38
1986	492,300 <sup>d/</sup>	1,451,608	0.34
1987	723,200	1,142,411	0.63
1988	570,500	1,005,644	0.57
1989	676,200	556,685	1.21
1990	536,700	287,840	1.86
1991	222,300	109,369	2.03
1992	96,100	69,115	1.39
1993	334,600	185,269	1.81
1994	224,600	163,119	1.38
1995	318,000	819,840	0.39
1996	749,400	419,342	1.79
1997	286,400	211,977	1.35
1998	225,300	201,914	1.12
1999	165,600	161,628	1.02
2000	389,900	662,324	0.59
2001	435,500	490,187	0.89
2002	362,500	619,464	0.59
2003	310,200	595,207	0.52
2004	216,300	281,876	0.77
2005	239,800	234,914	1.02
2006	110,000	159,225	0.69
2007	546,200	413,448	1.32
2008	190,700	152,311	1.25
2009	505,700	268,896	1.88
2010	331,500	255,369	1.30
2011	371,100	307,481	1.21
2012	1,651,800	878,413	1.88
2013	727,700	636,587	1.14
2014	299,300	404,784	0.74
2015	423,800	184,858	2.29
2016	142,200	58,638	2.43
2017	54,200	75,204	0.72
2018 <sup>c/</sup>	359,200	408,626	0.88
2019	274,200	--	--

a/ Original preseason forecasts for years 1985-2001 were for May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the May 1 (t) number by the assumed Sept. 1 (t-1) through May 1 (t) survival rate in those years: 0.5 age-3, 0.8 age-4, 0.8 age-5.

b/ A scalar of 0.75 was applied to the jack count to produce the forecast because, (1) most jacks returned to the Trinity River, and (2) the jack count was outside the database range.

c/ Postseason estimates are preliminary.

d/ Does not include age-5 adults.

TABLE II-5. Summary of management objectives and predictor performance for Klamath River fall Chinook.

Year (t)	Preseason		Postseason		Preseason		Postseason		Preseason		Postseason	
	Ocean Abundance		Ocean Abundance		Age-4		Age-4		Adult		Adult	
	Sept. 1 (t-1) Forecast <sup>a/</sup>		Sept. 1 (t-1) Estimate		Harvest Rate Forecast <sup>b/</sup>		Harvest Rate Estimate <sup>c/</sup>		Harvest Forecast		Harvest Estimate	
	Age-3	Age-4	Age-3	Age-4	Ocean	River	Ocean	River	Ocean	River	Ocean	River
1986-90	447,640	144,880	677,548	199,729	0.30	0.51	0.44	0.54	104,100	56,020	214,598	51,814
1991-95	185,520	52,320	236,925	30,168	0.09	0.28	0.13	0.34	12,980	14,460	13,095	13,667
1996-00	262,960	97,220	246,677	81,693	0.11	0.44	0.10	0.33	30,500	44,180	21,336	31,382
2001	187,200	247,000	356,128	133,801	0.14	0.61	0.09	0.29	45,600	105,300	21,747	50,780
2002	209,000	143,800	513,604	98,927	0.13	0.57	0.15	0.26	30,000	70,900	28,896	35,069
2003	171,300	132,400	401,112	192,180	0.16	0.50	0.21	0.28	30,600	52,200	70,995	39,715
2004	72,100	134,500	159,446	105,246	0.15	0.38	0.35	0.48	26,500	35,800	64,226	29,807
2005	185,700	48,900	189,976	38,079	0.08	0.16	0.20	0.19	7,100	9,600	12,807	10,001
2006	44,100	63,700	90,606	63,383	0.11	0.23	0.10	0.18	10,000	10,000	10,401	10,345
2007	515,400	26,100	376,922	33,615	0.16	0.63	0.21	0.56	30,200	51,400	30,249	33,884
2008	31,600	157,200	68,003	81,408	0.02	0.43	0.10	0.38	4,500	49,500	8,718	24,180
2009	474,900	25,200	240,713	21,124	0.00	0.57	0.00	0.40	100	61,700	51	34,040
2010	223,400	106,300	192,760	62,092	0.12	0.49	0.04	0.40	22,600	46,600	4,497	32,920
2011	304,600	61,600	240,160	64,568	0.16	0.54	0.08	0.34	26,900	42,700	11,996	30,502
2012	1,567,600	79,600	799,014	74,289	0.16	0.77	0.08	0.51	92,400	227,600	34,721	109,263
2013	390,700	331,200	438,264	194,379	0.16	0.62	0.20	0.51	74,800	154,800	59,421	82,835
2014	219,800	67,400	216,499	180,662	0.16	0.40	0.17	0.25	23,200	31,400	40,152	31,353
2015	342,200	71,100	110,592	60,983	0.16	0.59	0.22	0.47	29,400	57,700	20,020	35,890
2016	93,400	45,100	32,668	24,826	0.08	0.19	0.09	0.31	6,300	8,500	3,064	6,470
2017 <sup>d/</sup>	42,000	10,600	63,360	9,820	0.03	0.06	0.04	0.08	700	900	1,777	1,951
2018 <sup>e/</sup>	330,000	28,400	397,568	11,008	0.12	0.34	0.23	0.36	14,600	21,600	14,863	18,844
2019	167,500	106,100	-	-	-	-	-	-	-	-	-	-

a/ Original preseason forecasts for years 1990-2001 were for May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the May 1 (t) number by the assumed Sept. 1 (t-1) through May 1 (t) survival rate in those years: 0.5 age-3, 0.8 age-4, 0.8 age-5.

b/ Ocean harvest rate forecast is the fraction of the predicted ocean abundance expected to be harvested Sept. 1 (t-1) through August 31(t). River harvest rate forecast is the fraction of the predicted river run expected to be harvested in river fisheries. Original ocean harvest rate forecasts for year (t), 1990-2001, were based on a May 1 (t) ocean abundance denominator; converted to Sept. 1 (t-1) abundance denominator by multiplying former values by 0.8

c/ Ocean harvest rate is the fraction of the postseason ocean abundance harvested Sept. 1 (t-1) through August 31 (t). River harvest rate is the fraction of the river run harvested by river fisheries.

d/ Postseason estimates are preliminary for age-3.

e/ Postseason estimates are preliminary for age-3 and age-4.

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 1 of 4)

Year (t) or Average	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )						River Fisheries (t)			
	KMZ			North of	South of	Subtotal	Ocean Total	Net	Sport	Total
	Troll	Sport	Subtotal	KMZ	KMZ					
<b>HARVEST (numbers of fish)</b>										
<b>Age-3</b>										
1986-90	15,081	6,253	21,334	38,683	64,397	103,080	124,414	7,200	9,480	16,680
1991-95	8	689	698	3,055	5,086	8,141	8,839	4,980	2,189	7,170
1996-00	93	740	833	2,157	7,326	9,483	10,316	8,840	3,764	12,604
2001	113	105	218	2,749	6,082	8,831	9,049	17,885	7,294	25,179
2002	220	784	1,004	1,501	9,916	11,417	12,421	11,734	6,258	17,992
2003	176	669	845	1,921	27,586	29,507	30,352	6,996	5,061	12,057
2004	402	970	1,372	9,710	7,324	17,034	18,406	4,679	2,051	6,730
2005	0	568	568	619	2,381	3,000	3,568	4,394	1,641	6,035
2006	0	477	477	32	341	373	850	2,388	13	2,401
2007	770	8,101	8,871	4,194	9,367	13,561	22,432	17,543	5,734	23,277
2008	0	0	0	0	0	0	0	3,225	608	3,833
2009	0	51	51	0	0	0	51	19,820	4,715	24,535
2010	112	28	140	0	1,664	1,664	1,804	13,132	1,884	15,016
2011	334	1,119	1,453	35	4,830	4,865	6,318	13,286	2,630	15,916
2012	1,121	11,350	12,471	926	13,089	14,015	26,486	70,409	12,104	82,513
2013	390	5,574	5,964	865	11,986	12,851	18,815	18,996	7,675	26,671
2014	0	566	566	4,144	1,550	5,694	6,260	3,386	1,778	5,164
2015	48	293	341	652	1,597	2,249	2,590	10,604	4,509	15,113
2016	0	0	0	14	308	322	322	918	430	1,348
2017 <sup>al</sup>	0	0	0	114	1,258	1,372	1,372	1,261	23	1,284
2018 <sup>al</sup>	1,895	1,210	3,105	4,941	4,287	9,228	12,333	12,954	3,896	16,850

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 2 of 4)

Year (t) or Average	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )							River Fisheries (t)		
	KMZ			North of	South of	Subtotal	Ocean Total	Net	Sport	Total
	Troll	Sport	Subtotal	KMZ	KMZ					
<b>HARVEST (numbers of fish)</b>										
<b>Age-4</b>										
1986-90	10,282	4,358	14,640	38,450	31,653	70,103	84,743	28,720	5,500	34,220
1991-95	34	484	519	1,438	1,807	3,245	3,764	5,072	856	5,928
1996-00	200	1,002	1,202	3,833	5,093	8,926	10,128	15,076	2,948	18,023
2001	1,312	1,604	2,916	5,819	3,926	9,745	12,661	20,759	4,819	25,578
2002	1,938	827	2,765	2,811	9,416	12,227	14,992	11,929	4,063	15,992
2003	834	919	1,753	7,856	30,011	37,867	39,620	22,754	4,592	27,346
2004	1,429	1,234	2,663	11,645	22,132	33,777	36,440	17,623	1,751	19,374
2005	247	317	564	5,243	1,909	7,152	7,716	3,048	304	3,352
2006	196	725	921	4,192	985	5,177	6,098	7,569	42	7,611
2007	270	2,336	2,606	1,991	2,472	4,463	7,069	8,987	502	9,489
2008	6,379	1,106	7,485	581	113	694	8,179	17,891	1,260	19,151
2009	0	0	0	0	0	0	0	5,831	706	6,537
2010	42	112	154	886	1,482	2,368	2,522	16,630	1,134	17,764
2011	417	176	593	1,043	3,780	4,823	5,416	12,587	1,466	14,053
2012	336	2,087	2,423	760	2,957	3,717	6,140	23,285	1,718	25,003
2013	4,265	6,236	10,501	4,047	23,993	28,040	38,541	43,671	12,043	55,714
2014	1,292	1,434	2,726	19,818	8,977	28,795	31,521	21,303	3,404	24,707
2015	273	197	470	5,763	7,128	12,891	13,361	13,160	2,692	15,852
2016	0	56	56	671	1,571	2,242	2,298	3,966	870	4,836
2017	0	124	124	98	183	281	405	503	43	546
2018 <sup>al</sup>	638	36	674	925	885	1,810	2,484	1,815	179	1,994

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 3 of 4)

Year (t) or Average	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )						River Fisheries (t)			
	KMZ			North of KMZ	South of KMZ	Subtotal	Ocean Total	Net	Sport	Total
<b>HARVEST RATE<sup>b/</sup></b>										
<b>Age-3</b>										
1986-90	0.02	0.01	0.03	0.08	0.09	0.17	0.20	0.09	0.11	0.20
1991-95	0.00	0.01	0.01	0.01	0.02	0.03	0.03	0.13	0.06	0.18
1996-00	0.00	0.00	0.00	0.01	0.02	0.03	0.03	0.14	0.07	0.21
2001	0.00	0.00	0.00	0.01	0.02	0.02	0.03	0.18	0.07	0.25
2002	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.12	0.07	0.19
2003	0.00	0.00	0.00	0.00	0.07	0.07	0.08	0.07	0.05	0.13
2004	0.00	0.01	0.01	0.06	0.05	0.11	0.12	0.14	0.06	0.20
2005	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.10	0.04	0.14
2006	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.13	0.00	0.13
2007	0.00	0.02	0.02	0.01	0.02	0.04	0.06	0.15	0.05	0.20
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.03	0.21
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06	0.31
2010	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.28	0.04	0.33
2011	0.00	0.00	0.01	0.00	0.02	0.02	0.03	0.23	0.04	0.27
2012	0.00	0.01	0.02	0.00	0.02	0.02	0.03	0.29	0.05	0.34
2013	0.00	0.01	0.01	0.00	0.03	0.03	0.04	0.34	0.14	0.48
2014	0.00	0.00	0.00	0.02	0.01	0.03	0.03	0.06	0.03	0.09
2015	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.29	0.12	0.41
2016	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.11	0.05	0.16
2017 <sup>al</sup>	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.05	0.00	0.05
2018 <sup>al</sup>	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.15	0.04	0.19

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 4 of 4)

Year (t) or Average	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )						River Fisheries (t)			
	KMZ			North of KMZ	South of KMZ	Subtotal	Ocean Total	Net	Sport	Total
<b>HARVEST RATE<sup>b/</sup></b>										
<b>Age-4</b>										
1986-90	0.05	0.02	0.07	0.21	0.16	0.37	0.44	0.45	0.09	0.54
1991-95	0.00	0.01	0.01	0.05	0.06	0.11	0.13	0.29	0.04	0.34
1996-00	0.00	0.01	0.01	0.05	0.04	0.09	0.10	0.28	0.05	0.33
2001	0.01	0.01	0.02	0.04	0.03	0.07	0.09	0.24	0.05	0.29
2002	0.02	0.01	0.03	0.03	0.10	0.12	0.15	0.19	0.06	0.26
2003	0.00	0.00	0.01	0.04	0.16	0.20	0.21	0.24	0.05	0.28
2004	0.01	0.01	0.03	0.11	0.21	0.32	0.35	0.43	0.04	0.48
2005	0.01	0.01	0.01	0.14	0.05	0.19	0.20	0.17	0.02	0.19
2006	0.00	0.01	0.01	0.07	0.02	0.08	0.10	0.18	0.00	0.18
2007	0.01	0.07	0.08	0.06	0.07	0.13	0.21	0.53	0.03	0.56
2008	0.08	0.01	0.09	0.01	0.00	0.01	0.10	0.36	0.03	0.38
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.04	0.40
2010	0.00	0.00	0.00	0.01	0.02	0.04	0.04	0.37	0.03	0.40
2011	0.01	0.00	0.01	0.02	0.06	0.07	0.08	0.31	0.04	0.34
2012	0.00	0.03	0.03	0.01	0.04	0.05	0.08	0.47	0.03	0.51
2013	0.02	0.03	0.05	0.02	0.12	0.14	0.20	0.40	0.11	0.51
2014	0.01	0.01	0.02	0.11	0.05	0.16	0.17	0.22	0.03	0.25
2015	0.00	0.00	0.01	0.09	0.12	0.21	0.22	0.39	0.08	0.47
2016	0.00	0.00	0.00	0.03	0.06	0.09	0.09	0.26	0.06	0.31
2017	0.00	0.01	0.01	0.01	0.02	0.03	0.04	0.07	0.01	0.08
2018 <sup>a/</sup>	0.06	0.00	0.06	0.08	0.08	0.16	0.23	0.33	0.03	0.36

a/ Preliminary (incomplete cohort).

b/ Ocean harvest rates are the fraction of Sept. 1 (t-1) ocean abundance harvested in these fisheries. River harvest rates are the fraction of the river run (t) harvested in these fisheries.

TABLE II-7. Rogue River fall Chinook inriver run and ocean population indices.

Return Year	Inriver Run Index in Thousands of Fish <sup>a/</sup>					Ocean Harvest Rate by Age <sup>b/</sup>		Rogue Ocean Population Index (ROPI) in Thousands of Fish <sup>c/d/</sup>			
	Age-2	Age-3	Age-4	Age-5-6	Total <sup>d/</sup>	Age-3	Age-4-6	Age-3	Age-4	Age-5-6	Total
1977-80	1.0	2.3	2.2	0.2	5.7	0.23	0.55	14.1	6.5	0.5	21.1
1981-85	21.4	17.6	22.9	2.3	64.1	0.18	0.45	197.5	60.0	16.6	274.1
1986-90	30.8	47.2	37.5	4.5	120.0	0.20	0.44	485.0	112.0	30.3	627.2
1991-95	16.7	28.9	17.2	3.5	66.4	0.03	0.13	165.1	51.2	11.8	228.2
1996-00	15.1	31.2	18.2	4.6	69.1	0.03	0.10	199.1	66.6	13.6	279.3
2001	27.9	29.5	33.9	16.6	107.9	0.03	0.09	164.8	146.2	18.6	329.6
2002	43.8	64.1	63.1	30.6	201.6	0.02	0.15	337.9	70.0	28.4	436.3
2003	20.1	66.9	99.0	47.0	233.0	0.08	0.21	530.4	151.9	52.2	734.5
2004	20.3	30.6	69.5	35.4	155.8	0.12	0.34	243.3	158.4	82.5	484.3
2005 <sup>f/</sup>	5.0	17.7	28.7	11.6	63.0	0.02	0.20	245.2	72.6	58.2	376.0
2006	7.4	11.6	19.6	7.1	45.7	0.01	0.10	60.4	42.1	23.5	126.0
2007	3.4	15.8	16.6	12.7	48.5	0.06	0.21	89.5	27.5	15.8	132.9
2008	16.2	7.6	14.1	4.2	42.1	0.00	0.10	41.3	37.6	15.4	94.2
2009	15.2	34.3	28.0	4.5	82.0	0.00	0.00	195.9	18.0	11.4	225.3
2010	15.1	23.6	26.5	2.7	67.9	0.01	0.04	183.4	81.3	21.5	286.2
2011	31.9	25.1	41.1	5.5	103.6	0.03	0.08	183.2	56.0	19.9	259.1
2012	11.0	39.9	28.0	5.3	84.2	0.03	0.08	385.6	59.4	31.2	476.2
2013	24.3	17.0	66.1	3.1	110.5	0.04	0.20	133.4	94.5	21.7	249.6
2014	12.5	20.5	29.2	6.7	68.9	0.03	0.17	295.5	40.5	49.0	385.0
2015	8.5	6.8	23.1	3.0	41.4	0.02	0.22	151.5	48.5	22.8	222.8
2016	17.7	8.1	17.7	2.9	46.5	0.01	0.09	102.6	16.2	17.6	136.4
2017	25.0	58.6	24.4	12.7	122.5	0.02 <sup>e/</sup>	0.04	214.0	19.2	13.6	246.9 <sup>e/</sup>
2018	23.9	27.7	11.4	0.4	63.4	-	0.23 <sup>e/</sup>	303.0 <sup>e/</sup>	138.8 <sup>e/</sup>	21.0	462.8 <sup>e/</sup>
2019	NA	NA	NA	NA	NA	-	-	305.4 <sup>f/</sup>	69.2 <sup>f/</sup>	8.9 <sup>f/</sup>	383.5 <sup>f/</sup>

a/ Huntley Park passage estimate and estuary harvest. Age composition from Huntley Park scale analysis.

b/ Exploitation rates since 1981 are based on Klamath River fall Chinook cohort analysis.

c/ Based on cohort reconstruction methods. Index values predicted from regression equations; postseason estimates are not available.

d/ Rogue ocean abundances initially reconstructed to May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the May 1 (t) number by the assumed Sept. 1 (t-1) through May 1 (t) survival rate: 0.5 age-3, 0.8 age-4, 0.8 age-5, 0.8 age-6.

e/ Preliminary, complete cohort not available.

f/ Preseason forecast.

TABLE II-8. Predicted and postseason returns of Columbia River adult summer and fall Chinook in thousands of fish.  
(Page 1 of 3)

Year or Average	March Preseason Forecast <sup>a/</sup>	April STT Modeled Forecast <sup>b/</sup>	Postseason Return	March Pre/Postseason	April Pre/Postseason
<b>URB</b>					
1984-85	124.6	126.1	163.9	0.75	0.76
1986-90	306.8	305.5	291.4	1.02	1.02
1991-95	86.2	91.5	105.3	0.83	0.87
1996-00	144.9	140.9	153.8	0.94	0.92
2001	127.2	132.7	232.6	0.55	0.57
2002	281.0	273.8	276.9	1.01	0.99
2003	280.4	253.2	373.2	0.75	0.68
2004	292.2	287.0	367.9	0.79	0.78
2005	352.2	354.6	268.7	1.31	1.32
2006	253.9	249.1	230.4	1.10	1.08
2007	182.4	185.2	112.6	1.62	1.64
2008	162.5	165.9	196.9	0.83	0.84
2009	259.9	269.8	212.0	1.23	1.27
2010	310.8	319.1	324.9	0.96	0.98
2011	398.2	399.5	324.1	1.23	1.23
2012	353.5	353.0	298.1	1.19	1.18
2013	432.5	434.7	784.1	0.55	0.55
2014	973.3	919.4	684.2	1.42	1.34
2015	500.3	516.2	795.9	0.63	0.65
2016	589.0	579.4	406.6	1.45	1.42
2017	260.0	275.1	297.1	0.88	0.93
2018 <sup>c/</sup>	200.1	205.8	149.0	1.34	1.38
2019	158.4	-	-	-	-
<b>LRW</b>					
1984-85	14.8	NA	13.3	1.12	NA
1986-90	27.8	30.8	32.6	0.86	0.95
1991-95	13.9	13.2	14.8	0.99	0.93
1996-00	6.1	5.5	9.5	0.69	0.62
2001	16.7	18.5	15.7	1.06	1.18
2002	18.7	18.3	24.9	0.75	0.73
2003	24.6	23.4	26.0	0.95	0.90
2004	24.1	24.2	22.3	1.08	1.09
2005	20.2	21.4	16.8	1.20	1.27
2006	16.6	16.6	18.1	0.92	0.92
2007	10.1	10.0	4.3	2.35	2.33
2008	3.8	3.8	7.1	0.54	0.54
2009	8.5	8.6	7.5	1.13	1.15
2010	9.7	10.0	10.9	0.89	0.92
2011	12.5	13.1	15.2	0.82	0.86
2012	16.2	16.2	13.9	1.17	1.17
2013	14.2	14.3	25.8	0.55	0.55
2014	34.2	33.4	25.8	1.33	1.29
2015	18.9	19.4	32.4	0.58	0.60
2016	22.2	22.4	13.0	1.71	1.72
2017	12.5	13.6	7.8	1.60	1.74
2018 <sup>c/</sup>	7.6	7.9	8.3	0.92	0.95
2019	13.7	-	-	-	-

TABLE II-8. Predicted and postseason returns of Columbia River adult summer and fall Chinook in thousands of fish.  
(Page 2 of 3)

Year	March Preseason Forecast <sup>a/</sup>	April STT Modeled Forecast <sup>b/</sup>	Postseason Return	March Pre/Postseason	April Pre/Postseason
<b>LRH</b>					
1984-85	76.0	87.9	106.7	0.71	0.83
1986-90	209.8	204.2	234.9	0.91	0.88
1991-95	67.2	72.2	55.5	1.18	1.28
1996-00	33.9	40.8	49.0	0.72	0.86
2001	32.2	30.5	94.3	0.34	0.32
2002	137.6	133.0	156.4	0.88	0.85
2003	115.9	116.9	155.0	0.75	0.75
2004	77.1	79.0	108.9	0.71	0.73
2005	74.1	78.4	78.3	0.95	1.00
2006	55.8	57.5	58.3	0.96	0.99
2007	54.9	54.4	32.7	1.68	1.66
2008	59.0	55.9	60.3	0.98	0.93
2009	88.8	88.2	76.7	1.16	1.15
2010	90.6	85.6	103.0	0.88	0.83
2011	133.5	128.9	109.0	1.22	1.18
2012	127.0	128.4	84.8	1.50	1.51
2013	88.0	87.4	103.2	0.85	0.85
2014	110.0	100.7	101.8	1.08	0.99
2015	94.9	96.8	128.7	0.74	0.75
2016	133.7	142.5	81.9	1.63	1.74
2017	92.4	98.8	64.6	1.43	1.53
2018 <sup>c/</sup>	62.4	63.9	50.4	1.2	1.3
2019	54.5	-	-	-	-
<b>SCH</b>					
1984-85	28.1	32.1	40.4	0.75	0.85
1986-90	17.7	15.6	16.7	1.01	0.92
1991-95	31.0	34.5	30.2	1.05	1.18
1996-00	30.3	32.6	30.3	0.94	1.05
2001	56.6	61.9	125.0	0.45	0.50
2002	144.4	136.0	160.8	0.90	0.85
2003	96.9	101.9	180.6	0.54	0.56
2004	138.0	150.0	175.3	0.79	0.86
2005	114.1	115.8	93.1	1.23	1.24
2006	50.0	51.8	27.9	1.79	1.86
2007	21.8	21.3	14.6	1.49	1.46
2008	87.2	86.2	91.9	0.95	0.94
2009	59.3	56.5	49.0	1.21	1.15
2010	169.0	162.9	130.8	1.29	1.25
2011	116.4	116.7	70.1	1.66	1.66
2012	63.8	60.0	56.8	1.12	1.06
2013	38.0	36.7	86.6	0.44	0.42
2014	115.1	103.3	127.0	0.91	0.81
2015	160.5	163.9	166.4	0.96	0.98
2016	89.5	100.7	44.6	2.01	2.26
2017	158.4	164.4	48.2	3.29	3.41
2018 <sup>c/</sup>	50.1	51.4	28.9	1.73	1.78
2019	46.0	-	-	-	-

TABLE II-8. Predicted and postseason returns of Columbia River adult summer and fall Chinook in thousands of fish.  
(Page 3 of 3)

Year	March Preseason Forecast <sup>a/</sup>	April STT Modeled Forecast <sup>b/</sup>	Postseason Return	March Pre/Postseason	April Pre/Postseason
<b>MCB</b>					
1991-95	34.6	35.6	32.4	1.08	1.10
1996-00	49.9	47.9	48.6	1.07	1.04
2001	43.5	45.3	76.4	0.57	0.59
2002	96.2	91.8	108.4	0.89	0.85
2003	104.8	94.6	150.2	0.70	0.63
2004	90.4	88.8	117.6	0.77	0.76
2005	89.4	89.7	98.0	0.91	0.92
2006	88.3	86.6	80.4	1.10	1.08
2007	68.0	69.1	46.9	1.45	1.47
2008	54.0	55.1	75.5	0.72	0.73
2009	94.4	97.9	73.1	1.29	1.34
2010	79.0	74.6	79.0	1.00	0.94
2011	100.0	100.4	85.4	1.17	1.18
2012	90.8	90.7	58.7	1.55	1.55
2013	105.2	96.3	243.4	0.43	0.40
2014	360.1	340.2	203.8	1.77	1.67
2015	113.3	116.9	170.6	0.66	0.69
2016	101.0	99.4	88.3	1.14	1.13
2017	45.6	48.3	47.4	0.96	1.02
2018 <sup>c/</sup>	36.4	41.2	36.0	1.01	1.14
2019	56.7	-	-	-	-
<b>SUMMER</b>					
2008	52.0		55.5	0.94	
2009	70.7		53.9	1.31	
2010	88.8		72.3	1.23	
2011	91.1		80.6	1.13	
2012	91.2	92.6	58.3	1.56	1.59
2013	73.5	78.5	67.6	1.09	1.16
2014	67.5	64.7	78.3	0.86	0.83
2015	73.0	100.1	126.9	0.58	0.79
2016	93.3	95.6	91.0	1.03	1.05
2017	63.1	64.8	68.2	0.93	0.95
2018 <sup>c/</sup>	67.3	70.5	42.1	1.60	1.67
2019	35.9	-	-	-	-

a/ March preseason forecasts are ocean escapements based on terminal run size and stock-specific cohort relationships affected by the historical "normal" ocean fisheries, generally between 1979 and the most recent complete broods.

b/ STT-modeled forecasts adjust March preseason forecasts for Council-adopted ocean regulations each year, and should provide a more accurate estimate of expected ocean escapement.

c/ Postseason estimates are preliminary.

TABLE II-9. Preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 1 of 4)

Year or Average	Preseason Forecast	Postseason Return	Pre/Post- season	Preseason Forecast	Postseason Return	Pre/Post- season	Preseason Forecast	Postseason Return	Pre/Post- season	Preseason Forecast	Postseason Return	Pre/Post- season
	<b>Nooksack-Samish Hatchery and Natural</b>			<b>East Sound Bay Hatchery</b>			<b>Skagit Hatchery</b>			<b>Skagit Natural</b>		
1993-95	45.2	27.6	1.65	3.3	1.6	9.41	1.3	3.4	0.47	9.1	7.3	1.33
1996-00	27.0	35.4	0.77	2.1	0.5	13.35	0.2	0.2	0.87	7.0	10.9	0.80
2001	34.9	65.6	0.53	1.6	0.9	1.85	0.0	0.0	-	9.1	14.1	0.64
2002	52.8	57.0	0.93	1.6	0.9	1.87	0.0	0.1	0.00	13.8	20.0	0.69
2003	45.8	30.0	1.53	1.6	0.2	7.51	0.0	0.3	0.00	13.7	10.3	1.33
2004	34.2	18.1	1.89	0.8	0.0	200.00	0.5	0.0	-	20.3	24.3	0.84
2005	19.5	16.5	1.18	0.4	0.0	13.33	0.7	0.4	1.88	23.4	23.4	1.00
2006	16.9	31.9	0.53	0.4	0.0	25.00	0.6	0.4	1.51	24.1	22.5	1.07
2007	18.8	26.5	0.71	0.4	0.0	66.67	1.1	0.4	2.75	15.0	13.0	1.15
2008	35.3	29.1	1.21	0.8	0.0	-	0.7	0.2	3.50	23.8	15.0	1.59
2009	23.0	20.9	1.10	0.1	0.0	25.00	0.6	0.1	6.00	23.4	12.5	1.87
2010	30.3	35.8	0.85	2.3	0.7	3.29	0.9	0.1	11.25	13.0	10.0	1.30
2011	37.5	33.3	1.13	0.4	0.7	0.57	1.5	0.1	15.00	14.3	9.2	1.55
2012	44.0	32.6	1.35	0.4	1.6	0.25	1.3	0.1	13.00	8.3	15.8	0.53
2013	47.2	31.4	1.50	2.0	1.1	1.82	0.3	0.1	3.00	12.9	13.0	0.99
2014	43.9	25.5	1.72	1.2	0.3	4.00	0.3	0.0	7.50	18.0	10.1	1.78
2015	38.6	18.1	2.13	1.2	0.9	1.33	0.6	0.0	-	11.8	14.8	0.80
2016	27.9	15.8	1.77	0.7	0.7	1.00	0.4	0.1	4.00	15.1	21.1	0.72
2017 <sup>b/</sup>	21.2	17.2	1.23	0.8	0.5	1.70	0.4	0.1	4.08	15.8	13.6	1.16
2018	24.6	NA	-	0.7	NA	-	0.3	NA	-	13.3	NA	-
2019	21.3	-	-	0.3	-	-	0.3	-	-	13.6	-	-

TABLE II-9. Preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 2 of 4)

Year or Average	Preseason Forecast	Postseason Return	Pre/Post-season	Preseason Forecast	Postseason Return	Pre/Post-season	Preseason Forecast	Postseason Return	Pre/Post-season	Preseason Forecast	Postseason Return	Pre/Post-season
	Stillaguamish <sup>c/</sup> Natural			Snohomish <sup>c/</sup> Hatchery			Snohomish <sup>c/</sup> Natural			Tulalip <sup>c/</sup> Hatchery		
1993-95	1.8	1.2	1.92	2.0	4.1	0.29	4.6	4.8	0.96	2.6	3.9	1.30
1996-00	1.6	1.3	1.20	7.0	5.6	1.67	5.3	5.5	0.98	3.7	10.1	0.39
2001	1.7	1.4	1.22	4.1	0.9	4.57	5.8	8.4	0.69	5.5	5.1	1.08
2002	2.0	1.6	1.25	6.8	2.6	2.66	6.7	7.3	0.92	5.8	5.2	1.12
2003	2.0	1.0	1.98	9.4	5.8	1.63	5.5	5.6	0.99	6.0	8.7	0.69
2004	3.3	1.6	2.06	10.1	6.4	1.58	15.7	11.2	1.40	6.8	6.5	1.05
2005	2.0	1.2	1.67	9.9	4.0	2.48	14.2	5.0	2.84	6.4	7.4	0.86
2006	1.6	1.3	1.26	9.6	4.3	2.23	8.7	8.8	0.99	9.3	5.8	1.60
2007	1.9	0.8	2.38	8.7	6.6	1.32	12.3	4.0	3.08	8.4	6.1	1.38
2008	1.1	1.8	0.61	8.8	6.3	1.40	6.5	8.7	0.75	2.7	3.2	0.84
2009	1.7	1.2	1.42	4.9	2.2	2.23	8.4	2.3	3.65	4.0	1.7	2.35
2010	1.4	1.0	1.40	5.6	2.7	2.07	9.9	4.8	2.06	3.4	3.2	1.06
2011	1.8	1.3	1.38	5.2	3.1	1.68	7.4	2.0	3.70	3.5	5.8	0.60
2012	0.9	1.7	0.53	3.9	8.4	0.46	2.8	3.4	0.82	5.9	0.6	9.83
2013	1.3	0.9	1.44	5.9	6.1	0.97	3.6	2.6	1.38	10.9	1.9	5.74
2014	1.6	0.4	4.00	5.4	6.2	0.87	5.3	2.4	2.21	4.7	1.8	2.61
2015	0.5	0.6	0.83	3.3	4.8	0.69	4.2	2.3	1.83	1.3	2.0	0.65
2016	0.5	0.5	1.00	5.0	10.0	0.50	3.3	3.5	0.94	1.4	6.0	0.23
2017 <sup>b/</sup>	1.5	1.7	0.89	4.8	9.0	0.53	3.4	4.4	0.78	5.3	11.3	0.47
2018	1.6	NA	-	6.5	NA	-	3.5	NA	-	7.5	NA	-
2019	0.9	-	-	7.2	-	-	3.7	-	-	12.7	-	-

TABLE II-9. Preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 3 of 4)

Year or Average	Preseason Forecast	Postseason Return	Pre/Post-season	Preseason Forecast	Postseason Return	Pre/Post-season	Preseason Forecast	Postseason Return	Pre/Post-season	Preseason Forecast	Postseason Return	Pre/Post-season
	South Puget Sound Hatchery			South Puget Sound Natural			Strait of Juan de Fuca Hatchery			Strait of Juan de Fuca Natural		
1993-95	54.7	56.1	1.05	22.1	15.0	1.78	2.5	0.9	2.85	1.7	1.6	1.10
1996-00	64.3	51.1	1.31	19.2	24.0	0.96	2.1	1.2	1.91	0.9	2.3	0.43
2001	73.7	76.6	0.96	16.2	60.6	0.27	0.0	1.7	0.00	3.5	2.0	1.79
2002	90.8	69.3	1.31	16.9	57.0	0.30	0.0	1.6	0.00	3.6	2.2	1.65
2003	86.6	57.2	1.51	19.6	38.6	0.51	0.0	1.3	0.00	3.4	2.8	1.21
2004	86.5	66.6	1.30	17.5	42.3	0.41	0.0	1.4	0.00	3.6	4.1	0.89
2005	83.1	73.9	1.12	17.7	19.0	0.93	0.0	1.4	0.00	4.2	2.1	2.00
2006	85.8	104.1	0.82	21.3	37.0	0.58	0.0	1.2	0.00	4.2	3.2	1.31
2007	83.0	140.3	0.59	17.0	30.1	0.56	0.0	0.8	0.00	4.4	1.3	3.38
2008	101.6	90.6	1.12	21.1	32.2	0.65	0.0	0.7	0.00	3.2	1.2	2.67
2009	93.0	72.7	1.28	17.2	13.3	1.29	0.0	1.5	0.00	2.4	1.3	1.85
2010	97.4	82.9	1.17	12.7	15.8	0.80	0.0	0.7	0.00	1.9	2.6	0.73
2011	118.6	83.9	1.41	8.9	20.6	0.43	0.0	0.7	0.00	2.5	2.9	0.86
2012	95.8	61.9	1.55	8.9	23.0	0.39	0.0	1.2	0.00	2.9	2.1	1.38
2013	102.0	75.5	1.35	5.0	22.2	0.23	2.7	2.1	1.29	1.6	4.8	0.33
2014	96.7	37.1	2.61	4.8	7.1	0.68	3.8	2.0	1.90	1.5	4.2	0.36
2015	62.4	47.1	1.32	3.8	5.5	0.69	4.9	2.8	1.75	3.5	4.5	0.78
2016	43.1	83.8	0.51	4.5	6.0	0.75	4.3	1.9	2.26	2.3	2.6	0.88
2017 <sup>b/</sup>	80.4	143.4	0.56	5.7	8.7	0.66	3.8	2.0	1.94	0.8	3.3	0.24
2018	123.6	NA	-	4.8	NA	-	6.0	NA	-	1.4	NA	-
2019	99.9	-	-	8.4	-	-	7.7	-	-	0.6	-	-

TABLE II-9. Comparison of preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 4 of 4)

Year or Average	Preseason Forecast	Postseason Return	Pre/Post-season
<b>Hood Canal</b>			
<b>Hatchery and Natural</b>			
1993-95	11.6	8.4	1.46
1996-00	7.3	26.4	0.26
2001	19.2	26.1	0.74
2002	25.3	30.2	0.84
2003	24.0	33.0	0.73
2004	29.6	34.3	0.86
2005	30.6	54.7	0.56
2006	30.2	40.7	0.74
2007	47.5	32.5	1.46
2008	36.8	33.1	1.11
2009	42.6	38.0	1.12
2010	45.0	37.8	1.19
2011	40.6	53.2	0.76
2012	46.8	90.3	0.52
2013	66.2	71.7	0.92
2014	84.1	25.2	3.34
2015	62.1	33.0	1.88
2016	45.0	63.6	0.71
2017 <sup>b/</sup>	50.8	111.0	0.46
2018	61.4	NA	-
2019	67.2	-	-

a/ Puget Sound run size is defined as the run available to Puget Sound net fisheries. Does not include fish caught by troll and recreational fisheries inside Puget Sound.

b/ Postseason returns are preliminary.

c/ These numbers are in terms of terminal run of Chinook returning to area 8A. This includes all adult Chinook harvested in the net fisheries in Areas 8A, 8D, the Stillaguamish and Snohomish Rivers harvest in sport fisheries in Area 8D and the Stillaguamish and Snohomish Rivers and escapement.

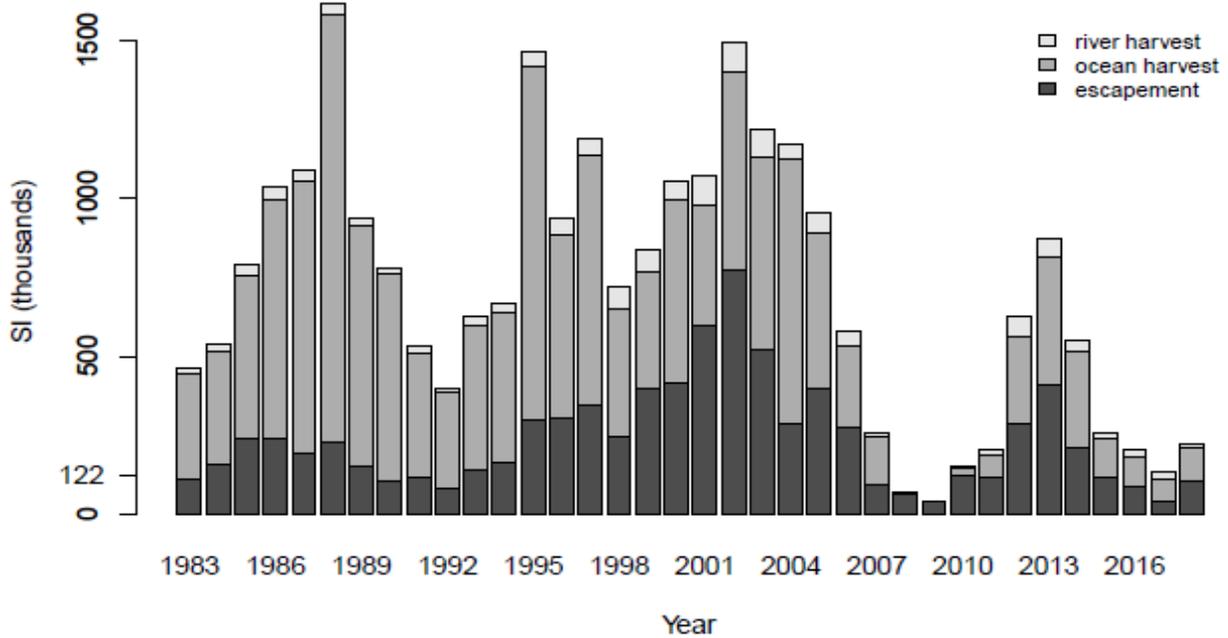


FIGURE II-1. The Sacramento Index (SI) and relative levels of its components. The Sacramento River fall Chinook  $S_{MSY}$  of 122,000 adult spawners is noted on the vertical axis.

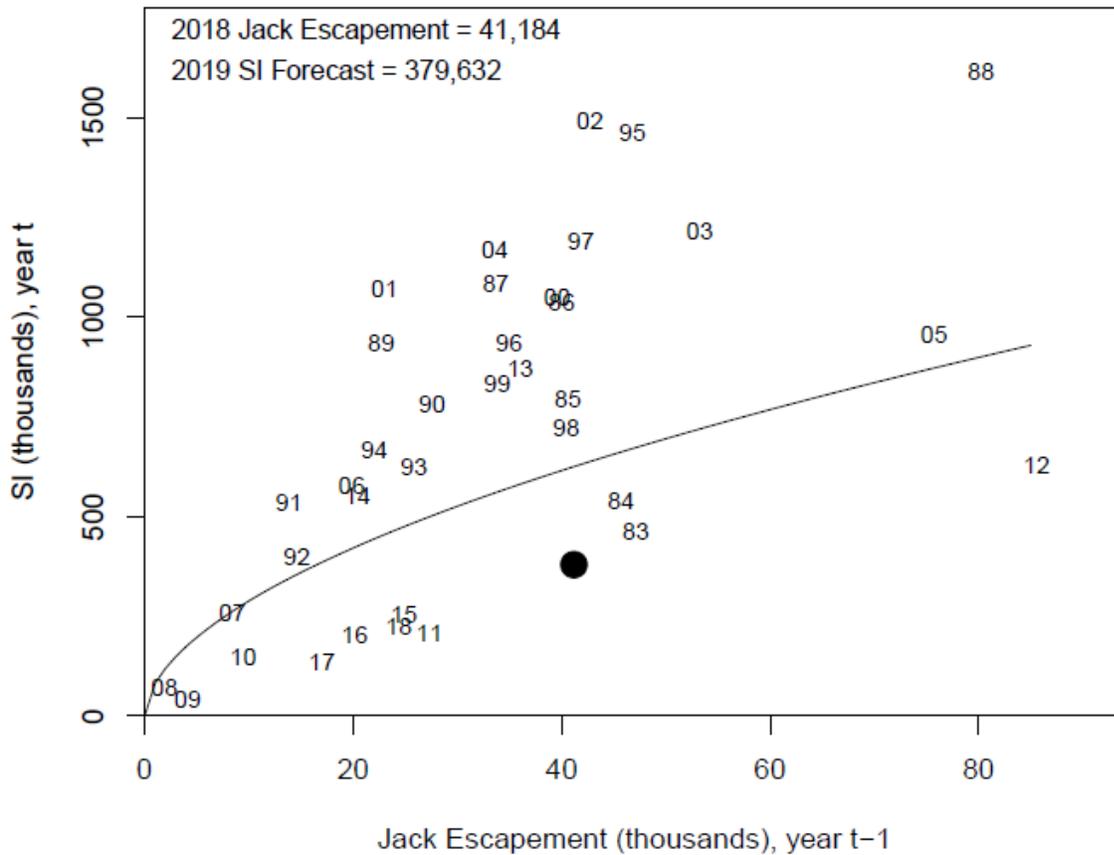


FIGURE II-2. Sacramento Index (SI) forecast based on log-log regression of the SI on jack escapement from the previous year, accounting for autocorrelated errors. The solid line represents the fitted model and the black dot denotes the SI forecast. Years shown are SI years.

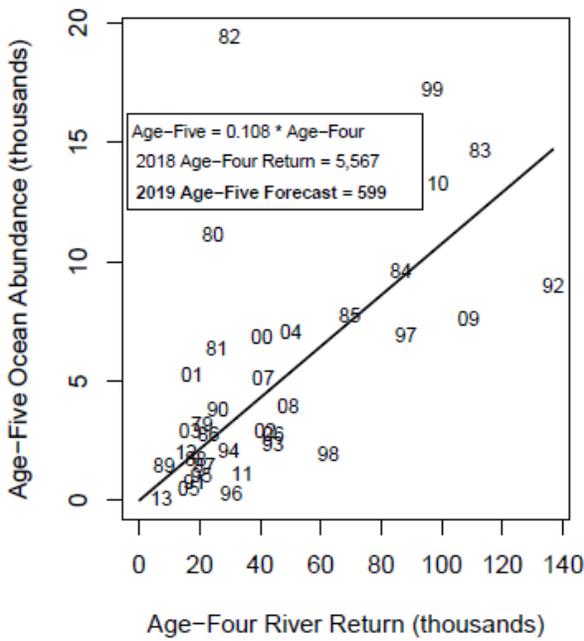
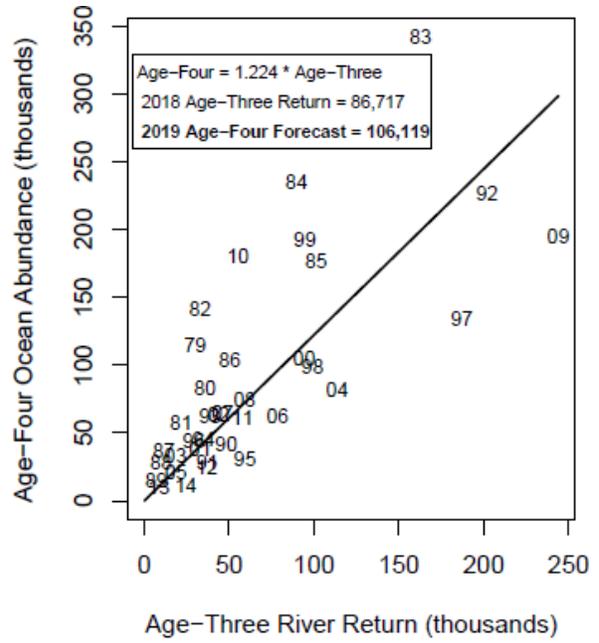
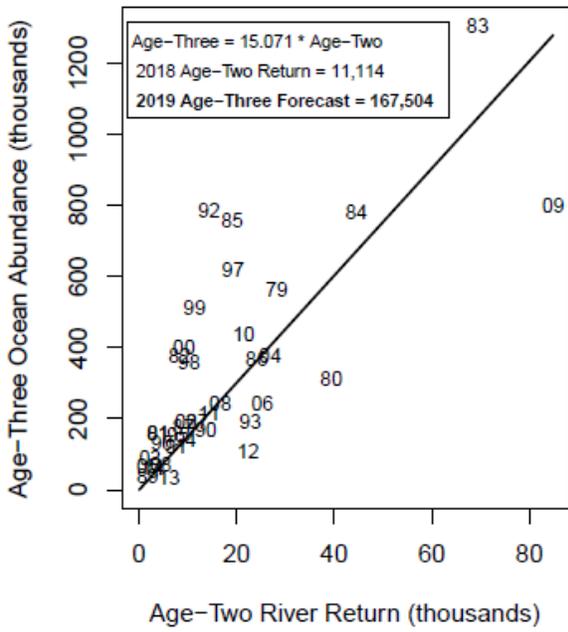


FIGURE II-3. Regression estimators for Klamath River fall Chinook ocean abundance (September 1) based on that year's river return of same cohort. Numbers in plots denote brood years.

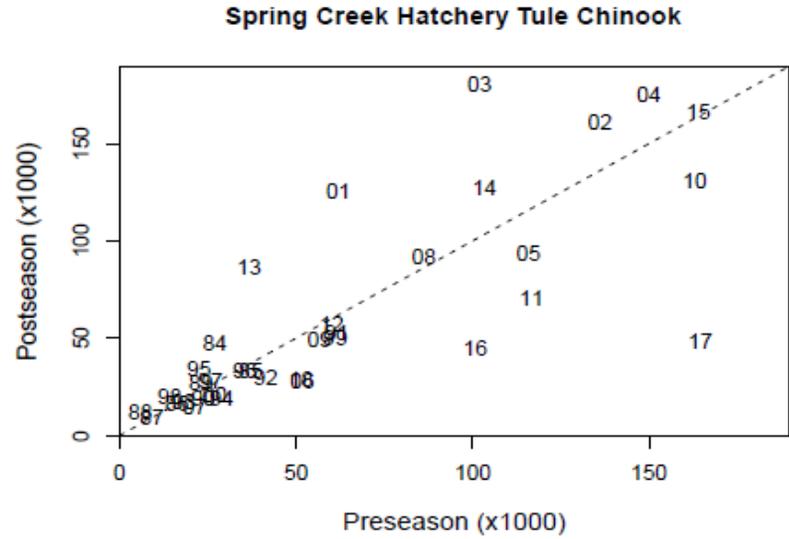
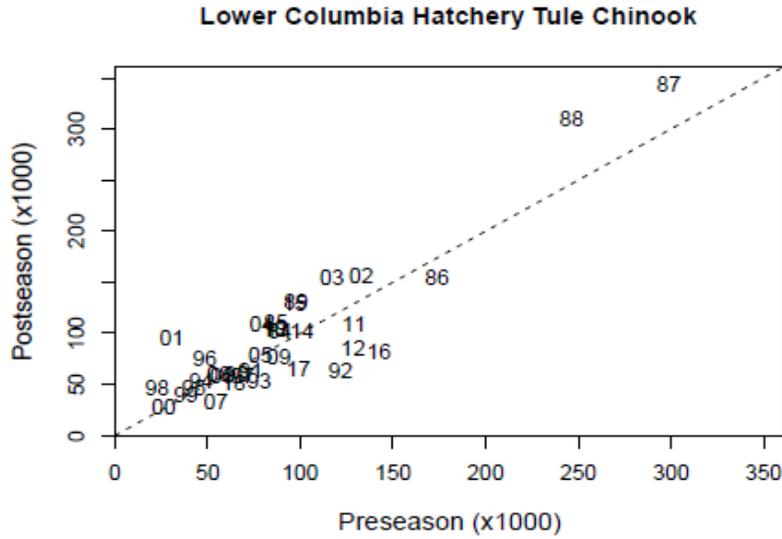
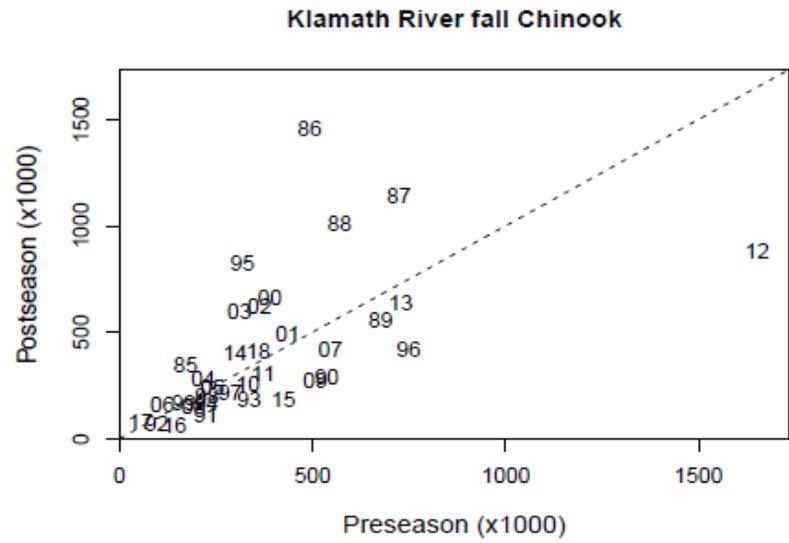
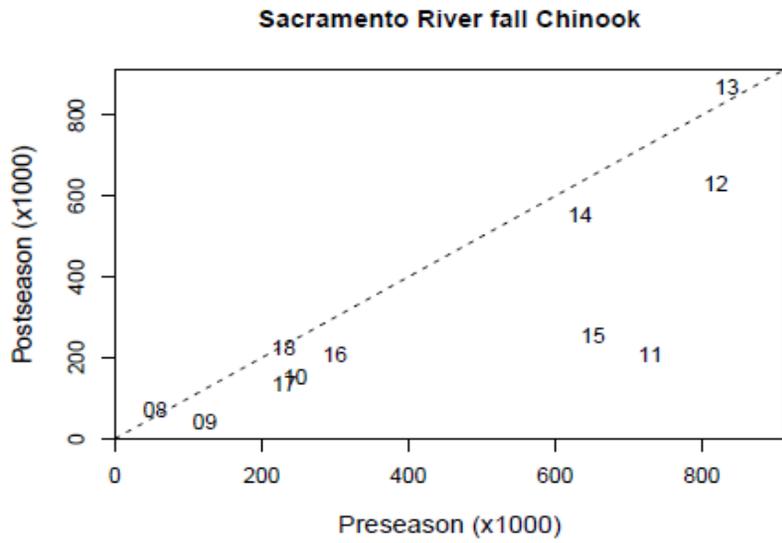


FIGURE II-4. Selected preseason vs. postseason forecasts for Chinook stocks with substantial contribution to Council area fisheries.

## CHAPTER III - COHO SALMON ASSESSMENT

### COLUMBIA RIVER AND OREGON/CALIFORNIA COAST COHO

#### OREGON PRODUCTION INDEX AREA

The majority of coho harvested in the Oregon Production Index (OPI) area originate from stocks produced in rivers located within the OPI area (Leadbetter Point, Washington to the U.S./Mexico border). These stocks include hatchery and natural production from the Columbia River, Oregon Coast, and northern California, and are divided into the following components: (1) public hatchery (OPIH), (2) Oregon coastal natural (OCN), including river and lake components, (3) Lower Columbia natural (LCN), and (4) natural and hatchery stocks south of Cape Blanco, Oregon, which include the Rogue, Klamath, and Northern California coastal stocks. Direct comparisons of 2019 abundance forecasts with recent year preseason abundance forecasts and postseason estimates are reported in Table III-1.

Beginning in 2008, a new method was developed to estimate coho abundances for both the natural and hatchery components of the Columbia River and the Oregon coast. The traditional method of stock abundance estimation used only catch data from Leadbetter Point, Washington, to the U.S./Mexico border. The assumption prior to 2008 was that OPI stocks that were caught north of the OPI area were balanced by northern stocks that were caught inside the OPI area. This assumption was valid as long as fisheries north and south were balanced. However, in recent years, fisheries to the south have been more restricted than those to the north, leading to underestimation of harvest of OPI area stocks. In addition, the estimation technique was not consistent with the methods used in Coho FRAM. The Mixed Stock Model (MSM) used for constructing the FRAM base period data was used to estimate the contribution of various coho stocks, including the OPI area stocks, to ocean fisheries and was based on CWT recoveries and associated tag rates. The MSM includes all fisheries that impact a particular stock, and therefore should provide a better overall accounting of total harvest and mortality of both Columbia River and Oregon coast coho stocks. The new run size estimates are based on the 1986-1997 base period and FRAM run reconstructions for more recent years. The Oregon Production Index Technical Team (OPITT) decided to use the MSM run reconstruction database for future accounting and forecasts. The MSM estimates were refined for use in 2009, with particular attention to the base period reconstruction for OCN coho. In 2010, the relationship between the MSM and previous time series was reconsidered. The changes in fishery effort patterns that resulted in biased harvest estimates began in the mid- to late-1990s, so the first few years of the MSM time series should be equivalent to the previous time series. This was used as justification to use the MSM data set as a continuation of the previous time series starting in 1986. In 2013, the OPI hatchery and OCN predictors used the longer, merged time series. This results in a higher level of statistical significance for the predictors and lower residuals in most recent years.

#### Hatchery Coho

OPI area public hatchery coho smolt production occurs primarily in Columbia River facilities and net pens. Several facilities located in Oregon coastal rivers and in the Klamath River Basin, California, collectively produce fewer coho. Salmon Trout Enhancement Hatchery Coho Smolt Program (STEP) program releases were discontinued after the 2004 brood. OPI area smolt releases since 1960 are reported by geographic area in Appendix C, Table C-1.

There have been no Oregon coastal private hatchery coho (PRIH) smolt releases since 1990.

#### *Predictor Description*

Prior to 2008, the OPIH stock predictor was a multiple linear regression with the following variables: (1) Columbia River jacks (Jack CR), (2) Oregon coastal and Klamath River Basin jacks (Jack OC), and (3) a

correction term for the proportion of delayed smolts released from Columbia River hatcheries (Jack CR \* [SmD/SmCR]).

In 2008, the stock predictor was modified slightly from that used in previous years. Because of the shorter data set (1986-2007 vs. 1970-2007) and the near-total phase-out of coastal coho salmon hatcheries, the factor for Oregon and California jacks (Jack OC) was not statistically significant in the regression. A simplified model with all OPI jacks combined into one term (Jack OPI) was used, and all parameters were statistically significant. In 2011, the longer (1970-2010) time series was used with the simplified model.

The OPIH stock predictor is partitioned into Columbia River early and late stocks based on the proportion of the 2018 jack returns of each stock adjusted for stock-specific maturation rates. The coastal hatchery stock is partitioned into northern and southern coastal stock components. The northern OPIH coastal stock is comprised of hatchery production from the central Oregon Coast. The southern OPIH coastal stock is comprised of hatchery production from the Rogue River basin in southern Oregon and the Klamath and Trinity basins in northern California. The 2018 partition was based on the proportion of the smolt releases in 2018.

For the 2019 abundance forecast, the database includes 1970-2017 recruits and 1969-2016 jack returns (in thousands of fish). The model was:

$$\text{OPIH}(t) = a (\text{Jack OPI}(t-1)) + b ((\text{Jack CR}(t-1) ([\text{SmD}(t-1)/\text{SmCR}(t-1)])) + c$$

Where:

$$\begin{aligned} a &= 19.25 \\ b &= 27.43 \\ c &= -97.25 \\ \text{adjusted } r^2 &= 0.94 \end{aligned}$$

The OPIH stock data set and a definition of the above terms are presented in Appendix C, Table C-2.

### *Predictor Performance*

Recent year OPIH stock preseason abundance forecasts partitioned by production area, stock, and as a total, are compared with postseason estimates in Table III-1. The 2018 preseason abundance prediction of 294,100 OPIH coho was about 2 times higher than the preliminary postseason estimate of 149,400 coho.

Since 1983, the OPIH predictor has performed well (Figure III-1a). The years with the highest variations were due principally to high interannual variability in the jack-to-adult ratios.

### *Stock Forecast and Status*

Using the appropriate values from Appendix C, Table C-2, the OPIH abundance forecast for 2019 is 933,500 coho, 3.2 times higher than the 2018 prediction and 6.2 times higher than the preliminary 2018 postseason estimate.

## **Oregon Coastal Natural Coho**

The OCN stock is composed of natural production north of Cape Blanco, Oregon from river (OCNR) and lake (OCNL) systems, which are forecasted independently.

Under the FMP, ESA consultation standards are used in place of ACLs for ESA-listed stocks like OCN (and Southern Oregon/Northern California (SONCC) and Central California Coho (CCC)) coho.

## Predictor Description

### Oregon Coastal Natural Rivers

Prior to 2010, a variety of methods were used to forecast OCNR coho abundance. Beginning in 2011, generalized additive models (GAMs) were used to relate OCNR recruitment to ocean environment indices. Nine variables were evaluated, ranging from indices of large-scale ocean patterns (e.g., Pacific Decadal Oscillation [PDO]) to local ecosystem variables (e.g., sea surface temperature at Charleston, OR). It was found that high explanatory power and promising forecast skill could be achieved when the mean May-July PDO averaged over the four years prior to the return year was used in combination with two other variables in a GAM. The multi-year average of the PDO, in essence, explains the lower frequency (multi-year) variability in recruitment, and can be viewed as a replacement of the Regime Index used previously. A final set of six models using six different environmental indices plus parent spawner abundance was chosen from the possible model combinations. When averaging the predictions from the set of models (the ensemble mean), a higher skill (in terms of variance explained or cross-validation) was achieved than by selecting any single model. Making multiple forecasts from a set of models also provides a range of possible outcomes that reflects, to some degree, the uncertainty in understanding how salmon productivity is driven by ocean conditions.

The GAM with 3 predictor variables can be expressed in the following general form:

$$\hat{Y} = f(X_1) + f(X_2) + f(X_3) + \varepsilon$$

Where  $\hat{Y}$  is the prediction,  $X_1$  through  $X_3$  are the predictor variables, and  $\varepsilon$  is the deviation of  $\hat{Y}$  from the observation  $Y$ . For the prediction,  $Y$  was the log-transformation of annual recruit abundance. The term  $f$  represents a smooth function, which in this case is a cubic spline.

The ensemble mean predictor used for the 2019 forecast was the geometric mean of the six GAM predictors:

Ensemble Mean of six forecasts based on environmental conditions and spawners.

Variables			Prediction	$r^2$	OCV <sup>a/</sup>
PDO	Spring Transition (Julian date; t-1)	Log Spawners (t-3)	67,525	0.65	0.56
PDO	Multivariate ENSO Index (Oct-Dec; t-1)	Upwelling (July-Sept; t-1)	67,001	0.68	0.59
PDO	Spring Transition (Julian date; t-1)	Multivariate ENSO Index (Oct-Dec; t-1)	63,031	0.68	0.60
PDO	Upwelling (July-Sept; t-1)	Sea Surface Temperature (May-Jul; t-1)	82,522	0.64	0.52
PDO	Sea Surface Height (Apr-June; t-1)	Upwelling (July-Sept; t-1)	95,194	0.68	0.55
PDO	Upwelling (Sept-Nov; t-1)	Sea Surface Temperature (Jan; t)	52,956	0.67	0.54
Ensemble Mean (90% prediction intervals)			70,097 (32,597-152,440)	0.74	0.61

a/ OCV – ordinary cross-validation score

The OCNR stock data set and a definition of the above terms are presented in Appendix C, Table C-4.

### Oregon Coastal Natural Lakes

Since 1988, except for 2008, the abundance of OCNL index coho has been predicted using the most recent three-year average adult stock abundance. OCNL coho production occurs from three lake systems (Tennile, Siltcoos, and Tahkenitch). Following the same reasoning used for the OCN Rivers predictor in 2008, OPITT chose to use the 2007 postseason abundance estimate of 10,000 coho for the 2008 preseason prediction instead of using the most recent three-year average. For 2019, OPITT chose to use the most recent three-year average adult stock abundance, which predicts 6,000 coho.

### *Predictor Performance*

Recent year OCN preseason abundance predictions are compared to postseason estimates in Table III-1. The 2018 preseason abundance prediction of 54,900 OCN coho was 68 percent of the preliminary postseason estimate of 81,300 coho.

### *Stock Forecasts and Status*

The 2019 preseason prediction for OCN (river and lake systems combined) is 76,100 coho, 39 percent higher than the 2018 preseason prediction and 94 percent of the 2018 postseason estimate (Table III-1). The 2019 preseason prediction for OCNR and OCNL components are 70,100 and 6,000 coho, respectively.

Based on parent escapement levels and observed OPI smolt-to-jack survival for 2016 brood OPI smolts, the total allowable OCN coho exploitation rate for 2019 fisheries is no greater than 15.0 percent under the Salmon FMP (Amendment 13) and no greater than 15.0 percent under the matrix developed by the OCN Coho Work Group during their review of Amendment 13 (Table V-8; Appendix A, Tables A-2 and A-3, respectively). The work group recommendation was accepted by the Council as expert biological advice in November 2000.

In November 2013, the Council approved a methodology change for a new marine survival index for the OCN coho harvest matrix that uses biological and oceanographic indicators for preseason planning beginning in 2014<sup>1</sup>. Based on this methodology, the marine survival index of 3.8 percent allows for a total allowable exploitation rate for 2019 fisheries that is no greater than 15.0 percent (Table V-8: Appendix Table A-4).

### **Lower Columbia River Natural**

LCN coho consist of naturally produced coho mostly from Columbia River tributaries below Bonneville dam; however, coho produced in the upper Willamette are not part of the ESA-listed ESU and are not included in the LCN coho forecast. LCN coho were listed as endangered under the Oregon State ESA in 2002, and as threatened under the Federal ESA on June 28, 2005. Under the FMP, ESA consultation standards are used in place of ACLs for ESA-listed stocks like LCN coho.

### *Predictor Description*

The 2019 predictions for the Oregon LCN coho populations are derived by the recent 2-year average abundances based on spawning ground counts. The 2019 adult abundance forecast for Oregon LCN coho is 8,800.

The 2019 predictions for the Washington LCN coho populations are derived by combining estimates of the 2016 brood year natural smolt production based on watershed area and the marine survival rate of 4.1 percent. The 2019 adult abundance forecast for Washington LCN coho is 28,100.

### *Predictor Performance*

The LCN stock predictor methodology was developed in 2007. The preseason abundance compared to the postseason estimate is presented in Table III-1. The 2018 preseason abundance prediction of 21,900 LCN coho was lower than the preliminary postseason estimate of 29,700 coho.

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<sup>1</sup> For additional information see the November 2013 PFMC Briefing Book, Agenda Item C.2.a, Attachment 1: Technical Revision to the OCN Coho Work Group Harvest Matrix.

## *Stock Forecast and Status*

The 2019 prediction for LCN coho is 36,900 coho (Table III-1). This abundance estimate includes both Oregon and Washington LCN components.

NMFS ESA guidance for harvest of LCN coho in marine and mainstem Columbia River fisheries is based on a matrix describing parent escapement levels for multiple populations and the observed Columbia River OPI smolt-to-jack survival rate. Based on this matrix, the total allowable marine and mainstem Columbia River exploitation rate for LCN coho in 2019 fisheries would be no more than 23.0 percent.

### **Oregon Production Index Area Summary of 2018 Stock Forecasts**

The 2019 combined OPI area stock abundance is predicted to be 1,009,600 coho, which is 2.89 times higher than the 2018 preseason prediction of 349,000 coho and 4.38 times higher than the 2018 preliminary postseason estimate of 230,700 coho. The historical OPI abundances are reported in Table III-2.

#### **WASHINGTON COAST COHO**

Washington coastal coho stocks include all natural and hatchery stocks originating in Washington coastal streams north of the Columbia River to the western Strait of Juan de Fuca (west of the Sekiu River). The stocks in this group most pertinent to ocean salmon fishery management are Willapa Bay (hatchery), Grays Harbor, Quinault (hatchery), Queets, Hoh, and Quillayute coho. These stocks contribute primarily to ocean fisheries off Washington and B.C.

A variety of preseason abundance estimators currently are employed for Washington coast and Puget Sound coho stocks, primarily based on smolt production and survival (Table I-2). These estimators are used to forecast preseason abundance of adult ocean (age-3) recruits.

A comparison was made of preseason ocean age-3 forecasts with postseason estimates derived from run reconstructions using FRAM (“Backwards” mode) to expand observed escapements to ocean abundance from CWT recovery data. It should be noted that forecast methodology has changed over time, and the overall trends and biases may not reflect the current methods.

Except for Willapa Bay, Washington Coast coho fall within an exception to the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for these stocks.

### **Willapa Bay**

#### *Predictor Description*

The natural forecast was calculated using the 2016 brood year spawner escapements expanded by freshwater survival to calculate Willapa Bay smolt outmigrants. That value was then applied to a marine survival rate of 4.60 percent and corrected for a four-year average (2015-18) model performance. The terminal runsize was expanded to ocean age-3 using a recent four-year average exploitation rate (2015-2018) from the ocean fisheries.

The hatchery forecast is based on a terminal marine survival rate of 4.60 percent. This was applied to the 2016 brood year smolts released in the spring of 2018 to create a terminal runsize. The terminal runsize was expanded to ocean age-3 using a recent four-year average exploitation rate (2015-18) from the ocean fisheries.

The 4.60 percent terminal marine survival rate used for both natural and hatchery coho was calculated by averaging the results of a Willapa Bay jack to marine survival regression (5.46 percent) and Quinault Fisheries Department marine survival estimate of 3.73 percent ocean age 3.

### *Predictor Performance*

There was no information available to evaluate performance of predictors for Willapa coho stocks.

### *Stock Forecasts and Status*

The 2019 natural coho ocean age-3 abundance forecast is 63,448 compared to a 2018 preseason forecast of 20,645.

The 2019 Willapa Bay hatchery coho ocean age-3 abundance forecast is 94,019 compared to a 2018 preseason forecast of 44,542.

### *OFL, ABC, and ACL*

The OFL, ABC, and ACL are defined in terms of spawner escapement ( $S_{OFL}$ ,  $S_{ABC}$ , and  $S_{ACL}$ ), and are calculated using potential spawner abundance forecasts and established exploitation rates. Potential Willapa Bay coho natural area spawner abundance was derived by adding the current forecast of natural coho ocean age-3 abundance to the predicted abundance of ocean age-3 hatchery origin coho spawning in natural areas. The abundance of ocean age-3 naturally spawning hatchery origin coho was calculated by multiplying the ocean age-3 hatchery coho abundance forecast by the most recent 3 year average proportion of hatchery origin returns that spawned naturally (.302), also known as stray rate. For Willapa Bay natural coho,  $F_{MSY} = 0.74$ , the value estimated from a stock-specific spawner-recruit analysis. The OFL for Willapa Bay natural coho is  $S_{OFL} = 91,843 \times (1-0.74) = 23,879$ . Because Willapa Bay natural coho are a Tier-1 stock,  $F_{ABC} = F_{MSY} \times 0.95 = 0.70$ , and  $F_{ACL} = F_{ABC}$ . The ABC for Willapa Bay natural coho is  $S_{ABC} = 91,843 \times (1-0.70) = 27,553$ , with  $S_{ACL} = S_{ABC}$ . These preseason estimates will be recalculated with postseason abundance estimates (when available) to assess ACL and OFL compliance.

### **Grays Harbor**

Preseason abundance forecasts are made for natural fish throughout the system and for hatchery fish returning to three freshwater rearing complexes and three saltwater net-pen sites. The forecasts include fish originating from numerous volunteer production projects.

### *Predictor Description*

The natural forecast is the sum of the Chehalis River natural, Humptulips River natural, and South Bay tributary natural forecasts. The Chehalis River coho forecast was developed by applying the Queets River natural coho January age-3 marine survival prediction to Grays Harbor coho smolt production estimate. The Grays Harbor coho smolt production estimate was developed by scaling the 2018 Queets River natural coho smolt production to the Chehalis River production based on the relationship between the Backward FRAM January age-3 ocean abundances of Queets and Chehalis natural Coho abundances. The Humptulips and South Bay tributary forecasts are based on recruit densities scaled from Clearwater and Chehalis basins, respectively.

The hatchery forecast is the sum of the Chehalis River, Humptulips River, and Grays Harbor net pen and off-site hatchery program hatchery-origin forecasts. The Chehalis River, Humptulips River, and Grays Harbor net-pen and off-site hatchery program hatchery-origin forecasts were based on recent 10 year average return/smolt rates (excluding two highest return rates) expanded to January age-3 recruits.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates for Grays Harbor natural coho derived from FRAM run reconstruction indicated no notable bias. The 2017 forecast was higher than the 2017 postseason return estimate (Table III-3; Figure III-1).

### *Stock Forecasts and Status*

The 2019 Grays Harbor natural ocean age-3 abundance forecast is 71,527, compared to a 2018 preseason forecast of 42,379. This ocean abundance results in classification of this stock's status as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

The 2019 Grays Harbor hatchery coho ocean age-3 abundance forecast is 64,347, compared to a 2018 preseason forecast of 51,414.

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Grays Harbor natural coho  $MFMT = 0.65$  and the OFL is  $S_{OFL} = 71,527 \times (1 - 0.65) = 25,034$ . The preseason  $S_{OFL}$  will also be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **Quinault River**

### *Predictor Description*

The natural forecast is based on a 3-year geometric mean of 2004, 2005 and 2015 recruits per spawner January Age-3 (JA3) abundance. These years are selected based on similar brood-year size.

The hatchery forecast is based on the smolt releases from the Quinault Cook Creek Hatchery (667,663) multiplied by the marine survival rate of 4.03 percent. The marine survival rate is based on the 10-year smolt to ocean age-3 survival (excluding 2009 and 2014). This is a lower marine survival rate than the 4.38 and 4.54 percent used in 2017 and 2018, respectively.

### *Predictor Performance*

There was no information available to evaluate performance of predictors for these stocks.

### *Stock Forecasts and Status*

The 2019 forecast for Quinault natural coho is 13,888 ocean age-3 recruits, a decrease from the 2018 forecast of 25,442.

The Quinault hatchery coho forecast is 26,904 ocean age-3 recruits. 100 percent of the hatchery smolts were marked with an adipose fin clip.

## **Queets River**

### *Predictor Description*

The natural coho forecast represents the estimated smolt outmigration multiplied by a projected marine survival rate of 4.60 percent to January age-3. The marine survival rate estimate is based on a model developed by Quinault Fisheries Department, which uses a relationship between survival to January age-3; specifically the mean Queets River flow in December of the smolt year and the maximum PDO value recorded from June through November of the smolt year (measured at 48N 125W). In 2018, an estimated 297,034 smolts emigrated from the Queets System.

The hatchery forecast is based on the smolt releases from 2018 (670,550) multiplied by a three-year average (2015-2017) marine survival rate of 1.96 percent. This is a lower marine survival rate than the 2.12 and 2.27 percent used in 2017 and 2018, respectively.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction indicated no persistent tendency to under- or over- predict abundance. The 2017 forecast was slightly lower than the postseason return estimate (Table III-3; Figure III-1).

### *Stock Forecasts and Status*

The 2019 Queets natural coho forecast is 11,100 ocean age-3 recruits, an increase compared to the 2016, 2017 and 2018 forecast levels of 3,495, 6,548 and 6,964, respectively. This ocean abundance results in classification of this stock's status as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

The 2018 Queets hatchery (Salmon River) coho forecast is 13,175 ocean age-3 recruits, an increase compared to the 2018 forecast of 10,814. Approximately 85 percent of the fish released from the Salmon River facility were marked with an adipose fin clip.

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Queets River coho, MFMT = 0.65, and the OFL is  $S_{OFL} = 11,100 \times (1 - 0.65) = 3,885$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **Hoh River**

### *Predictor Description*

The natural coho forecast is based on estimated average smolt production per square mile of watershed from the Clearwater tributary which lies between the Queets River mainstem and the Hoh River. The Quinault Fisheries Department has a long-standing trapping program on the Clearwater River to estimate smolt production; it is assumed the two rivers produce smolts at a comparable rate per square mile of watershed (WDFW 2019). To estimate Hoh River production the Clearwater production of 591.37 smolts per square mile was multiplied by the size of the Hoh watershed (299 square miles), for a total of 176,820 coho smolts.

The total natural smolt production estimate was then multiplied by an expected marine survival rate of 4.85 percent. This is the same marine survival rate used to forecast 2019 Quillayute system and Strait of Juan de Fuca wild coho abundance, and is similar to the 4.60 percent survival to JA3 used in the Queets River. Each model used correlations between ocean indicators and January age-3 run sizes from prior years.

No hatchery production is projected for the Hoh system for 2019.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction indicated no persistent tendency to under- or over- predict abundance. The 2017 forecast was slightly higher than the postseason return estimate (Table III-3; Figure III-1).

### *Stock Forecasts and Status*

The 2019 Hoh River natural coho forecast is 6,963 ocean age-3 recruits, an increase compared to the 2017 and 2018 forecasts of 6,198 and 5,816, respectively. This ocean abundance results in classification of this stock's status as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

## OFL

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Hoh River coho,  $MFMT = 0.65$ , and the OFL is  $S_{OFL} = 6,963 \times (1-0.65) = 2,437$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## Quillayute River

Quillayute River coho consist of a summer run that is managed primarily for hatchery production, and a fall run that is managed primarily for natural production. Quillayute River coho have both natural and hatchery components to both runs.

### *Predictor Description*

The natural coho forecast is based on a scalar and average smolt production when the Quillayute system was trapped. The Clearwater River smolt production is used as a scalar to adjust the smolt production up or down from average production during the years the Bogachiel and Dickey Rivers were trapped, 1987-88, 1990, and 1992-94 respectively. The Quinault Fisheries Department has a long-standing trapping program on the Clearwater River to estimate smolt production.

In 2018, an estimated 119,905 smolts emigrated from the Dickey River and 284,009 smolts emigrated from the rest of the Quillayute system. The total freshwater production for the system is the sum of the two pieces, or 403,914 wild smolts. Separating these into summer and fall wild coho smolts by the relative number of spawners in brood year 2016 yields estimates of 29,977 wild summer coho smolts and 373,936 wild fall coho smolts.

### **Summer Coho**

The summer natural coho forecast is based on the estimated total summer coho smolt production (29,977) and a projected marine survival rate of 4.85 percent. This is the same marine survival rate used to forecast Strait of Juan de Fuca wild coho abundance, and is similar to the 4.60 percent survival to JA3 used in the Queets River. It is a lower marine survival rate than the 5.10 and 4.88 percent used in 2017 and 2018, respectively.

An examination of the return rates of both hatchery releases and natural smolts indicate hatchery return rates are slightly below natural returns. Thus, for the hatchery component, a marine survival rate of 3.85 percent was selected. The survival rate of 3.85 percent was multiplied by a release of 109,666 smolts from the Sol Duc Hatchery.

### **Fall Coho**

The forecast for the natural component was based on the estimated total fall coho smolt production (373,936) multiplied by an expected marine survival rate of 4.85 percent, the same as summer natural returns.

The fall hatchery production forecast was based on the same prediction of marine survival (3.85 percent) used for the summer hatchery coho forecast, multiplied by a release of 542,362 smolts.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates for fall natural coho derived from FRAM run reconstruction indicated a tendency to over-predict actual run size. The 2017 Quillayute fall forecast was higher than the postseason return estimate (Table III-3; Figure III-1).

### *Stock Forecasts and Status*

The 2019 Quillayute River summer natural and hatchery coho forecasts are 1,180 and 3,428 ocean age-3 recruits, respectively; 100 percent of the hatchery smolts were marked with an adipose fin clip. The 2019 forecast abundance of natural summer coho is lower than the 2018 forecast of 2,743.

The 2019 Quillayute River fall natural and hatchery coho forecasts are 14,724 and 16,953 ocean age-3 recruits, respectively. The 2019 forecast abundance of Quillayute fall natural and hatchery coho forecasts are higher than the respective 2018 forecasts of 10,557 and 16,505, respectively. The hatchery smolts were marked as follows: 392,140 (72.3 percent) adipose fin clip only; 75,195 (13.86 percent) adipose fin clip + CWT; and 75,027 (13.83 percent CWT only).

The ocean abundance forecast for Quillayute fall natural coho results in classification of the stock abundance as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

## **North Washington Coast Independent Tributaries**

### *Predictor Description*

Production from several smaller rivers and streams along the North Washington Coast (Waatch River, Sooes River, Ozette River, Goodman Creek, Mosquito Creek, Cedar Creek, Kalaloch Creek, Raft River, Camp Creek, Duck Creek, Moclips River, Joe Creek, Copalis River, and Conner Creek), which flow directly into the Pacific Ocean, is forecast as an aggregate. Generally, stock assessment programs on these systems are minimal.

The 2019 forecast of natural coho production for these independent streams is based on a prediction of 500 smolts per square mile of watershed drainage, 424 square miles of watershed, and resulting in 212,000 smolts multiplied by an expected marine survival rate of 4.725 percent. The expected marine survival rate was developed by averaging the marine survival rate for Strait of Juan de Fuca natural coho, 4.85 percent, and the marine survival rate for Queets natural coho, 4.6 percent.

The 2019 hatchery forecast is based on the predicted marine survival of 7.77 percent for the brood year 2016 multiplied by brood year smolt release (198,161) into the Tsoo-Yess River from the Makah National Fish Hatchery. Ocean indicators suggest the 2016 brood encountered improving ocean conditions after migrating seaward in 2017. The forecast model predicts marine survival using the natural log of the brood's jack return rate. The jack return in 2018 was relatively high making up approximately 30% of the hatchery rack returns. The forecast model using the jack return rate predicted a marine survival rate of 7.77 percent.

### *Predictor Performance*

There was no information available to evaluate performance of predictors for these stocks.

### *Stock Forecasts and Status*

The 2019 forecast of natural coho production for these independent streams is 8,133 age-3 ocean recruits, compared to the 2018 preseason forecast of 4,144.

The 2019 hatchery forecast is 12,505 age-3 ocean recruits, compared to 7,891 age-3 recruits in 2018. All smolts released were marked with an adipose fin clip.

## **PUGET SOUND COHO STOCKS**

Puget Sound coho salmon stocks include natural and hatchery stocks originating from U.S. tributaries in Puget Sound and the Strait of Juan de Fuca. The primary stocks in this group that are most pertinent to ocean salmon fishery management are Strait of Juan de Fuca, Hood Canal, Skagit, Stillaguamish, Snohomish, and South Puget Sound (hatchery) coho. These stocks contribute primarily to ocean fisheries off Washington and B.C.

A variety of preseason abundance estimators currently are employed for Puget Sound coho stocks, primarily based on smolt production and survival (Table I-2). These estimators are used to forecast preseason abundance of adult ocean age-3 recruits. Forecasts for natural Puget Sound coho stocks were generally derived by measured or predicted smolt production from each major watershed or region, multiplied by stock-specific marine survival rate predictions based on a jack return model from the WDFW Big Beef Creek Research Station in Hood Canal, natural coho CWT tagging programs at Baker Lake (Skagit River basin) and South Fork Skykomish River, adult recruits/smolt data generated from the WDFW Deschutes River Research Station, or other information. Puget Sound hatchery forecasts were generally the product of 2016 brood year (BY) smolt releases from each facility, and a predicted marine survival rate for each program. Hatchery marine survival rates were typically based on recent year average survival rates derived from CWT recovery information and/or run reconstructions.

The 2019 total Puget Sound region natural and hatchery coho ocean recruit forecast is 649,560, compared to a 2018 preseason forecast of 529,836. The 2019 natural forecast is 248,848, compared to the 2018 preseason forecast of 243,074. The 2019 hatchery forecast is 400,712, compared to the 2018 preseason forecast of 286,762.

A comparison was made of preseason ocean age-3 forecasts with postseason estimates derived from run reconstructions using FRAM (“Backwards” mode). This method expands observed escapements and actual catch to produce a FRAM estimate of post-season ocean abundance. This post-season FRAM estimate is dependent upon Base Period (1986-1992 fishing years) CWT recovery data. It should be noted that forecast methodology has changed over time, and the overall trends and biases may not reflect the current methods.

Puget Sound coho fall within an exception to the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for these stocks.

### **Strait of Juan de Fuca**

#### *Predictor Description*

The natural forecast includes both Eastern and Western Strait of Juan de Fuca drainages. The forecast is based on a January age-3 ocean survival rate of 4.85 percent. The marine survival rate was predicted by a multiple linear regression model using two independent predictor variables: the natural log of the Elwha Hatchery coho jack return rate, and the PDO sum from May through September of the year preceding smolt outmigration. The marine survival rate was then applied to the coho smolt outmigration (223,939) to produce the forecast of January age-3 recruits and converted to ocean age-3.

#### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction in recent years indicated no notable bias. The 2017 preseason forecast over-predicted the 2017 postseason estimate by a factor of 2.24 (Table III-4; Figure III-1b).

### *Stock Forecasts and Status*

The 2019 Strait of Juan de Fuca natural ocean age-3 abundance forecast is 8,800 compared to the 2018 preseason forecast of 7,168.

The 2019 Strait of Juan de Fuca hatchery ocean age-3 abundance forecast is 16,846.

The preseason forecast of 8,800 age-3 ocean recruits places Strait of Juan de Fuca natural coho in the “Critical” category under the FMP and in the Low category under the PST. This results in an allowable total exploitation rate of no more than 20 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Strait of Juan de Fuca coho  $MFMT = 0.60$ , and the OFL is  $S_{OFL} = 8,800 \times (1 - 0.60) = 3,520$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **Nooksack-Samish**

### *Predictor Description*

The natural coho forecast is the product of projected natural smolt production from each stream basin in the region, multiplied by stock-specific marine survival rate expectations.

The hatchery forecast is based on median marine survival rate expectations for Lummi Bay Hatchery or Skookum Hatchery multiplied by the number of smolts released.

### *Predictor Performance*

There was no information available to evaluate performance of predictors for Nooksack-Samish coho stocks.

### *Stock Forecasts and Status*

The 2019 Nooksack-Samish natural ocean age-3 abundance forecast is 25,133, compared to the 2018 preseason forecast of 20,574.

The 2019 Nooksack-Samish hatchery ocean age-3 abundance forecast is 59,790, compared to the 2018 preseason forecast of 61,256.

## **Skagit**

### *Predictor Description*

This natural forecast is based on weighted regression results of Saratoga Passage chlorophyll and light transmissivity in May, ONI in January - June, PDO in May – September and NPGO in May - September. The range of brood years used in this analysis was 1996 to 2014; brood years 1998 and 1999 were excluded because no Baker wild smolts were tagged in those years. The analysis produced an average marine survival of 3.88 percent; this was multiplied by the measured smolt production from the Skagit basin (49,075 Baker wild smolts and 1,444,051 Skagit wild smolts).

The hatchery forecast is based on weighted regression results of Saratoga Passage chlorophyll and light transmissivity in May, PDO in May - September and NPGO in May - September. Analysis of Marblemount Hatchery CWT recoveries for brood years 1996-2014 produced an average marine survival rate of 2.92

percent; this was multiplied by the total number of 2018 smolts released from all regional hatcheries (64,614 Baker marked hatchery smolts, 37,851 Marblemount unmarked hatchery smolts, and 237,149 Marblemount marked hatchery smolts).

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction indicated a tendency to over-predict actual run size, especially early in the time series. The 2017 preseason forecast under-predicted the postseason estimate by a factor of .50 (Table III-4; Figure III-1b).

### *Stock Forecasts and Status*

The 2019 Skagit natural ocean age-3 abundance forecast is 57,933, compared to the 2018 preseason forecast of 59,196.

The 2019 Skagit hatchery ocean age-3 abundance forecast is 9,917, compared to the 2018 preseason forecast of 13,101.

The preseason forecast of 57,933 age-3 ocean recruits places Skagit natural coho in the Low category under the FMP and in the Moderate category under the PST. This results in an allowable total exploitation rate of no more than 35 percent under both the Council adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Skagit River coho,  $MFMT = 0.60$  and the OFL is  $S_{OFL} = 57,933 \times (1 - 0.60) = 23,173$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **Stillaguamish**

### *Predictor Description*

Regressing annual coho CPUE (total fish/total hours fished) against terminal run size one year later, generates a relationship that could be used to predict Stillaguamish adult returns. However, due to the high variability in marine survival (MS), coho smolt numbers at the trap are not a very precise predictor of adult returns one year later. Therefore, the Stillaguamish smolt trap CPUE was corrected with the South Fork Skykomish MS estimate for each brood and log transformed the data, which tightened the regression relationship with the terminal run.

The natural coho marine survival rate is 4.0 percent, which is below the long term average for the South Fork Skykomish (12.79 percent) and in consideration of ocean conditions to be similar, if not slightly worse, to 2018 returns. Due to consecutive years of low returns, discussion with the co-managers concluded that a MS of 4.0 percent is most risk-averse for harvest management purposes.

The Stillaguamish Hatchery released 57,060 marked and 6,765 unmarked yearlings in 2018, with an estimated 1,997 marked and 237 unmarked adults returning based on current a hatchery marine survival estimate of 3.5 percent.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction in recent years indicated no notable bias. The 2017 preseason forecast over-predicted the postseason estimate by a factor of 1.10 (Table III-4; Figure III-1b).

### *Stock Forecasts and Status*

The 2019 Stillaguamish natural ocean age-3 abundance forecast is 23,820, compared to the 2018 preseason forecast of 18,950.

The 2019 Stillaguamish hatchery ocean age-3 abundance is 2,234, compared to the 2018 preseason forecast of less than 500.

The preseason forecast of 23,820 age-3 ocean recruits places Stillaguamish natural coho in the Normal category under the FMP and in the “Abundant” category under the PST. This results in an allowable total exploitation rate of no more than 50 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Stillaguamish coho,  $MFMT = 0.50$  and the OFL is  $S_{OFL} = 23,820 \times (1-0.50) = 11,910$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **Snohomish**

### *Predictor Description*

The natural forecast is based on production of 2018 out-migrant smolts estimated from rotary screwtraps in the Skykomish and Snoqualmie rivers, and expanded to account for the “unsampled” spawning habitat downstream the traps and a 4.0 percent marine survival. The total smolt production estimate for the Snohomish watershed during 2018 is 1,565,000 smolts.

The hatchery forecast is based on 2018 hatchery releases of smolts from the WDFW Wallace River Hatchery, the Everett Net Pens, Eagle Creek and Tulalip Bernie Kai Kai Gobin Hatchery and a 3.5 percent marine survival.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction indicated no notable bias. The 2017 forecast over-estimated the postseason estimate by a factor of 4.64 (Table III-4; Figure III-1b).

### *Stock Forecasts and Status*

The 2019 Snohomish natural ocean age-3 abundance forecast is 62,600, compared to the 2018 preseason forecast of 65,925.

The 2019 Snohomish hatchery ocean age-3 abundance forecast is 43,662, compared to the 2018 preseason forecast of 38,303.

The preseason forecast of 62,600 age-3 ocean recruits places Snohomish natural coho in the Low category under the FMP and in the Moderate category under the PST. This results in an allowable total exploitation

rate of no more than 40 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Snohomish coho, MFMT = 0.60 and the OFL is  $S_{OFL} = 62,600 \times (1-0.60) = 25,054$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **Hood Canal**

### *Predictor Description*

The natural forecast is based on a regression of CWT natural Big Beef Creek jacks on Hood Canal December age-2 recruits, using brood years 1983-1998 and 2002-2014 and converted to ocean age-3. The 1999-2001 broods were excluded because of the unusually high recruit-per-tagged jack ratio, which is not expected to occur this year. For 2019, as was done in the previous three years, the co-managers agreed to apply a bias correction for forecasting natural coho in Hood Canal.

The hatchery forecast is based on average cohort reconstruction-based December age-2 recruits/smolt for the six most recent available broods from each facility, applied to the 2016 brood smolt releases for each facility and converted to ocean age-3.

### *Predictor Performance*

A comparison of preseason ocean age-3 forecasts with postseason estimates derived from FRAM run reconstruction indicated no notable bias. The 2017 preseason forecast over-predicted the postseason estimate by a factor of 3.32 (Table III-4; Figure III-1b).

### *Stock Forecasts and Status*

The 2019 Hood Canal natural ocean age-3 abundance forecast is 40,140, compared to the 2018 preseason forecast of 59,530.

The 2019 Hood Canal hatchery ocean age-3 abundance forecast is 87,869, compared to the 2018 preseason forecast of 84,549.

The 2019 preseason forecast of 40,140 age-3 ocean recruits places Hood Canal natural coho in the Low category under the FMP and in the Moderate category under the PST. This results in an allowable total exploitation rate of no more than 45 percent under both the Council adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ( $S_{OFL}$ ). For Hood Canal coho MFMT = 0.65, and the OFL is  $S_{OFL} = 40,140 \times (1-0.65) = 14,049$ . The preseason  $S_{OFL}$  value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## **South Sound**

### *Predictor Description*

The natural forecast is the product of projected smolt production from each of the stream basins in the region multiplied by a marine survival rate expectation for natural coho in the region. The upper South

Sound natural stocks' marine survival rate of 2.4 percent was based upon a recent year average smolt to adult ratio. The deep South Sound stocks' marine survival prediction of 2.8 percent also came from the methods of WDFW 2019 Wild Coho Forecast paper.

The hatchery forecast is the product of projected smolt production from each of the stream basins in the region multiplied by a marine survival rate expectation for hatchery coho in the region. The upper South Sound hatchery stocks' marine survival rate of 2.4 percent was based upon a recent year average smolt to adult ratio expanded to ocean age 3 using pre-terminal ERs from 2010 – 2017, excluding 2016. The deep South Sound stocks' marine survival prediction of 2.1 percent came from the South Sound recent year average.

### *Stock Forecasts and Status*

The 2019 South Sound natural ocean age-3 abundance forecast is 30,422 compared to the 2018 preseason forecast of 15,034.

The 2019 South Sound hatchery ocean age-3 abundance forecast is 180,394, compared to the 2018 preseason forecast of 103,011.

### **STOCK STATUS DETERMINATION UPDATES**

Queets River natural coho, Strait of Juan de Fuca natural coho, and Snohomish River natural coho were found to meet the criteria for being classified as overfished in the PFMC *Review of 2017 Ocean Salmon Fisheries*, released in February 2018. These three stocks remain overfished at the current time, based on escapement estimates detailed in the PFMC *Review of 2018 Ocean Salmon Fisheries*, released in February 2019.

### **SELECTIVE FISHERY CONSIDERATIONS FOR COHO**

As the region has moved forward with mass marking of hatchery coho salmon stocks, selective fishing options have become an important consideration for fishery managers. Projected coho mark rates in Canadian, Puget Sound, and north Washington Coast fisheries are generally slightly higher than 2018 projections. Table III-6 summarizes projected 2019 mark rates for coho fisheries by month from Southern British Columbia, Canada to the Oregon Coast, based on preseason abundance forecasts.

TABLE III-1. Preliminary preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 1 of 2)

Year	Columbia River Hatchery - Early Stock			Columbia River Hatchery - Late Stock			Lower Columbia River Natural (LCN)			Oregon Coast Natural (Rivers and Lakes)		
	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>
1996	142.2	98.0	1.45	114.4	30.8	3.71				63.2	86.1	0.73
1997	206.9	129.8	1.59	86.5	53.7	1.61				86.4	27.8	3.11
1998	63.8	126.4	0.50	24.9	47.3	0.53				47.2	29.2	1.62
1999	325.5	174.9	1.86	140.9	120.7	1.17				60.7	51.9	1.17
2000	326.3	378.0	0.86	278.0	260.1	1.07				55.9	69.0	0.81
2001	1036.5	873.0	1.19	491.8	488.3	1.01				50.1	163.2	0.31
2002	161.6	324.7	0.50	143.5	271.8	0.53				71.8	304.5	0.24
2003	440.0	645.7	0.68	377.9	248.0	1.52				117.9	278.8	0.42
2004	313.6	389.0	0.81	274.7	203.0	1.35				150.9	197.0	0.77
2005	284.6	282.7	1.01	78.0	111.6	0.70				152.0	150.1	1.01
2006	245.8	251.4	0.98	113.8	156.3	0.73				60.8	116.4	0.52
2007	424.9	291.0	1.46	139.5	171.0	0.82	21.5	20.5	1.05	255.4	60.0	4.26
2008	110.3	333.9	0.33	86.4	207.6	0.42	13.4	28.7	0.47	60.0	170.9	0.35
2009	672.7	681.4	0.99	369.7	374.1	0.99	32.7	37.6	0.87	211.6	257.0	0.82
2010	245.3	274.3	0.89	144.2	263.6	0.55	15.1	53.2	0.28	148.0	266.8	0.55
2011	216.0	288.5	0.75	146.5	141.2	1.04	22.7	29.5	0.77	249.4	311.6	0.80
2012	229.8	114.7	2.00	87.4	55.6	1.57	30.1	12.9	2.33	291.0	123.8	2.35
2013	331.6	190.8	1.74	169.5	110.7	1.53	46.5	36.8	1.26	191.0	128.4	1.49
2014	526.6	760.5	0.69	437.5	480.3	0.91	33.4	108.7	0.31	230.6	403.3	0.57
2015	515.2	150.5	3.42	261.9	91.8	2.85	35.9	20.9	1.72	206.6	70.4	2.93
2016	153.7	127.0	1.21	226.9	96.1	2.36	40.0	25.1	1.59	152.7	83.2	1.84
2017	231.7	170.9	1.36	154.6	108.4	1.43	30.1	31.2	0.96	101.9	65.6	1.55
2018	164.7	82.7	1.99	121.5	64.6	1.88	21.9	29.7	0.74	54.9	81.3	0.68
2019	545.0	-	-	360.6	-	-	36.9	-	-	76.1	-	-

TABLE III-1. Preliminary preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 2 of 2)

Year	Pre/Post season <sup>a/</sup>			Pre/Post season <sup>a/</sup>			Pre/Post season <sup>a/</sup>			Pre/Post season <sup>a/</sup>		
	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>	Preseason	Postseason <sup>a/</sup>	Pre/Post season <sup>a/</sup>
	Salmon Trout Enhancement Program (STEP) <sup>c/</sup>			Oregon Coast			California and Oregon Coast			Oregon Production Index Area Hatchery Total <sup>b/</sup>		
				North of Cape Blanco			South of Cape Blanco					
1996	0.4	1.2	0.33	38.5	28.0	1.38	14.2	25.8	0.55	309.2	182.6	1.69
1997	1.3	0.3	4.33	60.4	19.0	3.18	22.3	12.8	1.74	376.1	215.3	1.75
1998	0.2	0.3	0.67	21.6	19.7	1.10	8.1	10.2	0.79	118.4	203.6	0.58
1999	0.7	0.4	1.75	59.4	14.4	4.13	33.4	9.6	3.48	559.2	319.6	1.75
2000	0.6	0.5	1.20	48.5	23.4	2.07	18.6	15.6	1.19	671.4	677.1	0.99
2001	1.0	1.4	0.71	127.3	46.9	2.71	52.0	46.0	1.13	1707.6	1454.2	1.17
2002	0.6	3.0	0.20	36.6	41.6	0.88	20.0	22.0	0.91	361.7	660.1	0.55
2003	3.6	3.6	1.00	29.3	34.5	0.85	15.9	24.3	0.65	863.1	952.5	0.91
2004	3.1	1.0	3.10	16.6	21.7	0.76	19.0	29.9	0.64	623.9	634.6	0.98
2005	1.0	0.4	2.50	11.5	10.7	1.07	15.8	38.1	0.41	389.9	443.1	0.88
2006	0.6	0.1	6.00	8.6	7.9	1.09	30.6	25.0	1.22	398.8	440.6	0.91
2007	0.2	0.0	-	7.0	1.3	5.38	22.2	13.2	1.68	593.6	476.5	1.25
2008				1.7	7.1	0.24	17.7	16.8	1.05	216.1	565.4	0.38
2009				7.3	7.5	0.97	23.4	3.1	7.55	1073.1	1066.2	1.01
2010				4.4	8.6	0.51	14.1	4.8	2.94	408.0	551.3	0.74
2011				3.6	3.6	1.00	9.0	9.0	1.00	375.1	442.3	0.85
2012				6.4	3.1	2.06	18.1	8.6	2.10	341.7	182.3	1.87
2013				5.6	5.7	0.98	18.7	7.6	2.46	525.4	316.9	1.66
2014				4.8	19.3	0.25	14.2	3.4	4.18	983.1	1263.6	0.78
2015				6.9	5.6	1.23	24.4	3.8	6.42	808.4	251.7	3.21
2016				5.5	9.3	0.59	10.4	1.5	6.93	396.5	233.8	1.70
2017				3.5	1.9	1.84	4.5	3.6	1.25	394.3	284.8	1.38
2018				3.3	1.1	3.00	4.6	1.0	4.60	294.1	149.4	1.97
2019				12.0	-	-	15.9	-	-	933.5	-	-

a/ Postseason estimates are based on preliminary data and not all stocks have been updated.

b/ LCN abundance is included as a subset of early/late hatchery abundance beginning in 2007. STEP estimates not included.

c/ Program was discontinued in 2005.

TABLE III-2. Oregon production index (OPI) area coho harvest impacts, spawning, abundance, and exploitation rate estimates in thousands of fish.<sup>a/</sup>

Year or Avg.	Oregon and California Coastal Returns							Ocean Exploitation Rate Based on OPI Abundance <sup>f/</sup>
	Ocean Fisheries <sup>b/</sup>		Hatcheries and Freshwater		Columbia River		Abundance <sup>e/</sup>	
	Troll	Sport	Harvest <sup>c/</sup>	OCN Spaw ners <sup>d/</sup>	Private Hatcheries	Returns		
1970-1975	1,629.6	558.4	45.8	55.2	-	460.4	2,749.3	0.80
1976-1980	1,253.6	555.0	31.2	31.1	26.1	263.3	2,154.2	0.85
1981-1985	451.2	274.0	37.2	56.0	176.8	305.3	1,328.6	0.63
1986-1990	574.6	339.3	55.1	45.5	154.3	705.0	1,602.2	0.70
1991-1995	107.4	182.7	46.6	53.2	35.1	315.1	668.4	0.35
1996	7.0	31.8	45.8	87.5	-	117.1	260.3	0.15
1997	5.5	22.4	27.9	31.6	-	156.4	230.5	0.12
1998	3.5	12.8	31.2	34.9	-	175.9	270.8	0.06
1999	3.6	36.5	23.4	48.6	-	289.1	432.0	0.09
2000	25.2	74.6	37.0	84.8	-	558.3	762.4	0.13
2001	38.1	216.8	75.7	174.7	-	1128.3	1,673.2	0.15
2002	15.0	118.7	53.9	266.9	-	535.8	972.2	0.14
2003	28.8	252.4	44.9	236.2	-	713.2	1,266.9	0.22
2004	26.2	159.3	38.1	197.3	-	463.5	904.5	0.21
2005	10.5	58.2	42.7	164.6	-	354.7	629.9	0.11
2006	4.5	47.5	29.5	132.7	-	409.7	674.1	0.08
2007	26.2	128.5	10.9	71.4	-	349.0	631.3	0.25
2008	0.6	26.4	16.0	180.1	-	520.8	769.8	0.04
2009	27.7	201.2	16.5	265.3	-	760.2	1,341.3	0.17
2010	5.8	48.8	18.5	287.1	-	466.5	848.4	0.06
2011	4.2	54.7	20.0	360.8	-	378.1	836.4	0.07
2012	4.7	45.5	18.5	104.6	-	152.4	311.3	0.16
2013	8.4	48.3	26.5	135.6	-	252.8	494.1	0.11
2014	35.6	197.4	42.0	362.1	-	1,019.5	1,724.8	0.14
2015	11.7	84.4	11.8	61.2	-	169.5	336.3	0.29
2016	2.8	31.7	11.4	82.2	-	205.0	334.8	0.10
2017	2.1	50.0	3.9	65.9	-	236.3	355.4	0.15
2018 <sup>g/</sup>	1.5	53.8	3.0	79.4	-	138.4	232.4	0.24

a/ The OPI area includes ocean and inside harvest impacts and escapement to streams and lakes south of Leadbetter Pt., Washington.

b/ Includes estimated non-retention mortalities; troll: release mort.(1982-present) and drop-off mort.(all yrs.); sport: release mort.(1994-present) and drop-off mort.(all yrs.).

c/ Includes STEP smolt releases through the 2007 return year, after which the program was terminated.

d/ Includes Rogue River.

e/ FRAM post-season runs used after 1985 and includes OPI origin stock catches in all fisheries.

f/ Private hatchery stocks are excluded in calculating the OPI area stock aggregate ocean exploitation rate index.

g/ Preliminary.

TABLE III-3. Preseason forecasts and postseason estimates of ocean abundance for selected Washington coastal adult natural coho stocks in thousands of fish.

Year or Ave.	Preseason Forecast	Postseason Return	Pre/Post- season	Preseason Forecast	Postseason Return	Pre/Post- season	Preseason Forecast	Postseason Return	Pre/Post- season	Preseason Forecast	Postseason Return	Pre/Post- season
	<b>Quillayute River Fall</b>			<b>Hoh River</b>			<b>Queets River</b>			<b>Grays Harbor<sup>a/b/</sup></b>		
1991-1995	15.4	16.2	1.07	7.1	8.5	1.32	11.9	14.0	1.2	122.8	68.0	2.2
1996	13.0	20.3	0.64	4.2	7.7	0.54	8.3	22.6	0.37	121.4	89.7	1.35
1997	8.9	5.8	1.53	2.8	4.1	0.68	4.3	2.2	1.92	26.1	20.2	1.29
1998	8.0	17.4	0.46	3.4	5.6	0.61	4.2	6.3	0.66	30.1	46.4	0.65
1999	14.5	16.1	0.90	3.2	6.8	0.47	4.3	8.6	0.50	57.7	42.7	1.35
2000	8.7	16.5	0.53	3.5	9.3	0.38	2.7	12.1	0.22	47.8	51.9	0.92
2001	23.0	28.4	0.81	8.5	16.2	0.52	12.0	35.8	0.33	51.3	103.2	0.50
2002	22.3	33.2	0.67	8.5	13.2	0.64	12.5	26.3	0.47	55.4	142.0	0.39
2003	24.9	22.5	1.11	12.5	8.7	1.44	24.0	15.7	1.52	58.0	108.4	0.54
2004	21.2	20.7	1.02	8.1	6.9	1.17	18.5	13.3	1.39	117.9	90.8	1.30
2005	18.6	20.9	0.89	7.6	8.2	0.93	17.1	11.9	1.43	91.1	65.9	1.38
2006	14.6	9.9	1.48	6.4	2.7	2.36	8.3	9.2	0.90	67.3	30.6	2.20
2007	10.8	10.7	1.01	5.4	5.8	0.93	13.6	7.1	1.92	59.4	34.6	1.72
2008	10.5	11.1	0.95	4.3	4.3	1.00	10.2	7.4	1.39	42.7	49.0	0.87
2009	19.3	15.5	1.24	9.5	9.5	1.00	31.4	16.0	1.97	59.2	104.6	0.57
2010	22.0	17.1	1.29	7.6	11.4	0.67	21.8	19.9	1.09	67.9	117.4	0.58
2011	28.2	13.3	2.11	11.6	13.0	0.89	13.3	15.1	0.88	89.1	86.2	1.03
2012	33.5	12.8	2.61	14.3	8.1	1.77	37.2	9.1	4.08	150.2	103.9	1.45
2013	17.2	15.8	1.09	8.6	9.2	0.94	24.5	9.9	2.48	196.8	80.3	2.45
2014	18.4	17.3	1.07	8.9	9.1	0.97	10.3	12.8	0.80	108.8	152.9	0.71
2015	10.5	4.8	2.19	5.1	2.9	1.74	7.5	2.7	2.75	142.6	31.7	4.50
2016	4.5	11.7	0.38	2.1	5.4	0.39	3.5	6.5	0.54	35.7	35.3	1.01
2017	15.8	12.9	1.22	6.2	6.0	1.03	6.5	6.8	0.96	50.0	37.3	1.34
2018	10.6	NA	NA	5.8	NA	NA	7.0	NA	NA	42.4	NA	NA
2019	14.7	-	-	7.0	-	-	11.1	-	-	71.5	-	-

a/ Coho FRAM w as used to estimate post-season ocean abundance.

b/ In 1993 and 1994 preseason forecasts w ere a range of 144-153 and 53.8-60.2 respectively. The midpoint of each range w as used in calculating the 1991-1995 average.

TABLE III-4. Preseason forecasts and postseason estimates of ocean abundance for selected Puget Sound adult natural coho stocks in thousands of fish<sup>a/</sup>. (Page 1 of 2)

Year or Ave.	Preseason	Postseason		Preseason	Postseason		Preseason	Postseason		
	Forecast <sup>b/</sup>	Return	Pre/Postseason	Forecast	Return	Pre/Postseason	Forecast	Return	Pre/Postseason	
		<b>Skagit River</b>			<b>Stillaguamish River</b>			<b>Hood Canal</b>		
1991-1995	NA	82.0	-	53.6	18.1	3.74	94.2	14.2	6.63	
1996	NA	48.3	-	51.6	12.5	4.13	25.1	37.2	0.67	
1997	70.9	63.1	1.12	36.0	14.1	2.56	78.4	101.8	0.77	
1998	55.0	95.1	0.58	47.8	31.1	1.54	108.0	118.5	0.91	
1999	75.7	40.9	1.85	35.7	7.5	4.77	65.1	17.6	3.70	
2000	30.2	95.2	0.32	17.7	31.2	0.57	61.0	39.7	1.54	
2001	87.2	132.5	0.66	24.4	81.8	0.30	62.0	110.0	0.56	
2002	98.5	71.8	1.37	19.7	30.4	0.65	34.9	81.0	0.43	
2003	116.6	114.1	1.02	37.8	49.8	0.76	33.4	199.9	0.17	
2004	155.8	145.3	1.07	38.0	73.9	0.51	98.7	219.7	0.45	
2005	61.8	52.4	1.18	56.7	29.1	1.95	98.4	68.3	1.44	
2006	106.6	11.5	9.25	45.0	11.8	3.81	59.4	49.7	1.20	
2007	26.8	83.0	0.32	69.2	45.2	1.53	42.4	78.6	0.54	
2008	61.4	35.5	1.73	31.0	15.3	2.03	30.4	25.8	1.18	
2009	33.4	87.5	0.38	13.4	27.4	0.49	48.6	45.7	1.06	
2010	95.9	64.6	1.48	25.9	16.8	1.55	33.2	14.5	2.29	
2011	138.1	78.1	1.77	66.6	61.3	1.09	74.7	56.8	1.31	
2012	48.3	139.1	0.35	47.5	60.6	0.78	73.4	125.5	0.58	
2013	137.2	150.7	0.91	33.1	78.1	0.42	36.8	37.9	0.97	
2014	112.4	51.7	2.17	32.5	49.1	0.66	82.8	69.6	1.19	
2015	121.4	15.5	7.82	31.3	5.6	5.59	61.5	63.7	0.96	
2016	8.9	44.7	0.20	2.8	15.6	0.18	35.3	31.8	1.11	
2017	11.2	22.3	0.50	7.6	6.9	1.10	115.6	35.0	3.31	
2018	59.2	NA	NA	19.0	NA	NA	59.5	NA	NA	
2019	57.9	-	-	23.8	-	-	40.1	-	-	

TABLE III-4. Preseason and postseason estimates of ocean abundance for selected Puget Sound adult natural coho stocks in thousands of fish<sup>a/</sup>. (Page 2 of 2)

Year or Ave.	Preseason	Postseason	Pre/Postseason	Preseason	Postseason	Pre/Postseason
	Forecast	Return		Forecast	Return	
	<b>Snohomish</b>			<b>Strait of Juan de Fuca</b>		
1991-1995	341.6	200.6	1.85	20.6	19.3	1.22
1996	338.1	132.3	2.55	10.7	19.4	0.55
1997	186.6	106.4	1.75	6.5	20.3	0.32
1998	165.3	193.9	0.85	16.8	21.0	0.80
1999	141.6	82.2	1.72	14.7	9.9	1.48
2000	53.0	154.6	0.34	13.5	28.6	0.47
2001	129.6	360.1	0.36	21.4	43.9	0.49
2002	123.1	185.5	0.66	21.3	26.3	0.81
2003	203.0	198.0	1.03	25.6	22.9	1.12
2004	192.1	287.9	0.67	35.7	23.8	1.50
2005	241.6	133.4	1.81	20.7	12.5	1.66
2006	139.5	94.2	1.48	26.1	4.6	5.65
2007	98.9	156.4	0.63	29.9	10.2	2.92
2008	92.0	49.5	1.86	24.1	3.9	6.25
2009	67.0	133.4	0.50	20.5	24.7	0.83
2010	99.4	54.4	1.83	8.5	20.1	0.42
2011	180.0	137.4	1.31	12.3	11.7	1.05
2012	109.0	175.8	0.62	12.6	12.5	1.01
2013	163.8	176.0	0.93	12.6	9.8	1.29
2014	150.0	66.6	2.25	12.5	13.8	0.91
2015	151.5	28.3	5.35	11.1	4.7	2.36
2016	20.6	54.1	0.38	4.4	8.7	0.51
2017	107.3	23.2	4.63	13.1	5.9	2.24
2018	65.9	NA	NA	7.2	NA	NA
2019	62.6	-	-	8.8	-	-

a/ Coho FRAM w as used to estimate post season ocean abundance.

b/ Preseason forecasts in 1986-1996 were based on accounting system that significantly underestimated escapement and are not comparable to post season.

TABLE III-5. Status categories and constraints for Puget Sound and Washington Coast coho under the FMP and PST Southern Coho Management Plan.

<b>FMP</b>		
FMP Stock	Total Exploitation Rate Constraint <sup>a/</sup>	Categorical Status <sup>a/</sup>
Skagit	35%	Low
Stillaguamish	50%	Normal
Snohomish	40%	Low
Hood Canal	45%	Low
Strait of Juan de Fuca	20%	Critical
Quillayute Fall	59%	
Hoh	65%	
Queets	65%	
Grays Harbor	65%	

**PST Southern Coho Management Plan**

U.S. Management Unit	Total Exploitation Rate Constraint <sup>b/</sup>	Categorical Status <sup>c/</sup>
Skagit	35%	Moderate
Stillaguamish	50%	Abundant
Snohomish	40%	Moderate
Hood Canal	45%	Moderate
Strait of Juan de Fuca	20%	Low
Quillayute Fall <sup>c/</sup>	57%	Abundant
Hoh <sup>c/</sup>	71%	Abundant
Queets <sup>c/</sup>	48%	Abundant
Grays Harbor	51%	Abundant

a/ Preliminary. For Puget Sound stocks, the exploitation rate constraints and categorical status (Normal, Low, Critical) reflect application of Comprehensive Coho Agreement rules, as adopted in the FMP. For Washington Coast stocks, exploitation rate constraints represent MFMT. Note that under *U.S. v. Washington* and *Hoh v. Baldrige* case law, the management objectives can differ from FMP objectives provided there is an annual agreement among the state and tribal comanagers; therefore, the exploitation rates used to report categorical status do not necessarily represent maximum allowable rates for these stocks.

b/ Preliminary. For Puget Sound and Washington Coast management units, the exploitation rate constraints reflect application of the 2019 PST Southern Coho Management Plan.

c/ Categories (Abundant, Moderate, Low) correspond to the general exploitation rate ranges depicted in paragraph 8(b)(iii) of the 2019 PST Southern Coho Management Plan. For Washington Coast stocks, categorical status is determined by the exploitation rate associated with meeting the escapement goal (or the lower end of the escapement goal range). This also becomes the maximum allowable rate unless the stock is in the "Low" status. In that case, an ER of up to 20% is allowed.

TABLE III-6. Projected coho mark rates for 2019 U.S. forecasts under base period fishing patterns (percent marked).

Area	Fishery	June	July	August	Sept
Canada					
Johnstone Strait	Recreational	-	47%	42%	-
West Coast Vancouver Island	Recreational	58%	47%	58%	62%
North Georgia Strait	Recreational	58%	59%	59%	57%
South Georgia Strait	Recreational	42%	61%	53%	59%
Juan de Fuca Strait	Recreational	59%	58%	60%	55%
Johnstone Strait	Troll	65%	60%	45%	56%
NW Vancouver Island	Troll	51%	48%	45%	40%
SW Vancouver Island	Troll	49%	52%	51%	55%
Georgia Strait	Troll	62%	61%	62%	58%
Puget Sound					
Strait of Juan de Fuca (Area 5)	Recreational	67%	61%	58%	60%
Strait of Juan de Fuca (Area 6)	Recreational	67%	59%	60%	56%
San Juan Island (Area 7)	Recreational	47%	60%	56%	45%
North Puget Sound (Areas 6 & 7A)	Net	-	67%	57%	50%
Council Area					
Neah Bay (Area 4/4B)	Recreational	47%	63%	57%	63%
LaPush (Area 3)	Recreational	70%	64%	73%	59%
Westport (Area 2)	Recreational	77%	72%	67%	66%
Columbia River (Area 1)	Recreational	81%	81%	74%	77%
Tillamook	Recreational	72%	66%	64%	65%
New port	Recreational	68%	64%	63%	55%
Coos Bay	Recreational	65%	62%	57%	48%
Brookings	Recreational	62%	51%	45%	17%
Neah Bay (Area 4/4B)	Troll	54%	59%	58%	62%
LaPush (Area 3)	Troll	48%	59%	59%	62%
Westport (Area 2)	Troll	66%	63%	64%	59%
Columbia River (Area 1)	Troll	75%	74%	70%	65%
Tillamook	Troll	62%	62%	67%	61%
New port	Troll	64%	62%	63%	63%
Coos Bay	Troll	64%	62%	59%	48%
Brookings	Troll	57%	54%	57%	66%
Columbia River					
Buoy 10	Recreational	-	-	-	71%

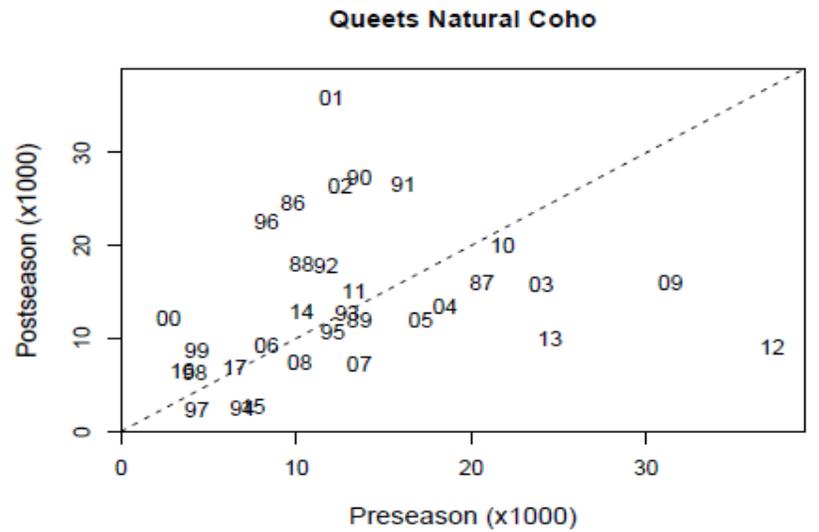
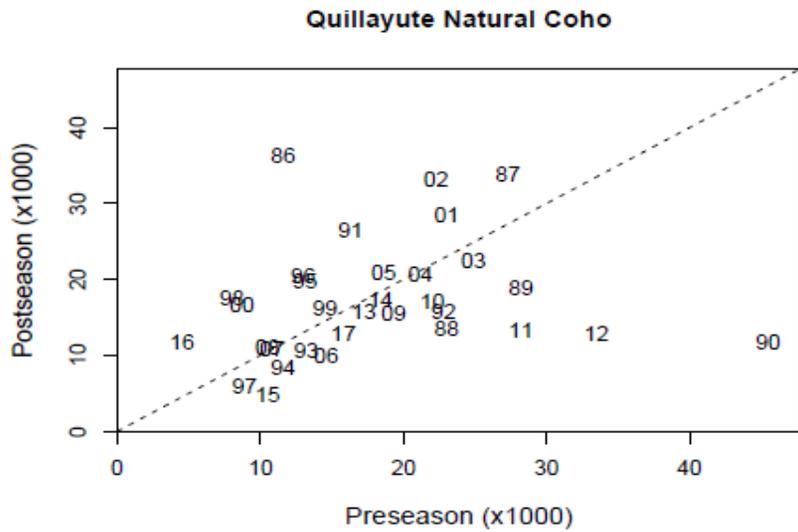
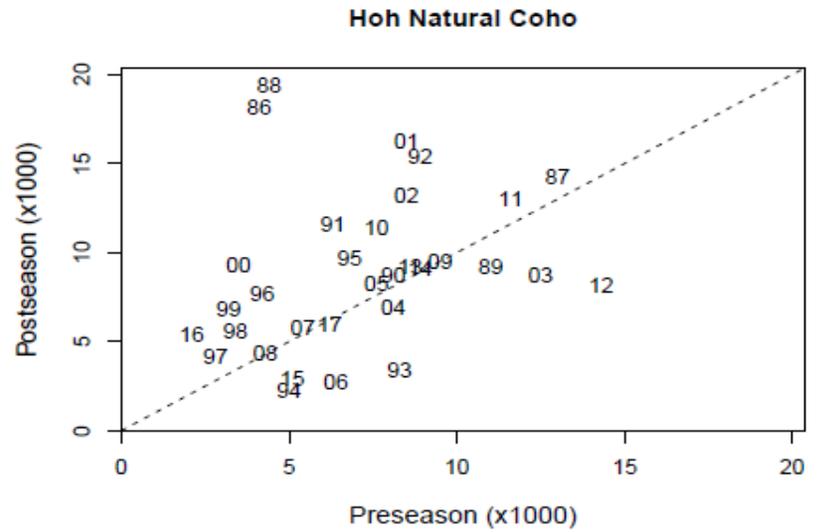
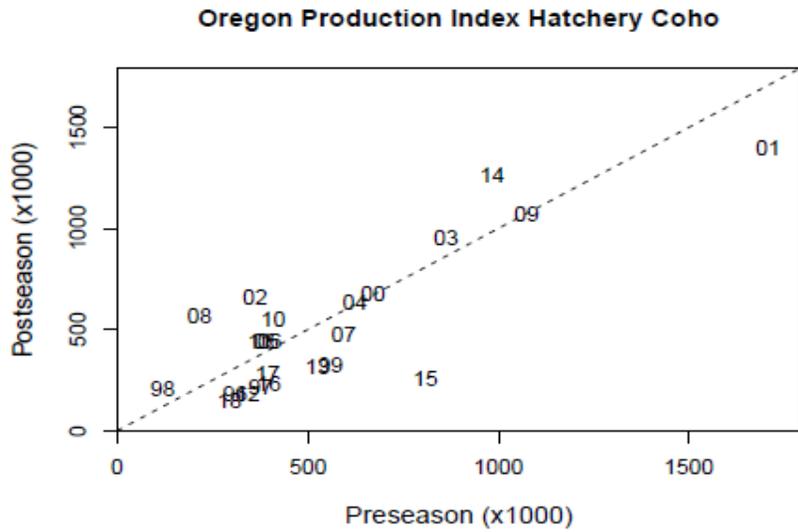


FIGURE III-1a. Selected preseason vs. postseason forecasts for coho stocks with substantial contribution to Council area fisheries.



## CHAPTER IV: AFFECTED ENVIRONMENT - PINK SALMON ASSESSMENT

Two major runs comprise the pink salmon population available to Council fisheries during odd-numbered years: the Puget Sound run and the Fraser River (British Columbia) run, which is more abundant of the two runs. The 2017 pink salmon runsize forecasts included 1.15 million for Puget Sound and 8.69 million for Fraser River. The 2017 actual run sizes included 510,857 for Puget Sound and 3.62 million for Fraser River. The Puget Sound runsize was the fifth lowest in the time series from 1959-2018 and lowest since 1997. The Fraser River run size represented 42 percent of the pre-season forecast. The 2019 run size forecasts include 608,388 Puget Sound pink salmon and 5.02 million Fraser River pink salmon (Table IV-1).

TABLE IV-1. Estimated annual (odd-numbered years) run sizes and forecasts for Fraser River and Puget Sound pink salmon in millions of fish.

Year	Puget Sound		Fraser River <sup>a/</sup>	
	Forecast	Actual	Forecast	Actual
1977	NA	0.88	NA	8.21
1979	NA	1.32	NA	14.40
1981	NA	0.50	NA	18.69
1983	NA	1.01	NA	15.35
1985	NA	1.76	NA	19.10
1987	NA	1.57	NA	7.17
1989	NA	1.93	NA	16.63
1991	NA	1.09	NA	22.18
1993	NA	1.06	NA	16.98
1995	3.4	2.08	NA	12.90
1997	NA	0.44	11.40	8.18
1999	NA	0.96	NA	3.59
2001	2.92	3.56	5.47	21.17
2003	2.32	2.90	17.30	26.00
2005	1.98	1.23	16.30	10.00
2007	3.34	2.45	19.60	11.00
2009	5.16	9.84	17.54	19.50
2011	5.98	5.27	17.50	20.65
2013	6.27	8.75	8.93	15.90
2015	6.76	3.70	14.50	5.78
2017	1.15	0.51	8.69	3.62
2019 <sup>b/</sup>	0.61	NA	5.02	NA

a/ Total run size.

b/ Preliminary forecast.

## **CHAPTER V: DESCRIPTION AND ANALYSIS OF THE NO-ACTION ALTERNATIVE**

The No-Action Alternative consists of the preseason management measures adopted by the Council and approved by the Secretary of Commerce for the 2018 ocean salmon season between the U.S./Canada border and the U.S./Mexico border. The management measures relate to three fishery sectors: non-Indian commercial (Table V-1), recreational (Table V-2), and treaty Indian (Table V-3). A description of the 2018 preseason management measures and analyses of their projected effects on the biological and socioeconomic environment are presented in Preseason Report III (PFMC 2018c). A description of the 2018 management measures as implemented, including inseason modifications, and an analysis of their effects on the environment, including a historical perspective, is presented in the SAFE document - Review of 2018 Ocean Salmon Fisheries (PFMC 2019).

### ***ANALYSIS OF EFFECTS ON THE ENVIRONMENT OF THE NO-ACTION ALTERNATIVE***

#### **Overview**

Table V-4 provides a summary of Salmon FMP stock spawning escapement and exploitation rate projections for 2019 under the No-Action Alternative (2018 regulations), as well as postseason estimates of these quantities for earlier years, which are compared to FMP conservation objectives. For some stocks, postseason estimates of these metrics were either incomplete or unavailable when the Review of 2018 Ocean Salmon Fisheries was published. A preliminary determination of stock status under the FMP Status Determination Criteria (SDC) was available for some of these stocks in time for this report; however, some estimates remain unavailable. The STT will report to the Council on the status of stocks at the March 2019 Council meeting, and may further update the status of stocks present in Table V-4 at that time.

Chinook escapements and fishery impacts were forecast using the Sacramento Harvest Model, the Winter Run Harvest Model, and the Klamath Ocean Harvest Model for SRFC, SRWC, and KRFC, respectively. Assessment of effects under the No-Action Alternative for Oregon Coast Chinook are not available. Columbia River Chinook stock assessments were based on qualitative assessment of the magnitude of forecasts, if available, in relation to escapement goals.

Coho escapements and fishery impacts were estimated using Coho FRAM. Abundance forecasts for 2019 were updated for Washington and Oregon stocks, but forecasts for Canadian stocks are unchanged from those employed for 2018 planning. Updated forecasts for Canadian stocks are expected to become available in March 2019. To provide information on the effect of changes in abundance forecasts, the final 2018 pre-season regulatory package for ocean and inside fisheries was applied to 2019 projections of abundance.

#### **Sacramento River Fall Chinook**

A repeat of 2018 regulations would be expected to result in an escapement of 230,486 hatchery and natural area SRFC adults. This projection is higher than the minimum escapement level specified by the control rule for 2019 (122,000),  $S_{MSY}$  (122,000), and the 2019 preseason  $S_{ACL}$  (113,890; Tables V-4 and V-5). The geometric mean of the 2017 and 2018 spawning escapement estimates and the 2019 forecast spawning escapement under the No-Action Alternative is greater than the MSST, yet lower than  $S_{MSY}$  (Table V-4). The predicted SRFC exploitation rate under the No-Action Alternative is 39.3 percent, which is below the MFMT (78.0 percent; Table V-4) and the maximum allowable rate specified by the control rule for 2019 (67.9 percent). If the ocean fisheries were closed from January through August 2019 between Cape Falcon and the U.S./Mexico border, and Sacramento Basin fisheries were closed in 2019, the expected number of hatchery and natural area adult spawners would be 365,710.

The 2018 estimate of SRFC adult escapement was 105,739, which exceeds the 2018 postseason  $S_{ACL}$  of 67,156 (Table V-5).

## **Sacramento River Winter Chinook**

A repeat of 2018 regulations would be expected to result in an age-3 impact rate of 9.1 percent for the area south of Point Arena, California. The 2019 forecast age-3 impact rate under the No-Action Alternative is lower than the 2019 maximum allowable rate of 15.7 percent.

## **Klamath River Fall Chinook**

A repeat of 2018 regulations, which included a river recreational harvest allocation of 19.3 percent of the non-tribal harvest and a tribal allocation of 50 percent of the overall adult harvest, would be expected to result in 58,729 natural area adult spawners. This projection is greater than the minimum escapement level specified by the control rule for 2019 (40,700),  $S_{MSY}$  (40,700), and the 2019 preseason  $S_{ACL}$  (28,126; Tables V-4 and V-5). The geometric mean of the 2017 and 2018 natural area adult spawner escapement estimates and the 2019 forecast spawning escapement under the No-Action Alternative is greater than the MSST, yet lower than  $S_{MSY}$  (Table V-4). The predicted KRFC exploitation rate under the No-Action Alternative is 33.2 percent, which is lower than the MFMT (71.0 percent; Table V-4) and the maximum allowable rate specified by the control rule for 2019 (53.7 percent). If the ocean fisheries were closed from January through August 2019 between Cape Falcon and Point Sur, and the Klamath Basin fisheries (tribal and recreational) were closed in 2019, the expected number of natural area adult spawners would be 87,768.

The 2018 estimate of KRFC escapement was 53,624 natural area adults, which exceeds the 2018 postseason  $S_{ACL}$  of 23,794 (Table V-5).

## **California Coastal Chinook Stocks**

The NMFS ESA consultation standard restricts the KRFC age-4 ocean harvest rate to no more than 16.0 percent to limit impacts on these stocks. The postseason estimate of this rate for 2018 is 22.6 percent. Applying 2018 regulations to the 2019 KRFC abundance results in an age-4 ocean harvest rate forecast of 10.2 percent. If the ocean fisheries were closed from January through August 2019 between Cape Falcon and Point Sur, the expected age-4 ocean harvest rate would be 0.2 percent (160 age-4 KRFC were harvested during the September through November 2018 period).

## **Oregon Coast Chinook Stocks**

The FMP conservation objective for the northern and central Oregon coast Chinook stock complexes is based on a total goal of 150,000 to 200,000 natural adult spawners. For these two stock complexes attainment of goals are assessed using peak spawner counts observed in standard index reaches for the respective complexes. For the southern Oregon coast Chinook stock complex, the FMP conservation objective is assessed using the escapement estimate at Huntley Park on the Rogue River. Forecasts are not available for all of these stocks, but given recent trends, the escapement goals would likely be met again in 2019 under 2018 fishing seasons.

## **Columbia River Chinook Stocks**

The 2019 forecasts for Columbia River spring and summer stocks are less than the 2018 forecasts. Most 2019 forecasts for tule and bright fall Chinook are less than the 2018 forecasts, but the 2019 forecasts for Lower River Wild and Mid-Columbia Brights are higher than the 2018 forecasts. Despite these reduced forecasts in 2019 from 2018, applying 2018 regulations to the forecasted 2019 abundance of Columbia River Chinook would result in ocean escapements meeting spawning escapement goals for all summer and fall Chinook stocks (Table V-4).

## **Washington Coast and Puget Sound Chinook Stocks**

Council fisheries north of Cape Falcon have a negligible impact on Washington coast Chinook stocks and a minor impact on stocks that originate in Puget Sound. These stocks have northerly marine distribution

patterns, and are therefore impacted primarily by Canadian and Alaskan fisheries. An evaluation of 2018 Council area management measures on projected 2019 abundance would not provide a useful comparison of fishery impacts in relation to conservation objectives.

### **Oregon Production Index Area Coho Stocks**

Ocean fisheries were modeled with 2018 Council regulations and 2018 regulations for non-Council area fisheries. Because of the increase in forecasts for most hatchery coho stocks in 2019 relative to the forecasts in 2018, this model run shows lower fishery impact rates. Due to the changes in the forecasts, the model run shows fishery impact rate decreases for OCN coho, LCN coho, and RK coho. This provides some indication of the fishery impacts and fisheries planning relative to the conservation objectives in 2019. Under this scenario, the expected escapement is 71,600 for OCN coho (Table V-6). For Columbia River hatchery coho stocks, the predicted ocean exploitation rate (excluding Buoy 10) is 9.8 percent on the Columbia River early stock and 12.5 percent on the Columbia River late stock; total predicted exploitation rates are 42.2 percent and 26.4 percent for early and late stock respectively. Predicted ocean escapements (after Buoy 10) into the Columbia River in 2019 show that under 2018 ocean regulations, Columbia River early and late coho would be expected to meet egg take goals.

As noted in Chapter III, the total allowable OCN coho exploitation rate for 2019 fisheries is no greater than 15.0 percent in the revised OCN coho matrix (Table V-8; Appendix A, Table A-4), and the total allowable RK hatchery coho marine exploitation rate is 13.0 percent (NMFS ESA consultation standard). Under 2018 fishery regulations and 2019 abundance forecasts, these exploitation rates are predicted to be 6.1 percent for OCN, and 2.4 percent (marine) for RK coho (Table V-7). The 2019 allowable LCN coho exploitation rate is expected to be 23.0 percent in the marine area and mainstem Columbia River fisheries combined pending NMFS ESA guidance. Under 2018 fishery regulations and 2019 abundance forecasts, the exploitation rate is predicted to be 4.0 percent for marine fisheries (excluding the Buoy 10 fishery) using combined unmarked Columbia River hatchery stocks as the proxy. The LCN coho exploitation rate estimate for the Buoy 10 fishery would be 0.7 percent and the estimated exploitation rate in freshwater fisheries would be 3.9 percent. The total exploitation rate on LCN coho would be 8.6 percent, less than the assumed 23.0 percent allowable rate.

### **Washington Coast, Puget Sound, and Canadian Coho Stocks**

Exploitation rate and ocean escapement expectations in relation to management goals for selected naturally-spawning coho stocks, given 2019 pre-season abundance forecasts and 2018 pre-season projections for fishing patterns, are presented in Table V-6. The 2019 forecasts for Canadian coho stocks are not available, but are assumed to be at 2018 levels for this analysis. More detailed fishery management goals for Council area coho stocks are listed in Appendix A.

Under 2018 regulations, 2019 exploitation rates are expected to meet FMP conservation objectives applicable for 2019 for all Puget Sound coho stocks except Hood Canal. Ocean abundance forecasts for all Washington Coast natural coho stocks are above FMP spawning escapement conservation objectives. Management objectives for U.S. Puget Sound stocks subject to the PSC agreement are identical to FMP objectives and would be met under 2018 regulations for all Puget Sound stocks except Hood Canal; all coastal stocks would meet PSC agreement management objectives under 2018 regulations.

The exploitation rate by U.S. fisheries south of the Canadian border on Interior Fraser (B.C.) coho is projected to be 6.0 percent, which is well below the anticipated 10.0 percent allowable exploitation rate under the 2019 PST Coho Agreement. The Council area fisheries portion would be 1.2 percent.

Coho bycatch during Puget Sound fisheries directed at pink, chum, and sockeye salmon will also be a consideration for pre-season planning.

## Summary

The effects of projected impacts (where available) under 2018 fishery regulations and 2019 abundance forecasts are as follows:

- SRFC are not at risk of approaching an over-fished condition.
- For SRWC, the predicted age-3 impact rate is less than the maximum allowable rate specified by the control rule and thus meets the 2019 objective.
- KRFC are not at risk of approaching an over-fished condition.
- The KRFC age-4 ocean harvest rate would not exceed the California Coastal Chinook ESA consultation standard.
- Willapa Bay, Grays Harbor, Queets, Hoh, Quillayute fall, Hood Canal, Skagit, and Stillaguamish coho would achieve  $S_{MSY}$  spawning escapement objectives.
- Strait of Juan de Fuca and Snohomish coho would not achieve  $S_{MSY}$  spawning escapement objectives.
- OCN coho and LCN coho stocks would have projected exploitation rates that comply with anticipated ESA consultation standards.
- All coho stocks would have exploitation rates below the MFMT.
- All Puget Sound coho stocks except Hood Canal coho would have exploitation rates that comply with the annual rates allowed under the FMP harvest rate matrix and the PST 2002 Southern Coho Management Plan. The exploitation rate on Hood Canal coho would exceed the rate allowed under both the FMP harvest rate matrix and the PST 2002 Southern Coho Management Plan.
- All coastal coho stocks would have exploitation rates that comply with the annual rates allowed under the FMP harvest rate matrix and the PST 2002 Southern Coho Management Plan.

## Conclusion

The No-Action alternative would not meet the Purpose and Need for the proposed action because:

- The projected total exploitation rate on Hood Canal natural coho would be above the rate allowed under the FMP harvest rate matrix and above PST management objectives.

The No-Action alternative does not reflect consideration of changes in the status of salmon stocks from the previous year; therefore, over- or under- harvest of some salmon stocks would occur if this alternative were implemented. The analysis of the No-Action Alternative does, however, provide perspective that is useful in the planning process for 2019 ocean salmon fishery management measures. An understanding of stock shortfalls and surpluses under the No-Action Alternative helps managers, advisors, and constituents construct viable alternatives to the status-quo management measures.

TABLE V-I. 2018 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted.  
(Page 1 of 6)

<b>A. SEASON DESCRIPTIONS</b>
<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1 Overall non-Indian TAC: 55,000 Chinook and 47,600 coho marked with a healed adipose fin clip (marked). 2. Non-Indian commercial troll TAC: 27,500 Chinook and 5,600 marked coho.</p>
<p>Model #: Coho-1830, Chin3218</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>• May 1 through the earlier of June 30 or 16,500 Chinook, no more than 5,200 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 4,600 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1). All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>Chinook landing and possession limits per vessel per landing week (Thurs. - Wed.) are in place:          -U.S./Canada border to the Queets River: 50 Chinook;          -Queets River to Leadbetter Point: 100 Chinook;          -Leadbetter Point to Cape Falcon: 50 Chinook (C.1, C.6).</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, or approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>• July 1 through the earlier of September 19 or 11,000 Chinook or 5,600 coho, no more than 4,600 Chinook may be caught in the area between the U.S./Canada border and the Queets River, and no more than 1,300 Chinook may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week. All salmon may be retained, except no chum retention north of Cape Alava, Washington in August and September (C.4, C.7). Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.e). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River and the area between Leadbetter Pt. and Cape Falcon, a landing and possession limit of 50 Chinook per vessel per landing week (Thurs. - Wed.) will be in place (C.1, C.6). Landing and possession limit of 10 coho per vessel per landing week (C.1).</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, or approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Mandatory closed areas include: Salmon troll Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 13, Grays Harbor Control Zone (C.5).          Vessels must land and deliver their salmon within 24 hours of any closure of this fishery.          Vessels fishing, or in possession of salmon while fishing, <u>north</u> of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point.          Vessels fishing, or in possession of salmon while fishing, <u>south</u> of Leadbetter Point must land and deliver all species of fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land all species of fish in Garibaldi, Oregon.          Under state law, vessels must report their catch on a state fish receiving ticket. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 ext. 271 or sending notification via e-mail to nfalcon.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery.          Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).          Vessels in possession of salmon <u>north</u> of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination.          Vessels in possession of salmon <u>south</u> of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination.</p>

TABLE 1. 2018 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 2 of 6)

<b>A. SEASON DESCRIPTIONS</b>
<b>South of Cape Falcon</b>
<b>Supplemental Management Information</b>
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 151,009 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 34.2%.</li> <li>3. Klamath River recreational fishery allocation: 3,490 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 18,122 adult Klamath River fall Chinook.</li> <li>5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 75% / 25%.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• May 4-14 and 19-31;</li> <li>• June 4-12 and 16-30;</li> <li>• July 5-12 and 16-31;</li> <li>• August 3-7, 13-17, and 25-29;</li> <li>• September 1-October 31 (C.9.a).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All vessels fishing in the area must land their salmon in the State of Oregon. See gear restrictions and definitions (C.2, C.3) and Oregon State regulations for a description of special regulations at the mouth of Tillamook Bay.</p> <p>Beginning September 1 no more than 50 Chinook allowed per vessel per landing week (Thurs.-Wed.); and only open shoreward of the 40 fathom management line beginning October 1.</p> <p>In 2019, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2018. This opening could be modified following Council review at its March 2019 meeting.</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 4-14 and 19-31;</li> <li>• June 4-12 and 16-30, or a 1,500 Chinook quota;</li> <li>• July 5-12 and 16-31, or a 2,000 Chinook quota;</li> <li>• August 3-7, 13-17, and 25-29, or a 500 Chinook quota; (C.9.a).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Prior to June 1, all salmon caught in this area must be landed and delivered in the State of Oregon.</p> <p>June 4 - August 29 weekly landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.). Any remaining portion of a monthly Chinook quota may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>All vessels fishing in this area from June through August must land and deliver all salmon within this area or into Port Orford, within 24 hours of any closure of this fishery, and prior to fishing outside of this area. For all quota managed seasons, Oregon state regulations require fishers to notify ODFW within one hour of landing and prior to transport away from the port of landing by calling 541-867-0300 Ext. 252 or sending notification via e-mail to kmzor.trollreport@state.or.us, with vessel name and number, number of salmon by species, location of delivery, and estimated time of delivery.</p> <p>In 2019, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2018. This opening could be modified following Council review at its March 2019 meeting.</p>
<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 1 through the earlier of May 29, or a 3,600 Chinook quota;</li> <li>• June 1 through the earlier of June 30, or a 4,000 Chinook quota;</li> <li>• July 1 through the earlier of July 31, or a 4,000 Chinook quota;</li> <li>• August 3 through the earlier of August 31, or a 4,000 Chinook quota (C.9.b).</li> </ul> <p>Open five days per week (Fri.-Tue.). All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). Landing and possession limit of 20 Chinook per vessel per day (C.8.f). Any remaining portion of a monthly Chinook quota may be transferred inseason on an impact neutral basis to the next open quota period (C.8.g). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>All fish caught in this area must be landed within the area and within 24 hours of any closure of the fishery and prior to fishing outside the area (C.10). Klamath Control Zone closed (C.5.e). See California State regulations for additional closures adjacent to the Smith and Klamath rivers.</p>
<p><b>Humboldt South Jetty to Horse Mt.</b></p> <ul style="list-style-type: none"> <li>• Closed.</li> </ul>
<p><b>For all commercial troll fisheries south of Cape Falcon</b> When the fishery is closed between the OR/CA border and Humbug Mountain and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon prior to landing in California, only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival (C.6).</p>

TABLE 1. 2018 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 3 of 6)

<b>A. SEASON DESCRIPTIONS</b>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• July 26-31;</li> <li>• August 3-29;</li> <li>• September 1-30 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6). When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6). During September, all fish must be landed north of Point Arena (C.6).</p> <p>In 2019, the season will open April 16-30 for all salmon except coho, with a 27 inch Chinook minimum size limit and the same gear restrictions as in 2018. All salmon caught in the area must be landed in the area. This opening could be modified following Council review at its March 2019 meeting.</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• July 26-31;</li> <li>• August 3-29;</li> <li>• September 1-30 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6). When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6). During September, all fish must be landed south of Point Arena (C.6).</p> <p style="padding-left: 20px;"><b>Point Reyes to Point San Pedro (Fall Area Target Zone)</b></p> <ul style="list-style-type: none"> <li>• October 1-5 and 8-12.</li> </ul> <p>Open five days per week, Monday through Friday. All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). All salmon caught in this area must be landed between Point Arena and Pigeon Point (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• May 1-7;</li> <li>• June 19-30 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., July 15 (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6).</p> <p><b>For all commercial troll fisheries In California:</b> California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the State (California Fish and Game Code §8226).</p>

TABLE V-1. 2018 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted.  
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**B. MINIMUM SIZE (Inches) (See C.1)**

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28	21.5	16	12	None
Cape Falcon to Humbug Mt.	28	21.5	-	-	None
Humbug Mt. to OR/CA Border	28	21.5	-	-	None
OR/CA Border to Humboldt South Jetty	26	19.5	-	-	26
Horse Mt. to Pt. Arena	26	19.5	-	-	26
Pt. Arena to Pigeon Pt.	26	19.5	-	-	26
Pigeon Pt. to U.S./Mexico Border	26	19.5	-	-	26

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

C.1. **Compliance with Minimum Size or Other Special Restrictions:** All salmon on board a vessel must meet the minimum size, landing/possession limit, or other special requirements for the area being fished and the area in which they are landed if the area is open or has been closed less than 48 hours for that species of salmon. Salmon may be landed in an area that has been closed for a species of salmon more than 48 hours only if they meet the minimum size, landing/possession limit, or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.

Any person who is required to report a salmon landing by applicable state law must include on the state landing receipt for that landing both the number and weight of salmon landed by species. States may require fish landing/receiving tickets be kept on board the vessel for 90 days or more after landing to account for all previous salmon landings.

C.2. **Gear Restrictions:**

- a. Salmon may be taken only by hook and line using single point, single shank, barbless hooks.
- b. Cape Falcon, Oregon, to the OR/CA border: No more than 4 spreads are allowed per line.
- c. OR/CA border to U.S./Mexico border: No more than 6 lines are allowed per vessel, and barbless circle hooks are required when fishing with bait by any means other than trolling.

C.3. **Gear Definitions:**

*Trolling defined:* Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

*Troll fishing gear defined:* One or more lines that drag hooks behind a moving fishing vessel engaged in trolling. In that portion of the fishery management area off Oregon and Washington, the line or lines must be affixed to the vessel and must not be intentionally disengaged from the vessel at any time during the fishing operation.

*Spread defined:* A single leader connected to an individual lure and/or bait.

*Circle hook defined:* A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

C.4. **Vessel Operation in Closed Areas with Salmon on Board:**

- a. Except as provided under C.4.b below, it is unlawful for a vessel to have troll or recreational gear in the water while in any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species, and no salmon are in possession.
- b. When Genetic Stock Identification (GSI) samples will be collected in an area closed to commercial salmon fishing, the scientific research permit holder shall notify NOAA OLE, USCG, CDFW, WDFW, ODFW and OSP at least 24 hours prior to sampling and provide the following information: the vessel name, date, location and time collection activities will be done. Any vessel collecting GSI samples in a closed area shall not possess any salmon other than those from which GSI samples are being collected. Salmon caught for collection of GSI samples must be immediately released in good condition after collection of samples.

C.5. **Control Zone Definitions:**

- a. *Cape Flattery Control Zone* - The area from Cape Flattery (48°23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48°10'00" N. lat.) and east of 125°05'00" W. long.
- b. *Mandatory Yelloweye Rockfish Conservation Area* - The area in Washington Marine Catch Area 3 from 48°00.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°16.50' W. long. to 48°00.00' N. lat.; 125°16.50' W. long. and connecting back to 48°00.00' N. lat.; 125°14.00' W. long.
- c. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 55'36" N. lat., 124°10'51" W. long.).
- d. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

**C.5. Control Zone Definitions (continued):**

northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

- e. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west by 124°23'00" W. long. (approximately 12 nautical miles off shore); and on the south by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

- f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70).

45°46.00' N. lat., 124°04.49' W. long.;	44°41.68' N. lat., 124°15.38' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°34.87' N. lat., 124°15.80' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°33.74' N. lat., 124°14.44' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	44°27.66' N. lat., 124°16.99' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	44°19.13' N. lat., 124°19.22' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	44°15.35' N. lat., 124°17.38' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	44°14.38' N. lat., 124°17.78' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	44°12.80' N. lat., 124°17.18' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	44°09.23' N. lat., 124°15.96' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
44°51.28' N. lat., 124°10.21' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
44°49.49' N. lat., 124°10.90' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
44°44.96' N. lat., 124°14.39' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
44°43.44' N. lat., 124°14.78' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;	42°40.50' N. lat., 124°31.98' W. long.;
44°42.26' N. lat., 124°13.81' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;	

- C.6. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate number of salmon (by species) on board, the estimated time of arrival, and the specific reason the vessel is not able to meet special management area landing restrictions.

In addition to contacting the U.S. Coast Guard, vessels fishing south of the Oregon/California border must notify CDFW within one hour of leaving the management area by calling 800-889-8346 and providing the same information as reported to the U.S. Coast Guard. All salmon must be offloaded within 24 hours of reaching port.

- C.7. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length, measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on. When halibut are caught and landed incidental to commercial salmon fishing by an IPHC license holder, any person who is required to report the salmon landing by applicable state law must include on the state landing receipt for that landing both the number of halibut landed, and the total dressed, head-on weight of halibut landed, in pounds, as well as the number and species of salmon landed.

License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone: 206-634-1838). Applicants must apply prior to mid-March 2018 for 2018 permits (*exact date to be set by the IPHC in early 2018*). Incidental harvest is authorized only during April, May, and June of the 2018 troll seasons, and after June 30 in 2018 if quota remains and if announced on the NMFS hotline (phone: 800-662-9825 or 206-526-6667). WDFW, ODFW, and CDFW will monitor landings. If the landings are projected to exceed the IPHC's 35,620 pound preseason allocation or the total Area 2A non-Indian commercial Pacific halibut allocation, NMFS will take inseason action to prohibit retention of halibut in the non-Indian salmon troll fishery.

Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2018, prior to any 2018 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2019 unless otherwise modified by inseason action at the March 2019 Council meeting

May 1, 2018 until the end of the 2018 salmon troll season, and April 1-30, 2019, license holders may land or possess no more than one Pacific halibut per two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 25 halibut may be possessed or landed per trip.

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS** *(continued)*

- a. "C-shaped" yelloweye rockfish conservation area is an area to be voluntarily avoided for salmon trolling. NMFS and the Council request salmon trollers voluntarily avoid this area in order to protect yelloweye rockfish. The area is defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (Washington marine area 3), with the following coordinates in the order listed:

48°18' N. lat.; 125°18' W. long.;  
48°18' N. lat.; 124°59' W. long.;  
48°11' N. lat.; 124°59' W. long.;  
48°11' N. lat.; 125°11' W. long.;  
48°04' N. lat.; 125°11' W. long.;  
48°04' N. lat.; 124°59' W. long.;  
48°00' N. lat.; 124°59' W. long.;  
48°00' N. lat.; 125°18' W. long.;  
and connecting back to 48°18' N. lat.; 125°18' W. long.

- C.8. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Chinook remaining from the May through June non-Indian commercial troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline if the transfer would not result in exceeding preseason impact expectations on any stocks.
- b. Chinook remaining from the June or July non-Indian commercial troll quotas in the Oregon KMZ may be transferred to the Chinook quota for the next open quota period if the transfer would not result in exceeding preseason impact expectations on any stocks.
- c. NMFS may transfer salmon between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the areas' representatives on the Salmon Advisory Subpanel (SAS), and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- d. At the March 2019 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2018).
- e. If retention of unmarked coho (adipose fin intact) is permitted by inseason action, the allowable coho quota will be adjusted to ensure preseason projected impacts on all stocks is not exceeded.
- f. Landing limits may be modified inseason to sustain season length and keep harvest within overall quotas.
- g. Chinook remaining from the May, June, and /or July non-Indian commercial troll quotas in the California KMZ may be transferred to the Chinook quota for the next open period if the transfer would not result in exceeding preseason impact expectations on any stocks.

- C.9. State Waters Fisheries: Consistent with Council management objectives:

- a. The State of Oregon may establish additional late-season fisheries in state waters.
- b. The State of California may establish limited fisheries in selected state waters.  
Check state regulations for details.

- C.10 For the purposes of California Fish and Game Code, Section 8232.5, the definition of the Klamath Management Zone (KMZ) for the ocean salmon season shall be that area from Humbug Mountain, Oregon, to Horse Mountain, California.

TABLE V-2. 2018 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted.  
(Page 1 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1. Overall non-Indian TAC: 55,000 Chinook and 47,600 coho marked with a healed adipose fin clip (marked).                  2. Recreational TAC: 27,500 Chinook and 42,000 marked coho; all retained coho must be marked.                  3. No Area 4B add-on fishery.                  4. Buoy 10 fishery opens August 1 with an expected landed catch of 25,000 marked coho in August and September.</p>
<p><b>U.S./Canada Border to Cape Alava (Neah Bay Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 23 through earlier of September 3 or 4,370 marked coho subarea quota with a subarea guideline of 4,900 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon may be retained, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3).</p>
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 23 through earlier of September 3 or 1,090 marked coho subarea quota with a subarea guideline of 1,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon may be retained, two salmon per day. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3).</p>
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• July 1 through earlier of September 3 or 15,540 marked coho subarea quota with a subarea guideline of 13,100 Chinook (C.5).</li> </ul> <p>Open five days per week (Sun. - Thurs.). All salmon may be retained; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Grays Harbor Control Zone closed beginning August 13 (C.4.b).</p>
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 23 through earlier of September 3 or 21,000 marked coho subarea quota with a subarea guideline of 8,000 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon may be retained; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Columbia Control Zone closed (C.4.c).</p>
<p><b>For all recreational fisheries North of Cape Falcon:</b> Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>

TABLE 2. 2018 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 2 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<b>South of Cape Falcon</b>
<b>Supplemental Management Information</b>
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 151,009 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 34.2%.</li> <li>3. Klamath River recreational fishery allocation: 3,490 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 18,122 adult Klamath River fall Chinook.</li> <li>5. Overall recreational coho TAC: 35,000 coho marked with a healed adipose fin clip (marked), and 3,500 coho in the non-mark-selective coho fishery.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• March 15-October 31 (C.6), except as provided below during the mark-selective coho fishery and the non-mark-selective coho fishery (C.5).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>October 1-31: The fishery is only open shoreward of the 40 fathom management line.</p> <p>In 2019, the season will open March 15 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2018 (C.2, C.3). This opening could be modified following Council review at its March 2019 meeting.</p>
<p><b>Cape Falcon to Humbug Mt.</b></p> <p><u>Mark-selective coho fishery:</u></p> <ul style="list-style-type: none"> <li>• June 30 through the earlier of September 3, or a landed catch of 35,000 marked coho (C.6).</li> </ul> <p>Open seven days per week. All salmon may be retained, except all retained coho must be marked with a healed adipose fin clip, two salmon per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3, C.5.e).</p> <p><u>Non-mark-selective coho fishery:</u></p> <ul style="list-style-type: none"> <li>• September 7-8, and each Friday through Saturday thereafter through the earlier of September 29 or a landed catch of a 3,500 non-mark-selective coho quota (C.6). Open days may be modified inseason.</li> </ul> <p>All salmon may be retained, two salmon per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 19-August 26 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p>
<p><b>For Recreational Fisheries from Cape Falcon to Humbug Mt.:</b> Fishing in the Stonewall Bank yelloweye rockfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).</p>

TABLE 2. 2018 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 3 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• June 1-September 3 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath Rivers.</p>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• June 17-October 31 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2019, season opens April 6 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2018 (C.2, C.3). This opening could be modified following Council review at its March 2019 meeting.</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• June 17-October 31 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2019, season opens April 6 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2018 (C.2, C.3). This opening could be modified following Council review at its March 2019 meeting.</p>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• April 7-July 2 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho may be retained, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2019, season opens April 6 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2018 (C.2, C.3). This opening could be modified following Council review at its March 2019 meeting.</p> <p>California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the state. (California Code of Regulations Title 14 Section 1.73)</p>

**B. MINIMUM SIZE (Inches) (See C.1)**

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24	16	None
Cape Falcon to Humbug Mt.	24	16	None
Humbug Mt. to OR/CA Border	24	-	None
OR/CA Border to Horse Mt.	20	-	20
Horse Mt. to Pt. Arena	20	-	20
Pt. Arena to Pigeon Pt.	20	-	20
Pigeon Pt. to U.S./Mexico Border	24	-	24

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

- C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.
- Ocean Boat Limits*: Off the coast of Washington, Oregon, and California, each fisher aboard a vessel may continue to use angling gear until the combined daily limits of Chinook and coho salmon for all licensed and juvenile anglers aboard have been attained (additional state restrictions may apply).
- C.2. Gear Restrictions: Salmon may be taken only by hook and line using barbless hooks. All persons fishing for salmon, and all persons fishing from a boat with salmon on board, must meet the gear restrictions listed below for specific areas or seasons.
- U.S./Canada Border to Pt. Conception, California*: No more than one rod may be used per angler; and no more than two single point, single shank barbless hooks are required for all fishing gear.
  - Horse Mt., California, to Pt. Conception, California*: Single point, single shank, barbless circle hooks (see gear definitions below) are required when fishing with bait by any means other than trolling, and no more than two such hooks shall be used. When angling with two hooks, the distance between the hooks must not exceed five inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.
- C.3. Gear Definitions:
- Recreational fishing gear defined*: Off Oregon and Washington, angling tackle consists of a single line that must be attached to a rod and reel held by hand or closely attended; the rod and reel must be held by hand while playing a hooked fish. No person may use more than one rod and line while fishing off Oregon or Washington. Off California, the line must be attached to a rod and reel held by hand or closely attended; weights directly attached to a line may not exceed four pounds (1.8 kg). While fishing off California north of Pt. Conception, no person fishing for salmon, and no person fishing from a boat with salmon on board, may use more than one rod and line. Fishing includes any activity which can reasonably be expected to result in the catching, taking, or harvesting of fish.
  - Trolling defined*: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.
  - Circle hook defined*: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- C.4. Control Zone Definitions:
- The Bonilla-Tatoosh Line*: A line running from the western end of Cape Flattery to Tatoosh Island Lighthouse (48°23'30" N. lat., 124°44'12" W. long.) to the buoy adjacent to Duntze Rock (48°24'37" N. lat., 124°44'37" W. long.), then in a straight line to Bonilla Pt. (48°35'39" N. lat., 124°42'58" W. long.) on Vancouver Island, British Columbia.
  - Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 55'36" N. lat., 124°10'51" W. long.).
  - Columbia Control Zone*: An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long. and then along the north jetty to the point of intersection with the Buoy #10 line; and on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.
  - Stonewall Bank Yelloweye Rockfish Conservation Area*: The area defined by the following coordinates in the order listed:  
44°37.46' N. lat.; 124°24.92' W. long.  
44°37.46' N. lat.; 124°23.63' W. long.  
44°28.71' N. lat.; 124°21.80' W. long.  
44°28.71' N. lat.; 124°24.10' W. long.  
44°31.42' N. lat.; 124°25.47' W. long.  
and connecting back to 44°37.46' N. lat.; 124°24.92' W. long.
  - Klamath Control Zone*: The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

TABLE V-2. 2018 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council adopted.  
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f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70).

45°46.00' N. lat., 124°04.49' W. long.;	44°41.68' N. lat., 124°15.38' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°34.87' N. lat., 124°15.80' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°33.74' N. lat., 124°14.44' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	44°27.66' N. lat., 124°16.99' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	44°19.13' N. lat., 124°19.22' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	44°15.35' N. lat., 124°17.38' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	44°14.38' N. lat., 124°17.78' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	44°12.80' N. lat., 124°17.18' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	44°09.23' N. lat., 124°15.96' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
44°51.28' N. lat., 124°10.21' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
44°49.49' N. lat., 124°10.90' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
44°44.96' N. lat., 124°14.39' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
44°43.44' N. lat., 124°14.78' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;	42°40.50' N. lat., 124°31.98' W. long.;
44°42.26' N. lat., 124°13.81' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;	

C.5. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines, and season duration. In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Actions could include modifications to bag limits, or days open to fishing, and extensions or reductions in areas open to fishing.
- b. Coho may be transferred inseason among recreational subareas north of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Council's SAS recreational representatives north of Cape Falcon, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- c. Chinook and coho may be transferred between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the representatives of the SAS, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- d. Fishery managers may consider inseason action modifying regulations restricting retention of unmarked (adipose fin intact) coho. To remain consistent with preseason expectations, any inseason action shall consider, if significant, the difference between observed and preseason forecasted (adipose-clipped) mark rates. Such a consideration may also include a change in bag limit of two salmon, no more than one of which may be a coho.
- e. Marked coho remaining from the Cape Falcon to Humbug Mt. recreational mark-selective coho quota may be transferred inseason to the Cape Falcon to Humbug Mt. non-mark-selective recreational fishery if the transfer would not result in exceeding preseason impact expectations on any stocks.

C.6. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the States of Washington, Oregon, and California may establish limited seasons in state waters. Check state regulations for details.

TABLE V-3. 2018 Treaty Indian ocean troll management measures for ocean salmon fisheries - Council adopted.

<b>A. SEASON DESCRIPTIONS</b>
<b>Supplemental Management Information</b>
<p>1. Overall Treaty-Indian TAC: 40,000 Chinook and 12,500 coho.                  2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>
<ul style="list-style-type: none"> <li>• May 1 through the earlier of June 30 or 16,000 Chinook quota.</li> </ul> <p>All salmon may be retained except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C).</p> <ul style="list-style-type: none"> <li>• July 1 through the earlier of September 15, or 24,000 Chinook quota, or 12,500 coho quota.</li> </ul> <p>All Salmon. See size limit (B) and other restrictions (C).</p>

**B. MINIMUM SIZE (Inches)**

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	24.0 (61.0 cm)	18.0 (45.7 cm)	16.0 (40.6 cm)	12.0 (30.5 cm)	None

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

C.1. Tribe and Area Boundaries. All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

S'KLALLAM - Washington State Statistical Area 4B (defined to include those waters of Puget Sound easterly of a line projected from the Bonilla Point light on Vancouver Island to the Tatoosh Island light, thence to the most westerly point on Cape Flattery and westerly of a line projected true north from the fishing boundary marker at the mouth of the Sekiu River [WAC 220-301-030]).

MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.

\*QUILEUTE - A polygon commencing at Cape Alava, located at latitude 48°10'00" north, longitude 124°43'56.9" west; then proceeding west approximately forty nautical miles at that latitude to a northwestern point located at latitude 48°10'00" north, longitude 125°44'00" west; then proceeding in a southeasterly direction mirroring the coastline at a distance no farther than forty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 47°31'42" north, longitude 125°20'26" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 47°31'42" north, longitude 124°21'9.0" west.

HOH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River) and east of 125°44'00" W. long.

\*QUINAULT - A polygon commencing at the Pacific coast shoreline near Destruction Island, located at latitude 47°40'06" north, longitude 124°23'51.362" west; then proceeding west approximately thirty nautical miles at that latitude to a northwestern point located at latitude 47°40'06" north, longitude 125°08'30" west; then proceeding in a southeasterly direction mirroring the coastline no farther than thirty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 46°53'18" north, longitude 124°53'53" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 46°53'18" north, longitude 124°7'36.6" west.

*\* On March 5, 2018, the Federal District Court for the Western District of Washington issued an order to revise the western U&A boundaries for the Quileute and Quinault Tribes. Most notably, the western boundaries are at set distances from the coast, rather than following a line of longitude.*

C.2. Gear restrictions

- a. Single point, single shank, barbless hooks are required in all fisheries.
- b. No more than eight fixed lines per boat.
- c. No more than four hand held lines per person in the Makah area fishery (Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.)

TABLE V-4. Stock status relative to overfished and overfishing criteria. A stock is approaching an overfished condition if the 3-year geometric mean of the most recent two years and the forecast spawning escapement is less than the minimum stock size threshold (MSST); a stock would experience overfishing if the total annual exploitation rate exceeds the maximum fishing mortality threshold (MFMT). Occurrences of stocks *at risk* of approaching an overfished condition or experiencing overfishing are indicated in **bold**. 2019 spawning escapement and exploitation rate estimates are based on preliminary 2019 preseason abundance forecasts and 2018 Council regulations.

	Estimated Adult Spawning Escapement										Total Exploitation Rate					
	2014	2015	2016	2017	2018 <sup>a/</sup>	Forecast 2019 <sup>b/</sup>	3-yr Geo Mean	MSST	S <sub>MSY</sub>	2014	2015	2016	2017	2018 <sup>a/</sup>	2019 <sup>b/</sup>	MFMT
<b>Chinook</b>																
Sacramento Fall	212,468	114,085	89,699	42,714	105,739	230,486	101,348	91,500	122,000	0.61	0.55	0.56	0.68	0.53	0.39	0.78
Klamath River Fall	95,104	28,112	13,937	19,904	53,624	58,729	39,724	30,525	40,700	0.36	0.59	0.37	0.10	0.28	0.33	0.71
Southern Oregon <sup>c/</sup>	53,546	30,462	27,278	91,977	39,497	NA	46,276	20,500	34,992	NA	NA	NA	NA	NA	NA	0.54
Central and Northern OR	157	247	118	114	92	NA	107	30 fish/mi	60 fish/mi	0.43	0.42	0.47	NA	NA	NA	0.78
Upper River Bright - Fall <sup>d/</sup>	233,934	323,276	151,373	97,789	58,540	62,215	70,884	19,182	39,625	0.53	0.40	0.51	NA	NA	NA	0.86
Upper River - Summer <sup>d/</sup>	77,982	88,691	79,253	56,265	38,816	33,084	41,651	6,072	12,143	0.69	0.67	0.63	NA	NA	NA	0.75
Willapa Bay - Fall <sup>e/</sup>	2,075	2,824	1,887	3,078	NA	NA	2,541	1,696	3,393	0.57	0.47	0.59	NA	NA	NA	0.78
Grays Harbor Fall <sup>e/</sup>	11,893	17,305	11,248	17,145	NA	NA	14,944	5,694	13,326	0.57	0.47	0.59	NA	NA	NA	0.78
Grays Harbor Spring	1,583	1,841	926	1,384	493	NA	858	700	1,400	NA	NA	NA	NA	NA	NA	0.78
Queets - Fall <sup>d/</sup>	3,820	5,313	2,915	2,702	NA	NA	3,472	1,250	2,500	0.57	0.47	0.59	NA	NA	NA	0.87
Queets - Sp/Su	377	532	704	NA	NA	NA	521	350	700	NA	NA	NA	NA	NA	NA	0.78
Hoh - Fall <sup>e/</sup>	1,933	1,795	2,831	1,808	NA	NA	2,094	600	1,200	0.57	0.47	0.59	NA	NA	NA	0.90
Hoh Sp/Su	744	1,070	1,144	1,364	NA	NA	1,186	450	900	NA	NA	NA	NA	NA	NA	0.78
Quillayute - Fall <sup>e/</sup>	2,782	3,440	3,654	3,604	4,031	NA	3,758	1,500	3,000	0.57	0.47	0.59	NA	NA	NA	0.87
Quillayute - Sp/Su	608	794	900	1,097	1,232	NA	1,067	600	1,200	NA	NA	NA	NA	NA	NA	0.78
Hoko -Su/Fa <sup>d/</sup>	1,760	2,877	1,324	1,188	2,179	NA	1,508	425	850	0.42	0.30	0.30	NA	NA	NA	0.78
<b>Coho</b>																
Willapa Bay	47,154	10,790	25,290	9,091	NA	50,124	22,587	8,600	17,200	0.51	0.44	0.38	0.33	NA	0.25	0.74
Grays Harbor	105,039	21,278	38,595	26,907	NA	57,788	39,151	18,320	24,426	0.45	0.49	0.12	0.32	NA	0.19	0.65
Queets	7,558	2,028	5,156	5,232	NA	9,331	6,314	4,350	5,800	0.41	0.26	0.15	0.23	NA	0.17	0.65
Hoh	4,565	1,794	5,009	4,478	NA	3,632	4,335	1,890	2,520	0.52	0.39	0.08	0.43	NA	0.48	0.65
Quillayute Fall	7,425	2,571	9,630	7,474	5,157	11,439	7,611	4,725	6,300	0.57	0.47	0.18	0.42	NA	0.22	0.59
Juan de Fuca	11,488	3,859	8,435	5,530	NA	8,314	7,292	7,000	11,000	0.17	0.18	0.03	0.06	NA	0.04	0.60
Hood Canal	26,787	26,926	24,313	22,519	NA	21,828	22,863	10,750	14,350	<b>0.68</b>	0.59	0.40	0.35	NA	0.46	0.65
Skagit	24,820	5,794	35,822	20,184	NA	40,551	30,836	14,875	25,000	0.52	<b>0.63</b>	0.20	0.09	NA	0.30	0.60
Stillaguamish	35,829	2,914	13,048	6,099	NA	16,420	10,933	6,100	10,000	0.27	0.48	0.16	0.12	NA	0.31	0.50
Snohomish	46,244	12,804	44,141	18,195	NA	42,477	32,433	31,000	50,000	0.31	0.55	0.18	0.21	NA	0.32	0.60

a/ Preliminary.

b/ Preliminary approximations based on preseason forecasts and the previous year fishing regulations.

c/ MSST 18,440 (20,500 as measured at Huntley Park).

d/ CWT based exploitation rates from annual catch and escapement distribution from PSC-CTC 2013 Exploitation Rate Analysis.

e/ Queets River fall Chinook CWT exploitation rates used as a proxy. Exploitation rates in the terminal fisheries will differ from those calculated for Queets fall CWTs.

TABLE V-5. Postseason  $S_{ACL}$ ,  $S_{OFL}$ , and spawner escapement estimates for Sacramento River fall Chinook (SRFC), Klamath River fall Chinook (KRFC) and Willapa Bay coho. For the current year,  $S_{ACL}$  and  $S_{OFL}$  are pre-season values. Current year spawner escapements are pre-season values based on current abundance forecasts and the previous year fishing regulations.

Year	SRFC			KRFC			Willapa Bay Coho		
	$S_{ACL}^{a/}$	$S_{OFL}$	Escapement <sup>b/</sup>	$S_{ACL}^{a/}$	$S_{OFL}$	Escapement <sup>c/</sup>	$S_{ACL}^{a/}$	$S_{OFL}$	Escapement <sup>c/</sup>
2012	188,405	138,164	285,429	70,946	64,295	121,543	--	--	--
2013	260,867	191,302	406,846	52,021	47,144	59,156	--	--	--
2014	165,358	121,262	212,468	47,673	43,204	95,104	--	--	--
2015	76,670	56,225	114,085	22,209	20,127	28,112	9,183	7,958	17,086
2016	61,595	45,170	89,699	7,066	6,403	13,937	14,780	12,810	30,667
2017	40,636	29,800	42,714	7,111	6,444	19,904	9,183	7,958	10,878
2018	67,156	49,248	105,739	23,794	21,563	53,624	NA	NA	NA
2019	113,890	83,519	230,486	28,126	25,489	58,729	27,553	23,879	71,734

a/  $S_{ACL} = S_{ABC}$ .

b/ Hatchery and natural area adult spaw ners.

c/ Natural area adult spaw ners.

TABLE V-6. Comparison of projected ocean escapements and exploitation rates for critical natural and Columbia River hatchery coho stocks (thousands of fish) resulting from application of 2018 Council-adopted regulations to 2018 and 2019 ocean abundance forecasts.<sup>a/</sup>

Stock	Ocean Escapement and ER Estimates Under 2018 Regulations <sup>b/</sup>				
	2018 Abundance Forecasts		2019 Abundance Forecasts		2019 FMP Conservation Objective <sup>c/</sup>
	Ocean Escapement	Exploitation Rate	Ocean Escapement	Exploitation Rate	
<b>Natural Coho Stocks</b>					
Skagit	57.0	31.3%	56.2	30.3%	Exploitation Rate $\leq 35.0\%$ <sup>d/</sup>
Stillaguamish	18.5	34.5%	23.4	31.2%	Exploitation Rate $\leq 50.0\%$ <sup>d/</sup>
Snohomish	64.3	33.5%	61.5	32.3%	Exploitation Rate $\leq 40.0\%$ <sup>d/</sup>
Hood Canal	57.0	42.5%	38.8	45.7%	Exploitation Rate $\leq 45.0\%$ <sup>d/</sup>
Strait of Juan de Fuca	6.9	6.7%	8.6	5.7%	Exploitation Rate $\leq 20.0\%$ <sup>d/</sup>
Quillayute Fall	10.1	23.5%	14.3	22.4%	6.3 - 15.8 Spaw ners
Hoh	5.2	49.7%	6.5	48.0%	2.0 - 5.0 Spaw ners
Queets	6.1	19.6%	10.1	16.5%	5.8 - 14.5 Spaw ners
Grays Harbor	40.5	20.7%	69.4	19.4%	35.4 Spaw ners
LCN	19.1	16.2%	35.3	8.6%	Exploitation Rate $\leq 23.0\%$ <sup>e/</sup>
OCN	48.1	12.9%	71.6	6.1%	Exploitation Rate $\leq 15.0\%$ <sup>e/</sup>
R/K	2.5	5.5%	12.9	2.4%	Exploitation Rate $\leq 13.0\%$ <sup>e/</sup>
<b>Hatchery Coho Stocks</b>					
Columbia Early	105.1	59.9%	472.7	42.2%	6.2 Hatchery Escapement
Columbia Late	81.0	43.6%	311.2	26.4%	14.2 Hatchery Escapement

a/ Quota levels include harvest and hooking mortality estimates used in planning the Council's 2018 ocean fisheries and a coho catch for the Canadian troll fishery off the West Coast of Vancouver Island (WCVI).

b/ 2018 pre-season regulations with the following coho quotas: U.S. Canada Border to Cape Falcon: Treaty Indian troll-12,500; non-Indian troll-5,600 selective; recreational-42,000 selective; Cape Falcon to OR/CA border: recreational-35,000 selective and 3,500 non-selective; troll-none. Ocean escapement is generally the estimated number of coho escaping ocean fisheries and entering freshwater. For Puget Sound stocks, ocean escapement is the total abundance minus ocean fisheries (ie outside Puget Sound). For the OCN coho stock, this value represents the estimated spawner escapement in SRS accounting. For Columbia R. hatchery and LCN stocks, ocean escapement represents the number of coho after the Buoy 10 fishery; the LCN exploitation rates shown are total marine and mainstem Columbia R. fishery ERs. The 2019 marine fisheries exploitation rates are forecast at 4.0% compared to 9.9% in 2018; the total 2018 ESA limit was 18.0% including mainstem Columbia R. fisheries.

c/ Goals represent FMP conservation objectives, ESA consultation standards, or hatchery escapement needs. Spawning escapement goals are not directly comparable to ocean escapement because the latter occur before inside fisheries.

d/ Assumed exploitation rate based on preliminary abundance forecasts.

e/ Pending confirmation of 2019 ESA consultation standard.

TABLE V-7. Comparison of Lower Columbia natural (LCN), Oregon coastal natural (OCN), and Rogue/Klamath (RK) coho projected harvest mortality and exploitation rates by fishery under Council-adopted 2018 management measures and preliminary 2019 pre-season abundance estimates.

Fishery	Projected Harvest Mortality and Exploitation Rate					
	LCN		OCN		RK <sup>a/</sup>	
	Number	Percent	Number	Percent	Number	Percent
<b>SOUTHEAST ALASKA</b>	0	0.0%	0	0.0%	0	0.0%
<b>BRITISH COLUMBIA</b>	54	0.1%	327	0.4%	42	0.3%
<b>PUGET SOUND/STRAITS</b>	37	0.1%	23	0.0%	0	0.0%
<b>NORTH OF CAPE FALCON</b>						
Recreational	435	1.2%	160	0.2%	3	0.0%
Treaty Indian Troll	214	0.6%	100	0.1%	0	0.0%
Non-Indian Troll	162	0.4%	78	0.1%	0	0.0%
<b>SOUTH OF CAPE FALCON</b>						
Recreational:						
Cape Falcon to Humbug Mt.	477	1.3%	2,133	2.8%	22	0.2%
Humbug Mt. to Horse Mt. (KMZ)	11	0.0%	121	0.2%	75	0.6%
Fort Bragg	3	0.0%	44	0.1%	26	0.2%
South of Pt. Arena	0	0.0%	25	0.0%	11	0.1%
Troll:						
Cape Falcon to Humbug Mt.	66	0.2%	178	0.2%	5	0.0%
Humbug Mt. to Horse Mt. (KMZ)	17	0.0%	226	0.3%	115	0.9%
Fort Bragg	0	0.0%	29	0.0%	11	0.1%
South of Pt. Arena	1	0.0%	38	0.0%	3	0.0%
<b>BUOY 10</b>	272	0.7%	37	0.0%	0	0.0%
<b>ESTUARY/FRESHWATER</b>	1,441	3.9%	1,166	1.5%	NA	NA
<b>TOTAL</b>	3,190	8.6%	4,685	6.1%	313	2.4%

a/ Unmarked hatchery production used as a surrogate for Rogue/Klamath natural stock coho.

TABLE V-8 Maximum allowable fishery impact rate for OCN coho under Amendment 13 matrix and the revised OCN work group matrix based on parent escapement levels by stock component and marine survival category.<sup>a/</sup>

Fishery Year (t)	OCN Coho Spaw ners by Stock Component				Marine Survival Indicator		Amendment 13 Matrix			OCN Work Group Matrix <sup>a/</sup>		
	Parent Spaw ner Year (t-3)	Northern	Central	South- Central	Hatchery Jack Survival	Predicted OCN Adult Survival	Marine Survival Category	Parental Spaw ner Category	Maximum Allow able Impacts	Marine Survival Category <sup>b/c/</sup>	Parental Spaw ner Category	Maximum Allow able Impacts
	1998	1995	3,900	13,600	36,500	0.04%	-	Low	Very Low	≤10-13%	Extremely Low	Very Low
1999	1996	3,300	18,100	52,600	0.10%	-	Med	Very Low	≤15%	Low	Critical	0-8%
2000	1997	2,100	2,800	18,400	0.12%	-	Med	Very Low	≤15%	Low	Critical	0-8%
2001	1998	2,600	3,300	25,900	0.27%	-	Med	Very Low	≤15%	Medium	Critical	0-8%
2002	1999	8,900	11,800	29,200	0.09%	-	Med	Low	≤15%	Low	Low	≤15%
2003	2000	17,900	14,300	36,500	0.20%	-	Med	Low	≤15%	Med	Low	≤15%
2004	2001	33,500	25,200	112,000	0.14%	-	Med	Low	≤15%	Med	Low	≤15%
2005	2002	52,500	104,000	104,100	0.11%	-	Med	High	≤20%	Low	High	≤15%
2006	2003	59,600	68,900	99,800	0.12%	-	Med	High	≤20%	Low	High	≤15%
2007	2004	28,800	42,100	101,900	0.17%	-	Med	Med	≤20%	Med	Med	≤20%
2008	2005	16,500	51,400	86,700	0.07%	-	Low	High	≤15%	Extremely Low	High	≤8%
2009	2006	24,100	21,200	83,500	0.27%	-	Med	Low	≤15%	Med	Low	≤15%
2010	2007	17,500	12,300	36,500	0.12%	-	Med	Low	≤15%	Low	Low	≤15%
2011	2008	25,600	68,100	86,000	0.12%	-	Med	High	≤20%	Low	High	≤15%
2012	2009	48,100	86,400	128,200	0.09%	-	Med	High	≤20%	Low	High	≤15%
2013	2010	55,000	56,500	171,900	0.14%	6.8%	Med	High	≤20%	Med	High	≤30%
2014	2011	45,900	119,100	191,300	0.26%	7.1%	Med	High	≤20%	Med	High	≤30%
2015	2012	7,500	33,800	57,800	0.20%	7.5%	Med	Low	≤15%	Med	Low	≤15%
2016	2013	11,000	39,700	73,700	0.10%	6.2%	Med	Med	≤20%	Med	Med	≤20%
2017	2014	67,400	121,900	170,400	0.13%	5.6%	Med	High	≤30%	Med	High	≤30%
2018	2015	6,700	22,700	27,700	0.11%	4.3%	Low	Low	≤15%	Low	Low	≤15%
2019	2016	18,700	26,500	30,700	0.27%	3.80%	Low	Low	≤15%	Low	Low	≤15%
2020	2017	13,600	22,800	24,900	-	-	-	Low	-	-	Low	-
2021	2018	7,700	22,100	41,300	-	-	-	Low	-	-	Low	-

a/ Developed by the OCN Coho Work Group as a result of the 2000 Review of Amendment 13. See Appendix A, tables A-2 and A-4 for details

b/ OCN workgroup matrix was modified during the 2012 methodology review. For 2013, the marine survival category is determined by a predicted OCN adult survival rate that is based on the natural smolt to jack relationship at Mill Creek in the Yaquina River basin.

c/ OCN workgroup matrix was modified during the 2013 methodology review. Beginning in 2014, the marine survival category is determined by a predicted OCN adult survival rate that is based on biologic and oceanographic indicators.

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**APPENDIX A  
SUMMARY OF COUNCIL STOCK MANAGEMENT GOALS**

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TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes<sup>a/</sup> (Page 1 of 7)

CHINOOK					
Stocks In The Fishery	Conservation Objective	S <sub>MSY</sub>	MSST	MFMT (F <sub>MSY</sub> )	ACL
Sacramento River Fall Indicator stock for the Central Valley fall (CVF) Chinook stock complex.	122,000-180,000 natural and hatchery adult spawners (MSY proxy adopted 1984). This objective is intended to provide adequate escapement of natural and hatchery production for Sacramento and San Joaquin fall and late-fall stocks based on habitat conditions and average run-sizes as follows: Sacramento River 1953-1960; San Joaquin River 1972-1977 (ASETf 1979; PFMC 1984; SRFCRT 1994). The objective is less than the estimated basin capacity of 240,000 spawners (Hallock 1977), but greater than the 118,000 spawners for maximum production estimated on a basin by basin basis before Oroville and Nimbus Dams (Reisenbichler 1986).	122,000	91,500	78% Proxy (SAC 2011a)	Based on F <sub>ABC</sub> and annual ocean abundance. F <sub>ABC</sub> is F <sub>MSY</sub> reduced by Tier 2 (10%) uncertainty
Sacramento River Spring ESA Threatened	NMFS ESA consultation standard/recovery plan: Conform to Sacramento River Winter Chinook ESA consultation standard (no defined objective for ocean management prior to listing).	Undefined	Undefined	Undefined	ESA consultation standard applies.
Sacramento River Winter ESA Endangered	NMFS ESA consultation standard/recovery plan: Recreational seasons: Point Arena to Pigeon Point between the first Saturday in April and the second Sunday in November; Pigeon Point to the U.S./Mexico Border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. Commercial seasons: Point Arena to the U.S./Mexico border between May 1 and September 30, except Point Reyes to Point San Pedro between October 1 and 15 (Monday through Friday). Minimum size limit ≥ 26 inches total length. In addition to these season and minimum size limit restrictions, annual limits to the preseason-predicted age-3 impact rate south of Point Arena, defined by a control rule, were implemented beginning in 2012 and updated in 2018 (See Figure A-3).	Undefined	Undefined	Undefined	
California Coastal Chinook ESA Threatened	NMFS ESA consultation standard/recovery plan: Limit ocean fisheries to no more than a 16.0% age-4 ocean harvest rate on Klamath River fall Chinook.	Undefined	Undefined	Undefined	
Klamath River Fall Indicator stock for the Southern Oregon Northern California (SONC) Chinook stock complex.	At least 32% of potential adult natural spawners, but no fewer than 40,700 naturally spawning adults in any one year. Brood escapement rate must average at least 32% over the long-term, but an individual brood may vary from this range to achieve the required tribal/nontribal annual allocation. Natural area spawners to maximize catch estimated at 40,700 adults (STT 2005).	40,700	30,525	71% (STT 2005)	Based on F <sub>ABC</sub> and annual ocean abundance. F <sub>ABC</sub> is F <sub>MSY</sub> reduced by Tier 1 (5%) uncertainty
Klamath River - Spring	Undefined	Undefined	Undefined	Undefined	Component stock of SONC complex; ACL indicator stock is KRFC
Smith River	Undefined	Undefined	Undefined	78% Proxy (SAC 2011a)	
Southern Oregon	At least 41,000 naturally-produced adults passing Huntley Park in the Rogue River to provide MSY spawning escapement. (PFMC 2015)	34,992	20,500	54% (PFMC 2015)	

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes.<sup>a/</sup> (Page 2 of 7)

CHINOOK						
Stocks In The Fishery	Conservation Objective	S <sub>MSY</sub>	MSST	MFMT (F <sub>MSY</sub> )	ACL	
Central and Northern Oregon	Unspecified portion of an aggregate 150,000 to 200,000 natural adult spawners for Oregon coast (Thompson 1977 and McGie 1982) measured by 60-90 fish per mile in index streams. ODFW developing specific conservation objectives for spring and fall stocks that may be implemented without plan amendment upon approval by the Council.	60 Fish per mile in index streams	30 Fish per mile in index streams	78% Proxy (SAC 2011a)	Component stock(s) of FNMC complex; international exception applies, ACLs are not applicable.	
Willapa Bay Fall	Undetermined in FMP. WDFW spawning escapement objective of 4,350.	3,393	1,697	78% Proxy (SAC 2011a)		
Grays Harbor Fall Indicator stock for the Far North Migrating Coastal (FNMC) Chinook stock complex	13,326 natural adult spawners in the Chehalis and Humptulips Rivers combined. (PFMC 2015)	Annual natural spawning escapement targets may vary from FMP conservation objectives if agreed to by WDFW and treaty tribes under the provisions of <i>Hoh v. Baldrige</i> and subsequent U.S. District Court orders.	13,326	6,663	63% (PFMC 2015)	FNMC complex; international exception applies, ACLs are not applicable.
Queets Fall Indicator stock for the FNMC Chinook stock complex	Manage terminal fisheries for 40% harvest rate, but no less than 2,500 natural adult spawners, the MSY level estimated by Cooney (1984).		2,500	1,250	87% (Cooney 1984)	
Hoh Fall Indicator stock for the FNMC Chinook stock complex	Manage terminal fisheries for 40% harvest rate, but no less than 1,200 natural adult spawners, the MSY level estimated by Cooney (1984).		1,200	600	90% (Cooney 1984)	
Quillayute Fall Indicator stock for the FNMC Chinook stock complex	Manage terminal fisheries for 40% harvest rate, but no less than 3,000 natural adult spawners, the MSY level estimated by Cooney (1984).		3,000	1,500	87% (Cooney 1984)	
Hoko Summer/Fall Indicator stock for the FNMC Chinook stock complex	850 natural adult spawners, the MSP level estimated by Ames and Phinney (1977). May include adults used for supplementation program.		850	425	78% Proxy (SAC 2011a)	
Grays Harbor Spring	1,400 natural adult spawners.		1,400	700	78% Proxy (SAC 2011a)	FNMC complex; international exception applies, ACLs are not applicable.
Queets Sp/Su	Manage terminal fisheries for 30% harvest rate, but no less than 700 natural adult spawners.		700	350	78% Proxy (SAC 2011a)	
Hoh Spring/Summer	Manage terminal fisheries for 31% harvest rate, but no less than 900 natural adult spawners.		900	450	78% Proxy (SAC 2011a)	
Quillayute Spring/Summer	1,200 natural adult spawners for summer component (MSY).		1,200	600	78% Proxy (SAC 2011a)	
Willapa Bay Fall (hatchery)	WDFW spawning escapement objective of 3,525 hatchery spawners	Not applicable to hatchery stocks				
Quinault Fall (hatchery)	Hatchery production.					

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes.<sup>a/</sup> (Page 3 of 7)

CHINOOK					
Stocks In The Fishery	Conservation Objective	S <sub>MSY</sub>	MSST	MFMT (F <sub>MSY</sub> )	ACL
North Lewis River Fall	NMFS consultation standard/recovery plan. McIsaac (1990) stock-recruit analysis supports MSY objective of 5,700 natural adult spawners.	5,700	ESA consultation standard applies.	76%	ESA consultation standard applies.
Snake River Fall	NMFS consultation standard/recovery plan. No more than 70.0% of 1988-1993 base period AEQ exploitation rate for all ocean fisheries.	Undefined		Undefined	
Upper Willamette Spring	NMFS consultation standard/recovery plan. Not applicable for ocean fisheries.	Undefined		Undefined	
Columbia Upper River Spring	NMFS consultation standard/recovery plan. Not applicable for ocean fisheries.	Undefined		Undefined	
Snake River - Spring/Summer	NMFS consultation standard/recovery plan. Not applicable for ocean fisheries.	Undefined		Undefined	
Columbia Lower River Hatchery - Fall	14,800 adults for hatchery egg-take. River mouth goal of 25,000.	Not applicable to hatchery stocks			
Columbia Lower River Hatchery Spring	3,500 adults to meet Cowlitz, Kalama, and Lewis Rivers broodstock needs.				
Columbia Mid-River Bright Hatchery Fall	7,900 for Little White Salmon Hatchery egg-take.				
Columbia Spring Creek Hatchery Fall	6,000 adults to meet hatchery egg-take goal.				
Columbia Upper River Bright Fall	40,000 natural bright adults above McNary Dam (MSY proxy adopted in 1984 based on CRFMP). The management goal has been increased to 60,000 by Columbia River managers in recent years.	39,625 (Langness and Reidinger 2003)	19,812	85.91% (Langness and Reidinger 2003)	International exception applies, ACLs are not applicable.
Columbia Upper River Summer	Hold ocean fishery impacts at or below base period; recognize CRFMP objective - MSY proxy of 80,000 to 90,000 adults above Bonneville Dam, including both Columbia and Snake River stocks (state and tribal management entities considering separate objectives for these stocks).	12,143 (CTC 1999)	6,071	75% (CTC 1999)	

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes.<sup>a/</sup> (Page 4 of 7)

CHINOOK						
Stocks In The Fishery	Conservation Objective		S <sub>MSY</sub>	MSST	MFMT (F <sub>MSY</sub> )	ACL
Eastern Strait of Juan de Fuca Summer/Fall	NMFS consultation standard/recovery plan.	Annual natural spawning escapement targets may vary from FMP conservation objectives if agreed to by WDFW and treaty tribes under the provisions of <i>U.S. v. Washington</i> and subsequent U.S. District Court orders.	Undefined	ESA consultation standard applies	Undefined	ESA Consultation standard applies.
Skokomish Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Mid Hood Canal Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Nooksack Spring early	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Skagit Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Skagit Spring	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Stillaguamish Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Snohomish Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Cedar River Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
White River Spring	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Green River Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Nisqually River Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	
Puyallup Summer/Fall	NMFS consultation standard/recovery plan.		Undefined		Undefined	

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes.<sup>a/</sup> (Page 5 of 7)

COHO					
Stocks In The Fishery	Conservation Objective	S <sub>MSY</sub>	MSST	MFMT (F <sub>MSY</sub> )	ACL
Central California Coast ESA Threatened	NMFS ESA consultation standard/recovery plan: No retention of coho south of the OR/CA border.	Undefined	ESA consultation standard applies	Undefined	ESA consultation standard applies.
Southern Oregon/Northern California Coast ESA Threatened	NMFS ESA consultation standard/recovery plan: No more than a 13.0% AEQ exploitation rate in ocean fisheries on Rogue/Klamath hatchery coho.	Undefined		Undefined	
Oregon Coastal Natural ESA Threatened	NMFS ESA consultation standard/recovery plan: Total AEQ exploitation rate limit based on parental seeding level and marine survival matrix in FMP Table 3-2.	Undefined		Undefined	
Lower Columbia Natural ESA Threatened	NMFS ESA consultation standard/recovery plan: AEQ exploitation rate limit on ocean and mainstem Columbia fisheries identified in annual NMFS guidance.	Undefined		Undefined	
Oregon Coast Hatchery	Hatchery production.	Not applicable to hatchery stocks			
Columbia River Late Hatchery	Hatchery rack return goal of 6,400 adults. River mouth goal of 9,700.				
Columbia River Early Hatchery	Hatchery rack return goal of 21,700 adults. River mouth goal of 77,200.				
Willapa Bay - Hatchery	Hatchery rack return goal of 6,100 adults.				
Quinault - Hatchery	Hatchery production.				
Quillayute - Summer Hatchery	Hatchery production.				
South Puget Sound Hatchery	Hatchery rack return goal of 52,000 adults.				
Willapa Bay Natural	17,200 natural area spawners.				

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes.<sup>a/</sup> (Page 6 of 7)

COHO						
Stocks In The Fishery	Conservation Objective		S <sub>MSY</sub>	MSST	MFMT (F <sub>MSY</sub> )	ACL
Grays Harbor	35,400 natural adult spawners (MSP based on WDF [1979])	Annual natural spawning escapement targets may vary from FMP conservation objectives if agreed to by WDFW and treaty tribes under the provisions of Hoh v. Baldrige, U.S. v. Washington, or subsequent U.S. District Court orders	24,426 S <sub>MSP</sub> (FMP) *F <sub>SMY</sub> (SAC 2010b)	18,320 (Johnstone et al. 2011)	MFMT=65% (Johnstone et al. 2011) F <sub>MSY</sub> =69% (SAC 2011b)	International exception applies, ACLs are not applicable.
Queets	MSY range of 5,800 to 14,500 natural adult spawners (Lestelle et al 1984)		5,800 (Johnston et al. 2011)	4,350 (Johnstone et al. 2011)	MFMT=65% (Johnstone et al. 2011) F <sub>MSY</sub> =68% (SAC 2011b)	
Hoh	MSY range of 2,000 to 5,000 natural adult spawners (Lestelle et al. 1984)		2,520 (SAC 2010b)	1,890 S <sub>MSY</sub> *0.75	MFMT=65% (Johnstone et al. 2011) F <sub>MSY</sub> =69% (SAC 2011b)	
Quillayute - Fall	MSY range of 6,300 to 15,800 natural adult spawners (Lestelle et al. 1984)		6,300 (Johnston et al. 2011)	4,725 (Johnstone et al. 2011)	MFMT=59%; F <sub>MSY</sub> =59% (SAC 2011b)	
Strait of Juan de Fuca	Total allowable MSY exploitation rate of: 0.60 for ocean age-3 abundance > 27,445; 0.40 for ocean age-3 abundance >11,679 and ≤27,445; 0.20 for ocean age-3 abundance ≤11,679		11,000 (Bowhay et al. 2009)	7,000 (Bowhay et al. 2009)	60% (Bowhay et al. 2009)	
Hood Canal	Total allowable MSY exploitation rate of: 0.65 for ocean age-3 abundance > 41,000; 0.45 for ocean age-3 abundance >19,545 and ≤41,000; 0.20 for ocean age-3 abundance ≤19,545		14,350 (Bowhay et al. 2009)	10,750 (Bowhay et al. 2009)	65% (Bowhay et al. 2009)	
Skagit	Total allowable MSY exploitation rate of: 0.60 for ocean age-3 abundance > 62,500; 0.35 for ocean age-3 abundance >22,857 and ≤62,500; 0.20 for ocean age-3 abundance ≤22,857		25,000 (Bowhay et al. 2009)	14,857 (Bowhay et al. 2009)	60% (Bowhay et al. 2009)	
Stillaguamish	Total allowable MSY exploitation rate of: 0.50 for ocean age-3 abundance > 20,000; 0.35 for ocean age-3 abundance >9,385 and ≤20,000; 0.20 for ocean age-3 abundance ≤9,385		10,000 (Bowhay et al. 2009)	6,100 (Bowhay et al. 2009)	50% (Bowhay et al. 2009)	
Snohomish	Total allowable MSY exploitation rate of: 0.60 for ocean age-3 abundance > 125,000; 0.40 for ocean age-3 abundance >51,667 and ≤125,000; 0.20 for ocean age-3 abundance ≤51,667	50,000 (Bowhay et al. 2009)	31,000 (Bowhay et al. 2009)	60% (Bowhay et al. 2009)		

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes.<sup>a/</sup> (Page 7 of 7)

<b>PINK (odd-numbered years)</b>					
<b>Stocks In The Fishery</b>	<b>Conservation Objective</b>				
		$S_{MSY}$	MSST	MFMT ( $F_{MSY}$ )	ACL
Puget Sound	900,000 natural spawners or consistent with provisions of the Pacific Salmon Treaty (Fraser River Panel).	900,000	450,000	Undefined	International exception applies, ACLs are not applicable.

a/ Some hatchery goals and ESA consultation standards have been updated relative to the version of this table in the FMP.

TABLE A-2. Allowable fishery impact rate criteria for OCN coho stock components under the Salmon Fishery Management Plan Amendment 13.

		MARINE SURVIVAL INDEX (based on return of jacks per hatchery smolt)			
		Low (<0.0009)	Medium (0.0009 to 0.0034)	High (>0.0034)	
PARENT SPAWNER STATUS		Allowable Total Fishery Impact Rate			
<b>High:</b>	Parent spawners achieved Level #2 rebuilding criteria; grandparent spawners achieved Level #1	≤15%	≤30% <sup>a/</sup>	≤35% <sup>a/</sup>	
<b>Medium:</b>	Parent spawners achieved Level #1 or greater rebuilding criteria	≤15%	≤20% <sup>a/</sup>	≤25% <sup>a/</sup>	
<b>Low:</b>	Parent spawners less than Level #1 rebuilding criteria	≤15%	≤15%	≤15%	
		≤10-13% <sup>b/</sup>			
OCN Coho Spawners by Stock Component					
Rebuilding Criteria	Northern	North-Central	South-Central	Southern	Total
Full Seeding at Low Marine Survival:	21,700	55,000	50,000	5,400	132,100
Level #2 (75% of full seeding):	16,400	41,300	37,500	4,100	99,300
Level #1 (50% of full seeding):	10,900	27,500	25,000	2,700	66,100
38% of Level #1 (19% of full seeding):	4,100	10,500	9,500	1,000	25,100
Stock Component (Boundaries)	Full Seeding of Major Basins at Low Marine Survival (Number of Adult Spawners)				
<b>Northern:</b> (Necanicum River to Neskowin Creek)	Nehalem	Tillamook	Nestucca	Ocean Tribs.	
	17,500	2,000	1,800	400	
<b>North-Central:</b> (Salmon River to Siuslaw River)	Siletz	Yaquina	Alsea	Siuslaw	Ocean Tribs.
	4,300	7,100	15,100	22,800	5,700
<b>South-Central:</b> (Siltcoos River to Sixes River)	Umpqua	Coos	Coquille	Coastal Lakes	
	29,400	7,200	5,400	8,000	
<b>Southern:</b> (Elk River to Winchuck River)	Rogue				
	5,400				

a/ When a stock component achieves a medium or high parent spawner status under a medium or high marine survival index, but a major basin within the stock component is less than 10% of full seeding, (1) the parent spawner status will be downgraded one level to establish the allowable fishery impact rate for that component, and (2) no coho-directed harvest impacts will be allowed within that particular basin.

b/ This exploitation rate criteria applies when (1) parent spawners are less than 38% of the Level #1 rebuilding criteria, or (2) marine survival conditions are projected to be at an extreme low as in 1994-1996 (<0.0006 jack per hatchery smolt). If parent spawners decline to lower levels than observed through 1998, rates of less than 10% would be considered, recognizing that there is a limit to further bycatch reduction opportunities.

TABLE A-3. Fishery impact rate criteria for OCN coho stock components based on the harvest matrix resulting from the OCN work group 2000 review of Amendment 13.

Parent Spawner Status <sup>a/</sup>	Marine Survival Index (based on return of jacks per hatchery smolt)						
	Extremely Low (<0.0008 )	Low (0.0008 to 0.0014 )	Medium (>0.0014 to 0.0040)	High (>0.0040 )			
<b>High</b> Parent Spawners > 75% of full seeding	<b>E</b> ≤ 8%	<b>J</b> ≤ 15%	<b>O</b> ≤ 30%	<b>T</b> ≤ 45%			
<b>Medium</b> Parent Spawners > 50% & ≤ 75% of full seeding	<b>D</b> ≤ 8%	<b>I</b> ≤ 15%	<b>N</b> ≤ 20%	<b>S</b> ≤ 38%			
<b>Low</b> Parent Spawners > 19% & ≤ 50% of full seeding	<b>C</b> ≤ 8%	<b>H</b> ≤ 15%	<b>M</b> ≤ 15%	<b>R</b> ≤ 25%			
<b>Very Low</b> Parent Spawners > 4 fish per mile & ≤ 19% of full seeding	<b>B</b> ≤ 8%	<b>G</b> ≤ 11%	<b>L</b> ≤ 11%	<b>Q</b> ≤ 11%			
<b>Critical <sup>b/</sup></b> Parental Spawners ≤ 4 fish per mile	<b>A</b> 0 - 8%	<b>F</b> 0 - 8%	<b>K</b> 0 - 8%	<b>P</b> 0 - 8%			
Sub-aggregate and Basin Specific Spawner Criteria Data							
Sub-aggregate	Miles of Available Spawning Habitat	100% of Full Seeding	"Critical"		Very Low, Low, Medium & High		
			4 Fish per Mile	12% of Full Seeding	19% of Full Seeding	50% of Full Seeding	75% of full Seeding
Northern	899	21,700	3,596	NA	4,123	10,850	16,275
North - Central	1,163	55,000	4,652	NA	10,450	27,500	41,250
South - Central	1,685	50,000	6,740	NA	9,500	25,000	37,500
Southern	450	5,400	NA	648	1,026	2,700	4,050
Coastwide Total	4,197	132,100	15,636		25,099	66,050	99,075

a/ Parental spawner abundance status for the OCN aggregate assumes the status of the weakest sub-aggregate.

b/ "Critical" parental spawner status is defined as 4 fish per mile for the Northern, North-Central, and South-Central subaggregates. Because the ratio of high quality spawning habitat to total spawning habitat in the Rogue River Basin differs significantly from the rest of the basins on the coast, the spawner density of 4 fish per mile does not represent "Critical" status for that basin. Instead, "Critical" status for the Rogue Basin (Southern Sub-aggregate) is estimated as 12% of full seeding of high quality

TABLE A-4. Fishery impact rate criteria for OCN coho stock components based on the harvest matrix resulting from the OCN work group 2000 review of Amendment 13 including modifications to the marine survival index adopted during the 2012 and 2013 methodology reviews.

Parent Spawner Status <sup>a/</sup>	Marine Survival Index <i>(Wild adult coho salmon survival as predicted by the two-variable GAM ensemble forecast)</i>						
	Extremely Low <2%	Low 2%-4.5%	Medium >4.5%-8%	High >8%			
<b>High</b> Parent Spawners > 75% of full seeding	E ≤ 8%	J ≤ 15%	O ≤ 30%	T ≤ 45%			
<b>Medium</b> Parent Spawners > 50% & ≤ 75% of full seeding	D ≤ 8%	I ≤ 15%	N ≤ 20%	S ≤ 38%			
<b>Low</b> Parent Spawners > 19% & ≤ 50% of full seeding	C ≤ 8%	H ≤ 15%	M ≤ 15%	R ≤ 25%			
<b>Very Low</b> Parent Spawners > 4 fish per mile & ≤ 19% of full seeding	B ≤ 8%	G ≤ 11%	L ≤ 11%	Q ≤ 11%			
<b>Critical</b> Parent Spawners ≤4 fish per mile	A 0 – 8%	F 0 – 8%	K 0 – 8%	P 0 – 8%			
Sub-aggregate and Basin Specific Spawner Criteria Data							
Sub-aggregate	Miles of Available Spawning Habitat	100% of Full Seeding	"Critical"		Very Low, Low, Medium & High		
			4 Fish per Mile	12% of Full Seeding	19% of Full Seeding	50% of Full Seeding	75% of Full Seeding
Northern	899	21,700	3,596	NA	4,123	10,850	16,275
North-Central	1,163	55,000	4,652	NA	10,450	27,500	41,250
South-Central	1,685	50,000	6,740	NA	9,500	25,000	37,500
Southern <i>(Removed per adoption of Amendment 16)</i>							
Coastwide Total	3,747	126,700	14,988		24,073	63,350	95,025

a/ Parental spawner abundance status for the OCN aggregate assumes the status of the weakest sub-aggregate.

TABLE A-5. Council adopted management objectives for Puget Sound natural coho management units, expressed as exploitation rate ceilings for critical, low and normal abundance based status categories, with runsize breakpoints (abundances expressed as ocean age-3).

Status	Management Unit				
	Strait of Juan de Fuca	Hood Canal	Skagit	Stillaguamish	Snohomish
Critical/Low Runsize Breakpoint	11,679	19,545	22,857	9,385	51,667
Critical Exploitation Rate	0.20	0.20	0.20	0.20	0.20
Low/normal runsize breakpoint	27,445	41,000	62,500	20,000	125,000
Low Exploitation Rate	0.40	0.45	0.35	0.35	0.40
Normal Exploitation Rate	0.60	0.65	0.60	0.50	0.60

TABLE A-6. Council recommended management objectives for Lower Columbia River natural tule Chinook, expressed as exploitation rate ceilings for abundance based status categories, with runsize forecast bins expressed as adult river mouth return forecasts of Lower Columbia River hatchery tule Chinook.

Runsize Forecast Bins	<30,000	30,000 to 40,000	40,000 to 85,000	>85,000
Maximum Exploitation Rate	0.30	0.35	0.38	0.41

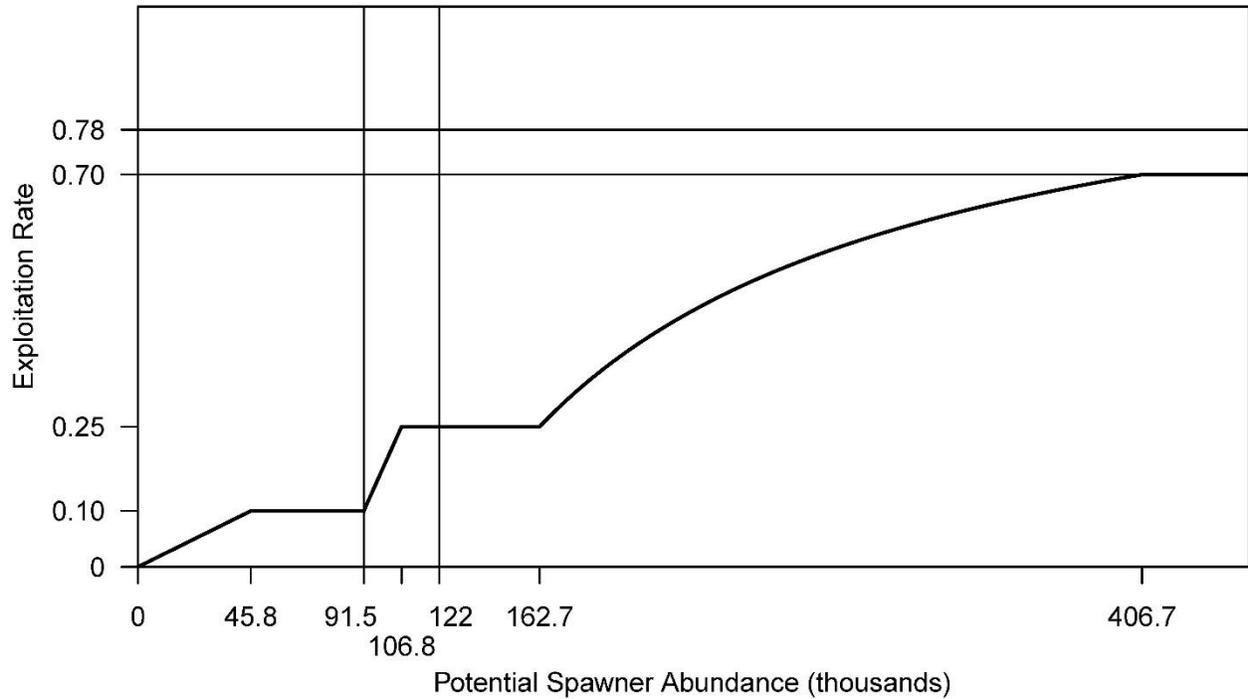


FIGURE A-1. Sacramento River fall Chinook control rule. Potential spawner abundance is the predicted hatchery and natural area adult spawners in the absence of fisheries, which is equivalent to the Sacramento Index. See the salmon FMP, Section 3.3.6, for control rule details.

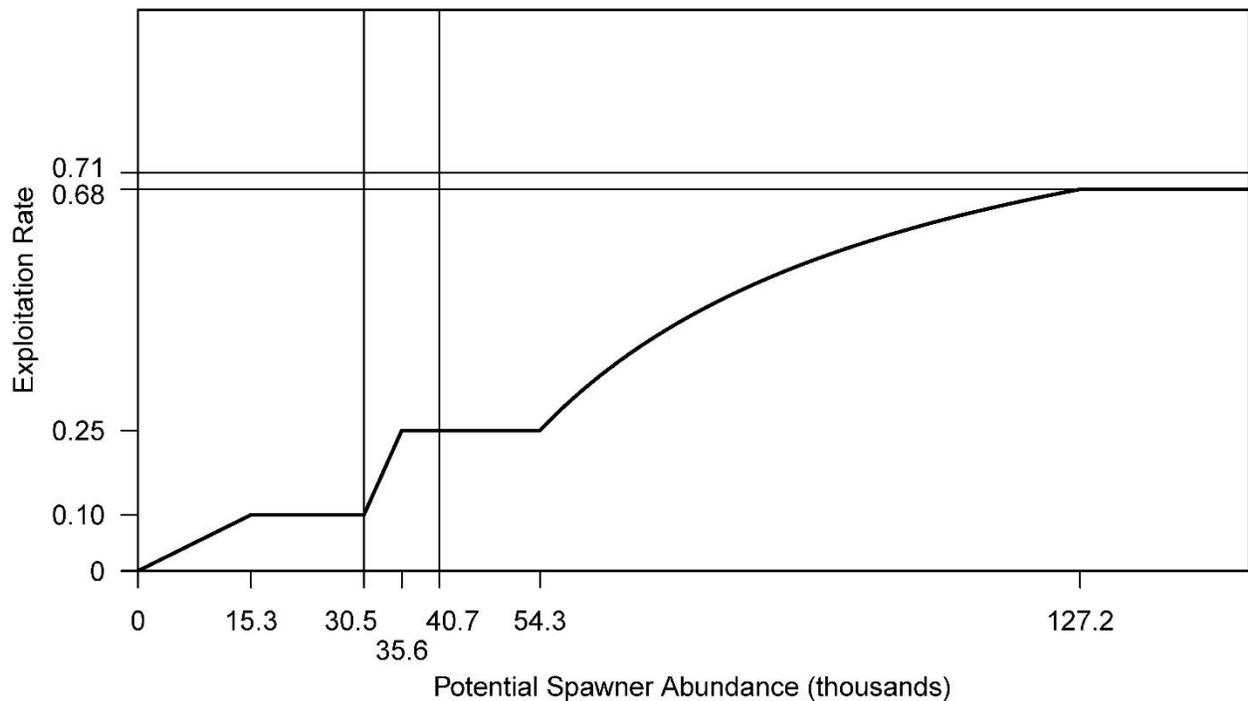


FIGURE A-2. Klamath River fall Chinook control rule. Potential spawner abundance is the predicted natural area adult spawners in the absence of fisheries. See the salmon FMP, Section 3.3.6, for control rule details.

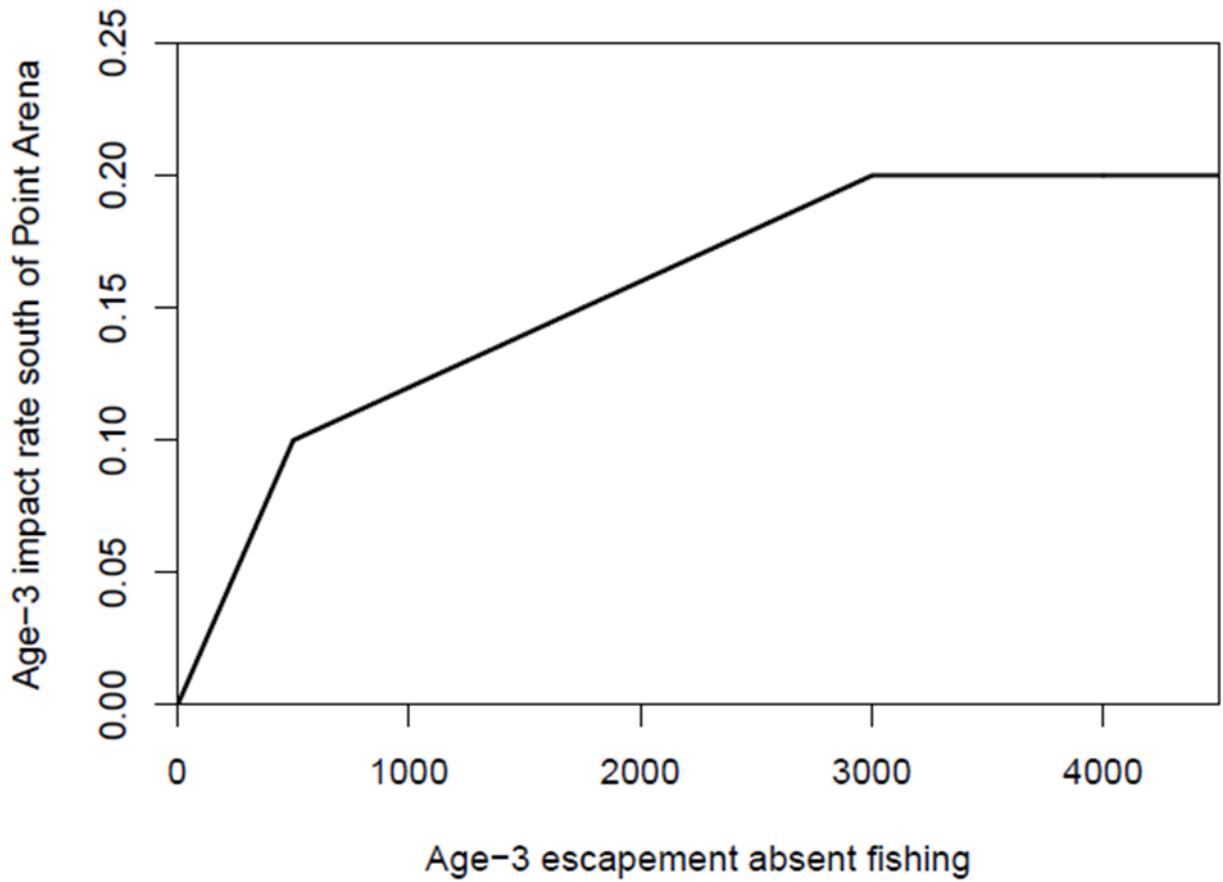


FIGURE A-3. Sacramento River winter Chinook impact rate control rule. The maximum forecast age-3 impact rate for the area south of Point Arena, California, is determined by the forecasted age-3 escapement absent fishing.

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**APPENDIX B  
SALMON HARVEST ALLOCATION SCHEDULES**

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### 5.3 ALLOCATION

*“A Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.”*

*Magnuson-Stevens Act, National Standard 4*

Harvest allocation is required when the number of fish is not adequate to satisfy the perceived needs of the various fishing industry groups and communities, to divide the catch between non-Indian ocean and inside fisheries and among ocean fisheries, and to provide federally recognized treaty Indian fishing opportunity. In allocating the resource between ocean and inside fisheries, the Council considers both in-river harvest and spawner escapement needs. The magnitude of in-river harvest is determined by the states in a variety of ways, depending upon the management area. Some levels of in-river harvests are designed to accommodate federally recognized in-river Indian fishing rights, while others are established to allow for non-Indian harvests of historical magnitudes. Several fora exist to assist this process on an annual basis. The North of Cape Falcon Forum, a state and tribal sponsored forum, convenes the pertinent parties during the Council’s preseason process to determine allocation and conservation recommendations for fisheries north of Cape Falcon. The individual states also convene fishery industry meetings to coordinate their input to the Council.

#### 5.3.1 Commercial (Non-Tribal) and Recreational Fisheries North of Cape Falcon

##### 5.3.1.1 Goal, Objectives, and Priorities

Harvest allocations will be made from a total allowable ocean harvest, which is maximized to the largest extent possible but still consistent with PST and treaty-Indian obligations, state fishery needs, and spawning escapement requirements, including consultation standards for stocks listed under the ESA. The Council shall make every effort to establish seasons and gear requirements that provide troll and recreational fleets a reasonable opportunity to catch the available harvest. These may include single-species directed fisheries with landing restrictions for other species.

The goal of allocating ocean harvest north of Cape Falcon is to achieve, to the greatest degree possible, the objectives for the commercial and recreational fisheries as follows:

- Provide recreational opportunity by maximizing the duration of the fishing season while minimizing daily and area closures and restrictions on gear and daily limits.
- Maximize the value of the commercial harvest while providing fisheries of reasonable duration.

The priorities listed below will be used to help guide establishment of the final harvest allocation while meeting the overall commercial and recreational fishery objectives.

At total allowable harvest levels up to 300,000 coho and 100,000 Chinook:

- Provide coho to the recreational fishery for a late June through early September all-species season. Provide Chinook to allow (1) access to coho and, if possible, (2) a minimal Chinook-only fishery prior to the all-species season. Adjust days per week and/or institute area restrictions to stabilize season duration.

- Provide Chinook to the troll fishery for a May and early June Chinook season and provide coho to (1) meet coho hooking mortality in June where needed and (2) access a pink salmon fishery in odd years. Attempt to ensure that part of the Chinook season will occur after June 1.

At total allowable harvest levels above 300,000 coho and above 100,000 Chinook:

- Relax any restrictions in the recreational all-species fishery and/or extend the all-species season beyond Labor Day as coho quota allows. Provide Chinook to the recreational fishery for a Memorial Day through late June Chinook-only fishery. Adjust days per week to ensure continuity with the all-species season.
- Provide coho for an all-salmon troll season in late summer and/or access to a pink fishery. Leave adequate Chinook from the May through June season to allow access to coho.

### 5.3.1.2 Allocation Schedule Between Gear Types

Initial commercial and recreational allocation will be determined by the schedule of percentages of total allowable harvest as follows:

TABLE 5-1. Initial commercial/recreational harvest allocation schedule north of Cape Falcon.

Harvest (thousands of fish)	Coho		Chinook		
	Percentage <sup>a/</sup>		Harvest (thousands of fish)	Percentage <sup>a/</sup>	
	Troll	Recreational		Troll	Recreational
0-300	25	75	0-100	50	50
>300	60	40	>100-150	60	40
			>150	70	30

a/ The allocation must be calculated in additive steps when the harvest level exceeds the initial tier.

This allocation schedule should, on average, allow for meeting the specific fishery allocation priorities described above. The initial allocation may be modified annually by preseason and inseason trades to better achieve (1) the commercial and recreational fishery objectives and (2) the specific fishery allocation priorities. The final preseason allocation adopted by the Council will be expressed in terms of quotas, which are neither guaranteed catches nor inflexible ceilings. Only the total ocean harvest quota is a maximum allowable catch.

To provide flexibility to meet the dynamic nature of the fisheries and to assure achievement of the allocation objectives and fishery priorities, deviations from the allocation schedule will be allowed as provided below and as described in Section 6.5.3.2 for certain selective fisheries.

1. Preseason species trades (Chinook and coho) that vary from the allocation schedule may be made by the Council based upon the recommendation of the pertinent recreational and commercial SAS representatives north of Cape Falcon. The Council will compare the socioeconomic impacts of any such recommendation to those of the standard allocation schedule before adopting the allocation that best meets FMP management objectives.
2. Inseason transfers, including species trades of Chinook and coho, may be permitted in either direction between recreational and commercial fishery allocations to allow for uncatchable fish in one fishery to be reallocated to the other. Fish will be deemed "uncatchable" by a respective commercial or

recreational fishery only after considering all possible annual management actions to allow for their harvest which meet framework harvest management objectives, including single species or exclusive registration fisheries. Implementation of inseason transfers will require (1) consultation with the pertinent recreational and commercial SAS members and the STT, and (2) a clear establishment of available fish and impacts from the transfer.

3. An exchange ratio of four coho to one Chinook shall be considered a desirable guideline for preseason trades. Deviations from this guideline should be clearly justified. Inseason trades and transfers may vary to meet overall fishery objectives. (The exchange ratio of four coho to one Chinook approximately equalizes the species trade in terms of average ex-vessel values of the two salmon species in the commercial fishery. It also represents an average species catch ratio in the recreational fishery.)
4. Any increase or decrease in the recreational or commercial total allowable catch (TAC), resulting from an inseason restructuring of a fishery or other inseason management action, does not require reallocation of the overall north of Cape Falcon non-Indian TAC.
5. The commercial TACs of Chinook and coho derived during the preseason allocation process may be varied by major subareas (i.e., north of Leadbetter Point and south of Leadbetter Point) if there is a need to do so to decrease impacts on weak stocks. Deviations in each major subarea will generally not exceed 50 percent of the TAC of each species that would have been established without a geographic deviation in the distribution of the TAC. Deviation of more than 50 percent will be based on a conservation need to protect weak stocks and will provide larger overall harvest for the entire fishery north of Cape Falcon than would have been possible without the deviation. In addition, the actual harvest of coho may deviate from the initial allocation as provided in Section 6.5.3.2 for certain selective fisheries.
6. The recreational TACs of Chinook and coho derived during the preseason allocation process will be distributed among four major recreational port areas as described for coho and Chinook distribution in Section 5.3.1.3. The Council may deviate from subarea quotas (1) to meet recreational season objectives based on agreement of representatives of the affected ports and/or (2) in accordance with Section 6.5.3.2 with regard to certain selective fisheries. Additionally, based on the recommendations of the SAS members representing the ocean sport fishery north of Cape Falcon, the Council will include criteria in its preseason salmon management recommendations to guide any inseason transfer of coho among the recreational subareas to meet recreational season duration objectives. Inseason redistributions of quotas within the recreational fishery or the distribution of allowable coho catch transfers from the commercial fishery may deviate from the preseason distribution.

### **5.3.1.3      *Recreational Subarea Allocations***

#### **Coho**

The north of Cape Falcon preseason recreational TAC of coho will be distributed to provide 50 percent to the area north of Leadbetter Point and 50 percent to the area south of Leadbetter Point. The distribution of the allocation north of Leadbetter point will vary, depending on the existence and magnitude of an inside fishery in Area 4B, which is served by Neah Bay.

In years with no Area 4B fishery, the distribution of coho north of Leadbetter Point (50 percent of the total recreational TAC) will be divided to provide 74 percent to the area between Leadbetter Point and the Queets River (Westport), 5.2 percent to the area between Queets River and Cape Flattery (La Push), and 20.8 percent to the area north of the Queets River (Neah Bay). In years when there is an Area 4B (Neah Bay) fishery under state management, the allocation percentages north of Leadbetter Point will be modified to maintain more equitable fishing opportunity among the ports by decreasing the ocean harvest share for

Neah Bay. This will be accomplished by adding 25 percent of the numerical value of the Area 4B fishery to the recreational TAC north of Leadbetter Point prior to calculating the shares for Westport and La Push. The increase to Westport and La Push will be subtracted from the Neah Bay ocean share to maintain the same total harvest allocation north of Leadbetter Point. Table 5-2 displays the resulting percentage allocation of the total recreational coho catch north of Cape Falcon among the four recreational port areas (each port area allocation will be rounded to the nearest hundred fish, with the largest quotas rounded downward if necessary to sum to the TAC).

TABLE 5-2. Percentage allocation of total allowable coho harvest among the four recreational port areas north of Cape Falcon.<sup>a/</sup>

Port Area	Without Area 4B Add-on	With Area 4B Add-on	
Columbia River	50.0%	50.0%	
Westport	37.0%	37.0%	plus 17.3% of the Area 4B add-on
La Push	2.6%	2.6%	plus 1.2% of the Area 4B add-on
Neah Bay	10.4%	10.4%	minus 18.5% of the Area 4B add-on

<sup>a/</sup> The Council may deviate from these percentages as described under #6 in Section 5.3.1.2.

TABLE 5-3. Example distributions of the recreational coho TAC north of Leadbetter Point.

Sport TAC North of Cape Falcon	Without Area 4B Add-On				With Area 4B Add-On <sup>a/</sup>					
	Columbia River	Westport	La Push	Neah Bay	Columbia River	Westport	La Push	Neah Bay		
								Ocean	Add-on	Total
50,000	25,000	18,500	1,300	5,200	25,000	19,900	1,400	3,700	8,000	11,700
150,000	75,000	55,500	3,900	15,600	75,000	57,600	4,000	13,600	12,000	25,600
300,000	150,000	111,000	7,800	31,200	150,000	114,500	8,000	27,500	20,000	47,500

<sup>a/</sup> The add-on levels are merely examples. The actual numbers in any year would depend on the particular mix of stock abundances and season determinations.

### Chinook

Subarea distributions of Chinook will be managed as guidelines and shall be calculated by the STT with the primary objective of achieving all-species fisheries without imposing Chinook restrictions (i.e., area closures or bag limit reductions). Chinook in excess of all-species fisheries needs may be utilized by directed Chinook fisheries north of Cape Falcon or by negotiating a Chinook/coho trade with another fishery sector.

Inseason management actions may be taken by the NMFS NW Regional Administrator to assure that the primary objective of the Chinook harvest guidelines for each of the four recreational subareas north of Cape Falcon are met. Such actions might include: closure from 0 to 3, or 0 to 6, or 3 to 200, or 5 to 200 nautical miles from shore; closure from a point extending due west from Tatoosh Island for 5 miles, then south to a point due west of Umatilla Reef Buoy, then due east to shore; closure from North Head at the Columbia River mouth north to Leadbetter Point; change species that may be landed; or other actions as prescribed in the annual regulations.

### 5.3.2 Commercial and Recreational Fisheries South of Cape Falcon

The allocation of allowable ocean harvest of coho salmon south of Cape Falcon has been developed to provide a more stable recreational season and increased economic benefits of the ocean salmon fisheries at varying stock abundance levels. When coupled with various recreational harvest reduction measures or the timely transfer of unused recreational allocation to the commercial fishery, the allocation schedule is designed to help secure recreational seasons extending at least from Memorial Day through Labor Day

when possible, assist in maintaining commercial markets even at relatively low stock sizes, and fully utilize available harvest. Total ocean catch of coho south of Cape Falcon will be treated as a quota to be allocated between troll and recreational fisheries as provided in Table 5-4.

(Note: The allocation schedule provides guidance only when coho abundance permits a directed coho harvest, not when the allowable impacts are insufficient to allow coho retention south of Cape Falcon. At such low levels, allocation of the allowable impacts will be accomplished during the Council's preseason process.)

TABLE 5-4. Allocation of allowable ocean harvest of coho salmon (thousands of fish) south of Cape Falcon.<sup>a/</sup>

Total Allowable Ocean Harvest	Recreational Allocation		Commercial Allocation	
	Number	Percentage	Number	Percentage
#100	#100 <sup>b/c/</sup>	100 <sup>b/</sup>	b/	b/
200	167 <sup>b/c/</sup>	84 <sup>b/</sup>	33 <sup>b/</sup>	17 <sup>b/</sup>
300	200	67	100	33
350	217	62	133	38
400	224	56	176	44
500	238	48	262	52
600	252	42	348	58
700	266	38	434	62
800	280	35	520	65
900	290	32	610	68
1,000	300	30	700	70
1,100	310	28	790	72
1,200	320	27	880	73
1,300	330	25	970	75
1,400	340	24	1,060	76
1,500	350	23	1,150	77
1,600	360	23	1,240	78
1,700	370	22	1,330	78
1,800	380	21	1,420	79
1,900	390	21	1,510	79
2,000	400	20	1,600	80
2,500	450	18	2,050	82
3,000	500	17	2,500	83

a/ The allocation schedule is based on the following formula: first 150,000 coho to the recreational base (this amount may be reduced as provided in footnote b); over 150,000 to 350,000 fish, share at 2:1, 0.667 to troll and 0.333 to recreational; over 350,000 to 800,000 the recreational share is 217,000 plus 14% of the available fish over 350,000; above 800,000 the recreational share is 280,000 plus 10% of the available fish over 800,000.

Note: The allocation schedule provides guidance only when coho abundance permits a directed coho harvest, not when the allowable impacts are insufficient to allow general coho retention south of Cape Falcon. At such low levels, allocation of the allowable impacts will be determined in the Council's preseason process. Deviations from the allocation may also be allowed to meet consultation standards for ESA-listed stocks (e.g., the 1998 biological opinion for California coastal coho requires no retention of coho in fisheries off California).

b/ If the commercial allocation is insufficient to meet the projected hook-and-release mortality associated with the commercial all-salmon-except-coho season, the recreational allocation will be reduced by the number needed to eliminate the deficit.

c/ When the recreational allocation is 167,000 coho or less, special allocation provisions apply to the recreational harvest distribution by geographic area (unless superseded by requirements to meet a consultation standard for ESA-listed stocks); see text of FMP as modified by Amendment 11 allocation provisions.

The allocation schedule is designed to give sufficient coho to the recreational fishery to increase the probability of attaining no less than a Memorial Day to Labor Day season as stock sizes increase. This increased allocation means that, in many years, actual catch in the recreational fishery may fall short of its allowance. In such situations, managers will make an inseason reallocation of unneeded recreational coho to the south of Cape Falcon troll fishery. The reallocation should be structured and timed to allow the commercial fishery sufficient opportunity to harvest any available reallocation prior to September 1, while still assuring completion of the scheduled recreational season (usually near mid-September) and, in any event, the continuation of a recreational fishery through Labor Day. This reallocation process will occur no later than August 15 and will involve projecting the recreational fishery needs for the remainder of the summer season. The remaining projected recreational catch needed to extend the season to its scheduled closing date will be a harvest guideline rather than a quota. If the guideline is met prior to Labor Day, the season may be allowed to continue if further fishing is not expected to result in any considerable danger of impacting the allocation of another fishery or of failing to meet an escapement goal.

The allocation schedule is also designed to assure there are sufficient coho allocated to the troll fishery at low stock levels to ensure a full Chinook troll fishery. This hooking mortality allowance will have first priority within the troll allocation. If the troll allocation is insufficient for this purpose, the remaining number of coho needed for the estimated incidental coho mortality will be deducted from the recreational share. At higher stock sizes, directed coho harvest will be allocated to the troll fishery after hooking mortality needs for Chinook troll fishing have been satisfied.

The allowable harvest south of Cape Falcon may be further partitioned into subareas to meet management objectives of the FMP. Allowable harvests for subareas south of Cape Falcon will be determined by an annual blend of management considerations including:

1. Abundance of contributing stocks
2. Allocation considerations of concern to the Council
3. Relative abundance in the fishery between Chinook and coho
4. Escapement goals
5. Maximizing harvest potential

Troll coho quotas may be developed for subareas south of Cape Falcon consistent with the above criteria. California recreational catches of coho, including projections of the total catch to the end of the season, would be included in the recreational allocation south of Cape Falcon, but the area south of the Oregon-California border would not close when the allocation is met; except as provided below when the recreational allocation is at 167,000 or fewer fish.

When the south of Cape Falcon recreational allocation is equal to or less than 167,000 coho:

1. The recreational fisheries will be divided into two major subareas, as listed in #2 below, with independent quotas (i.e., if one quota is not achieved or is exceeded, the underage or overage will not be added to or deducted from the other quota; except as provided under #3 below).
2. The two major recreational subareas will be managed within the constraints of the following impact quotas, expressed as a percentage of the total recreational allocation (percentages based on avoiding large deviations from the historical harvest shares):
  - a. Central Oregon (Cape Falcon to Humbug Mountain) - 70 percent
  - b. South of Humbug Mountain - 30 percent

In addition,

- (1) Horse Mountain to Point Arena will be managed for an impact guideline of 3 percent of the south of Cape Falcon recreational allocation, and
  - (2) There will be no coho harvest constraints south of Point Arena. However, the projected harvest in this area (which averaged 1,800 coho from 1986-1990) will be included in the south of Humbug Mountain impact quota.
3. Coho quota transfers can occur on a one-for-one basis between subareas if Chinook constraints preclude access to coho.

### **5.3.3 Tribal Indian Fisheries**

#### **5.3.3.1 California**

On October 4, 1993 the Solicitor, Department of Interior, issued a legal opinion in which he concluded that the Yurok and Hoopa Valley Indian tribes of the Klamath River Basin have a federally protected right to the fishery resource of their reservations sufficient to support a moderate standard of living or 50 percent of the total available harvest of Klamath-Trinity basin salmon, whichever is less. The Secretary of Commerce recognized the tribes' federally reserved fishing right as applicable law for the purposes of the MSA (58 FR 68063, December 23, 1993). The Ninth Circuit Court of Appeals upheld the conclusion that the Hoopa Valley and Yurok tribes have a federally reserved right to harvest fish in Parravano v. Babbitt and Brown, 70 F.3d 539 (1995) (Cert. denied in Parravano v. Babbitt and Brown 110, S.Ct 2546 [1996]). The Council must recognize the tribal allocation in setting its projected escapement level for the Klamath River.

#### **5.3.3.2 Columbia River**

Pursuant to a September 1, 1983 Order of the U.S. District Court, the allocation of harvest in the Columbia River was established under the "Columbia River Fish Management Plan" which was implemented in 1988 by the parties of U.S. v. Oregon. This plan replaced the original 1977 plan (pages 16-20 of the 1978 FMP). Since the Columbia River Fishery Management Plan expired on December 31, 1998, fall Chinook in Columbia River fisheries were managed through 2007 under the guidance of annual management agreements among the U.S. v. Oregon parties. Since 2008, two 10-year management agreements (2008-2017 and 2018-2027) were negotiated through the U.S. v. Oregon process. The management agreement provides a framework within which the relevant parties may exercise their sovereign powers in a coordinated and systematic manner in order to protect, rebuild, and enhance upper Columbia River fish runs while providing harvest for both treaty Indian and non-Indian fisheries. The parties to the agreement are the United States, the states of Oregon, Washington, and Idaho, and four Columbia River treaty Indian tribes-Warm Springs, Yakama, Nez Perce, and Umatilla.

#### **5.3.3.3 U.S. v. Washington Area**

Treaty Indian tribes have a legal entitlement to the opportunity to take up to 50 percent of the harvestable surplus of stocks which pass through their usual and accustomed fishing areas. The treaty Indian troll harvest which would occur if the tribes chose to take their total 50 percent share of the weakest stock in the ocean, is computed with the current version of the Fishery Regulation Assessment Model (FRAM), assuming this level of harvest did not create conservation or allocation problems on other stocks. A quota may be established in accordance with the objectives of the relevant treaty tribes concerning allocation of the treaty Indian share to ocean and inside fisheries. The total quota does not represent a guaranteed ocean harvest, but a maximum allowable catch.

The requirement for the opportunity to take up to 50 percent of the harvestable surplus determines the treaty shares available to the inside/outside Indian and all-citizen fisheries. Ocean coho harvest ceilings off the

Washington coast for treaty Indians and all-citizen fisheries are independent within the constraints that (1) where feasible, conservation needs of all stocks must be met; (2) neither group precludes the other from the opportunity to harvest its share, and; (3) allocation schemes may be established to specify outside/inside sharing for various stocks.

## **6.5 SEASONS AND QUOTAS**

For each management area or subarea, the Council has the option of managing the commercial and recreational fisheries for either coho or Chinook using the following methods: (1) fixed quotas and seasons; (2) adjustable quotas and seasons; and (3) seasons only. The Council may also use harvest guidelines within quotas or seasons to trigger inseason management actions established in the preseason regulatory process.

Quotas provide very precise management targets and work best when accurate estimates of stock abundance and distribution are available, or when needed to ensure protection of depressed stocks from potential overfishing. The Council does not view quotas as guaranteed harvests, but rather the maximum allowable harvest, which assures meeting the conservation objective of the species or stock of concern. While time and area restrictions are not as precise as quotas, they allow flexibility for effort and harvest to vary in response to abundance and distribution.

### **6.5.1 Preferred Course of Action**

Because of the need to use both seasons and quotas, depending on the circumstances, the Council will make the decision regarding seasons and quotas annually during the preseason regulatory process, subject to the limits specified below. Fishing seasons and quotas also may be modified during the season as provided under Section 10.2.

### **6.5.2 Procedures for Calculating Seasons**

Seasons will be calculated using the total allowable ocean harvest determined by procedures described in Chapter 5, and further allocated to the commercial and recreational fishery in accordance with the allocation plan presented in Section 5.3, and after consideration of the estimated amount of effort required to catch the available fish, based on past seasons.

Recreational seasons will be established with the goal of encompassing Memorial Day and/or Labor Day weekends in the season, if feasible. Opening dates will be adjusted to provide reasonable assurance that the recreational fishery is continuous, minimizing the possibility of an in-season closure.

Criteria used to establish commercial seasons, in addition to the estimated allowable ocean harvests, the allocation plan, and the expected effort during the season, will be: (1) bycatch mortality; (2) size, poundage, and value of fish caught; (3) effort shifts between fishing areas; (4) harvest of pink salmon in odd-numbered years; and (5) protection for weak stocks when they frequent the fishing areas at various times of the year.

### **6.5.3 Species-Specific and Other Selective Fisheries**

#### **6.5.3.1 Guidelines**

In addition to the all-species and single or limited species seasons established for the commercial and recreational fisheries, other species-limited fisheries, such as "ratio" fisheries and fisheries selective for marked or hatchery fish, may be adopted by the Council during the preseason regulatory process. In adopting such fisheries, the Council will consider the following guidelines:

1. Harvestable fish of the target species are available.
2. Harvest impacts on incidental species will not exceed allowable levels determined in the management plan.

3. Proven, documented, selective gear exists (if not, only an experimental fishery should be considered).
4. Significant wastage of incidental species will not occur or a written economic analysis demonstrates the landed value of the target species exceeds the potential landed value of the wasted species.
5. The selective fishery will occur in an acceptable time and area where wastage can be minimized and target stocks are maximally available.
6. Implementation of selective fisheries for marked or hatchery fish must be in accordance with U.S. v. Washington stipulation and order concerning co-management and mass marking (Case No. 9213, Subproceeding No. 96-3) and any subsequent stipulations or orders of the U.S. District Court, and consistent with international objectives under the PST (e.g., to ensure the integrity of the coded-wire tag program).

#### *6.5.3.2 Selective Fisheries Which May Change Allocation Percentages North of Cape Falcon*

As a tool to increase management flexibility to respond to changing harvest opportunities, the Council may implement deviations from the specified port area allocations and/or gear allocations to increase harvest opportunity through mark-selective fisheries. The benefits of any mark-selective fishery will vary from year to year and fishery to fishery depending on stock abundance, the mix of marked and unmarked fish, projected hook-and-release mortality rates, and public acceptance. These factors should be considered on an annual and case-by-case basis when utilizing mark-selective fisheries. The deviations for mark-selective fisheries are subordinate to the allocation priorities in Section 5.3.1.1 and may be allowed under the following management constraints:

1. Mark-Selective fisheries will first be considered during the months of May and/or June for Chinook and July through September for coho. However, the Council may consider mark-selective fisheries at other times, depending on year to year circumstances identified in the preceding paragraph.
2. The total impacts within each port area or gear group on the critical natural stocks of management concern are not greater than those under the original allocation without the mark-selective fisheries.
3. Other allocation objectives (i.e., treaty Indian, or ocean and inside allocations) are satisfied during negotiations in the North of Cape Falcon Forum.
4. The mark-selective fishery is assessed against the guidelines in Section 6.5.3.1.
5. Mark-selective fishery proposals need to be made in a timely manner in order to allow sufficient time for analysis and public comment on the proposal before the Council finalizes its fishery recommendations.

If the Council chooses to deviate from specified port and/or gear allocations, the process for establishing a mark-selective fishery would be as follows:

1. Allocate the TAC among the gear groups and port areas according to the basic FMP allocation process described in Section 5.3.1 without the mark-selective fishery.
2. Each gear group or port area may utilize the critical natural stock impacts allocated to its portion of the TAC to access additional harvestable, marked fish, over and above the harvest share established in step one, within the limits of the management constraints listed in the preceding paragraph.

#### **6.5.4 Procedures for Calculating Quotas**

Quotas will be based on the total allowable ocean harvest and the allocation plan as determined by the procedures of Chapter 5.

To the extent adjustable quotas are used, they may be subject to some or all of the following inseason adjustments:

1. For coho, private hatchery contribution to the ocean fisheries in the OPI area.
2. Unanticipated loss of shakers (bycatch mortality of undersized fish or unauthorized fish of another species that have to be returned to the water) during the season. (Adjustment for coho hooking mortality during any all-salmon-except-coho season will be made when the quotas are established.)
3. Any catch that take place in fisheries within territorial waters that are inconsistent with federal regulations in the EEZ.
4. If the ability to update inseason stock abundance is developed in the future, adjustments to total allowable harvest could be made, where appropriate.
5. The ability to redistribute quotas between subareas depending on the performance toward achieving the overall quota in the area.

Changes in the quotas as a result of the inseason adjustment process will be avoided unless the changes are of such magnitude that they can be validated by the STT and Council, given the precision of the original estimates.

The basis for determining the private hatchery contribution in (1) above will be either coded-wire tag analysis or analysis of scale patterns, whichever is determined by the STT to be more accurate, or another more accurate method that may be developed in the future, as determined by the STT and Council.

In reference to (4) and (5) above, if reliable techniques become available for making inseason estimates of stock abundance, and provision is made in any season for its use, a determination of techniques to be applied will be made by the Council through the Salmon Methodology Review process and discussed during the preseason regulatory process.

#### **6.5.5 Procedures for Regulating Ocean Harvests of Pink and Sockeye**

Sockeye salmon are only very rarely caught in Council-managed ocean salmon fisheries and no specific procedures have been established to regulate their harvest. Procedures for pink salmon are as follows:

1. All-species seasons will be planned such that harvest of pink salmon can be maximized without exceeding allowable harvests of Chinook and/or coho and within conservation and allocation constraints of the pink stocks.
2. Species specific or ratio fisheries for pink salmon will be considered under the guidelines for species specific fisheries presented in Section 6.5.3, and allocation constraints of the pink stocks.

**APPENDIX C  
OREGON PRODUCTION INDEX DATA**

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TABLE C-1. Millions of coho smolts <sup>a/</sup> released annually into the OPI area by geographic area and rearing agency.

Year or Average	Columbia River						Oregon Coast				
	Oregon	Washington			Federal	Total	ODFW <sup>b/</sup>	Private		California	Total OPI
		Early	Late	Combined				Yearlings	Total		
1960-1965	5.6	-	-	6.1	4.5	16.2	2.0	-	2.0	0.4	18.6
1966-1970	6.0	10.2	4.9	15.1	6.5	27.6	2.9	0.0	2.9	1.3	31.8
1971-1975	6.8	10.7	6.8	17.5	4.5	28.8	3.9	0.0	3.9	1.2	33.9
1976-1980	8.0	7.3	10.1	17.4	4.7	30.1	3.8	1.4	5.2	0.7	36.0
1981-1985	7.1	4.3	14.4	18.7	3.2	29.0	3.9	3.3	7.2	0.7	36.9
1986-1990	7.3	3.1	15.6	18.7	4.1	30.1	5.2	1.9	7.1	1.4	38.6
1991-1995	9.8	3.6	13.9	17.5	3.5	30.8	4.9	-	4.9	0.9	36.6
1996-2000	7.2	4.5	10.9	15.4	4.3	26.9	2.0	-	2.0	0.6	29.4
2001	7.6	4.2	9.7	13.9	3.7	25.2	0.9	-	0.9	0.6	26.7
2002	7.5	3.3	8.6	11.9	4.3	23.7	1.0	-	1.0	0.6	25.3
2003	8.2	3.3	8.7	12.0	3.1	23.3	0.8	-	0.8	0.5	24.6
2004	6.7	3.0	8.8	11.8	3.6	22.1	0.8	-	0.8	0.6	23.5
2005	6.1	2.5	9.1	11.6	2.8	20.6	0.8	-	0.8	0.6	22.0
2006	6.1	2.8	9.0	11.7	2.6	20.4	0.8	-	0.8	0.6	21.8
2007	6.2	3.1	9.0	12.1	3.1	21.4	0.7	-	0.7	0.6	22.6
2008	6.9	2.8	9.2	12.0	2.9	21.9	0.4	-	0.4	0.5	22.8
2009	6.9	2.5	8.3	10.8	3.2	20.9	0.4	-	0.4	0.6	21.8
2010	5.9	2.0	7.5	9.5	3.1	18.6	0.3	-	0.3	0.5	19.4
2011	5.8	1.8	8.4	10.2	3.0	19.0	0.4	-	0.4	0.5	19.8
2012	5.9	2.2	7.4	9.7	2.7	18.2	0.4	-	0.4	0.6	19.3
2013	6.0	2.0	7.8	9.8	2.9	18.6	0.4	-	0.4	0.6	19.5
2014	6.5	1.5	7.4	8.9	3.0	18.4	0.4	-	0.4	0.6	19.4
2015	5.7	2.1	7.4	9.5	3.0	18.2	0.3	-	0.3	0.4	18.9
2016	5.7	2.2	6.9	9.1	3.0	17.7	0.3	-	0.3	0.3	18.3
2017	5.5	1.7	7.6	9.2	1.9	16.7	0.3	-	0.3	0.3	17.2
2018 <sup>c/</sup>	6.1	2.1	7.3	9.4	3.6	19.2	0.3	-	0.3	0.3	19.8

a/ Defined here as 30 fish per pound or larger and released in February or later.

b/ Beginning in 1989, does not include minor releases from STEP projects.

c/ Preliminary.

TABLE C-2. Data set used in predicting Oregon production index hatchery (OPIH) adult coho. Adults and jacks shown in thousands of fish and smolts in millions of fish.

Year (t) or Average	Adults (t)		Jacks (t-1)			Columbia River Smolts (t-1)			
	OPIH <sup>a/</sup>	MSM <sup>b/</sup>	Total OPI <sup>c/</sup>	Columbia River <sup>d/</sup>	OR Coast/ CA <sup>e/</sup>	Total OPI <sup>f/</sup>	Normal Timed <sup>g/</sup>	Delayed <sup>h/</sup>	Delayed Smolt Adjustment <sup>i/</sup>
1970-1975	2,432.6	-	119.0	113.3	5.7	32.7	26.4	1.3	4.7
1976-1980	1,879.5	-	91.7	81.5	10.2	34.9	27.4	2.8	6.4
1981-1985 <sup>i/</sup>	867.9	-	47.2	40.6	6.6	33.5	22.6	6.3	8.3
1986-1990	1,486.2	1,459.0	60.6	50.6	10.0	35.9	21.0	8.9	15.5
1991-1995	605.9	581.2	27.7	22.6	5.0	38.1	26.3	5.5	4.5
1996-2000	320.2	329.2	22.4	18.3	4.0	28.9	22.3	3.4	2.5
2001	1,417.1	1,478.7	87.4	71.7	15.7	32.2	28.7	2.0	4.7
2002	649.8	689.5	25.2	18.9	6.3	26.8	23.9	1.4	1.0
2003	936.6	1,009.9	49.9	41.7	8.2	25.3	23.4	0.3	0.5
2004	622.1	693.6	35.4	29.4	6.0	24.5	21.2	2.0	2.5
2005	443.2	454.0	25.0	21.2	3.8	23.4	21.2	0.8	0.8
2006	440.6	523.4	25.9	20.9	5.0	22.0	20.2	0.4	0.4
2007	476.6	545.3	36.3	34.2	2.2	21.8	20.3	0.1	0.2
2008	565.3	576.9	16.0	14.9	1.2	22.7	20.8	0.6	0.4
2009	1,066.2	1,051.0	60.4	58.4	2.0	22.8	20.8	1.1	2.9
2010	551.3	546.5	25.1	23.8	1.4	21.9	20.7	0.2	0.2
2011	442.3	454.2	23.3	22.2	1.1	19.3	18.2	0.3	0.4
2012	182.3	183.1	17.9	13.9	4.0	19.9	18.1	0.9	0.7
2013	316.9	335.1	26.3	24.1	2.2	19.2	17.1	1.1	1.5
2014	1,263.6	1,316.5	51.4	49.4	2.0	19.6	18.0	0.6	1.6
2015	251.7	254.7	39.6	37.0	2.6	19.4	16.9	1.5	3.0
2016	233.8	242.3	19.7	18.6	1.0	18.9	16.9	1.3	1.3
2017	284.8	284.8	22.9	22.4	0.4	18.4	16.5	1.3	1.6
2018	149.4	179.1	19.2	18.5	0.7	17.2	16.0	0.7	0.8
2019	-	933.5 <sup>k/</sup>	51.6	50.8	0.8	19.8	18.6	0.5	1.4

a/ Adult OPIH = Harvest impacts plus escapement for public hatchery stocks originating in the Columbia River, Oregon coastal rivers, and the Klamath River, California.

b/ Adult MSM = Harvest impacts plus escapement for public hatchery stocks originating in the Columbia River, Oregon coastal rivers, and the Klamath River. Estimates derived from the MSM and used for prediction beginning in 2008.

c/ Jack OPI = Total Jack CR and Jack OC.

d/ Jack CR = Columbia River jack returns corrected for small adults.

e/ Jack OC = Oregon coastal and California hatchery jack returns corrected for small adults.

f/ Total OPI = Columbia River (Sm D + Sm CR), Oregon coastal and Klamath Basin.

g/ Sm CR = Columbia River smolt releases from the previous year expected to return as adults in the year listed.

h/ Sm D = Columbia River delayed smolt releases from the previous year expected to return as adults in the year listed.

i/ Correction term for delayed smolts released from Col. R. hatcheries (Col. R. Jacks\*(Delayed Smolts/Col. R. Smolts)).

j/ Subsequent to 1983 data not used in predictions due to El Niño impacts.

k/ Preseason predicted adults.

TABLE C-3. Estimated coho salmon natural spawner abundance in Oregon coastal basins for each OCN coho management component.

Component and Basin <sup>a/</sup>	2001-2005 Ave.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>NORTHERN</b>														
Necanicum	2,534	750	431	1,055	3,827	4,445	2,120	902	798	5,727	847	936	529	393
Nehalem	20,159	11,614	14,033	17,205	21,753	32,215	15,322	2,963	4,539	30,577	3,079	7,549	5,486	3,989
Tillamook	6,563	8,774	2,295	4,828	16,251	14,890	19,250	1,686	4,402	20,090	1,345	7,102	2,927	1,976
Nestucca	7,287	1,876	394	1,844	4,252	1,947	7,857	1,751	946	6,369	1,029	2,412	4,495	1,075
Ind. Tribs.	573	1,121	376	639	2,052	1,473	1,341	218	271	4,607	440	699	206	264
<b>TOTAL</b>	<b>37,116</b>	<b>24,135</b>	<b>17,529</b>	<b>25,571</b>	<b>48,135</b>	<b>54,970</b>	<b>45,890</b>	<b>7,520</b>	<b>10,956</b>	<b>67,370</b>	<b>6,740</b>	<b>18,698</b>	<b>13,643</b>	<b>7,697</b>
<b>NORTH CENTRAL</b>														
Salmon	506	513	59	652	753	1,382	3,636	297	1,165	3,680	332	1,054	450	105
Siletz	6,902	5,205	2,197	20,634	24,070	6,283	33,094	4,495	7,660	19,496	2,216	3,015	5,202	4,040
Yaquina	10,571	4,247	3,158	10,913	11,182	8,589	19,074	6,268	3,553	25,582	2,400	3,730	2,491	4,672
Beaver Ck.	3,487	1,950	611	1,218	3,575	2,072	2,389	1,878	2,015	6,564	332	1,709	1,553	494
Alesea	8,344	1,972	2,146	13,320	14,638	9,688	28,337	8,470	9,283	25,855	6,185	7,375	4,377	5,112
Siuslaw	24,138	5,869	3,552	17,491	30,607	25,983	28,082	11,946	14,118	38,896	10,352	9,141	7,129	6,688
Ind. Tribs.	3,279	1,468	547	3,910	1,610	2,548	4,487	492	1,929	1,890	856	464	1,646	972
<b>TOTAL</b>	<b>57,227</b>	<b>21,224</b>	<b>12,270</b>	<b>68,138</b>	<b>86,435</b>	<b>56,545</b>	<b>119,099</b>	<b>33,846</b>	<b>39,723</b>	<b>121,963</b>	<b>22,673</b>	<b>26,488</b>	<b>22,848</b>	<b>22,083</b>
<b>SOUTH CENTRAL</b>														
Umpqua	37,165	18,092	11,783	37,868	57,984	70,019	94,655	20,969	27,016	66,272	14,860	7,494	15,492	21,987
Coos	26,572	11,266	1,329	14,881	26,979	27,658	10,999	9,414	6,884	38,880	3,030	4,624	2,689	7,074
Coquille	15,571	28,577	13,968	8,791	22,286	23,564	55,667	5,911	23,637	41,660	3,357	9,494	4,641	5,201
Floras Ck.	3,568	1,104	340	786	3,203	11,329	9,217	2,502	1,936	1,022	1,585	942	693	278
Sixes R.	157	294	97	43	176	92	334	34	567	410	168	120	69	95
Coastal Lakes	18,205	24,127	8,955	23,608	17,349	38,744	20,281	18,922	13,659	22,010	4,729	8,044	1,302	6,704
Ind. Tribs.	-	-	-	0	188	484	101	48	33	106	0	0	0	10
<b>TOTAL</b>	<b>101,238</b>	<b>83,460</b>	<b>36,472</b>	<b>85,977</b>	<b>128,165</b>	<b>171,890</b>	<b>191,254</b>	<b>57,800</b>	<b>73,732</b>	<b>170,360</b>	<b>27,729</b>	<b>30,718</b>	<b>24,886</b>	<b>41,349</b>
<b>SOUTH</b>														
Rogue <sup>b/</sup>	12,349	3,911	5,136	414	2,566	3,671	4,545	5,474	11,210	2,409	4,072	6,302	4,529	8,266
<b>COASTWIDE</b>	<b>207,930</b>	<b>132,730</b>	<b>71,407</b>	<b>180,100</b>	<b>265,301</b>	<b>287,076</b>	<b>360,788</b>	<b>104,640</b>	<b>135,621</b>	<b>362,102</b>	<b>61,214</b>	<b>82,206</b>	<b>65,906</b>	<b>79,395</b>

a/ The sum of the individual basins may not equal the aggregate totals due to the use of independent estimates at different geographic scales.

b/ Mark recapture estimate based on seining at Huntley Park in the lower Rogue River.

TABLE C-4. Data set used in predicting Oregon coastal natural river (OCNR) coho ocean recruits with random survey sampling and Mixed Stock Model (MSM) accounting. All environmental data in year of ocean entry (t-1) except SST-J, which is January of adult return year (t). Spawners is parent brood (t-3). Recruits shown in thousands of fish.

Year (t)	Recruits		Environmental Index-Month(s) <sup>a/</sup>							
	Adults	Spawners	PDO-MJJ	UWI-JAS	UWI-SON	SSH-AMJ	SST-AMJ	SST-J	MEI-ON	SPR.TRN
1970-1975	237.5	112.3	-0.7	35.5	-19.7	-84.8	11.6	9.0	-0.5	98.3
1976-1980	204.3	30.7	-0.3	26.4	-29.2	-113.6	11.1	9.9	0.1	86.0
1981-1985	148.9	26.8	-0.1	28.4	-30.0	-96.8	11.4	10.4	0.5	85.0
1986-1990	153.8	28.9	0.1	29.6	-39.2	-91.0	11.6	10.4	0.4	82.0
1991-1995	150.7	27.0	0.3	29.3	-40.8	-77.9	11.6	10.4	0.7	89.0
1996-2000	131.8	25.2	0.5	31.2	-49.0	-61.7	11.7	10.8	0.6	94.8
2000	156.6	21.5	0.4	35.8	-26.8	-56.2	11.4	10.2	-0.6	72.0
2001	246.1	34.7	-0.4	47.1	-38.2	-126.2	10.7	10.1	-0.2	61.0
2002	227.3	61.0	-0.6	50.5	-25.9	-148.6	10.1	11.0	1.0	80.0
2003	164.0	143.1	-0.2	55.5	-26.4	-63.5	11.1	10.3	0.5	112.0
2004	146.3	236.4	0.0	27.0	4.3	-62.6	11.9	10.2	0.7	110.0
2005	113.3	213.3	0.5	51.8	-9.0	-25.7	12.5	11.5	-0.3	145.0
2006	64.9	154.1	0.8	53.6	-14.1	-36.4	11.2	9.8	1.1	112.0
2007	157.0	139.9	0.6	27.5	-9.9	-123.7	10.6	8.9	-1.2	74.0
2008	262.9	104.7	0.2	32.7	-10.7	-113.3	9.6	9.4	-0.6	89.0
2009	255.6	57.3	-0.3	24.3	-47.1	-96.0	10.5	10.8	1.0	82.0
2010	352.4	156.1	-0.5	34.2	-32.9	-48.5	11.7	10.1	-1.7	100.0
2011	98.1	245.4	-0.8	29.3	-26.3	-46.3	10.7	9.2	-0.9	100.0
2012	130.2	244.7	-0.7	53.6	-29.9	-34.5	11.0	9.9	0.1	121.0
2013	377.4	336.0	-0.8	35.3	-7.8	-106.6	10.7	9.1	0.0	100.0
2014	64.6	80.2	-0.4	41.3	-40.1	-30.1	11.2	12.3	0.6	101.0
2015	74.3	110.8	0.2	40.4	-7.9	-65.4	10.3	11.0	2.3	92.0
2017	67.4	337.7	1.0	48.0	-68.2	-127.4	11.6	9.9	-0.3	85.0
2018	73.6	52.4	1.3	46.1	-36.2	-63.9	11.2	11.0	-0.4	116.0
2019 <sup>b/</sup>	70.1	67.9	1.0	41.1	-12.4	-116.2	10.8	11.1	0.6	107.0

a/ Environmental Index descriptions:

PDO - Pacific Decadal Oscillation (4-year moving average)

UWI - Upwelling wind index (mean upwelling winds index in months of ocean migration year at 42° N 125° W)

SSH - Sea surface height (South Beach, OR at 44° 37.5' N, 124° 02.6' W)

SST - Sea surface temperature (mean sea surface temperature in January of return year at Charleston, OR)

MEI - Multi-variate ENSO index

SPR.TRN - Spring transition date (Julian)

b/ Adult recruits is a forecasted number.



This map is for reference only and is not intended for use in navigation or fishery regulation.

**PRESEASON REPORT II**  
**PROPOSED ALTERNATIVES**  
**AND**  
**ENVIRONMENTAL ASSESSMENT PART 2**  
**FOR 2019**  
**OCEAN SALMON FISHERY**  
**REGULATIONS**

REGULATION IDENTIFIER NUMBER 0648- BI05



**Pacific Fishery Management Council**  
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**Portland, OR 97220-1384**  
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[www.pcouncil.org](http://www.pcouncil.org)

**MARCH 2019**

## **PUBLIC HEARINGS ON SALMON ALTERNATIVES**

### **Monday, March 25, 2019, 7:00 p.m.**

Chateau Westport  
Beach Room  
710 Hancock  
Westport, WA 98595  
360.268.9101

### **Monday, March 25, 2019, 7:00 p.m.**

Red Lion Coos Bay  
South Umpqua Room  
1313 N. Bayshore Drive  
Coos Bay, OR 97420  
541.267.4141

### **Tuesday, March 26, 2019, 7:00 p.m.**

Hampton Inn by Hilton  
Grand Ballroom  
1160 Airport Park Blvd.  
Ukiah, CA 95482  
707.462.6555

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Public comment on the Alternatives will also be accepted during the April Council meeting on Thursday, April 11, during the public comment period for Agenda Item F.1 at the Doubletree by Hilton Sonoma, One Doubletree Drive, Rohnert Park, CA 94928 Telephone: 707-584-5466. Written public comments may also be submitted to the PFMC Public Comment Electronic Portal ([E-Portal](#)). The supplemental public comment deadline is 5:00 p.m. Pacific Time, Monday, April 1, 2019.

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## LIST OF ACRONYMS AND ABBREVIATIONS

AABM	Aggregate Abundance Based Management
ABC	acceptable biological catch
ACL	annual catch limit
AEQ	adult equivalent
BO	biological opinion
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Commission
CO	central Oregon (South end of Heceta Bank to Humbug Mt.)
Council	Pacific Fishery Management Council
CPUE	catch per unit effort
CWT	coded-wire tag
DPS	Distinct Population Segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ENSO	El Niño/Southern Oscillation
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FB	Fort Bragg (Horse Mt. to Point Arena)
FRAM	Fishery Regulation Assessment Model
FMA	fishery management area
FMP	fishery management plan
FONSI	finding of no significant impact
GSI	genetic stock identification
IPHC	International Pacific Halibut Commission
ISBM	Individual Stock Based Management
KC	California KMZ (OR/CA border to Horse Mountain)
KO	Oregon KMZ (Humbug Mountain to the OR/CA border)
KMZ	Klamath Management Zone
KRFC	Klamath River fall Chinook
LCN	Lower Columbia Natural (wild Columbia River coho below Bonneville Dam)
LCR	Lower Columbia River (wild Col. River tule fall Chinook below Bonneville Dam)
LRH	Lower River Hatchery (hatchery Col. River tule fall Chinook below Bonneville Dam)
LRW	Lower River Wild (Columbia River bright fall wild Chinook below Bonneville Dam).
MO	Monterey (Pigeon Point to the U.S./Mexico border)
NEPA	National Environmental Policy Act
MSA	Magnuson-Stevens Act
MSY	maximum sustainable yield
NMFS	National Marine Fisheries Service
NO	northern Oregon (Cape Falcon to Florence South Jetty)
NAO	National Oceanic and Atmospheric Administration Administrative Order
NOAA	National Oceanic and Atmospheric Administration
ODFW	Oregon Department of Fish and Wildlife
OCN	Oregon coastal natural (coho)
OFL	overfishing limit
OLE	Office of Law Enforcement (NOAA)
OPI	Oregon Production Index
OSP	Oregon State Police
OY	optimum yield

## LIST OF ACRONYMS AND ABBREVIATIONS (continued)

PDO	Pacific (inter) Decadal Oscillation
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RMP	Resource Management Plan
RK	Rogue/Klamath (hatchery coho)
S <sub>ABC</sub>	spawning escapement associated with ABC
S <sub>ACL</sub>	spawning escapement associated with ACL (= S <sub>ABC</sub> )
SCH	Spring Creek Hatchery (Col. R. tule fall Chinook returning to Spring Creek Hatchery [above Bonneville Dam])
SEAK	Southeast Alaska
S <sub>MSY</sub>	MSY spawning escapement
SET	spawning escapement target
SF	San Francisco (Point Arena to Pigeon Point)
SONCC	Southern Oregon/Northern California Coast (coho ESU)
SRFC	Sacramento River fall Chinook
SRFI	Snake River fall (Chinook) Index
SRW	Snake River wild (fall Chinook)
SRWC	Sacramento River winter Chinook
STT	Salmon Technical Team
SWO	State Waters Only (fisheries off Oregon south of Cape Falcon)
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

## 1.0 INTRODUCTION

This is the third report in an annual series of four reports prepared by the Salmon Technical Team (STT) of the Pacific Fishery Management Council (Council) to document and help guide ocean salmon fishery management off the coasts of Washington, Oregon, and California. This report describes the Council's proposed ocean salmon management alternatives for 2019 and characterizes the expected impacts on ocean salmon fisheries and the stocks which support them. The Council solicits public comments on the proposed management Alternatives in preparation for adopting final management recommendations at its April meeting. Oral and written comments may be presented at public hearings at the times and locations displayed on the inside front cover of this report. Additional comments will be accepted during the April Council meeting at the Doubletree by Hilton Sonoma Hotel in Rohnert Park, California. Written public comments may also be submitted to the PFMC Public Comment Electronic Portal ([E-Portal](#)). The supplemental public comment deadline is 5:00 p.m. Pacific Time, Monday, April 1, 2019.

This report also constitutes the second part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2019 ocean salmon regulations. An EA is used to determine whether an action being considered by a Federal agency has significant environmental impacts. This part of the EA includes a statement of the purpose and need, a description of the affected environment, a description of 2019 ocean salmon regulation alternatives being considered, and an analysis of the effects of those Alternatives on the affected environment. The first part of the EA (Preseason Report I; PFMC 2019b) included a description of the No-Action alternative and an analysis of the effects of the No-Action alternative on salmon stocks managed under the Pacific Coast Salmon Fishery Management Plan (FMP), which is one component of the affected environment. Along with the description and analysis of the Proposed Action in Preseason Report III (developed after the Council makes a final recommendation in April 2019), these three parts of the EA will provide the necessary components to determine if a finding of no significant impact (FONSI) or Environmental Impact Statement (EIS) is warranted.

### 1.1 *Purpose and Need*

The purpose of this action, implementation of the 2019 ocean salmon fishery management measures, is to allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP, the Pacific Salmon Treaty (PST), and consultation standards established for salmon stocks listed under the Endangered Species Act (ESA). In achieving this purpose, management measures must take into account the allocation of harvest among different user groups and port areas. Without this action, 2018 management measures would be in effect, which do not consider changes in abundance of stocks in the mixed stock ocean salmon fisheries. Therefore, this action is needed to ensure constraining stocks are not overharvested and that harvest of abundant stocks can be optimized to achieve the most overall benefit to the nation.

The Salmon FMP establishes nine more general harvest-related objectives:

1. Establish ocean exploitation rates for commercial and recreational salmon fisheries that are consistent with requirements for stock conservation objectives and annual catch limits, specified ESA consultation or recovery standards, or Council adopted rebuilding plans.
2. Fulfill obligations to provide for Indian harvest opportunity as provided in treaties with the United States, as mandated by applicable decisions of the Federal courts, and as specified in the October 4, 1993, opinion of the Solicitor, Department of Interior, with regard to Federally-recognized Indian fishing rights of Klamath River tribes.

3. Maintain ocean salmon fishing seasons that support established recreational and commercial fisheries, while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial fisheries that are fair and equitable, and in which fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.
4. Minimize fishery mortalities for those fish not landed from all ocean salmon fisheries as consistent with achieving optimum yield (OY) and bycatch management specifications.
5. Manage and regulate fisheries, so the OY encompasses the quantity and value of food produced, the recreational value, and the social and economic values of the fisheries.
6. Develop fair and creative approaches to managing fishing effort and evaluate and apply effort management systems as appropriate to achieve these management objectives.
7. Support the enhancement of salmon stock abundance in conjunction with fishing effort management programs to facilitate economically viable and socially acceptable commercial, recreational, and tribal seasons.
8. Achieve long-term coordination with the member states of the Council, Indian tribes with Federally recognized fishing rights, Canada, the North Pacific Fishery Management Council, Alaska, and other management entities which are responsible for salmon habitat or production. Manage consistent with the Pacific Salmon Treaty and other international treaty obligations.
9. In recommending seasons, to the extent practicable, promote the safety of human life at sea.

These objectives, along with the consultation standards established under the ESA, provide "sideboards" for setting management measures necessary to implement the Salmon FMP, which conforms to the terms and requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the National Standards Guidelines.

## **2.0 SELECTION OF FINAL MANAGEMENT MEASURES**

The Council's final ocean salmon season recommendations will be based on the range of Alternatives presented in this report and guidance received from deliberations at management fora such as the north of Cape Falcon planning process (sponsored by the States of Washington and Oregon and the treaty Indian tribes in that area), Pacific Salmon Commission (PSC), and from public hearings sponsored by the Council and the States of Washington, Oregon, and California. Final recommendations concerning season dates, catch quotas, and exploitation rates may vary from the range of Alternatives presented in this report depending upon determination of allocations, allowable harvest levels, public comment, or the final impact analyses completed by the STT. Elements of the Alternatives may be recombined to alter season patterns and quotas, or measures such as bag limits, days of fishing per week, special landing restrictions, and other specific regulatory details may also change. In addition, inseason modification of management measures may be used to ensure achievement of the Council's management objectives.

Specific details pertaining to season structure and special management measures for the treaty Indian troll fishery north of Cape Falcon are established in tribal regulations. Chinook and coho quota levels for the treaty Indian troll fishery may be adjusted if substantial changes in incidental fishing mortality result from tribal regulations, preseason or inseason.

The impact analyses presented in this document reflect uncertainties and limitations of information available at the time of the March 2019 Council meeting. At this point in the planning cycle, the STT's impact assessments reflect five key assumptions relative to stocks impacted by Canadian and Alaskan fisheries:

- 1) abundance levels for Canadian Chinook and coho stocks identical to 2018 forecasts;
- 2) for Canadian Chinook fisheries managed under the aggregate abundance based management (AABM) provisions of the 2019 PST Agreement, fishing effort scalars from the final 2018 preseason model run for north-central British Columbia, and West Coast Vancouver Island (WCVI) fisheries;
- 3) for Canadian Chinook fisheries managed under individual stock based management (ISBM) regimes; the 2019 fishery inputs were modeled at 87.5 percent of the 2009 – 2015 average landed catch to reflect anticipated reductions resulting from the recently adopted 2019 PST Agreement;
- 4) for Canadian coho fisheries, single-year 2017 postseason fishing effort scalars from FRAM were used, except a 2015 postseason fishing effort scalar for Fraser Net; and
- 5) for Southern U.S. inside fisheries for Chinook and inside and coastal terminal fisheries for coho, the 2018 final preseason modeled fisheries were used.

In mid-March, U.S. and Canadian fishery managers exchange information regarding preseason expectations for fisheries and the status of Chinook and coho stocks. In addition, the PSC's Chinook Model will be calibrated by the PSC Chinook Technical Committee to determine the allowable catch ceilings for Canadian AABM fisheries under the 2019 PST Agreement. Abundances and fishery expectations will be adjusted in the Council's fishery planning models prior to the April Council meeting, and inside fisheries will be shaped by state and tribal co-managers both prior to and during the April Council meeting.

Any Alternative considered for adoption that deviates from Salmon FMP objectives or other applicable laws will require implementation by emergency rule. If an emergency rule appears to be necessary, the Council must clearly identify and justify the need for such an action consistent with emergency criteria established by the Council and NMFS.

### **3.0 SALMON TECHNICAL TEAM CONCERNS**

The Salmon Technical Team has no concerns to report in this document for 2019.

### **4.0 SALMON FISHERY MANAGEMENT PLAN REQUIREMENTS**

The Council's Salmon FMP includes objectives for setting annual management measures to regulate ocean salmon fisheries between the U.S./Canada border and the U.S./Mexico border. The objectives include biological, administrative, and allocation requirements. In recommending final management measures, the Council attempts to meet all objectives in a fair and balanced manner, while maintaining established priorities.

Biological objectives for stocks originating in the Council area and impacted by Council area ocean fisheries are listed in Table 3-1 of the Salmon FMP. The objectives generally consist of meeting spawning escapement numbers associated with maximum sustainable yield ( $S_{MSY}$ ), overfishing limits (OFL), acceptable biological catch (ABC), and annual catch limits (ACL), or exploitation rate limits designed to support recovery of depressed stocks or to rebuild overfished stocks, while encompassing a long term average harvest approximating MSY.

Administrative objectives are requirements for meeting other applicable law outside of the Salmon FMP. These requirements include ESA consultation standards, international treaties, and tribal trust responsibilities. The Salmon FMP defers to NMFS consultation standards for salmon stocks listed under the ESA in regard to biological conservation objectives. Section 5.0 of this document provides greater detail on ESA listed stocks, while impacts of the Council adopted salmon management measures on ESA listed stocks are included in Table 5.

The Salmon FMP requires compliance with relevant terms of the PST. Section 6.0 of this document provides greater detail on PST provisions and stocks, while impacts of the Council adopted salmon management measures on those stocks are included in Table 5.

Treaty trust responsibilities of the Salmon FMP require the Council to abide by Court orders in the *U.S. v. Washington* (Puget Sound), *Hoh v. Baldrige* (Washington coast), and *U.S. v. Oregon* (Columbia River) cases, and the Solicitor General opinion (Klamath River) governing allocation and management of shared salmon resources. Much of the North of Falcon forum is dedicated to annual negotiations establishing allocation among the tribes, non-Indian fishing sectors, and ocean and inside interests. The results of these negotiations allow the Council to complete final management measure recommendations while meeting its biological, administrative, and allocation objectives.

The Columbia River treaty tribes establish periodic management agreements with the state co-managers and Federal agencies. These agreements are approved pursuant to provisions of *U.S. v. Oregon* procedures. Recent agreements have included an entitlement for the treaty tribes of 50 percent of the coho return destined for areas upstream from Bonneville Dam. Council area fisheries are shaped in order to meet this requirement in some years.

The Yurok and Hoopa Valley Tribes are entitled to 50 percent of the total Klamath River fall Chinook (KRFC) harvest, which is calculated as a harvest of KRFC equal to that taken in all non-Indian fisheries. The Council must account for all harvest impacts when assessing the achievement of KRFC conservation objectives.

In addition to the allocation objectives associated with sharing between treaty Indian and non-Indian sectors, the Salmon FMP includes formulas for sharing Chinook and coho quotas. North of Cape Falcon there are sharing formulas between commercial and recreational sectors, and also among recreational port subareas. South of Cape Falcon there are sharing formulas for coho between commercial and recreational sectors. Alternatives for the 2019 salmon management measures adopted by the Council meet the allocation requirements for Chinook fisheries north of Cape Falcon in the Salmon FMP. In response to conservation concerns for coho salmon stocks on the Washington coast and Puget Sound, Alternative III reduces impacts in the commercial troll fishery relative to those in the recreational fishery and allocates a greater portion of the recreational catch to the area south of Leadbetter Point relative to those areas north of Leadbetter Point; thus, Alternative III deviates from the FMP harvest allocation guidelines and therefore may require fisheries north of Cape Falcon to be implemented under a temporary rule for emergency action if the Alternative is selected.

In support of the adoption of these Alternatives for public review, the Council reviewed the criteria used to evaluate requests for emergency action by the Secretary from Council Operating Procedure 10 (*italics below*) and provided the following preliminary rationale for considering a deviation from the FMP harvest allocation guidelines:

The Council is required to consider proposals for emergency changes at the March meeting and decide whether or not a specific issue appears to meet all the applicable criteria.

*1. The issue was not anticipated or addressed in the salmon plan, or an error was made.*

The issue was not caused by an error. The recent poor status of many Washington coho stocks has presented circumstances not anticipated by the FMP. Although 2019 forecasts for key coho stocks caught in Council fisheries are much improved, there is a need to consider an alternative that is more precautionary for coho management. Because the recreational fishery North of Falcon is more dependent on coho than the commercial fishery, Alternative III allocates a larger share to the recreational fishery than is prescribed by the FMP. Because the recreational fishery focuses on hatchery stocks returning to the Columbia River, Alternative III also allocates a larger share to the recreational fishery in the Columbia River Area, to allow analysis of fishery options that are potentially more focused on those stocks.

*2. Waiting for a plan amendment to be implemented would have substantial adverse biological or economic consequences.*

If regulations that allocate coho differently than as described by the FMP are not considered, there could be significant economic consequences to the ports and communities of the Columbia River, Westport, La Push, and Neah Bay. Alternative III is being considered to allow consideration of alternate allocations of harvest that optimize harvest of hatchery coho while minimizing risk to rebuilding coho stocks.

*3. In the case of allocation issues, the affected user representatives support the proposed emergency action.*

Commercial troll and recreational fishery representatives were involved in developing all three Alternatives put before the Council. Their assistance was critical to the development of these Alternatives and there is full support from them for these Alternatives, including an Alternative that deviates from strict adherence to the FMP.

*4. The action is necessary to meet FMP objectives.*

The structure of the Alternative and the potential deviation from the strict terms of the FMP will allow consideration of fishery structures that optimize harvest while meeting conservation goals, and thereby more fully meet FMP objectives.

*5. If the action is taken, long-term yield from the stock complex will not be decreased.*

These Alternatives will not decrease long-term yield. The potential deviation from the FMP allocation guidelines in Alternative III is intended to optimize harvest while meeting conservation objectives and promoting rebuilding of stocks – it would reallocate, not increase allowable harvest.

## 5.0 SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

Since 1989, NMFS has listed the following 17 Evolutionarily Significant Units (ESUs) of salmon under the ESA:

Species	ESU	Status	Federal Register Notice			
			Most Recent		Original Listing	
<b>Chinook</b>						
Chinook Salmon ( <i>O. tshawytscha</i> )	Sacramento River Winter	Endangered	83 FR 18233	4/26/2018	54 FR 32085	8/1/1989
	Snake River Fall	Threatened	76 FR 50448	8/15/2011	57 FR 14653	4/22/1992
	Snake River Spring/Summer	Threatened	76 FR 50448	8/15/2011	57 FR 14653	4/22/1992
	Puget Sound	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Lower Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Upper Willamette River	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Upper Columbia River Spring	Endangered	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Central Valley Spring	Threatened	76 FR 50447	8/15/2011	64 FR 50394	9/16/1999
	California Coastal	Threatened	76 FR 50447	8/15/2011	64 FR 50394	9/16/1999
<b>Chum</b>						
Chum Salmon ( <i>O. keta</i> )	Hood Canal Summer-Run	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
	Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
<b>Coho</b>						
Coho Salmon ( <i>O. kisutch</i> )	Central California Coastal	Endangered	76 FR 50447	8/15/2011	61 FR 56138	10/31/1996
	S. Oregon/ N. California Coastal	Threatened	76 FR 50447	8/15/2011	62 FR 24588	5/6/1997
	Oregon Coastal	Threatened	76 FR 50448	8/15/2011	63 FR 42587	8/10/1998
	Lower Columbia River	Threatened	76 FR 50448	8/15/2011	70 FR 37160	6/28/2005
<b>Sockeye</b>						
Sockeye Salmon ( <i>O. nerka</i> )	Snake River	Endangered	76 FR 50448	8/15/2011	56 FR 58619	11/20/1991
	Ozette Lake	Threatened	76 FR 50448	8/15/2011	64 FR 14528	3/25/1999

As the listings have occurred, NMFS has initiated formal consultations and issued biological opinions (BOs) that consider the impacts resulting from implementation of the Salmon FMP, or from annual management measures, to listed salmonid species. NMFS has also reinitiated consultation on certain ESUs when new information has become available on the status of the stocks or on the impacts of the Salmon FMP on the stocks. The consultation standards referred to in this document include: (1) reasonable and prudent alternatives, (2) conservation objectives for which NMFS conducted Section 7 consultations and arrived at a no-jeopardy conclusion, and (3) NMFS requirements under Section 4(d) determinations.

A list of current BOs in effect, the species they apply to, and their duration follows:

Date	Evolutionarily Significant Unit covered and effective period
3/8/1996	Snake River spring/summer and fall Chinook and sockeye (until reinitiated)
4/28/1999	Oregon Coastal natural coho, Southern Oregon/ Northern California coastal coho, Central California coastal coho (until reinitiated)
4/28/2000	Central Valley spring Chinook (until reinitiated)
4/27/2001	Hood Canal summer chum 4(d) limit (until reinitiated)
4/30/2001	Upper Willamette Chinook, Upper Columbia spring Chinook, Lake Ozette sockeye, Columbia River chum, and 10 steelhead ESUs (until reinitiated)
4/30/2004	Puget Sound Chinook (until reinitiated)
6/13/2005	California coastal Chinook (until reinitiated)
4/26/2012	Lower Columbia River Chinook (until reinitiated)
4/9/2015	Lower Columbia River natural coho (until reinitiated)
4/26/2018	Sacramento River winter Chinook (until reinitiated)

Amendment 12 to the Salmon FMP added the generic category “species listed under the ESA” to the list of stocks in the salmon management unit and modified respective escapement goals to include “manage consistent with NMFS jeopardy standards or recovery plans to meet immediate conservation needs and long-term recovery of the species.” Amendment 14 specified those listed ESUs and clarified which stocks in the FMP management unit were representative of the ESUs.

In a letter received by the Council on March 5, 2019, NMFS provided guidance on protective measures for species listed under the ESA during the 2019 fishing season. The letter summarized the requirements of NMFS’ BOs on the effects of potential actions under the salmon FMP on listed salmon and provided the anticipated consultation standards of the BOs in preparation for the 2019 management season, as well as further guidance and recommendations for the 2019 management season.

The ESA consultation standards, exploitation rates, and other criteria in place for the 2019 management season are presented in Table 5. Some listed stocks are either rarely caught in Council fisheries (e.g., spring Chinook from the upper Columbia River) or already receive sufficient protection from other salmon FMP and ESA standards (e.g., Central Valley spring Chinook). NMFS has determined that management actions designed to limit catch from these ESUs, beyond what will be provided by harvest constraints for other stocks, are not necessary.

Of the listed Chinook and coho, Council-managed fisheries have substantive impacts on Sacramento River winter Chinook (SRWC), Central Valley spring Chinook, California coastal Chinook (CCC), Snake River wild (SRW) fall Chinook, lower Columbia River (LCR) fall Chinook, and all of the coho stocks.

Additional listed salmonid ESUs found within the Council area, but not substantively impacted by Council managed fisheries, include:

<b><u>Chinook</u></b>	<b><u>Steelhead</u></b>
Snake River spring/summer (threatened)	Southern California (endangered)
Upper Willamette (threatened)	South-central California coast (threatened)
Puget Sound (threatened)	Upper Columbia River (endangered)
Upper Columbia River spring (endangered)	Middle Columbia River (threatened)
	Snake River Basin (threatened)
<b><u>Sockeye</u></b>	Puget Sound (threatened)
Snake River (endangered)	Central Valley, California (threatened)
Ozette Lake Sockeye (threatened)	Central California coast (threatened)
	Upper Willamette River (threatened)
<b><u>Chum</u></b>	Lower Columbia River (threatened)
Columbia River (threatened)	Northern California (threatened)
Hood Canal summer (threatened)	

## **6.0 OBLIGATIONS UNDER THE PACIFIC SALMON TREATY**

In 1985 the PST was signed, setting long-term goals for the benefit of the shared salmon resources of the United States and Canada. The PSC is the body formed by the governments of Canada and the United States to implement the Pacific Salmon Treaty.

### **6.1 Chinook Salmon Management**

A new agreement under the PST was negotiated in 2018 and formally accepted by both the U.S. and Canada. The U.S. and Canada began managing fisheries in accordance with this new agreement on January 1, 2019. The new agreement includes reductions to catch ceilings for SEAK and WCVI AABM fisheries relative to

the prior 2009 agreement. These reductions for SEAK and WCVI range from 7.5 percent and 12.5 percent, respectively, in years of low abundances to 1.5 percent and 2.4 percent, respectively, in years of higher abundances. Under the terms of the 2019 PST Agreement, Council fisheries for Chinook salmon will be subject to a new set of ISBM fishery limits, identified in Attachment I of Chapter 3. These provisions require the calendar year exploitation rate (CYER) by all U.S. fisheries south of the U.S./Canada border on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives (see Attachment I in Chapter 3 of the 2019 Agreement for specifics).

Many Chinook stocks of concern to the Council are affected by fisheries off Canada and Alaska. Maximum allowable catches by Canadian AABM fishery complexes off the WCVI and Northern British Columbia are determined through the annual calibration of the PSC Chinook Model. Under the new Agreement, catch ceilings for Southeast Alaskan (SEAK) fisheries will be determined prior to February 1 in each year using estimated catch per unit effort (CPUE) from the winter power troll fishery. Canadian fisheries that are not included in AABM complexes are managed under ISBM constraints, which, similar to U.S. ISBM fisheries, require the CYER by Canadian ISBM fisheries on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives. Expectations for Canadian and Alaskan fisheries harvest and stock abundance forecasts are incorporated into the Chinook Fishery Regulation Assessment Model (FRAM) to estimate total exploitation rate impacts from all marine fisheries (Table 5).

Key considerations for Canadian domestic fishery management for Chinook in 2019 include: (1) meeting domestic conservation obligations for WCVI, Lower Strait of Georgia, Fraser River Spring 4.2 and 5.2, Fraser Summer 5.2, Fraser Summer 4.1 and Fraser Fall 4.1 (Harrison River) stocks; (2) meeting First Nations Food, Social and Ceremonial and treaty obligations for Chinook harvests in native fisheries; and (3) monitoring of incidental impacts during commercial and native fisheries directed at sockeye, and chum salmon. It is anticipated that the details of the fishery regulatory package off WCVI and in the Juan de Fuca-Strait of Georgia areas will be driven by levels of allowable impact on WCVI, Lower Strait of Georgia and Fraser River Chinook stocks, Interior Fraser (Thompson River) coho, and potentially Thompson and/or Chilcotin River Steelhead (depending on a listing decision under Canada's Species at Risk Act). Increasing the availability of Chinook salmon in key foraging areas of Southern Resident Killer Whales in the southern BC region is an additional consideration which will be supported through conservation actions implemented for Fraser River and other Chinook salmon.

## 6.2 *Coho Salmon Management*

In 2002, the PSC adopted a management plan for coho salmon originating in Washington and Southern British Columbia river systems. The plan is directed at the conservation of key management units, four from Southern British Columbia (Interior Fraser, Lower Fraser, Strait of Georgia Mainland, and Strait of Georgia Vancouver Island) and nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Exploitation rate limits for intercepting fisheries are established for individual management units through formulas specified in the 2019 PST Southern Coho Management Plan, and are based on total allowable fishery exploitation rates.

The categorical status of U.S. coho management units is reported to comply with obligations pursuant to the 2019 PST Southern Coho Management Plan. Categorical status is employed by the PSC under the 2019 PST Southern Coho Management Plan to indicate general ranges of allowable total exploitation rates for U.S. and Canadian coho management units. Three categories are employed: low (total exploitation rate less than 20 percent), moderate (total exploitation rate 20 percent to 40 percent), and abundant (total exploitation rate greater than 40 percent). For the Puget Sound management units, the 2019 PST Southern Coho Management Plan uses the thresholds and stepped harvest rate goals from the Comprehensive Coho

Agreement, developed by Washington and the Puget Sound tribes, and adopted by the Council as FMP conservation objectives in November 2009. Actual exploitation rate constraints for Canadian fisheries on U.S. coho management units are determined by formulas that specify sharing of allowable exploitation rates and a “composite rule.” The composite rule adjusts constraints for Canadian fishery exploitation rates based on the number of U.S. management units which fall in a given category. For example, if only one Washington coastal or Puget Sound coho management unit is in low status, Canadian fisheries are constrained to a total exploitation rate on that unit of 12 percent; if two or more Washington coastal management units are in low status, the constraint becomes 10 percent. The most restrictive exploitation rate limit for Canadian fishery impacts on U.S. coho management units is 10 percent.

For several Washington coastal coho management units, management objectives are expressed as a range of spawning escapements expected to produce MSY. Allowable exploitation rates are calculated from the forecast abundance and the lower end of the escapement range and used to classify the categorical status of the management units. This rate is the maximum allowed under the PST when the management unit is in the moderate or abundant status, but exploitation rates up to 20 percent are allowed if the management unit is in the low abundance status.

For 2019, Puget Sound and Washington coast coho constraints are as follows:

<b>FMP</b>		
FMP Stock	Total Exploitation Rate Constraint <sup>a/</sup>	Categorical Status <sup>a/</sup>
Skagit	35%	Low
Stillaguamish	50%	Normal
Snohomish	40%	Low
Hood Canal	45%	Low
Strait of Juan de Fuca	20%	Critical
Quillayute Fall	59%	
Hoh	65%	
Queets	65%	
Grays Harbor	65%	

<b>PST Southern Coho Management Plan</b>		
U.S. Management Unit	Total Exploitation Rate Constraint <sup>b/</sup>	Categorical Status <sup>c/</sup>
Skagit	35%	Moderate
Stillaguamish	50%	Abundant
Snohomish	40%	Moderate
Hood Canal	45%	Moderate
Strait of Juan de Fuca	20%	Low
Quillayute Fall <sup>c/</sup>	57%	Abundant
Hoh <sup>c/</sup>	71%	Abundant
Queets <sup>c/</sup>	48%	Abundant
Grays Harbor	51%	Abundant

a/ Preliminary. For Puget Sound stocks, the exploitation rate constraints and categorical status (Normal, Low, Critical) reflect application of Comprehensive Coho Agreement rules, as adopted in the FMP. For Washington Coast stocks, exploitation rate constraints represent MFMT. Note that under *U.S. v. Washington* and *Hoh v. Baldrige* case law, the management objectives can differ from FMP objectives provided there is an annual agreement among the state and tribal comanagers; therefore, the exploitation rates used to report categorical status do not necessarily represent maximum allowable rates for these stocks.

b/ Preliminary. For Puget Sound and Washington Coast management units, the exploitation rate constraints reflect application of the 2019 PST Southern Coho Management Plan.

c/ Categories (Abundant, Moderate, Low) correspond to the general exploitation rate ranges depicted in paragraph 8(b)(iii) of the 2019 PST Southern Coho Management Plan. For Washington Coast stocks, categorical status is determined by the exploitation rate associated with meeting the escapement goal (or the lower end of the escapement goal range). This also becomes the maximum allowable rate unless the stock is in the "Low" status. In that case, an ER of up to 20% is allowed.

Key considerations for Canadian fishery management for coho in 2019 are expected to include: (1) meeting domestic conservation obligations for Interior Fraser (including Thompson River) coho; (2) coho harvests by First Nations fisheries; (3) incidental impacts during commercial and First Nations fisheries directed at pink, Chinook, sockeye, and chum salmon; and (4) the desire to provide increased opportunity for sport fisheries through mark-selective retention regulations. The Canadian fishery regimes affecting coho are expected to be driven by Canadian domestic allowable impacts on the Thompson River component of the Interior Fraser management unit.

In previous years prior to 2014, Canadian fisheries were managed so as not to exceed a three percent maximum exploitation rate. In May 2014, Canada decided to permit up to a 16% exploitation rate on upper Fraser coho in Canadian fisheries to allow for impacts in fisheries directed at a record Fraser sockeye forecast. Since 2015, upper Fraser coho in Canadian fisheries have been managed per low status limitations. The projected status of Canadian coho management units in 2019 indicates continuing concerns for the condition of Interior Fraser coho. The Interior Fraser coho management unit is anticipated to remain in low status, resulting in a requirement to constrain the total mortality fishery exploitation rate for 2019 Southern U.S. fisheries to a maximum of 10.0 percent.

## **7.0 DESCRIPTION OF THE ALTERNATIVES**

Detailed information on the proposed ocean salmon regulation Alternatives are presented in Tables 1 (non-Indian commercial), 2 (recreational), and 3 (treaty Indian). Notable changes from recent seasons are highlighted below.

### **7.1 Commercial**

Alternatives for the area north of Cape Falcon reflect a lower total abundance of Chinook and increased Columbia River hatchery and natural coho compared to 2018 forecasts. In 2019, allowable catch of Chinook will likely be similar to 2018 due to similar expected impacts in northern fisheries, and an identical total exploitation rate limit on LCR natural tule fall Chinook compared to 2018. Coho catch quotas will likely be greater than 2018 due to increased harvestable Columbia River hatchery coho.

Alternative I north of Cape Falcon assigns 67 percent of the troll Chinook quota to the May-June Chinook directed fishery, Alternative II assigns 60 percent to the May-June Chinook directed fishery, while Alternative III assigns 50 percent to the May-June Chinook directed fishery. In Alternatives I and II, the May-June fishery opens initially seven days per week with sub-quotas in the area north of the Queets River and in the area south of Leadbetter Point. Landing and possession limits per Thursday-Wednesday landing week are in place in the area north of the Queets River and in the area south of Leadbetter Point in Alternatives I and II. In Alternative III, the May-June fishery opens five days per week with landing and possession limits in all areas and sub-quotas in the area north of the Queets River and in the area south of Leadbetter Point. The summer all-salmon fishery in Alternatives I and II opens seven days per week; Alternative II includes a Chinook sub-quota in the area north of the Queets River. Alternatives I and II include a weekly landing and possession limit for Chinook in the area north of the Queets River and in the area south of Leadbetter Point, and a weekly coho landing and possession limit in all areas. Alternative III includes sub-quotas in the area north of the Queets River and in the area south of Leadbetter Point, and includes landing and possession limits per open period for both Chinook and coho in all areas.

Commercial fisheries south of Cape Falcon will primarily be constrained by Sacramento River fall Chinook (SRFC), SRWC, California coastal Chinook, and LCR natural tule fall Chinook. Both SRFC and KRFC were declared overfished in 2018 and remain overfished in 2019. In an effort to make progress toward rebuilding these stocks, NMFS and the Council provided guidance to structure fisheries to achieve higher

expected spawner escapement levels than those required by the FMP. These increased escapement goals for SRFC and KRFC are reflected in the three fishery Alternatives.

For the area between Cape Falcon and Humbug Mountain, Alternative I for Chinook fisheries would be open on April 20 and run through August 29. The fishery re-opens on September 1 and remains open through October. The fishery under Alternatives II and III would be open in most of May, June, July, and about half of August. The fishery re-opens on September 1 and remains open through October. The September and October fishery would be only open shoreward of the 40 fathom line under Alternative II and only open seaward of this line under Alternative III.

In the Oregon portion of the Klamath Management Zone (KMZ) under Alternative I, the season would open on April 20 and run through the end of May. June, July, and August would be managed under monthly quotas of 3,500, 2,500, and 1,200 Chinook, respectively, with weekly landing and possession limits of 50 Chinook. Under Alternative II, the season would open in May with open periods through the end of the month. June, July, and August would be managed under monthly quotas of 2,500, 2,000, and 1,000 Chinook, respectively, with weekly landing and possession limits of 50 Chinook. Under Alternative III, open periods would be the same as Alternative II with June, July, and August monthly quotas of 1,500, 1,000, and 1,000 Chinook, respectively, with weekly landing and possession limits of 30 Chinook.

For the California portion of the KMZ, Alternative I allows for a quota of 2,500 Chinook in June and quotas of 2,000 Chinook in July and August. Alternative II allows for monthly Chinook quotas of 3,000 in June, July, and August. Alternative III allows for monthly Chinook quotas of 6,000 in June, July and August. Under each of the Alternatives, the fishery would be open five days per week with variable landing and possession limits. The minimum size limit is 27 inches in Alternatives I and II, and 26 inches in Alternative III.

In the Fort Bragg area, under Alternative I, the fishery would be open for the month of June and the second half of July. There is more fishing opportunity under Alternative II, with variable portions of May through July open, along with nearly all of August. Under Alternative III, the fishery would be open for approximately three weeks in June and July, and nearly all of August. The minimum size limit is 27 inches in Alternatives I and II, and 26 inches in Alternative III.

In the San Francisco area under Alternative I, the fishery would be open for all of May and June, about half of July, and nearly all of August and September. The Fall Area Target Zone fishery would be open Monday through Friday in early October. For Alternative II, the fishery would be open for approximately half of May, all of June, most of July and August, and half of September. Alternative III allows for approximately three weeks open in each of June and July, and nearly all of August. The minimum size limit is 26 inches under each of the Alternatives.

In the Monterey area, the fishery would be open for all of May and June, and variable portions of July under Alternatives I and II. For Alternative III, the area would be open for all of May and approximately three weeks in each of June and July. The minimum size limit is 26 inches under each of the Alternatives.

## *7.2 Recreational*

North of Cape Falcon: In Alternative I, the sub-areas north of the Queets River open June 15 for all salmon species, seven days per week, while the sub-areas south of the Queets River open June 22 for all salmon species, seven days per week. The closing date in all sub-areas is September 30 with the exception of the area between Cape Alava and the Queets River, which closes September 22. This Alternative includes a

late-season opportunity in the area between Cape Alava and the Queets River September 28 through October 13.

In Alternative II, the area between the Queets River and Leadbetter Point opens for all salmon species seven days per week on June 29. All other sub-areas open for all salmon species seven days per week on June 22. The scheduled ending date in the area between the Queets River and Leadbetter Point is September 22; all other sub-areas close on September 30.

In Alternative III, the area between the Queets River and Leadbetter Point opens for all salmon species five days per week (Sunday through Thursday) on June 16. All other sub-areas open for all salmon species seven days per week on June 29. The scheduled ending date in the area between the Leadbetter Point and Cape Falcon is September 30; all other sub-areas close on September 15.

In all Alternatives north of Cape Falcon, all retained coho must be marked with a healed adipose fin clip. In the Westport subarea, the Grays Harbor Control Zone is closed beginning August 12 in all Alternatives.

South of Cape Falcon, for the North and Central Oregon coast: Chinook fisheries are open March 15 through October 31 under each of the Alternatives. Each Alternative also features a mark-selective coho quota fishery in the summer, with different quota sizes and closing dates for those Alternatives. A non-mark-selective coho fishery exists for the Cape Falcon to Humbug Mountain area beginning on August 31 under Alternative I and September 6 under Alternative II.

In the Oregon KMZ, Alternatives I and II would open for Chinook fishing on May 18 and would open May 25 under Alternative III. The seasons continue through late August under Alternative I and September 2 under Alternatives II and III. Under Alternative I, a mark-selective coho fishery would open June 22.

In the California KMZ, the fishery opens on May 25 and runs into September under each of the Alternatives. Closing dates in September vary by Alternative. The minimum size limit will be 20 inches.

In the Fort Bragg area, Alternatives I and II have identical seasons, running from April 13 through the end of October. Under Alternative III, the fishery would be open from April 13 through the end of May. After a three week closure, the fishery would re-open on June 22 and run through the end of September. The minimum size limit is 20 inches under each of the Alternatives.

The Alternatives for the San Francisco area are identical to those described above for Fort Bragg, with one exception. The minimum size limit is 24 inches through the end of May, then 20 inches thereafter for each of the Alternatives.

For the Monterey area, from Pigeon Point to the U.S./Mexico border, the fishery opens on April 6 and runs into August, with closing dates that vary by Alternative. The minimum size limit is 24 inches under each of the Alternatives.

### **7.3 Treaty Indian**

Alternatives are similar in structure to past years. All three Alternatives include a Chinook directed fishery in the May-June time period and an all-species fishery targeting coho and Chinook occurring from July to September 15. The proposed Chinook quota would be split 50/50 between each fishing season. Any balance of fish remaining from the May-June fishery may be transferred to the July – September fishery.

## 8.0 AFFECTED ENVIRONMENT AND ANALYSIS OF IMPACTS

Based on National Oceanic and Atmospheric Administration (NOAA) Administrative Order (NAO) 216-6 Section 6.02, the affected environment may consist of the following components:

- Target (FMP) species
- Social or economic environments
- Non-target species
- Essential Fish Habitat
- Public health or safety
- ESA listed (non-salmon) species or critical habitat
- Marine mammals
- Biodiversity or ecosystem function

### 8.1 *Salmon Stocks in the Fishery*

Target stocks include Chinook, coho, and pink salmon stocks identified in Appendix A, Table A-1 of Preseason Report I (Part 1 of this EA; PFMC 2018b), which includes several ESA listed Chinook and coho stocks. These ESA listed stocks are not targeted in Council area salmon fisheries, but will be included in the analysis of effects on target species because they are impacted coincidentally with targeted salmon stocks and frequently constrain access to targeted stocks. Environmental impacts to other ESA listed species (e.g., marine mammals) from the Alternatives will be analyzed in a later section of this EA.

A description of the historical baseline for this component of the affected environment is presented in the Review of 2018 Ocean Salmon Fisheries (PFMC 2019a). A more general description of salmon life history and population characteristics is presented in PFMC 2006. The current status (2019 ocean abundance forecasts) of the environmental components expected to be affected by the 2019 ocean salmon fisheries regulation Alternatives (FMP salmon stocks) are described in PFMC 2019b. The criteria used to evaluate whether there are significant effects from the Alternatives on target stocks are achievement of conservation objectives, ACLs, and rebuilding criteria. For ESA listed stocks impacted by the fishery, ESA consultation standards are applied to determine whether there are significant effects. The Salmon FMP conservation objectives are based on the best available science and are intended to prevent overfishing while achieving optimum yield from West Coast salmon fisheries as required by the MSA. The ESA consultation standards are likewise based on the best available science and are intended to ensure that fishery impacts do not appreciably reduce the likelihood of survival and recovery of listed species in the wild. FMP conservation objectives also include criteria for rebuilding overfished stocks. Therefore conservation objectives and consultation standards are appropriate indicators for determining the significance of fishery management actions referred to in NAO 216-6, Section 6.02.

#### 8.1.1 Chinook Salmon

##### 8.1.1.1 *North of Cape Falcon*

Abundance projections important to Chinook harvest management north of Cape Falcon in 2019 are:

- *Columbia River hatchery tules*. Combined production of Lower River Hatchery (LRH) and Spring Creek Hatchery (SCH) stocks returning to the Columbia River is forecasted to be 100,500, which is lower than the 2018 preseason expectation of 112,500. The 2019 LRH forecast is 54,500, which is below the forecast of 62,400 in 2018. The 2019 SCH forecast is 46,000, which is below the 2018 forecast of 50,100.

The primary Chinook salmon management objective shaping the Alternatives north of Cape Falcon is:

- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 5.0 above. Relevant stocks for the area north of Cape Falcon include LCR natural tule Chinook, Columbia Lower River Wild (LRW) fall Chinook, and Snake River Wild (SRW) fall Chinook.

Fishery quotas under the Alternatives are presented in Table 4. Stock-specific management criteria and their forecast values under the Alternatives are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality under the Alternatives are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR natural tule Chinook. Descriptions pertaining to the achievement of key objectives for Chinook salmon management north of Cape Falcon are found below.

- *LCR natural tule fall Chinook.* The exploitation rate on LCR natural tule fall Chinook in Alternative I is over the 38.0 percent NMFS consultation standard maximum in 2019, assuming the same pre-season river fishery harvest rates as last year. Additional shaping of PSC and inriver fisheries prior to the April Council meeting may result in minor changes to the anticipated ERs presented in the Alternatives. LCR tules are the constraining Chinook stock for fisheries north of Cape Falcon in 2019.
- *LRW fall Chinook.* Alternatives have ocean escapement values ranging from 14,000 to 14,400, which exceeds the ESA consultation standard of 6,900 minimum ocean escapement. LRW Chinook will not constrain ocean fisheries north of Cape Falcon in 2019.
- *SRW fall Chinook.* Alternatives have ocean exploitation rates of 67.1 percent or less of the base period exploitation rates, which is less than the ESA consultation standard of no more than 70 percent of the 1988-1993 base period exploitation rate for all ocean fisheries. SRW Chinook will not constrain ocean fisheries north of Cape Falcon in 2019.

Alternatives II and III for Chinook fisheries north of Cape Falcon satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks (Table 5). The NMFS ESA consultation standard for LCR natural tule fall Chinook is exceeded in Alternative I. Meeting the ESA consultation standard for natural tules under Alternative I may be achievable following updates in PSC fisheries and shaping of inriver fisheries.

#### 8.1.1.2 South of Cape Falcon

Status of Chinook stocks important to 2019 Chinook harvest management south of Cape Falcon are:

- *SRFC.* The Sacramento Index forecast is 379,632, which is higher than last year's pre-season forecast of 229,432.
- *KRFC.* The ocean abundance forecast for this stock is 167,504 age-3, 106,119 age-4, and 599 age-5 fish. Last year's pre-season forecast was 330,049 age-3, 28,415 age-4, and 767 age-5 fish.
- *SRWC.* The forecast of age-3 escapement absent fishing is 1,924, which is higher than last year's pre-season forecast of 1,594.

Key Chinook salmon management objectives shaping the Alternatives south of Cape Falcon are:

- SRFC hatchery and natural area spawner escapement of at least 122,000 adults, which is produced, in expectation, by a maximum exploitation rate of 67.9 percent (FMP control rule). Council

guidance provided at the March meeting included meeting minimum escapement levels of 151,000 under Alternatives I and II, and 180,000 under Alternative III. This was following guidance provided by NMFS to target an escapement around the upper end of the SRFC conservation objective range of 122,000 – 180,000 hatchery and natural area adults, with at least one of the Alternatives targeting an escapement of 180,000 adult spawners.

- KRFC natural area spawner escapement of at least 40,700 adults, which is produced, in expectation, by a maximum exploitation rate of 53.7 percent (FMP control rule). NMFS guidance included targeting spawner escapement levels greater than 40,700 ( $S_{MSY}$ ), and the Council provided further guidance for one Alternative to target a natural area escapement of 45,000 adults while the other two Alternatives target  $S_{MSY}$  escapement.
- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 5.0 above. Relevant stocks for the area south of Cape Falcon include SRWC, California coastal Chinook, SRW fall Chinook, and LCR natural tule Chinook.

Fishery quotas under the Alternatives are presented in Table 4. Stock-specific management criteria and their forecast values under the Alternatives are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality under the Alternatives are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR tule Chinook. Appendix A presents tables of adult SRFC impacts, KRFC age-4 harvest, and the SRWC age-3 impact rate, stratified by fishery/month/management area, under the three Alternatives. Descriptions pertaining to the achievement of key objectives for Chinook salmon management south of Cape Falcon are found below.

- *SRFC*. The control rule-defined minimum of 122,000 hatchery and natural area adult spawners is met by each of the Alternatives. Alternatives I and II meet Council guidance for achieving a minimum of 151,000 hatchery and natural area adult spawners. Alternative III meets Council guidance for achieving a minimum of 180,000 hatchery and natural area adult spawners.
- *KRFC*. The control rule-defined minimum of 40,700 natural area adult spawners is met by each of the Alternatives. Alternative III meets Council guidance for meeting a minimum of 45,000 natural area adult spawners.
- *SRWC*. The ESA consultation standard that (1) limits the forecast age-3 impact rate in 2019 fisheries south of Point Arena to a maximum of 15.7 percent and (2) specifies time/area closures and minimum size limit constraints south of Point Arena, is met by each of the Alternatives.
- *California coastal Chinook*. The ESA consultation standard that limits the forecast KRFC age-4 ocean harvest rate to a maximum of 16.0 percent is met by each of the Alternatives.
- *SRW fall Chinook*. SRW Chinook will not constrain ocean fisheries south of Cape Falcon in 2019.

Alternatives II and III for Chinook fisheries south of Cape Falcon satisfies NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks. Alternative I does not meet the ESA consultation standard and guidance for LCR natural tule fall Chinook (Table 5).

### 8.1.2 Coho Salmon

Abundance projections important to coho harvest management in Council area fisheries are:

- *OPI Hatchery coho.* The 2019 forecast for hatchery coho from the Columbia River and the coast south of Cape Falcon of 933,500 is substantially higher than the 2018 forecast of 294,100. The Columbia River early coho forecast is 545,000 compared to the 2018 forecast of 164,700 and the Columbia River late coho forecast is 360,600, compared to the 2018 forecast of 121,500.
- *OCN coho.* The 2019 OCN forecast is 76,100 compared to the 2018 forecast of 54,900.
- *LCN coho.* The 2019 LCN forecast is 36,900 compared to the 2018 forecast of 21,900.
- *Puget Sound coho.* Among Puget Sound natural stocks, Strait of Juan de Fuca coho are in the critical category in 2019. Skagit, Snohomish, and Hood Canal coho are in the low category. Stillaguamish coho are in the normal category.
- *Interior Fraser (Thompson River) coho.* This Canadian stock continues to be depressed, and will continue to constrain ocean coho fisheries north of Cape Falcon in 2019.
- *Washington coastal coho.* Forecasts for most Washington coastal coho stocks are higher than in 2018. Quillayute fall, Hoh, Queets, and Grays Harbor coho are in the abundant category under the PST Southern Coho Management Plan.

Key coho salmon management objectives shaping the Alternatives are:

- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 5.0 above. Relevant stocks include Central California Coast coho (south of the Oregon/California border), Southern Oregon/Northern California Coastal (SONCC) coho, OCN coho, and LCN coho. The maximum allowable exploitation rates for 2019 are: (1) a combined marine/freshwater exploitation rate not to exceed 15.0 percent for OCN coho, (2) a combined exploitation rate in marine-area and mainstem Columbia River fisheries not to exceed 23.0 percent for LCN coho, and (3) a marine exploitation rate not to exceed 13.0 percent for Rogue/Klamath hatchery coho, used as a surrogate for the SONCC coho ESU. Furthermore, coho retention is prohibited in all California ocean fisheries.
- Salmon FMP conservation objectives and obligations under the PST Southern Coho Management Plan for stocks originating along the Washington coast, Puget Sound, and British Columbia as provided in Section 6.2 above. The forecasts for several Puget Sound and Interior Fraser coho stocks in 2019 are low; however, the majority of the exploitation on these stocks occurs in Puget Sound and will be addressed in development of fishing seasons for inside waters during the North of Falcon co-management process by the state and tribes of Washington prior to the April Council meeting. Because of their abundance status, Interior Fraser coho are subject to an exploitation rate ceiling of 10.0 percent in southern U.S. fisheries under the PST Southern Coho Management Plan.

Fishery quotas under the Alternatives are presented in Table 4. Stock-specific management criteria and their forecast values under the Alternatives are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality under the Alternatives are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCN, OCN, and RK coho. Table 8 provides expected coho mark rates for west coast fisheries by month.

- *LCN coho.* All Alternatives satisfy the maximum 23.0 percent exploitation rate when 2019 projected marine impacts are combined with preliminary 2019 preseason modeled impacts for mainstem Columbia River fisheries. Total exploitation rates projected for 2019 Alternatives range from 18.5 percent in Alternative I to 12.6 percent in Alternative III.
- *Queets wild coho.* The FMP MSY adult spawner objective for Queets wild coho is 5,800; projected ocean escapement values for the 2019 Alternatives range from 8,900 in Alternative I to 9,700 in Alternative III.
- *Interior Fraser coho.* The Southern U.S. exploitation rate in Alternative III is less than the 10.0 percent maximum required by the PST Southern Coho Management Plan when 2019 projected marine impacts are combined with the 2018 preseason modeled impacts for Puget Sound fisheries. Alternatives I and II are above the maximum exploitation rate. Shaping of the State and Tribal inside fisheries will occur during the North of Falcon process, and ocean fisheries may require further shaping before final management measures are adopted in order to comply with the PST limit.
- *Puget Sound coho.* Total exploitation rates for all Puget Sound stocks except Hood Canal coho are less than the maximum required by the FMP matrix in all Alternatives when 2019 projected marine impacts are combined with the 2018 preseason modeled impacts for Puget Sound fisheries. The total exploitation rate for Hood Canal coho exceeds the maximum required by the FMP matrix in all Alternatives; Exploitation rates on Hood Canal coho in Council area fisheries range from 6.3 percent in Alternative I to 2.9 percent in Alternative III. Shaping of the State and Tribal inside fisheries will occur during the North of Falcon process, and ocean fisheries may require further shaping before final management measures are adopted in order to comply with the FMP limits.

All of the Alternatives for coho fisheries satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant coho stocks other than those listed above (Table 5).

### **8.1.3 Pink Salmon**

Pink salmon merit management consideration in 2019. Impacts on Chinook and coho in pink-directed fisheries may be part of negotiations to reach a final agreement in North of Cape Falcon ocean and Puget Sound fisheries.

### **8.1.4 Summary of Environmental Impacts on Target Stocks**

Stock forecasts for some Canadian stocks and the actual PST limits on AABM fisheries are not known at this time, and preliminary values have been used in the analyses presented in this report. These forecasts and limits will be available prior to the April Council meeting. Negotiations in the North of Falcon process will not be completed until the April Council meeting. These negotiations affect allocation of stock impacts primarily among inside fisheries (State, Tribal, recreational, various commercial sectors, etc.) but also between inside and ocean fisheries.

Environmental impacts on salmon stocks are assessed based on compliance with conservation objectives, ACLs, rebuilding plans, and ESA consultation standards. As noted in the description of the Alternatives (Tables 1, 2, and 3), if analyses using the updated values and the results of these negotiations do not result in compliance with FMP conservation objectives or ESA consultation standards, some Alternatives will not be viable and impacts in Council-area fisheries will need to be modified to comply with all applicable objectives and standards. If updated values and negotiations result in compliance with applicable objectives

and standards, Council area fishery impacts would not increase; therefore, the analysis of effects would include the upper bound of a reasonable range of effects under the Alternatives considered for 2019 Council area ocean salmon fisheries.

#### *8.1.4.1 Targeted Salmon Stocks*

Based on current assumptions regarding Canadian, Alaskan, and inside fishery impacts, all target salmon stocks (non-ESA listed) meet their FMP conservation objectives under Alternatives I, II, and III with the exception of Interior Fraser (Thompson River) coho under Alternatives I and II (Table 5). Impacts on Interior Fraser coho in Council area fisheries range from 6.3% in Alternative I to 3.0% in Alternative III, and there appears to be sufficient flexibility within Council and inside area fisheries as a whole to comply with requirements of the PST Southern Coho Management Plan.

#### *8.1.4.2 ESA Listed Salmon Stocks*

Based on current assumptions regarding Canadian and inside fishery impacts, all ESA listed salmon stocks meet their ESA consultation standards under Alternatives II and III (Table 5). Under Alternative I, ESA consultation standards are met, except the total exploitation rate for LCN tule Chinook exceeds the allowable rate (Table 5). Changes in the impacts in northern fisheries from current assumptions and further shaping of ocean and inside fisheries may result in compliance with the ESA consultation standards; however, additional restrictions to Council area fisheries may be necessary to meet both consultation standards and inside fishery needs.

Council-area fisheries have a minor impact on ESA-listed Puget Sound Chinook and on most Chinook stocks subject to the 2019 PST Agreement. At this point there appears to be sufficient flexibility within Council and inside area fisheries as a whole to achieve protection for the Puget Sound Chinook ESU.

## *8.2 Socioeconomics*

In general, Council-area ocean salmon fisheries are managed to meet conservation objectives for stocks that are expected to achieve optimum yields while minimizing impacts on depressed stocks. While analysis of biological impacts is organized around salmon stocks that spawn in particular rivers, socioeconomic impacts under the regulatory alternatives are analyzed by ocean fishery management areas as described in the Salmon FMP. Although most stocks range across several areas, the abundance of individual stocks varies, thus the use of management areas facilitates more optimal management of each stock than would be possible with coastwide regulations. From north to south, the fishery management areas are: (1) from the U.S./Canada border to Cape Falcon (45°46' N. lat.), which is on the Oregon coast south of the Columbia River mouth; (2) between Cape Falcon and Humbug Mountain (42°40' N. lat.) on Oregon's southern coast; (3) the Oregon Klamath Management Zone (KMZ), which covers ocean waters from Humbug Mountain in southern Oregon to the Oregon/California border (42° N. lat.); (4) the California Klamath Management Zone (California KMZ), which includes the area from the Oregon/California border to Horse Mountain (40°05' N. lat.) in northern California; (5) from Horse Mountain to Point Arena (38°57' N. lat.) in Mendocino County; (6) from Point Arena to Pigeon Point (37°11' N. lat.) north of Santa Cruz; and (7) from Pigeon Point to the U.S./Mexico border. There are also numerous subdivisions within these areas that are used to further balance stock conservation and harvest allocation needs. A map of the boundaries of these areas, also showing the main salmon ports, appears on the inside back cover of this report.

Tribal ocean fisheries (including Washington State statistical area 4B) occur only in the area north of Cape Falcon. The S'Kallam, Makah, Quileute, Hoh, and Quinault Tribes all have fishery areas in the northern part of the area north of Cape Falcon (Table 3). Other federally-recognized tribes participate in in-river fisheries. The following analysis of impacts on the user of the resource and fishing communities is organized around the seven broad management areas.

The Review of 2018 Ocean Salmon Fisheries (PFMC 2019a) provides an historical description of the salmon fishery affected environment. In addition to stock status assessments, the document reports socioeconomic impacts of historical fisheries and analyzes the current socioeconomic status of West Coast salmon fisheries. For the purpose of characterizing the economic impact of non-tribal Council-area ocean salmon fisheries, commercial exvessel value, recreational fishing trips, and community level personal income impacts resulting from both commercial and recreational fishing activities are used.

The short-term economic effects of the regulatory Alternatives for non-Indian fisheries are shown in Tables 9 and 10. Table 9 shows projected commercial troll impacts expressed in terms of estimated potential exvessel value. Table 10 shows projected recreational fisheries impacts in terms of the number of projected angler-trips and community personal income impacts associated with those activities. Note that exvessel values shown under the Alternatives for the commercial troll fishery in Table 9 and income impact values shown for the recreational fishery in Table 10 are not directly comparable. More directly comparable measures of short-term economic impacts from commercial and recreational salmon fisheries appear in Figures 1 and 2, which show estimated community income impacts under the commercial troll and recreational fishery Alternatives, respectively, compared to historical impacts in real (inflation-adjusted) dollars. In general, income impacts are estimates of the amount of income generated by the economic linkages associated with a particular activity (see Chapter IV of the Review of 2018 Ocean Salmon Fisheries for additional description of income impact estimates). Income impacts are a measure of relative economic activity. Differences in income impacts between an Alternative and the value for the 2018 fishery indicate the expected impact of the Alternative compared with not taking action, (i.e., if 2018 regulations were to remain in place). While reductions in income impacts associated with an activity may not necessarily reflect net losses, they are likely to indicate losses to businesses and individuals in a community that depends on that activity for livelihood.

Total economic effects for non-Indian fisheries under the Alternatives may vary more or less than is indicated by the short-term impacts on ocean fisheries reported below. Salmon that are not harvested in the ocean do not necessarily result in an economic loss, as they may become available for additional inside harvest in non-Indian commercial, tribal, and recreational fisheries or may provide additional spawning escapement. Alternatives that restrict ocean harvests may increase opportunities for inside harvesters (e.g., higher commercial revenue or more angler trips) or contribute to higher inside catch per unit effort (CPUE) (i.e., lower costs for commercial harvesters and/or higher success rates for recreational fishers). Harvest forgone by both ocean fisheries and inside fisheries may impact future production, although the magnitude of that effect is uncertain depending on the resulting escapement level compared to MSY escapement and the nature of the spawner-recruit relationship, both of which are influenced by habitat conditions in the ocean and in the spawning grounds.

Fishing effort estimates for the recreational fishery south of Cape Falcon are based on measures developed by the STT for modeling biological impacts. STT estimates for south of Cape Falcon use multi-year averages to predict effort for the coming year. Consequently, if the multi-year average for a particular time period and area happens to be higher than last year's effort level, then the model may forecast an increase in effort for the coming year even though management measures may actually be relatively more constraining, or *vice-versa*. Estimated recreational effort includes relatively small amounts occurring in state waters only (SWO) fisheries off central and southern Oregon. Recreational fishery effort north of Cape Falcon was estimated using historical CPUE estimates ("success rates") applied to salmon quotas and expected harvest levels under the Alternatives. Projections of recreational catch north of Cape Falcon under each of the Alternatives were made by multiplying the proposed quotas for the two species by the historic ratios of actual catch to the actual quotas. Effort and economic impacts were then estimated by summing

recent year weighted average coho and Chinook angler success rates multiplied by the projected coho and Chinook catch under each Alternative.

Exvessel revenues in Table 9 are based on estimated harvest by catch area while commercial income impacts in Figure 1 are based on projected deliveries by landing area. Historically, there has been a divergence between these two measures. The difference is due to salmon caught in certain catch areas being delivered to ports in neighboring catch areas. In an attempt to account for this effect and assign income impacts to the “correct” landing area, adjustments are made based on historical patterns. The patterns are typically inferred from the most recent year’s catch and landings data. For example, in 2018 there were deliveries of salmon: (1) caught between Cape Falcon and Humbug Mountain to landing ports in the Oregon KMZ region, (2) caught between Point Arena and Pigeon Point to landing ports in the Fort Bragg region, and (3) caught south of Pigeon Point to landing ports in the San Francisco region.

The expected harvest levels used to model commercial fishery impacts are taken from Table 6. Estimated harvests include relatively small amounts occurring in SWO fisheries off central and southern Oregon. These total harvest estimates combined with the prior year’s average Chinook weights per fish and exvessel prices per pound were assumed to be the best indicators of expected revenues in the coming season. Coastwide average Chinook weight per fish in 2018 was three percent higher than the prior year but slightly lower than the recent five year average; while coastwide average Chinook exvessel prices in 2018 were 14 percent lower than the prior year but the fourth highest in inflation-adjusted terms since 1976. If this year’s actual average weight per fish or exvessel prices diverge significantly from what was observed in 2018, then salmon exvessel revenues and resulting commercial fisheries income impacts projected in this document may prove to be correspondingly biased. Unless otherwise noted, the economic effects of the commercial and recreational fisheries Alternatives summarized below are compared in terms of estimated community income impacts.

### **8.2.1 Alternative I**

Under Alternative I, overall coastwide community personal income impacts from commercial salmon fisheries are projected to be more than double last year’s (2018) level and above the recent (2014-2018) inflation-adjusted average by 53 percent. Coastwide income impacts from recreational fishing are projected to be 75 percent above last year’s level and above the recent (2014-2018) inflation-adjusted average by 35 percent.

South of Cape Falcon, overall commercial fishery income impacts are projected to exceed last year’s level by 123 percent and the recent (2014-2018) inflation-adjusted average by 63 percent.

Commercial fishery income impacts north of Cape Falcon are projected to be 58 percent above last year and seven percent above the recent (2014-2018) inflation-adjusted average.

Areas south of Cape Falcon, except the California KMZ (between the Oregon/California border and Horse Mountain), would see commercial fishery income impacts considerably above last year’s levels. Areas between Cape Falcon and Humbug Mountain, between Humbug Mountain and the Oregon/California border, and between Horse Mountain and Point Arena would see projected increases of more than 100 percent compared with last year’s levels. Areas between Point Arena and Pigeon Point and south of Pigeon Point would see projected increases of 88 percent and 32 percent, respectively, compared with last year. All areas south of Cape Falcon would see projected increases in commercial fishery income impacts compared to the recent (2014-2018) inflation-adjusted average.

Projected income impacts from recreational fisheries north of Cape Falcon are nearly triple (198 percent above) last year and 61 percent above the recent (2014-2018) inflation-adjusted average.

Overall recreational fishery income impacts south of Cape Falcon are projected to be 38 percent above last year's and 22 percent above the recent (2014-2018) inflation-adjusted average. Recreational income impacts are projected to be above last year's levels in all areas south of Cape Falcon except between Point Arena and Pigeon Point. Recreational fishery income impacts are projected to be above the recent (2014-2018) inflation-adjusted average in all areas south of Cape Falcon, except between Point Arena and Pigeon Point.

Tribal ocean fisheries north of Cape Falcon would be allocated 45,000 Chinook and 65,000 coho for ocean area harvest, compared to the 2018 actual allocation of 40,000 Chinook and 12,500 coho.

Under Alternative I income impacts for combined non-Indian commercial and recreational salmon fisheries are projected to be above last year's levels overall coastwide and in all management areas. Income impacts for combined non-Indian commercial and recreational salmon fisheries under Alternative I are also projected to be above the 2014-2018 inflation-adjusted average overall coastwide and in all management areas.

### **8.2.2 Alternative II**

Under Alternative II, coastwide community personal income impacts from commercial salmon fisheries are projected to exceed last year's (2018) level by 80 percent and the recent (2014-2018) inflation-adjusted average by 29 percent. Coastwide income impacts from recreational fishing are projected to be 67 percent above last year's level and 29 percent above the recent (2014-2018) inflation-adjusted average.

South of Cape Falcon, overall commercial fishery income impacts are projected to exceed last year's level by 89 percent and the recent (2014-2018) inflation-adjusted average by 38 percent.

Commercial fishery income impacts north of Cape Falcon are projected to be 36 percent above last year's level but nine percent below the recent (2014-2018) inflation-adjusted average.

All areas south of Cape Falcon would see projected commercial fishery income impacts above last year's levels. Areas between Cape Falcon and Humbug Mountain, between Humbug Mountain and the Oregon/California border, between Horse Mountain and Point Arena, between Point Arena and Pigeon Point and South of Pigeon Point would see projected increases of at least 46 percent compared with last year's levels. All areas south of Cape Falcon, except between Cape Falcon and Humbug Mountain, would see projected increases in commercial fishery income impacts compared with the recent (2014-2018) inflation-adjusted average.

Projected income impacts from recreational fisheries north of Cape Falcon are 175 percent above last year, and 48 percent above the recent (2014-2018) inflation-adjusted average.

Under Alternative II overall recreational fishery income impacts south of Cape Falcon are projected to be 35 percent above last year's level and 20 percent above the recent (2014-2018) inflation-adjusted average. Recreational fishery income impacts are projected to be above last year's levels in all areas south of Cape Falcon, except between Point Arena and Pigeon Point. Recreational fishery income impacts are also projected to be above the recent (2014-2018) inflation-adjusted average in all areas south of Cape Falcon, except between Point Arena and Pigeon Point.

Tribal ocean fisheries north of Cape Falcon would be allocated 35,000 Chinook and 55,000 coho for ocean area harvests, compared to the 2018 actual allocation of 40,000 Chinook and 12,500 coho.

Income impacts for combined non-Indian commercial and recreational salmon fisheries under Alternative II are projected to be above last year's level overall coastwide and in all areas along the coast. Compared with the recent (2014-2018) inflation-adjusted average, income impacts for combined non-Indian commercial and recreational salmon fisheries under Alternative II are projected to be higher overall coastwide, and in six of the seven management areas, i.e., all except Cape Falcon to Humbug Mountain.

### **8.2.3 Alternative III**

Under Alternative III, overall coastwide community personal income impacts from commercial salmon fisheries are projected to exceed last year's (2018) level by 52 percent and the recent (2014-2018) inflation-adjusted average by nine percent. Coastwide income impacts from recreational fisheries are projected to be exceed last year's level by 35 percent and the recent (2014-2018) inflation-adjusted average by five percent.

South of Cape Falcon, overall commercial fishery income impacts are projected to exceed last year's level by 63 percent and the recent (2014-2018) inflation-adjusted average by 19 percent.

Commercial fishery income impacts north of Cape Falcon are projected to be three percent below last year's level, and 34 percent below the recent (2014-2018) inflation-adjusted average.

All areas south of Cape Falcon would see commercial fisheries income impacts above last year's levels. Areas between Cape Falcon and Humbug Mountain, between Humbug Mountain and the Oregon/California border, between the Oregon/California border and Horse Mountain, between Horse Mountain and Point Arena, and south of Pigeon Point would see projected increases of at least 40 percent compared with last year's levels, while the area between Point Arena and Pigeon Point would see a projected increase of six percent compared with last year. All areas south of Cape Falcon, except between Cape Falcon and Humbug Mountain, would see at least some projected increase in commercial fishery income impacts compared with recent (2014-2018) inflation-adjusted averages, although the increase for the area between Humbug Mountain and the Oregon/California border is less than two percent. The area between Cape Falcon and Humbug Mountain would see a projected decrease of 31 percent compared with the recent (2014-2018) inflation-adjusted average.

Projected income impacts from recreational fisheries north of Cape Falcon exceed last year by 67 percent but fall below the recent (2014-2018) inflation-adjusted average by 10 percent.

Overall recreational fishery income impacts south of Cape Falcon are projected to exceed last year's level by 26 percent and the recent (2014-2018) inflation-adjusted average by 12 percent. Recreational fishery income impacts are projected to be above last year's levels in all areas south of Cape Falcon, except between Point Arena and Pigeon Point where they are projected to fall 22 percent below last year's level. Recreational fishery income impacts are projected to be above the recent (2014-2018) inflation-adjusted average in all areas south of Cape Falcon except between Point Arena and Pigeon Point where they are projected to fall by 24 percent.

Tribal ocean fisheries north of Cape Falcon would be allocated 25,000 Chinook and 35,000 coho for ocean area harvests, compared to the 2018 actual allocation of 40,000 Chinook and 12,500 coho.

Income impacts from combined non-Indian commercial and recreational salmon fisheries under Alternative III are projected to be above last year's levels overall coastwide and in all management areas except between Point Arena and Pigeon Point where they are projected to fall by 13 percent. Compared with the recent (2014-2018) inflation-adjusted average, income impacts for combined non-Indian commercial and recreational salmon fisheries under Alternative III are projected to be higher overall coastwide and in five of the seven management areas, i.e., all areas except Cape Falcon to Humbug Mountain and between Point Arena and Pigeon Point where they are projected to fall by seven percent and 11 percent, respectively.

#### **8.2.4 Summary of Impacts on the Socioeconomic Environment**

The commercial salmon fishery Alternatives are projected to generate coastwide income impacts ranging from 112 percent above (Alternative I) to 52 percent above (Alternative III) last year's levels. These corresponding levels also range from 53 percent above to nine percent above the recent (2014-2018) inflation-adjusted averages. Compared with last year all areas, except from the Oregon/California border to Horse Mountain under Alternative I and North of Cape Falcon under Alternative III, would see projected increases in commercial fisheries income impacts under all three Alternatives.

North of Cape Falcon, commercial salmon fisheries income impacts are projected to be above last year and the 2014-2018 inflation-adjusted average under Alternative I, above last year but below the 2014-2018 inflation-adjusted average under Alternative II, and below last year and the 2014-2018 inflation-adjusted average under Alternative III. Among the Alternatives, projections for Alternative III show the lowest relative commercial fisheries income impacts overall and for three of the seven management areas: North of Cape Falcon, Humbug Mountain to the Oregon/California border, and Point Arena to Pigeon Point. Projections for Alternative I show the lowest relative commercial fisheries income impacts for three of the seven management areas: Oregon/California border to Horse Mountain, Horse Mountain to Point Arena, and south of Pigeon Point. Projections show Alternative II with the lowest relative commercial fisheries income impacts for one area: Cape Falcon to Humbug Mountain.

Total coastwide income impacts from recreational salmon fisheries are projected to be higher than last year under all three alternatives, with increases of 75 percent under Alternative I, 67 percent under Alternative II, and 35 percent under Alternative III. Compared with the recent (2014-2018) inflation-adjusted average, increases in coastwide recreational fishery income impacts are also projected under Alternative I (35 percent), Alternative II (29 percent), and Alternative III (5 percent). Compared with last year, all management areas would see projected increases in recreational fishery income impacts under Alternatives I, II and III, with the exception of reductions in the area from Point Arena to Pigeon Point under all three Alternatives. Compared with the recent (2014-2018) inflation-adjusted average, all areas are projected to see increases in recreational fishery income impacts under all three alternatives, with the exception of projected decreases for Point Arena to Pigeon Point under Alternatives I, II and III, and north of Cape Falcon under Alternative III.

Total coastwide income impacts from combined non-Indian commercial and recreational salmon fisheries are projected to be higher than last year (2018) and the recent (2014-2018) inflation-adjusted average under all three Alternatives. With respect to last year, coastwide increases of 86 percent under Alternative I, 71 percent under Alternative II, and 40 percent under Alternative III are projected. Compared with the recent (2014-2018) inflation-adjusted average, the increases in coastwide combined commercial and recreational salmon fishery income impacts are projected to be 41 percent under Alternative I, 29 percent under Alternative II, and six percent under Alternative III. All seven management areas would see projected increases in combined commercial and recreational salmon fishery income impacts compared with last year under Alternatives I and II, and six of seven management areas (all except Point Arena to Pigeon Point) are projected to see increases under Alternative III. Compared with the recent (2014-2018) inflation-adjusted

average, all management areas are projected to see increases in combined commercial and recreational salmon fishery income impacts under Alternative I, all areas except Cape Falcon to Humbug Mountain under Alternative II, and all except, and north of Cape Falcon, Cape Falcon to Humbug Mountain, and Point Arena to Pigeon Point under Alternative III.

Ocean tribal fisheries occurring only north of Cape Falcon would be allocated a maximum of 45,000 Chinook under Alternative I and a minimum of 25,000 Chinook under Alternative III. Ocean tribal fisheries would be allocated a maximum of 65,000 coho under Alternative I and a minimum of 35,000 coho under Alternative III.

### **8.3 *Non-target Fish Species***

Prior NEPA analyses have considered the effects of the ocean salmon fisheries on non-target fish species. Since then, ocean salmon fisheries have not changed substantially in terms of season length, areas, depth, bag limits, etc. Nor is there any new information to suggest that the incidental nature of encounters of non-target species in ocean salmon fisheries has changed. Therefore, conclusions from previous environmental analyses indicating that effects on non-target fish species are low and not significant are still applicable, as discussed below. The differences between the Alternatives for the 2019 salmon fishery are not discernible with respect to their effect on non-target fish species.

Impacts to groundfish stocks from salmon troll fisheries continue to be managed as part of the open access groundfish fishery sector, and are at similar levels compared to recent years. Previous environmental analysis concluded that the amount of groundfish taken incidentally in the salmon fishery is very low and is not substantially altered by changes in the salmon fishery. (NMFS 2003; Appendix B). The 2019 ocean salmon regulation Alternatives are not expected to differ substantially from fisheries analyzed previously with respect to groundfish impacts; therefore, effects from the Alternatives to groundfish stocks are not significant.

Impacts to Pacific halibut from salmon troll fisheries continue to be managed under limits established through the International Pacific Halibut Commission (IPHC) process and under the Area 2A (Council area) catch sharing plan. Previous environmental analysis stated that data on the commercial segment of salmon fisheries show the co-occurrence rates for salmon and halibut, coastal pelagic species, highly migratory species, and non-Council managed fish species are low (NMFS 2003; Appendix B). The 2019 ocean salmon regulation Alternatives include Pacific halibut landing restrictions within the range enacted in the past, and are not expected to differ substantially from earlier analyses with respect to Pacific halibut impacts; therefore, effects from the Alternatives to Pacific halibut are not significant. Likewise, there are no changes to the salmon fishery for 2019 that would change impacts to other non-salmon fish species compared to previous analyses, therefore, effects from the Alternatives to these species are not expected to be significant.

### **8.4 *Marine Mammals***

The commercial salmon troll fisheries off the coasts of Washington, Oregon, and California are classified as Category III fisheries, indicating a remote or no likelihood of causing incidental mortality or serious injury to marine mammals (83 FR 5349). Recreational salmon fisheries use similar gear and techniques as the commercial fisheries and are assumed to have similar encounter rates and impacts. The non-ESA listed marine mammal species that are known to interact with ocean salmon fisheries are California sea lion and harbor seals. Populations of both these species are at stable and historically high levels. There is no new information to suggest that the nature of interactions between California sea lions or harbor seals in ocean salmon fisheries has changed since the Category III determination. Therefore, the impacts from the 2019

salmon regulation Alternatives to non-ESA listed marine mammals are not expected to be significant, and there is no discernible difference between the effects of the Alternatives on these resources.

### **8.5 ESA Listed Species**

There is no record of injury or mortality of Guadalupe fur seals in Pacific Coast salmon fisheries (NMFS 2003; Appendix B). No sea turtles have been reported taken by the ocean salmon fisheries off Washington, Oregon, or California, and NMFS has determined that commercial fishing by Pacific Coast salmon fisheries would pose a negligible threat to Pacific turtle species (NMFS 2003; Appendix B). There is no discernible difference between the effects of the alternatives on these resources.

Salmon fisheries have the potential to affect Southern Resident killer whales by removing Chinook salmon, an important prey species for the whales. NMFS issued a biological opinion evaluating the effects of the Pacific Coast salmon fisheries on the Southern Resident killer whale distinct population segment in 2009 (NMFS 2009; Appendix B); this opinion concluded that ocean salmon fisheries were not likely to jeopardize the continued existence of the Southern Resident killer whales or adversely modify their critical habitat. NMFS completed a five-year review of the Southern Resident killer whale ESA listing in September 2016. There is new information that indicates Chinook salmon abundance may be related to Southern Resident killer whale population trends. NMFS is reassessing the effects of salmon fisheries in light of this new information, and plans to reinitiate consultation on the effects of Council fisheries. At the March 2019 Council meeting, NMFS expressed its intent to work with the Council to reassess the effects of Council salmon fisheries on Southern Resident killer whales and, as needed, to develop a long-term approach to managing the effects of the fisheries on the whales. This effort will take some time, and will not be completed in time to inform the 2019 preseason process. NMFS is evaluating available information about the potential effects of the 2019 fishery alternatives on Southern Residents and plans to report on the results of that evaluation at the April 2019 Council meeting.

Other ESA listed salmonid species present in Council area waters include sockeye and chum salmon, and steelhead trout. These species are rarely encountered in ocean salmon fisheries, and Alternatives for 2018 Council area ocean salmon fisheries are in compliance with applicable BOs for listed ESUs of these species as listed in Chapter 5 of this document. Because anticipated impacts are negligible, there are no significant impacts expected on listed sockeye or chum salmon or steelhead trout from the Alternatives analyzed in this EA, and there is no discernible difference between the effects of the Alternatives on these resources.

### **8.6 Seabirds**

The types of vessels used in ocean salmon fisheries and the conduct of the vessels are not conducive to collisions or the introduction of rats or other non-indigenous species to seabird breeding colonies. Other types of accidental bird encounters are a rare event for commercial and recreational ocean salmon fisheries (NMFS 2003; Appendix B). Therefore, there are no significant impacts expected on seabirds from the Alternatives analyzed in this EA, and there is no discernible difference between the effects of the Alternatives on seabirds.

### **8.7 Biodiversity and Ecosystem Function**

The removal of adult salmon by the ocean fisheries is not considered to significantly affect the lower trophic levels or the overall marine ecosystem because salmon are not the only or primary predator in the marine environment (NMFS 2003; Appendix B). Therefore, no significant impacts are expected on biodiversity or ecosystem function from the Alternatives analyzed in this EA, and there is no discernible difference between the effects of the Alternatives on these resources.

## 8.8 *Ocean and Coastal Habitats*

Council Area salmon fisheries do not employ bottom contact gear, and there is no evidence of direct gear effects on fish habitat from Council-managed salmon fisheries on essential fish habitat (EFH) for salmon or other managed species (PFMC 2006; Appendix B). Critical habitat for ESA listed salmon does not include Council area ocean water. Because Council area salmon fisheries are conducted at sea and without bottom contact gear, there is no interaction with unique geographic characteristics or other cultural, scientific, or historical resources such as those that might be listed on the National Register of Historical Places.

## 8.9 *Public Health and Safety*

Fisheries management can affect safety if, for example, season openings make it more likely that fishermen will have to go out in bad weather because fishing opportunities are limited. The Salmon FMP, however, has provisions to adjust management measures if unsafe weather affected fishery access. The Alternatives for 2019 ocean salmon regulations have season structures similar to those employed in previous salmon seasons and are not expected to result in any significant increase in the risk to human health or safety at sea (PFMC 2006; Appendix B). There are also no discernible differences between the effects of the Alternatives on the risk to human health or safety at sea.

## 8.10 *Cumulative Impacts*

A cumulative effects analysis is required by the Council on Environmental Quality (CEQ) (40 CFR part 1508.7). The purpose of a cumulative effects analysis is to consider the combined effects of many actions on the human environment over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective, but rather, the intent is to focus on those effects that are truly meaningful. A formal cumulative impact assessment is not necessarily required as part of an EA under NEPA as long as the significance of cumulative impacts has been considered (U.S. EPA 1999). The following addresses the significance of the expected cumulative impacts as they relate to the Pacific Coast salmon fishery.

### **8.10.1 Consideration of the Effected Resource**

The affected resources that relate to the Pacific Coast salmon fishery are described in the Affected Environment sections of Preseason I and in Section 8.0 of this report. The significance of the cumulative effects will be discussed in relation to these affected resources listed below.

- Fishery and Fish Resources,
- Protected Resources,
- Biodiversity/Ecosystem Function and Habitats,
- Socioeconomics.

### **8.10.2 Geographic Boundaries**

The analysis focuses on actions related to Council-managed ocean salmon commercial and recreational fisheries. Council-managed ocean fisheries occur in the exclusive economic zone (EEZ), from three to 200 miles offshore, off the coasts of the states of Washington, Oregon, and California as well as the ports in these states that receive landings from the ocean salmon fisheries. Since salmon are anadromous and spend part of their lifecycle in fresh water, the geographic scope also includes internal waters (e.g., Puget Sound) and rivers that salmon use to migrate towards their spawning grounds.

### **8.10.3 Temporal Boundaries**

The temporal scope of past and present actions for the affected resources is primarily focused on actions that have occurred after framework FMP implementation (1984). The temporal scope of future actions for

all affected resources extends about five years into the future. This period was chosen because the dynamic nature of resource management and lack of information on future projects make it very difficult to predict impacts beyond this timeframe with any certainty.

#### **8.10.4 Past, Present, and Reasonably Foreseeable Future Actions**

##### ***Fishery Actions***

The Council sets management measures for ocean salmon fisheries annually based on stock forecasts and in accordance with conservation objectives set in the FMP and guidance provided by NMFS for managing impacts to ESA listed stocks. The Council manages ocean salmon fisheries through an intensive preseason analysis process to shape salmon fisheries impacts on salmon stocks within the parameters of the FMP conservation measures and ESA requirements.

Fisheries outside of the Council's jurisdiction also impact the Council-area salmon fishery. The Council considers fisheries managed by the states and treaty Indian tribes in the North of Falcon management process and Columbia River fisheries managed under U.S. v. Oregon Management Plan, as well as obligations for fisheries off Alaska and Canada under the Pacific Salmon Treaty (PFMC and NMFS 2014). Additionally, the Council and NMFS manage ocean salmon fisheries inseason to keep fisheries impacts within the constraints set preseason. The Council also conducts annual methodology reviews to improve models and other tools for assessing salmon stocks.

##### ***Non-Fishing Related Actions***

Because salmon spend part of their lifecycle in fresh water, they are more vulnerable to a broad range of human activities (since humans spend most of their time on land) that affect the quantity and quality of these freshwater environments. These effects are generally well known and diverse. They include physical barriers to migration (dams), changes in water flow and temperature (often a secondary effect of dams or water diversion projects), and degradation of spawning environments (such as increased silt in the water from adjacent land use). Non-fishing activities in the marine environment can introduce chemical pollutants and sewage; and result in changes in water temperature, salinity, dissolved oxygen, and suspended sediment which poses a risk to the affected resources. Human-induced non-fishing activities tend to be localized in nearshore areas and marine project areas. When these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and may indirectly constrain the sustainability of the managed resources, non-target species, and protected resources. Decreased habitat suitability tends to reduce the tolerance of affected species to the impacts of fishing effort. Mitigation through regulations that would reduce fishing effort could negatively impact human communities. The overall impact to the affected species and their habitats on a population level is unknown, but likely neutral to low negative, since a large portion of these species have a limited or minor exposure to the localized non-fishing perturbations.

For many of the proposed non-fishing activities to be permitted by other Federal agencies, those agencies would examine the potential impacts on the affected resources. The Magnuson-Stevens Act (50 CFR 600.930) imposes an obligation on other Federal agencies to consult with the Secretary of Commerce on actions that may adversely affect EFH. The eight fishery management councils engage in the review process by making comments and recommendations on any Federal or state action that may affect habitat, including EFH, for their managed species and by commenting on actions likely to substantially affect habitat, including EFH. In addition, under the Fish and Wildlife Coordination Act (Section 662), "whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the U.S., or by any public or private agency under Federal permit or license, such department or agency first shall consult with the U.S. Fish and Wildlife Service (USFWS), Department of the Interior, and with the head of the agency exercising

administration over the wildlife resources of the particular state wherein the” activity is taking place. This act provides another avenue for review of actions by other Federal and state agencies that may impact resources that NMFS manages in the reasonably foreseeable future. In addition, NMFS and the USFWS share responsibility for implementing the ESA. ESA requires NMFS to designate "critical habitat" for any species it lists under the ESA (i.e., areas that contain physical or biological features essential to conservation, which may require special management considerations or protection) and to develop and implement recovery plans for threatened and endangered species. The ESA provides another avenue for NMFS to review actions by other entities that may impact endangered and protected resources whose management units are under NMFS’ jurisdiction.

The effects of climate on the biota of the California Current ecosystem have been recognized for some time. The El Niño-Southern Oscillation (ENSO) is widely recognized to be the dominant mode of inter-annual variability in the equatorial Pacific, with impacts throughout the rest of the Pacific basin and the globe. During the negative (El Niño) phase of the ENSO cycle, jet stream winds are typically diverted northward, often resulting in increased exposure of the Pacific Coast of the U.S. to subtropical weather systems. The impacts of these events to the coastal ocean generally include reduced upwelling winds, deepening of the thermocline, intrusion of offshore (subtropical) waters, dramatic declines in primary and secondary production, poor recruitment, reduced growth and survival of many resident species (such as salmon and groundfish), and northward extensions in the range of many tropical species. Concurrently, top predators such as seabirds and pinnipeds often exhibit reproductive failure. In addition to inter-annual variability in ocean conditions, the North Pacific seems to exhibit substantial inter-decadal variability, which is referred to as the Pacific (inter) Decadal Oscillation (PDO).

Anomalously warm sea surface temperatures in the northeast Pacific Ocean developed in 2013 and continued to persist through much of 2015; this phenomenon was termed “the Blob.” During the persistence of the Blob, distribution of marine species was affected (e.g., tropical and subtropical species were documented far north of their usual ranges), marine mammals and seabirds starved, and a coastwide algal bloom that developed in the summer of 2015 resulted in domoic acid poisoning of animals at various trophic levels, from crustaceans to marine mammals. In 2015-2016, a very strong El Niño event disrupted the Blob, which was declared “dead” by climatologists in December 2015. The extent of the impact of The Blob on salmon and salmon fisheries has not yet been fully determined. It is also uncertain if or when environmental conditions would cause a repeat of this event. However, NMFS’ Northwest and Southwest Fisheries Science Centers presented information to the Council indicating that the broods that will contribute to 2019 harvest and escapement encountered generally poor to intermediate ocean conditions in the California Current Ecosystem.

Within the California Current itself, Mendelsohn et al, (2003) described long-term warming trends in the upper 50 to 75 meters of the water column. Recent paleoecological studies from marine sediments have indicated that 20th century warming trends in the California Current have exceeded natural variability in ocean temperatures over the last 1,400 years. Statistical analyses of past climate data have improved our understanding of how climate has affected North Pacific ecosystems and associated marine species productivities.

In addition, changes in river flows and flow variability may affect population growth of anadromous fishes. Ward et al. (2015) found that increases in variability in freshwater flows may have a more negative effect than any other climate signal included in their model. Some climate change models predict that in the Pacific Northwest, there will be warmer winters and more variable river flows, which may affect the ability of anadromous fishes to recover in the future (Ward et al. 2015). However, our ability to predict future impacts on a large scale ecosystem stemming from climate forcing events remains uncertain.

### **8.10.5 Magnitude and Significance of Proposed Action**

In determining the magnitude and significance of the cumulative effects, the additive and synergistic effects of the proposed action, as well as past, present, and future actions, must be taken into account. The following section presents the effects of past, present, and reasonably foreseeable future actions on each of the managed resources. This is followed by a discussion on the synergistic effects of the proposed action, as well as past, present, and reasonably foreseeable future actions.

#### **8.10.5.1 Fishery and Fish Resources**

Past, present, and reasonably foreseeable future actions that affect the salmon fishery and fish resources are considered annually when the Council sets management measures for ocean salmon fisheries based on stock forecasts and in accordance with conservation objectives set in the FMP and guidance provided by NMFS for managing impacts to ESA-listed stocks. The Council also considers fisheries managed by the states and treaty Indian tribes in the North of Falcon management process and Columbia River fisheries managed under *U.S. v. Oregon* Management Plan, as well as obligations under the Pacific Salmon Treaty (PFMC and NMFS 2014). Additionally, the Council and NMFS manage ocean salmon fisheries inseason to keep fisheries impacts within the constraints set preseason. The Council also conducts annual methodology reviews to improve models and other tools for assessing salmon stocks. Therefore, the magnitude and significance of cumulative effects, including the proposed action, on the salmon fishery and fish resources are expected to be low positive and not significant.

#### **8.10.5.2 Protected Resources**

Past, present, and foreseeable future actions that affect ESA-listed salmon are considered annually when the Council sets management measures for ocean salmon fisheries; NMFS provides guidance for managing impacts to ESA-listed stocks based on biological opinions and stock productivity information provided by the states and analyzed by the STT. Fishery management actions have been taken to manage impacts on ESA-listed salmon, and the states have developed information to better inform fishery management decisions. Therefore, the magnitude and significance of cumulative effects, including the proposed action on ESA-listed salmon are expected to be low positive and not significant.

#### **8.10.5.3 Biodiversity/Ecosystem Function and Habitats**

Past, present, and foreseeable future actions that affect biodiversity/ecosystem function and habitats are considered to the extent practicable annually. When considering the proposed action's removal of adult salmon by the ocean fisheries in addition to past, present, and reasonably foreseeable future actions, such removal of these salmon is not considered to significantly affect the lower trophic levels or the overall marine ecosystem because salmon are not the only primary predator. In addition, Council-area salmon fisheries are conducted at sea with hook-and-line gear and thus, there is no to negligible interactions expected with EFH for salmon or other managed species.

Salmon escapement to fresh water provides for spawning and for carrying marine derived nutrients to freshwater habitats. The importance of salmon carcasses in the transport of marine derived nutrients to freshwater habitats is described in Appendix A of the FMP and the related EA (see Final Environmental Assessment and Regulatory Impact Review; Pacific Coast Salmon Plan Amendment 18: Incorporating Revisions to Pacific Salmon Essential Fish Habitat, available on the Council's website: [www.pcouncil.org](http://www.pcouncil.org)) and also in the Environmental Impact Statement (EIS) for Puget Sound Chinook Harvest Resource Management Plan (Puget Sound Chinook Harvest Resource Management Plan FEIS. NMFS Northwest Region with Assistance from the Puget Sound Treaty Tribes and Washington Department of Fish and Wildlife. December 2004. 2 volumes, available on the NMFS West Coast Region website: <http://www.westcoast.fisheries.noaa.gov/>); these documents are incorporated herein by reference. Council

fisheries are designed to provide escapement of salmon to provide for natural spawning and transport of marine derived nutrients.

#### *8.10.5.4 Socioeconomic Environment*

Each year the Council evaluates the socioeconomic impact of past salmon fisheries in the stock assessment and fishery evaluation document (e.g., PFMC 2018a) and also evaluates foreseeable future impacts in the annual preseason reports; these documents are also used as the basis for the NEPA analysis for the annual management measures. The magnitude and significance of cumulative effects, including the proposed action on the socioeconomic environment, is expected to be low positive, and not significant.

## **9.0 CONCLUSION**

This analysis has identified no significant environmental impacts that would result from the 2019 ocean salmon regulation Alternatives, from final regulations selected from within the range presented in these Alternatives.

## 10.0 LIST OF AGENCIES AND PERSONS CONSULTED

The following public meetings were held as part of the salmon management process (Council-sponsored meetings in bold):

- November 1-8, 2018: **Pacific Fishery Management Council meeting**, San Diego, California.
- January 22-25: **Salmon Technical Team (Review preparation)**, Portland, Oregon.
- February 6: California Fish and Game Commission meeting, Sacramento, California.
- February 19-22: **Salmon Technical Team (Preseason Report I preparation)**, Portland, Oregon.
- February 27: Washington Department of Fish and Wildlife public meeting, Olympia, Washington.
- February 27: California Department of Fish and Wildlife public meeting, Santa Rosa, California.
- February 28: Oregon Ocean Salmon Industry Group meeting, Newport, Oregon.
- March 6-12: **Pacific Fishery Management Council meeting**, Vancouver, Washington.
- March 15: Oregon Fish and Wildlife Commission meeting, Salem, Oregon.
- March 19: North of Falcon, Ocean fisheries, Puget Sound, and *U.S. v. Oregon* Forums, Olympia, Washington.
- March 25-26: **Public hearings on management options** in Westport, Washington; Coos Bay, Oregon; and Ukiah, California.
- April 2: North of Falcon, Ocean fisheries and Columbia River fisheries, Ridgefield, Washington.
- April 3: North of Falcon, Puget Sound forum, Lynnwood, Washington.
- April 11-16: **Pacific Fishery Management Council meeting**, Rohnert Park, California.
- April 17: California Fish and Game Commission meeting, Santa Monica, California.
- April 19: Oregon Fish and Wildlife Commission meeting, St. Helens, Oregon.
- April 19: Washington Fish and Wildlife Commission meeting, Teleconference.

The following organizations were consulted and/or participated in preparation of supporting documents:

California Department of Fish and Wildlife  
Oregon Department of Fish and Wildlife  
Washington Department of Fish and Wildlife

National Marine Fisheries Service, West Coast Region, Sustainable Fisheries Division  
National Marine Fisheries Service, Northwest Fisheries Science Center  
National Marine Fisheries Service, Southwest Fisheries Science Center  
U.S. Fish and Wildlife Service, Columbia River Fisheries Program Office  
United States Coast Guard

Northwest Indian Fisheries Commission  
Columbia River Intertribal Fish Commission  
West Coast Indian Tribes

## 11.0 REFERENCES

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TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 11)

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
<b>ALTERNATIVE I</b>	<b>ALTERNATIVE II</b>	<b>ALTERNATIVE III</b>
<b>North of Cape Falcon</b>	<b>North of Cape Falcon</b>	<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>	<b>Supplemental Management Information</b>	<b>Supplemental Management Information</b>
Model #: Coho-1911, Chinook 1019	Model #: Coho-1912, Chinook 1119	Model #: Coho-1913, Chinook 1219
<p>1. Overall non-Indian TAC: 65,000 Chinook and 205,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 32,500 Chinook and 32,800 marked coho.</p> <p>3. Trade: May be considered at the April Council meeting.</p> <p>4. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>	<p>1. Overall non-Indian TAC: 55,000 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 27,500 Chinook and 30,400 marked coho.</p> <p>3. Trade:</p> <p>4. Same as Alternative 1</p>	<p>1. Overall non-Indian TAC: 45,000 Chinook and 100,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 22,500 Chinook and 5,600 coho.</p> <p>3. Trade:</p> <p>4. Same as Alternative 1</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 30, or 21,700 Chinook. No more than 4,825 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,780 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River the landing and possession limit is 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon the landing and possession limit is 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>All salmon, except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>When it is projected that approximately 75% of the overall Chinook guideline has been landed, approximately 75% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 75% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 28, or 16,500 Chinook. No more than 5,200 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 4,400 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>Same as Alternative 1</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 25, or 11,300 Chinook. No more than 3,550 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,000 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open five days per week (Fri.-Tues.) (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 40 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between the Queets River and Leadbetter Pt. a landing and possession limit of 200 Chinook per vessel per open period (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon the landing and possession limit is 40 Chinook per vessel per open period (C.1, C.6).</p> <p>Same as Alternative 1</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 2 of 11)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 30, or 10,800 Chinook or 32,800 coho (C.8).</li> </ul> <p>Open seven days per week. All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 60 Chinook per vessel per landing week (Thurs.-Wed.) will be in place (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon landing and possession limit of 60 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6). Landing and possession limit of 150 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 24, or 11,000 Chinook or 30,400 coho; no more than 5,200 Chinook may be caught in the area between the U.S./Canada border and the Queets River (C.8).</li> </ul> <p>Same as Alternative 1</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) will be in place (C.1, C.6).</p> <p>In the area between Leadbetter Pt. to Cape Falcon landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6). Landing and possession limit of 100 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>	<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 24, or 11,200 Chinook or 5,600 coho; no more than 5,300 Chinook may be caught in the area between the U.S./Canada border and the Queets River, and no more than 1,325 Chinook may be caught in the area between Leadbetter Point and Cape Falcon (C.8).</li> <li>Open July 1-2 then;</li> <li>July 5-September 24; open five days per week (Fri. - Tues.) (C.1).</li> </ul> <p>All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 40 Chinook per vessel per open period (C.1, C.6). In the area between the Queets River and Leadbetter Pt. a landing and possession limit of 100 Chinook per vessel per open period (C.1, C.6). In the area between Leadbetter Pt. to Cape Falcon a landing and possession limit of 40 Chinook per vessel per open period (C.1, C.6). Landing and possession limit of 10 marked coho per vessel per open period (C.1).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish in a Washington port and must possess a Washington troll license. For delivery to Washington ports south of Leadbetter Point, vessels must notify the Washington Department of Fish and Wildlife at 360-249-1215 prior to crossing the Leadbetter Point line with area fished, total Chinook, coho and halibut catch aboard, and destination with approximate time of delivery. During any single trip, only one side of the Leadbetter line may be fished (C.11).</p>	<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point (C.11).</p>	<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Vessels fishing, or in possession of salmon while fishing, north of Leadbetter Point must land and deliver all species of fish within the area and north of Leadbetter Point (C.11).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Mandatory closed areas include: Salmon troll Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 12, Grays Harbor Control Zone (C.5). Vessels must land and deliver their salmon within 24 hours of any closure of this fishery. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver all species of fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land all species of fish in Garibaldi, Oregon. Under state law, vessels must report their catch on a state fish receiving ticket. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon to notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 ext. 271 or sending notification via e-mail to nfalcon.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. (C.11).</p>		

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - <b>Council Adopted.</b> (Page 3 of 11)		
<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
South of Cape Falcon	South of Cape Falcon	South of Cape Falcon
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 152,272 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 59.9%.</li> <li>3. Klamath River recreational fishery allocation: 7,899 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 32,405 adult Klamath River fall Chinook.</li> <li>5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 69% / 31%.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 163,939 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 56.8%.</li> <li>3. Klamath River recreational fishery allocation: 7,767 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 32,456 adult Klamath River fall Chinook.</li> <li>5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 80% / 20%.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 180,085 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 52.6%.</li> <li>3. Klamath River recreational fishery allocation: 5,230 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 29,993 adult Klamath River fall Chinook.</li> <li>5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 81% / 19%.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• April 20-30;</li> <li>• May 1-August 29;</li> <li>• September 1-October 31 (C.9.a).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All vessels fishing in the area must land their salmon in the State of Oregon. See gear restrictions and definitions (C.2, C.3).</p> <p>Beginning September 1 no more than 75 Chinook allowed per vessel per landing week (Thurs.-Wed.).</p> <p>In 2020, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2019. This opening could be modified following Council review at its March 2020 meeting.</p>	<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• May 4-14; 19-31;</li> <li>• June 4-12, 16-30;</li> <li>• July 5-12, 16-31;</li> <li>• August 3-7, 13-17, 25-29;</li> <li>• September 1-October 31 (C.9.a).</li> </ul> <p>Same as Alternative 1</p> <p>Beginning September 1 only open <u>shoreward</u> of the 40 fathom management line and no more than 50 Chinook per vessel per landing week (Thurs.-Wed.).</p> <p>In 2020, same as Alternative 1</p>	<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• May 4-14; 19-31;</li> <li>• June 4-12, 16-30;</li> <li>• July 5-12, 16-31;</li> <li>• August 3-7, 13-17, 25-29;</li> <li>• September 1-October 31 (C.9.a).</li> </ul> <p>Same as Alternative 1</p> <p>Beginning September 1 only open <u>seaward</u> of the 40 fathom management line and no more than 50 Chinook per vessel per landing week (Thurs.-Wed.).</p> <p>In 2020, same as Alternative 1</p>

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 4 of 11)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• April 20-30;</li> <li>• May 1-31;</li> <li>• June 1 through the earlier of June 30, or a 3,500 Chinook quota;</li> <li>• July 1 through the earlier of July 31, or a 2,500 Chinook quota;</li> <li>• August 1 through the earlier of August 29, or a 1,200 Chinook quota (C.9.a).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Prior to June 1, all salmon caught in this area must be landed and delivered in the State of Oregon.</p> <p>June 1-August 29 weekly landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.). Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>All vessels fishing in this area during June, July, and August must land and deliver all salmon within this area or into Port Orford within 24 hours of any closure of this fishery and prior to fishing outside of this area.</p> <p>For all quota managed seasons (June, July, and August), Oregon state regulations require fishers to notify ODFW within one hour of landing and prior to transport away from the port of landing by calling 541-867-0300 Ext. 252 or sending notification via e-mail to kmzor.trollreport@state.or.us, with vessel name and number, number of salmon by species, location of delivery, and estimated time of delivery.</p> <p>In 2020, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2019. This opening could be modified following Council review at its March 2020 meeting.</p>	<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 4-14; 19-31;</li> <li>• June 4 through the earlier of June 12, June 16 through the earlier of June 30, or a 2,500 Chinook quota;</li> <li>• July 5 through the earlier of July 12, July 16 through the earlier of July 31, or a 2,000 Chinook quota;</li> <li>• August 3 through the earlier of August 7, August 13 through the earlier of August 17, August 25 through the earlier of August 29, or a 1,000 Chinook quota (C.9.a).</li> </ul> <p>Same as Alternative 1</p> <p>June 4-August 29 weekly landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.). Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>	<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 4-14; 19-31;</li> <li>• June 4 through the earlier of June 12, June 16 through the earlier of June 30, or a 1,500 Chinook quota;</li> <li>• July 5 through the earlier of July 12, July 16 through the earlier of July 31, or a 1,000 Chinook quota;</li> <li>• August 3 through the earlier of August 7, August 13 through the earlier of August 17, August 25 through the earlier of August 29, or a 1,000 Chinook quota (C.9.a).</li> </ul> <p>Same as Alternative 1</p> <p>June 4-August 29 weekly landing and possession limit of 30 Chinook per vessel per landing week (Thurs.-Wed.). Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 5 of 11)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• June 1 through the earlier of June 30, or a 2,500 Chinook quota;</li> <li>• July 1 through the earlier of July 30, or a 2,000 Chinook quota;</li> <li>• August 2 through the earlier of August 31, or a 2,000 Chinook quota (C.9.b).</li> </ul> <p>Open five days per week (Fri.-Tue.). All salmon except coho (C.4, C.7).</p> <p>Chinook minimum size limit of 27 inches total length (B, C.1).</p> <p>Landing and possession limit of 20 Chinook per vessel per day (C.8.f).</p> <p>Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>All fish caught in this area must be landed within the area, within 24 hours of any closure of the fishery, and prior to fishing outside the area (C.10). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed (C.5.e). See California State regulations for additional closures adjacent to the Smith and Klamath rivers.</p>	<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• June 1 through the earlier of June 30, or a 3,000 Chinook quota;</li> <li>• July 1 through the earlier of July 30, or a 3,000 Chinook quota;</li> <li>• August 2 through the earlier of August 31, or a 3,000 Chinook quota (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>Landing and possession limit of 25 Chinook per vessel per day (C.8.f).</p> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• June 1 through the earlier of June 30, or a 6,000 Chinook quota;</li> <li>• July 1 through the earlier of July 30, or a 6,000 Chinook quota;</li> <li>• August 2 through the earlier of August 31, or a 6,000 Chinook quota (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>Chinook minimum size limit of 26 inches total length (B, C.1).</p> <p>Landing and possession limit of 30 Chinook per vessel per day (C.8.f).</p> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>
<p><b>Humboldt South Jetty to Horse Mt.</b> Closed.</p>	<p><b>Humboldt South Jetty to Horse Mt.</b> Closed.</p>	<p><b>Humboldt South Jetty to Horse Mt.</b> Closed.</p>

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 6 of 11)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• June 1-30;</li> <li>• July 13-31 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>Chinook minimum size limit of 27 inches total length (B, C.1).</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 5 (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6).</p> <p>All fish must be landed north of Point Arena (C.6).</p> <p>In 2020, the season will open April 16-30 for all salmon except coho, with a 27 inch Chinook minimum size limit and the same gear restrictions as in 2019. All salmon caught in the area must be landed in the area. This opening could be modified following Council review at its March 2020 meeting.</p>	<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• May 17-31;</li> <li>• June 1-20;</li> <li>• July 11-31;</li> <li>• August 1-28 (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>Same as Alternative 1</p> <p>All fish must be landed north of Point Arena (C.6).</p> <p>In 2020, same as Alternative 1</p>	<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• June 11-30;</li> <li>• July 11-31;</li> <li>• August 1-29 (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>Chinook minimum size limit of 26 inches total length (B, C.1).</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>
<p>When the fishery is closed between the OR/CA border and Humbug Mountain and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival (C.6).</p>		

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 7 of 11)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Pt. Arena to Pigeon Pt. (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• May 1-31;</li> <li>• June 1-30;</li> <li>• July 13-31;</li> <li>• August 1-29;</li> <li>• September 1-30 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>During May, June, and July, all salmon must be landed south of Point Arena (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6).</p> <p><b>Point Reyes to Point San Pedro (Fall Area Target Zone)</b></p> <ul style="list-style-type: none"> <li>• October 1-4, 7-11.</li> </ul> <p>Open five days per week (Mon.-Fri.). All salmon except coho (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). All salmon caught in this area must be landed between Point Arena and Pigeon Point (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>	<p><b>Pt. Arena to Pigeon Pt. (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• May 17-31;</li> <li>• June 1-30;</li> <li>• July 11-31;</li> <li>• August 1-28;</li> <li>• September 1-15 (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>During May, June, July, and August, all salmon must be landed south of Point Arena (C.6).</p> <p>Same as Alternative 1</p> <p><b>Point Reyes to Point San Pedro (Fall Area Target Zone)</b></p> <ul style="list-style-type: none"> <li>• Closed</li> </ul>	<p><b>Pt. Arena to Pigeon Pt. (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• June 11-30;</li> <li>• July 11-31;</li> <li>• August 1-29 (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>Same as Alternative 1</p> <p><b>Point Reyes to Point San Pedro (Fall Area Target Zone)</b></p> <ul style="list-style-type: none"> <li>• Closed</li> </ul>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• May 1-31;</li> <li>• June 1-30;</li> <li>• July 13-31 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>All salmon must be landed south of Point Arena (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours. All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 5 (C.6)</p>	<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• May 1-31;</li> <li>• June 1-30;</li> <li>• July 11-31 (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• May 1-31;</li> <li>• June 11-30;</li> <li>• July 11-31 (C.9.b).</li> </ul> <p>Same as Alternative 1</p> <p>All salmon must be landed in California.</p> <p>Same as Alternative 1</p>
<p>California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the State (California Fish and Game Code §8226).</p>		

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 8 of 11)

<b>B. MINIMUM SIZE (Inches) (See C.1)</b>					
Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28	21.5	16	12	None
Cape Falcon to Humbug Mt.	28	21.5	-	-	None
Humbug Mt. to OR/CA Border	28	21.5	-	-	None
OR/CA Border to Humboldt South Jetty (Alt. 1 and Alt. 2)	27	20.5	-	-	27
OR/CA Border to Humboldt South Jetty (Alt. 3)	26	19.5			26
Horse Mt. to Pt. Arena (Alt. 1 and Alt. 2)	27	20.5	-	-	27
Horse Mt. to Pt. Arena (Alt. 3)	26	19.5			26
Pt. Arena to Pigeon Pt.	26	19.5	-	-	26
Pigeon Pt. to U.S./Mexico Border	26	19.5	-	-	26

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size, landing/possession limit, or other special requirements for the area being fished and the area in which they are landed if the area is open or has been closed less than 48 hours for that species of salmon. Salmon may be landed in an area that has been closed for a species of salmon more than 48 hours only if they meet the minimum size, landing/possession limit, or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.

Any person who is required to report a salmon landing by applicable state law must include on the state landing receipt for that landing both the number and weight of salmon landed by species. States may require fish landing/receiving tickets be kept on board the vessel for 90 days or more after landing to account for all previous salmon landings.

C.2. Gear Restrictions:

- a. Salmon may be taken only by hook and line using single point, single shank, barbless hooks.
- b. Cape Falcon, Oregon, to the OR/CA border: No more than 4 spreads are allowed per line.
- c. OR/CA border to U.S./Mexico border: No more than 6 lines are allowed per vessel, and barbless circle hooks are required when fishing with bait by any means other than trolling.

C.3. Gear Definitions:

*Trolling defined:* Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

*Troll fishing gear defined:* One or more lines that drag hooks behind a moving fishing vessel engaged in trolling. In that portion of the fishery management area off Oregon and Washington, the line or lines must be affixed to the vessel and must not be intentionally disengaged from the vessel at any time during the fishing operation.

*Spread defined:* A single leader connected to an individual lure and/or bait.

*Circle hook defined:* A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

C.4. Vessel Operation in Closed Areas with Salmon on Board:

- a. Except as provided under C.4.b below, it is unlawful for a vessel to have troll or recreational gear in the water while in any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species, and no salmon are in possession.
- b. When Genetic Stock Identification (GSI) samples will be collected in an area closed to commercial salmon fishing, the scientific research permit holder shall notify NOAA OLE, USCG, CDFW, WDFW, ODFW and OSP at least 24 hours prior to sampling and provide the following information: the vessel name, date, location and time collection activities will be done. Any vessel collecting GSI samples in a closed area shall not possess any salmon other than those from which GSI samples are being collected. Salmon caught for collection of GSI samples must be immediately released in good condition after collection of samples.

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council adopted. (Page 9 of 11)

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)**

**C.5. Control Zone Definitions:**

- a. *Cape Flattery Control Zone* - The area from Cape Flattery (48°23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48°10'00" N. lat.) and east of 125°05'00" W. long.
- b. *Mandatory Yelloweye Rockfish Conservation Area* – The area in Washington Marine Catch Area 3 from 48°00.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°16.50' W. long. and connecting back to 48°00.00' N. lat.; 125°14.00' W. long.
- c. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 55'36" N. lat., 124°10'51" W. long.).
- d. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.), and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.
- e. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west by 124°23'00" W. long. (approximately 12 nautical miles off shore); and on the south by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).
- f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70)..

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45°46.00' N. lat., 124°04.49' W. long.;	44°51.28' N. lat., 124°10.21' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°49.49' N. lat., 124°10.90' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°44.96' N. lat., 124°14.39' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	44°43.44' N. lat., 124°14.78' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	44°42.26' N. lat., 124°13.81' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	44°41.68' N. lat., 124°15.38' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	44°34.87' N. lat., 124°15.80' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	44°33.74' N. lat., 124°14.44' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	44°27.66' N. lat., 124°16.99' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	44°19.13' N. lat., 124°19.22' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	44°15.35' N. lat., 124°17.38' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	44°14.38' N. lat., 124°17.78' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	44°12.80' N. lat., 124°17.18' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	44°09.23' N. lat., 124°15.96' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;	42°40.50' N. lat., 124°31.98' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;	

TABLE 1. 2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council adopted. (Page 10 of 11)

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (continued)**

C.6. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate number of salmon (by species) on board, the estimated time of arrival, and the specific reason the vessel is not able to meet special management area landing restrictions.

In addition to contacting the U.S. Coast Guard, vessels fishing south of the Oregon/California border must notify CDFW within one hour of leaving the management area by calling 800-889-8346 and providing the same information as reported to the U.S. Coast Guard. All salmon must be offloaded within 24 hours of reaching port.

C.7. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length, measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on. When halibut are caught and landed incidental to commercial salmon fishing by an IPHC license holder, any person who is required to report the salmon landing by applicable state law must include on the state landing receipt for that landing both the number of halibut landed, and the total dressed, head-on weight of halibut landed, in pounds, as well as the number and species of salmon landed.

License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone: 206-634-1838). Applicants must apply prior to mid-March 2019 for 2019 permits (*exact date to be set by the IPHC in early 2019*). Incidental harvest is authorized only during April, May, and June of the 2019 troll seasons, and after June 30 in 2019 if quota remains and if announced on the NMFS hotline (phone: 800-662-9825 or 206-526-6667). WDFW, ODFW, and CDFW will monitor landings. If the landings are projected to exceed the IPHC's 44,899 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to prohibit retention of halibut in the non-Indian salmon troll fishery.

**Alternative I** - May 1, 2019 until the end of the 2019 salmon troll season, and April 1-30, 2020, license holders may land or possess no more than one Pacific halibut per two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 25 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).  
**Alternative II** - May 1, 2019 until the end of the 2019 salmon troll season, and April 1-30, 2020, license holders may land or possess no more than one Pacific halibut per two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 35 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).  
**Alternative III** - May 1, 2019 until the end of the 2019 salmon troll season, and April 1-30, 2020, license holders may land or possess no more than one Pacific halibut per two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 15 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).

Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2019, prior to any 2019 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2020 unless otherwise modified by inseason action at the March 2020 Council meeting.

- a. "C-shaped" yelloweye rockfish conservation area is an area to be voluntarily avoided for salmon trolling. NMFS and the Council request salmon trollers voluntarily avoid this area in order to protect yelloweye rockfish. The area is defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (Washington marine area 3), with the following coordinates in the order listed:

- 48°18' N. lat.; 125°18' W. long.;
- 48°18' N. lat.; 124°59' W. long.;
- 48°11' N. lat.; 124°59' W. long.;
- 48°11' N. lat.; 125°11' W. long.;
- 48°04' N. lat.; 125°11' W. long.;
- 48°04' N. lat.; 124°59' W. long.;
- 48°00' N. lat.; 124°59' W. long.;
- 48°00' N. lat.; 125°18' W. long.;
- and connecting back to 48°18' N. lat.; 125°18' W. long.

TABLE 1.2019 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council adopted. (Page 11 of 11)

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (continued)**

- C.8. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:
- Chinook remaining from the May through June non-Indian commercial troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline if the transfer would not result in exceeding preseason impact expectations on any stocks.
  - Chinook remaining from May, June, and /or July non-Indian commercial troll quotas in the Oregon or California KMZ may be transferred to the Chinook quota for the next open period if the transfer would not result in exceeding preseason impact expectations on any stocks.
  - NMFS may transfer salmon between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the areas' representatives on the Salmon Advisory Subpanel (SAS), and if the transfer would not result in exceeding preseason impact expectations on any stocks.
  - At the March 2020 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2019).
  - If retention of unmarked coho (adipose fin intact) is permitted by inseason action, the allowable coho quota will be adjusted to ensure preseason projected impacts on all stocks is not exceeded.
  - Landing limits may be modified inseason to sustain season length and keep harvest within overall quotas.
- C.9. State Waters Fisheries: Consistent with Council management objectives:
- The State of Oregon may establish additional late-season fisheries in state waters.
  - The State of California may establish limited fisheries in selected state waters.
  - Check state regulations for details.
- C.10. For the purposes of California Fish and Game Code, Section 8232.5, the definition of the Klamath Management Zone (KMZ) for the ocean salmon season shall be that area from Humbug Mountain, Oregon, to Horse Mountain, California.
- C.11. Latitudes for geographical reference of major landmarks along the west coast. Source: 2018 West Coast federal salmon regulations. <https://www.govinfo.gov/content/pkg/FR-2018-05-01/pdf/2018-09164.pdf>
- |                          |                  |                           |                  |
|--------------------------|------------------|---------------------------|------------------|
| Cape Flattery, WA        | 48°23'00" N lat. | Humboldt South Jetty, CA. | 40°45'53" N lat. |
| Cape Alava, WA           | 48°10'00" N lat. | Horse Mountain, CA        | 40°05'00" N lat. |
| Queets River, WA         | 47°31'42" N lat. | Point Arena, CA           | 38°57'30" N lat. |
| Leadbetter Point, WA     | 46°38'10" N lat. | Point Reyes, CA           | 37°59'44" N lat. |
| Cape Falcon, OR          | 45°46'00" N lat. | Point San Pedro, CA       | 37°35'40" N lat. |
| Florence South Jetty, OR | 44°00'54" N lat. | Pigeon Point, CA          | 37°11'00" N lat. |
| Humbug Mountain, OR      | 42°40'30" N lat. | Point Sur, CA             | 36°18'00" N lat. |
| Oregon-California border | 42°00'00" N lat. | Point Conception, CA      | 34°27'00" N lat. |

TABLE 2. 2019 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 7)

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
North of Cape Falcon	North of Cape Falcon	North of Cape Falcon
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<ol style="list-style-type: none"> <li>Overall non-Indian TAC: 65,000 Chinook and 205,000 coho marked with a healed adipose fin clip (marked).</li> <li>Recreational TAC: 32,500 Chinook and 172,200 marked coho; all retained coho must be marked.</li> <li>A trade with commercial troll may be considered in April.</li> <li>No Area 4B add-on fishery.</li> <li>Buoy 10 fishery opens August 1 with an expected landed catch of 40,000 marked coho in August and September.</li> <li>Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</li> </ol>	<ol style="list-style-type: none"> <li>Overall non-Indian TAC: 55,000 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).</li> <li>Recreational TAC: 27,500 Chinook and 159,600 marked coho; all retained coho must be marked.</li> <li>Trade:</li> <li>No Area 4B add-on fishery.</li> <li>Buoy 10 fishery opens August 1 with an expected landed catch of 45,000 marked coho in August and September.</li> <li>Same as Alternative I</li> </ol>	<ol style="list-style-type: none"> <li>Overall non-Indian TAC: 45,000 Chinook and 100,000 coho marked with a healed adipose fin clip (marked).</li> <li>Recreational TAC: 22,500 Chinook and 94,400 marked coho; all retained coho must be marked.</li> <li>Trade:</li> <li>No Area 4B add-on fishery.</li> <li>Buoy 10 fishery opens August 1 with an expected landed catch of 50,000 marked coho in August and September.</li> <li>Same as Alternative I</li> </ol>
<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 15 through earlier of September 30, or 17,910 marked coho subarea quota, with a subarea guideline of 6,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 22 through earlier of September 30, or 16,600 marked coho subarea quota, with a subarea guideline of 5,500 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>	<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>June 29 through earlier of September 15, or 4,370 marked coho subarea quota, with a subarea guideline of 4,400 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>

TABLE 2. 2019 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 2 of 7)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 15 through earlier of September 22, or 4,380 marked coho subarea quota, with a subarea guideline of 1,400 Chinook (C.5)</li> <li>• September 28 through earlier of October 13, or 100 marked coho quota, or 100 Chinook quota (C.5) in the area north of 47°50'00 N. lat. and south of 48°00'00" N. lat.</li> </ul> <p>Open seven days per week. All salmon, two salmon per day. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 4,150 marked coho subarea quota, with a subarea guideline of 1,300 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 15, or 1,090 marked coho subarea quota, with a subarea guideline of 1,100 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (see C.1). See gear restrictions and definitions (C.2, C.3).</p> <p>Same as Alternative 1</p>
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 63,710 marked coho subarea quota, with a subarea guideline of 15,700 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 12 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 22, or 59,050 marked coho subarea quota, with a subarea guideline of 13,300 Chinook (C.5)</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 16 through earlier of September 15, or 15,540 marked coho subarea quota, with a subarea guideline of 10,900 Chinook (C.5).</li> </ul> <p>Open five days per week (Sunday through Thursday). All salmon; two salmon per day no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Same as Alternative 1</p>
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 86,100 marked coho subarea quota, with a subarea guideline of 8,800 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>	<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 79,800 marked coho subarea quota, with a subarea guideline of 7,400 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p>	<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 29 through earlier of September 30, or 73,400 marked coho subarea quota, with a subarea guideline of 6,100 Chinook (C.5).</li> </ul> <p>Same as Alternative 1</p>

TABLE 2. 2019 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 3 of 7)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
South of Cape Falcon	South of Cape Falcon	South of Cape Falcon
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 152,272 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 59.9%.</li> <li>3. Klamath River recreational fishery allocation: 7,899 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 32,405 adult Klamath River fall Chinook.</li> <li>5. Overall recreational coho TAC: 95,000 coho marked with a healed adipose fin clip (marked), and 10,000 coho in the non-mark-selective coho fishery.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the CFGC.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 163,939 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 56.8%.</li> <li>3. Klamath River recreational fishery allocation: 7,767 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 32,456 adult Klamath River fall Chinook.</li> <li>5. Overall recreational coho TAC: 80,000 coho marked with a healed adipose fin clip (marked), and 8,000 coho in the non-mark-selective coho fishery.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the CFGC.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 180,085 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 52.6%.</li> <li>3. Klamath River recreational fishery allocation: 5,230 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 29,993 adult Klamath River fall Chinook.</li> <li>5. Overall recreational coho TAC: 105,000 coho marked with a healed adipose fin clip (marked), and 0 coho in the non-mark-selective coho fishery.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the CFGC.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• March 15-October 31 (C.6), except as provided below during the all-salmon mark-selective fishery and the non-mark-selective coho fishery (C.5).</li> </ul> <p>Open seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, the season will open March 15 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting</p>	<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• March 15-October 31 (C.6), except as provided below during the all-salmon mark-selective fishery and the non-mark-selective coho fishery (C.5).</li> </ul> <p>Same as Alternative 1</p> <p>October 1-31: The fishery is only open shoreward of the 40 fathom management line.</p> <p>In 2020, same as Alternative 1</p>	<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• March 15-October 31 (C.6), except as provided below during the all-salmon mark-selective fishery (C.5).</li> </ul> <p>Open seven days per week. All salmon except coho, two fish per day; beginning September 1 the daily bag limit may include only one Chinook (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, same as Alternative 1</p>
<p>Fishing in the Stonewall Bank yelloweye rockfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).</p>		

TABLE 2. 2019 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 4 of 7)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>Cape Falcon to OR/CA Border</b> All-salmon mark-selective coho fishery:</p> <ul style="list-style-type: none"> <li>• June 22 through the earlier of August 28, or 95,000 marked coho quota (C.6).</li> </ul> <p>Open seven days per week. All salmon, two salmon per day. All retained coho must be marked with a healed adipose fin clip (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Any remainder of the mark-selective coho quota may be transferred inseason on an impact neutral basis to the non-selective coho quota from Cape Falcon to Humbug Mountain (C.5).</p> <p><b>Cape Falcon to Humbug Mt.</b> Non-mark-selective coho fishery:</p> <ul style="list-style-type: none"> <li>• August 31-September 30, open each Friday through Sunday, or 10,000 non-mark-selective coho quota (C.6). Open days may be modified inseason.</li> </ul> <p>All salmon, two salmon per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p>	<p><b>Cape Falcon to Humbug Mt.</b> All-salmon mark-selective coho fishery:</p> <ul style="list-style-type: none"> <li>• June 29 through the earlier of August 18, or 80,000 marked coho quota (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>Non-mark-selective coho fishery:</p> <ul style="list-style-type: none"> <li>• September 6-30, open each Friday and Saturday, or 8,000 non-mark-selective coho quota (C.6). Open days may be modified inseason</li> </ul> <p>Same as Alternative 1</p>	<p><b>Cape Falcon to Humbug Mt.</b> All-salmon mark-selective coho fishery:</p> <ul style="list-style-type: none"> <li>• June 22 through the earlier of September 30, or 105,000 marked coho quota (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p> <p>Non-mark-selective coho fishery:</p> <ul style="list-style-type: none"> <li>• No season</li> </ul> <p>Same as Alternative 1</p>
Fishing in the Stonewall Bank yelloweye rockfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).		
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 18-August 28 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, <u>except</u> as described above in the “Cape Falcon to OR/CA Border all-salmon mark-selective coho fishery.” Two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p>	<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 18-September 2 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p>	<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 25-September 2 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p>

TABLE 2. 2019 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council Adopted. (Page 5 of 7)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 25-September 8 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath Rivers.</p>	<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 25-September 4 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>	<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 25-September 2 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>Same as Alternative 1</p>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• April 13-October 31 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, season opens April 4 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p>	<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• April 13-October 31 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>	<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• April 13-May 31;</li> <li>• June 22-September 30 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• April 13-October 31 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length through May 31, then 20 inches thereafter (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, season opens April 4 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p>	<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• April 13-October 31 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>	<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• April 13-May 31;</li> <li>• June 22-September 30 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• April 6-August 28 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, season opens April 4 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p>	<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• April 6-August 22 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>	<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• April 6-August 18 (C.6).</li> </ul> <p>Same as Alternative 1</p> <p>In 2020, same as Alternative 1</p>
<p>California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the State (California Code of Regulations Title 14 Section 1.73).</p>		

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<b>B. MINIMUM SIZE (Inches) (See C.1)</b>			
<u>Area (when open)</u>	<u>Chinook</u>	<u>Coho</u>	<u>Pink</u>
North of Cape Falcon	24	16	None
Cape Falcon to Humbug Mt.	24	16	None
Humbug Mt. to OR/CA Border	24	16	None
OR/CA Border to Horse Mt.	20	-	20
Horse Mt. to Pt. Arena	20	-	20
Pt. Arena to Pigeon Pt. (April 13-May 31)	24	-	24
Pt. Arena to Pigeon Pt. (June 1-October 31)	20	-	20
Pigeon Pt. to U.S./Mexico Border	24	-	24

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

- C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.  
*Ocean Boat Limits*: Off the coast of Washington, Oregon, and California, each fisher aboard a vessel may continue to use angling gear until the combined daily limits of Chinook and coho salmon for all licensed and juvenile anglers aboard have been attained (additional state restrictions may apply).
- C.2. Gear Restrictions: Salmon may be taken only by hook and line using barbless hooks. All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.
  - a. *U.S./Canada Border to Pt. Conception, California*: No more than one rod may be used per angler; and no more than two single point, single shank, barbless hooks are required for all fishing gear.
  - b. *Horse Mt., California, to Pt. Conception, California*: Single point, single shank, barbless circle hooks (see gear definitions below) are required when fishing with bait by any means other than trolling, and no more than two such hooks shall be used. When angling with two hooks, the distance between the hooks must not exceed five inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.
- C.3. Gear Definitions:
  - a. *Recreational fishing gear defined*: Off Oregon and Washington, angling tackle consists of a single line that must be attached to a rod and reel held by hand or closely attended; the rod and reel must be held by hand while playing a hooked fish. No person may use more than one rod and line while fishing off Oregon or Washington. Off California, the line must be attached to a rod and reel held by hand or closely attended; weights directly attached to a line may not exceed four pounds (1.8 kg). While fishing off California north of Pt. Conception, no person fishing for salmon, and no person fishing from a boat with salmon on board, may use more than one rod and line. Fishing includes any activity which can reasonably be expected to result in the catching, taking, or harvesting of fish.
  - b. *Trolling defined*: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.
  - c. *Circle hook defined*: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

TABLE 2. 2019 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council adopted. (Page 7 of 7)

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (continued)****C.4. Control Zone Definitions:**

- a. *The Bonilla-Tatoosh Line:* A line running from the western end of Cape Flattery to Tatoosh Island Lighthouse (48°23'30" N. lat., 124°44'12" W. long.) to the buoy adjacent to Duntze Rock (48°24'37" N. lat., 124°44'37" W. long.), then in a straight line to Bonilla Pt. (48°35'39" N. lat., 124°42'58" W. long.) on Vancouver Island, British Columbia.
- b. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 55'36" N. lat., 124°10'51" W. long.).
- c. *Columbia Control Zone:* An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long. and then along the north jetty to the point of intersection with the Buoy #10 line; and on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.
- d. *Stonewall Bank Yelloweye Rockfish Conservation Area:* The area defined by the following coordinates in the order listed:  
 44°37.46' N. lat.; 124°24.92' W. long.  
 44°37.46' N. lat.; 124°23.63' W. long.  
 44°28.71' N. lat.; 124°21.80' W. long.  
 44°28.71' N. lat.; 124°24.10' W. long.  
 44°31.42' N. lat.; 124°25.47' W. long.  
 and connecting back to 44°37.46' N. lat.; 124°24.92' W. long.
- e. *Klamath Control Zone:* The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

**C.5. Inseason Management:** Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines, and season duration. In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Actions could include modifications to bag limits, or days open to fishing, and extensions or reductions in areas open to fishing.
- b. Coho may be transferred inseason among recreational subareas north of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Council's SAS recreational representatives north of Cape Falcon, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- c. Chinook and coho may be transferred between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the representatives of the SAS, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- d. Fishery managers may consider inseason action modifying regulations restricting retention of unmarked (adipose fin intact) coho. To remain consistent with preseason expectations, any inseason action shall consider, if significant, the difference between observed and preseason forecasted (adipose-clipped) mark rates. Such a consideration may also include a change in bag limit of two salmon, no more than one of which may be a coho.
- e. Marked coho remaining from the Cape Falcon to Oregon/California Border recreational mark-selective coho quota may be transferred inseason to the Cape Falcon to Humbug Mt. non-mark-selective recreational fishery if the transfer would not result in exceeding preseason impact expectations on any stocks.

**C.6. Additional Seasons in State Territorial Waters:** Consistent with Council management objectives, the States of Washington, Oregon, and California may establish limited seasons in state waters. Check state regulations for details.

TABLE 3. 2019 Treaty Indian troll management Alternatives for ocean salmon fisheries - Council adopted. (Page 1 of 2)

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Supplemental Management Information	Supplemental Management Information	Supplemental Management Information
<p>1. Overall Treaty-Indian TAC: 45,000 Chinook and 65,000 coho.</p> <p>2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>	<p>1. Overall Treaty-Indian TAC: 35,000 Chinook and 55,000 coho.</p> <p>2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>	<p>1. Overall Treaty-Indian TAC: 25,000 Chinook and 35,000 coho.</p> <p>2. Overall Chinook and/or coho TAC may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.</p>
<ul style="list-style-type: none"> <li>May 1 through the earlier of June 30 or 22,500 Chinook quota.</li> </ul> <p>All salmon may be retained except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C).</p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 15, or 22,500 Chinook quota, or 65,000 coho quota.</li> </ul> <p>All Salmon. See size limit (B) and other restrictions (C).</p>	<ul style="list-style-type: none"> <li>May 1 through the earlier of June 30 or 17,500 Chinook quota.</li> </ul> <p>All salmon may be retained except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C).</p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 15, or 17,500 Chinook quota or 55,000 coho quota</li> </ul> <p>All salmon. See size limit (B) and other restrictions (C).</p>	<ul style="list-style-type: none"> <li>May 1 through the earlier of June 30 or 12,500 Chinook quota.</li> </ul> <p>All salmon may be retained except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C).</p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 15, or 12,500 Chinook quota or 35,000 coho quota.</li> </ul> <p>All salmon. See size limit (B) and other restrictions (C).</p>

**B. Minimum Length (total inches).**

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	24.0 (61.0 cm)	18.0 (45.7 cm)	16.0 (40.6 cm)	12.0 (30.5 cm)	None

TABLE 3. 2019 Treaty Indian troll management Alternatives for ocean salmon fisheries - Council adopted. (Page 2 of 2)
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### C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Tribe and Area Boundaries. All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

S'KLALLAM - Washington State Statistical Area 4B (defined to include those waters of Puget Sound easterly of a line projected from the Bonilla Point light on Vancouver Island to the Tatoosh Island light, thence to the most westerly point on Cape Flattery and westerly of a line projected true north from the fishing boundary marker at the mouth of the Sekiu River [WAC 220-301-030]).

MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.

QUILEUTE - A polygon commencing at Cape Alava, located at latitude 48°10'00" north, longitude 124°43'56.9" west; then proceeding west approximately forty nautical miles at that latitude to a northwestern point located at latitude 48°10'00" north, longitude 125°44'00" west; then proceeding in a southeasterly direction mirroring the coastline at a distance no farther than forty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 47°31'42" north, longitude 125°20'26" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 47°31'42" north, longitude 124°21'9.0" west.

HQH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River) and east of 125°44'00" W. long.

QUINAULT - A polygon commencing at the Pacific coast shoreline near Destruction Island, located at latitude 47°40'06" north, longitude 124°23'51.362" west; then proceeding west approximately thirty nautical miles at that latitude to a northwestern point located at latitude 47°40'06" north, longitude 125°08'30" west; then proceeding in a southeasterly direction mirroring the coastline no farther than thirty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 46°53'18" north, longitude 124°53'53" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 46°53'18" north, longitude 124°7'36.6" west.

C.2. Gear restrictions

- a. Single point, single shank, barbless hooks are required in all fisheries.
- b. No more than eight fixed lines per boat.
- c. No more than four hand held lines per person in the Makah area fishery (Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.)

C.3. Quotas

- a. The quotas include troll catches by the S'Klallam and Makah Tribes in Washington State Statistical Area 4B from May 1 through September 15.
- b. The Quileute Tribe may continue a ceremonial and subsistence fishery during the time frame of October 1 through October 15 in the same manner as in 2004-2015. Fish taken during this fishery are to be counted against treaty troll quotas established for the 2019 season (estimated harvest during the October ceremonial and subsistence fishery: 20 Chinook; 40 coho).

C.4. Area Closures

- a. The area within a six nautical mile radius of the mouths of the Queets River (47°31'42" N. lat.) and the Hoh River (47°45'12" N. lat.) will be closed to commercial fishing.
- b. A closure within two nautical miles of the mouth of the Quinault River (47°21'00" N. lat.) may be enacted by the Quinault Nation and/or the State of Washington and will not adversely affect the Secretary of Commerce's management regime.

C.5. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Chinook remaining from the May through June treaty-Indian ocean troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline on a fishery impact equivalent basis.

TABLE 4. 2019 Chinook and coho harvest quotas and guidelines (\*) for ocean salmon fishery management Alternatives - Council adopted.

Fishery or Quota Designation	Chinook for Alternative			Coho for Alternative		
	I	II	III	I	II	III
<b>NORTH OF CAPE FALCON</b>						
TREATY INDIAN OCEAN TROLL <sup>a/</sup>						
U.S./Canada Border to Cape Falcon (All Except Coho)	22,500	17,500	12,500	-	-	-
U.S./Canada Border to Cape Falcon (All Species)	22,500	17,500	12,500	65,000	55,000	35,000
Subtotal Treaty Indian Ocean Troll	45,000	35,000	25,000	65,000	55,000	35,000
NON-INDIAN COMMERCIAL TROLL <sup>b/</sup>						
U.S./Canada Border to Cape Falcon (All Except Coho)	21,700	16,500	11,300	-	-	-
U.S./Canada Border to Cape Falcon (All Species)	10,800	11,000	11,200	32,800	30,400	5,600
Subtotal Non-Indian Commercial Troll	32,500	27,500	22,500	32,800	30,400	5,600
RECREATIONAL						
U.S./Canada Border to Cape Alava <sup>b/</sup>	6,500 *	5,500 *	4,400	17,910	16,600	4,370
Cape Alava to Queets River <sup>b/</sup>	1,500 *	1,300 *	1,100	4,480	4,150	1,090
Queets River to Leadbetter Pt. <sup>b/</sup>	15,700 *	13,300 *	10,900	63,710	59,050	15,540
Leadbetter Pt. to Cape Falcon <sup>b/c/</sup>	8,800 *	7,400 *	6,100	86,100	79,800	73,400
Subtotal Recreational	32,500	27,500	22,500	172,200	159,600	94,400
TOTAL NORTH OF CAPE FALCON	110,000	90,000	70,000	270,000	245,000	129,400
<b>SOUTH OF CAPE FALCON</b>						
COMMERCIAL TROLL <sup>a/</sup>						
Humbug Mt. to OR/CA Border	7,200	5,500	3,500	-	-	-
OR/CA Border to Humboldt South Jetty	6,500	9,000	18,000	-	-	-
Subtotal Commercial Troll	13,700	14,500	21,500	-	-	-
RECREATIONAL						
Cape Falcon to OR/CA Border	-	-	-	105,000 <sup>d/</sup>	88,000 <sup>e/</sup>	105,000 <sup>f/</sup>
TOTAL SOUTH OF CAPE FALCON	13,700	14,500	21,500	105,000	88,000	105,000

a/ Quotas are non-mark selective for both Chinook and coho.

b/ Quotas are non-mark-selective for Chinook and mark-selective for coho.

c/ Does not include Buoy 10 fishery. Expected catch in August and September: Alternative I - 40,000 marked coho; Alternative II - 45,000 marked coho; Alternative III - 50,000 marked coho.

d/ The quota consists of both mark-selective and non-mark-selective coho quotas: 95,000 and 10,000 respectively.

e/ The quota consists of both mark-selective and non-mark-selective coho quotas: 80,000 and 8,000 respectively.

f/ Quota is mark-selective.

TABLE 5. 2019 Projected key stock escapements (thousands of fish) or management criteria for ocean fishery Alternatives - Council adopted <sup>a/</sup> (Page 1 of 2)

Key Stock/Criteria	PROJECTED			2019 Criteria
	Alt I	Alt II	Alt III	
<b>CHINOOK</b>	<b>CHINOOK</b>			<b>CHINOOK</b>
Columbia Upriver Brights	160.7	163.4	165.1	74.0 Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest. The management goal has been increased to 60.0 by Columbia River managers.
Mid-Columbia Brights	65.6	66.7	67.4	14.9 Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	53.9	55.2	56.2	25.0 Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules <sup>c/</sup> (threatened)	<b>39.2%</b>	36.7%	34.8%	≤ 38.0% Total adult equivalent fishery exploitation rate (2019 NMFS ESA guidance).
Columbia Lower River Wild <sup>d/</sup> (threatened)	14.0	14.2	14.4	6.9 Minimum ocean escapement to attain MSY spawner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	46.0	48.1	49.5	8.2 Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Upper Columbia River Summer	35.1	36.0	36.7	29.0 Aggregate escapement to mouth of Columbia River (2019 NMFS guidance).
Snake River Fall (threatened) SRFI	67.1%	59.7%	53.7%	≤ 70.0% Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Klamath River Fall	40.7	40.7	--	≥ 40.7 2019 minimum natural area adult escapement (FMP control rule).
	--	--	45.0	≥ 45.0 2019 minimum natural area adult escapement (Council guidance).
Federally recognized tribal harvest	50.0%	50.0%	50.0%	50.0% Equals 32.4, 32.5, and 30.0 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spawner reduction) rate	53.7%	53.7%	48.8%	≤ 53.7% FMP control rule.
Adult river mouth return	98.2	98.1	98.5	NA Total adults in thousands.
Age-4 ocean harvest rate	15.9%	16.0%	15.3%	≤ 16.0% NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	6.9%	6.9%	7.0%	NA Includes 0.0 (thousand) adult fish impacted in the KMZ sport fishery during fall (Sept.-Dec.) 2018.
River recreational fishery share	24.4%	23.9%	17.4%	NA Equals 7.9, 7.8, and 5.2 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	15.7%	15.6%	13.5%	≤ 15.7% Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: <u>Recreational</u> - Pt. Arena to Pigeon Pt. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. <u>Commercial</u> - Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2019 ESA Guidance).
Sacramento River Fall	152.3	163.9	--	≥ 151.0 Alternatives I & II: 2019 minimum hatchery and natural area adult escapement (Council guidance).
	--	--	180.1	≥ 180.0 Alternative III: 2019 minimum hatchery and natural area adult escapement (Council guidance).
Sacramento Index Exploitation Rate	59.9%	56.8%	52.6%	≤ 67.9% FMP control rule.
Ocean commercial impacts	149.6	136.1	121.0	Includes fall (Sept-Dec) 2018 impacts (6.2 thousand SRFC).
Ocean recreational impacts	50.9	50.7	46.8	Includes fall 2018 impacts (7.7 thousand SRFC).
River recreational impacts	26.9	28.9	31.8	NA Equals 11.8%, 13.4%, and 15.9% of the total allowable harvest.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery management measures - Council Adopted.<sup>a/</sup> (Page 2 of 2)

Key Stock/Criteria	PROJECTED			2019	
	Alt I	Alt II	Alt III	Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>
<b>COHO</b>	<b>COHO</b>			<b>COHO</b>	
Interior Fraser (Thompson River)	<b>11.0%(6.3%)</b>	<b>10.1%(5.4%)</b>	7.7%(3.0%)	≤ 10.0%	2019 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	33.8%(5.7%)	33.2%(4.9%)	31.4%(2.7%)	≤ 35.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Stillaguamish	32.5%(4.1%)	31.9%(3.4%)	30.5%(1.9%)	≤ 50.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Snohomish	33.7%(4.1%)	33.1%(3.4%)	31.6%(1.9%)	≤ 40.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Hood Canal	<b>48.8%(6.3%)</b>	<b>48.2%(5.4%)</b>	<b>46.8%(2.9%)</b>	≤ 45.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Strait of Juan de Fuca	9.6%(5.0%)	8.9%(4.3%)	7.0%(2.4%)	≤ 20.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Quillayute Fall	13.6	13.7	14.1	6.3	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Hoh	5.6	5.8	6.2	2.0	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Queets Wild	8.9	9.1	9.7	5.8	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Grays Harbor	65.3	66.1	68.1	24.4	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Willapa Bay Natural	55.5	56.3	58.5	17.2	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Lower Columbia River Natural (threatened)	18.5%	16.6%	12.6%	≤ 23.0%	Total marine and mainstem Columbia R. fishery exploitation rate (2019 NMFS ESA guidance).
Upper Columbia <sup>c/</sup>	64%	66%	71%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	337.2	351.0	372.0	77.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.7 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	204.9	217.4	250.6	9.7	Minimum ocean escapement to attain hatchery egg-take goal of 6.4 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural	14.6%	13.0%	10.4%	≤ 15.0%	Marine and freshwater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)	5.8%	5.8%	6.2%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

a/ Projections in the table assume a combination of 2015 and 2017 post season fishing effort scalars for coho in Canadian fisheries. Model results for Chinook in this table used 2018 preseason catches and fishing effort scalars, and are updated with 2018 post season data if available. Assumptions for these fisheries will be changed prior to the April meeting as new information becomes available.

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spaw ner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for LCN and OCN coho represent marine and freshwater impacts. Values reported for Klamath River fall Chinook are natural area adult spaw ners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spaw ners.

c/ Includes projected impacts of inriver fisheries that have not yet been shaped.

d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. It is anticipated that fishery management will be adjusted by state and tribal comanagers during the preseason planning process to comply with stock management objectives.

e/ Includes minor contributions from East Fork Lewis River and Sandy River.

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2019 ocean salmon fishery management Alternatives - Council adopted. (Page 1 of 2)

Area and Fishery	2019 Catch Projection			2019 Bycatch Mortality <sup>a/</sup> Projection			2019 Bycatch Projection <sup>b/</sup>			Observed in 2018	
	I	II	III	I	II	III	I	II	III	Catch	Bycatch Mortality
<b>OCEAN FISHERIES:</b>											
<b>CHINOOK (thousands of fish)</b>											
<b>NORTH OF CAPE FALCON</b>											
Treaty Indian Ocean Troll	45.0	35.0	25.0	4.6	3.6	2.6	11.6	9.0	6.4	23.7	2.5
Non-Indian Commercial Troll	32.5	27.5	22.5	14.4	13.3	10.5	51.6	48.2	38.0	23.9	11.8
Recreational	32.5	27.5	22.5	5.3	4.5	3.6	27.8	23.4	19.1	10.6	1.8
<b>CAPE FALCON TO HUMBUG MT.<sup>c/</sup></b>											
Commercial Troll	64.9	42.9	43.8	22.0	14.6	14.9	66.7	44.2	45.1	20.2	8.2
Recreational	7.7	6.6	7.9	1.2	1.0	1.2	4.9	4.2	5.0	2.7	0.2
<b>HUMBUG MT. TO OR/CA BORDER<sup>c/</sup></b>											
Commercial Troll	8.5	6.6	4.6	2.9	2.2	1.6	8.8	6.8	4.7	3.9	1.9 <sup>e/</sup>
Recreational	3.6	3.7	3.7	0.6	0.6	0.6	2.3	2.3	2.3	1.6	0.5 <sup>e/</sup>
<b>OR/CA BORDER TO HORSE MT.<sup>d/</sup></b>											
Commercial Troll	6.5	9.0	18.0	2.2	3.1	6.1	6.7	9.3	18.5	9.0	4.4 <sup>e/</sup>
Recreational	8.7	8.6	8.6	1.4	1.3	1.3	5.6	5.5	5.5	3.7	1.2 <sup>e/</sup>
<b>HORSE MT. TO PT. ARENA</b>											
Commercial Troll	58.3	69.3	61.3	19.8	23.5	20.8	60.0	71.3	63.0	10.6	4.9 <sup>e/</sup>
Recreational	7.3	7.3	6.0	1.1	1.1	0.9	4.6	4.6	3.8	5.6	1.0 <sup>e/</sup>
<b>PT. ARENA TO PIGEON PT.</b>											
Commercial Troll	79.7	58.7	39.1	27.0	19.9	13.3	82.0	60.4	40.2	39.5	15.5 <sup>e/</sup>
Recreational	36.9	36.9	30.8	5.8	5.8	4.8	22.6	22.6	18.9	72.0	10.8 <sup>e/</sup>
<b>SOUTH OF PIGEON PT.</b>											
Commercial Troll	25.6	28.3	28.0	8.7	9.6	9.5	26.3	29.1	28.8	19.4	1.8 <sup>e/</sup>
Recreational	10.6	10.6	10.5	1.7	1.6	1.6	6.5	6.5	6.4	5.7	0.6 <sup>e/</sup>
<b>TOTAL OCEAN FISHERIES</b>											
Commercial Troll	321.0	277.3	242.3	101.5	89.7	79.1	313.6	278.2	244.8	150.1	51.0
Recreational	107.3	101.1	90.0	17.0	16.0	14.2	74.2	69.1	61.1	101.9	16.1
<b>INSIDE FISHERIES:</b>											
Area 4B	-	-	-	-	-	-	-	-	-	-	-
Buoy 10	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.6	5.0 <sup>e/</sup>

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2018 ocean salmon fishery management Alternatives adopted by the Council. (Page 2 of 2)

Area and Fishery	2019 Catch Projection			2019 Bycatch Mortality <sup>a/</sup> Projection			2019 Bycatch Projection <sup>b/</sup>			Observed in 2018	
	I	II	III	I	II	III	I	II	III	Catch	Bycatch Mortality
<b>COHO (thousands of fish)</b>											
<b>OCEAN FISHERIES:</b>											
<b>NORTH OF CAPE FALCON</b>											
Treaty Indian Ocean Troll <sup>f/</sup>	65.0	55.0	35.0	4.1	3.4	2.2	6.6	5.4	3.5	11.3	0.7
Non-Indian Commercial Troll	32.8	30.4	5.6	12.6	11.2	3.3	40.3	35.6	11.4	1.4	0.4
Recreational	172.2	159.6	94.4	27.1	24.7	13.3	110.5	100.5	52.3	41.8	11.3
<b>SOUTH OF CAPE FALCON</b>											
Commercial Troll	-	-	-	11.6	9.8	10.2	44.6	37.6	39.2	-	1.9
Recreational <sup>f/</sup>	105.0	88.0	105.0	21.0	19.3	22.2	91.5	88.3	98.6	18.5	9.4
<b>TOTAL OCEAN FISHERIES</b>											
Commercial Troll	97.8	85.4	40.6	16.8	14.7	5.5	46.9	40.9	14.8	12.7	3.0
Recreational	277.2	247.6	199.4	48.1	44.0	35.6	202.0	188.7	150.9	60.3	20.7
<b>INSIDE FISHERIES:</b>											
Area 4B	-	-	-	-	-	-	-	-	-	-	-
Buoy 10	40.0	45.0	50.0	7.0	28.9	8.4	26.4	28.9	31.2	6.8	1.5 <sup>e/</sup>

a/ The bycatch mortality reported in this table consists of drop-off mortality (includes predation on hooked fish) plus hook-and-release mortality of Chinook and coho salmon in Council-area fisheries. Drop-off mortality for both Chinook and coho is assumed to be equal to 5% of total encounters. The hook-and-release mortality (HRM) rates used for both Chinook and coho are:

Commercial: 26%.

Recreational, north of Pt. Arena: 14%.

Recreational, south of Pt. Arena: 15% (based on the expected proportion of fish that will be caught using mooching versus trolling gear, and the HRMs of 42.2% and 14% for these two respective gear types).

b/ Bycatch calculated as dropoff mortality plus fish released.

c/ Includes Oregon territorial water, late season Chinook fisheries.

d/ The commercial fishery in this area is closed between Humboldt South Jetty and Horse Mountain.

e/ Based on reported released Chinook or coho. Reported releases in California fisheries are used as a surrogate in Oregon fisheries.

f/ Includes fisheries that allow retention of all legal sized coho.

TABLE 7. Expected coastwide lower Columbia Natural (LCN), Oregon coastal natural (OCN), and Rogue/Klamath (RK) coho, and Lower Columbia River (LCR) natural tule Chinook exploitation rates by fishery for 2019 ocean fisheries management Alternatives - Council adopted.

Fishery	Exploitation Rate (Percent)											
	LCN Coho			OCN Coho			RK Coho			LCR Tule Chinook		
	I	II	III	I	II	III	I	II	III	I	II	III
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	1.7%	1.7%
BRITISH COLUMBIA	0.2%	0.2%	0.2%	0.5%	0.5%	0.5%	0.3%	0.3%	0.3%	12.3%	12.7%	12.9%
PUGET SOUND/STRAIT	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.6%	0.6%
NORTH OF CAPE FALCON												
Treaty Indian Ocean Troll	3.2%	2.7%	1.7%	0.7%	0.6%	0.4%	0.0%	0.0%	0.0%	2.6%	2.0%	1.5%
Recreational	5.4%	4.9%	3.1%	0.9%	0.9%	0.5%	0.1%	0.1%	0.0%	5.6%	4.8%	4.0%
Non-Indian Troll	1.8%	1.6%	0.4%	0.4%	0.3%	0.1%	0.0%	0.0%	0.0%	7.1%	5.6%	4.6%
SOUTH OF CAPE FALCON												
Recreational:										0.2%	0.2%	0.2%
Cape Falcon to Humbug Mt.	3.6%	3.1%	3.1%	7.6%	6.6%	4.6%	0.4%	0.4%	0.4%	-	-	-
Humbug Mt. to OR/CA border (KMZ)	0.1%	0.0%	0.0%	0.4%	0.2%	0.2%	0.7%	0.4%	0.4%	-	-	-
OR/CA border to Horse Mt. (KMZ)	0.0%	0.0%	0.0%	0.3%	0.3%	0.3%	1.1%	1.1%	1.1%	-	-	-
Fort Bragg	0.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.7%	0.7%	0.5%	-	-	-
South of Pt. Arena	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	-	-	-
Troll:										1.6%	1.3%	1.3%
Cape Falcon to Humbug Mt.	0.7%	0.5%	0.5%	0.9%	0.7%	0.7%	0.2%	0.1%	0.1%	-	-	-
Humbug Mt. to OR/CA border (KMZ)	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.1%	0.1%	-	-	-
OR/CA border to Horse Mt. (KMZ)	0.0%	0.0%	0.1%	0.2%	0.3%	0.6%	0.8%	1.1%	2.0%	-	-	-
Fort Bragg	0.0%	0.0%	0.0%	0.4%	0.5%	0.4%	0.9%	1.0%	0.9%	-	-	-
South of Pt. Arena	0.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	-	-	-
BUOY 10	1.5%	1.6%	1.7%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	7.5%	7.8%	8.1%
ESTUARY/FRESHWATER	NA	NA	NA	1.4%	1.4%	1.5%	NA	0.2%	NA			
<b>TOTAL<sup>a/</sup></b>	<b>15.3%</b>	<b>13.4%</b>	<b>9.3%</b>	<b>14.6%</b>	<b>13.0%</b>	<b>10.4%</b>	<b>5.8%</b>	<b>5.8%</b>	<b>6.2%</b>	<b>39.2%</b>	<b>36.7%</b>	<b>34.8%</b>

a/ Totals do not include Buoy 10 and estuary/freshwater for LCN and RK coho; estuary/freshwater catch is included in the total for OCN. Bolded values identify ocean exploitation rates that, when combined with 2018 freshwater harvest rates, would exceed the total allowable exploitation rate.

TABLE 8. Projected coho mark rates for 2019 fisheries under base period fishing patterns (percent marked).

Area	Fishery	June	July	August	Sept
Canada					
Johnstone Strait	Recreational	-	47%	42%	-
West Coast Vancouver Island	Recreational	58%	47%	58%	62%
North Georgia Strait	Recreational	58%	59%	59%	57%
South Georgia Strait	Recreational	42%	61%	53%	59%
Juan de Fuca Strait	Recreational	59%	58%	60%	55%
Johnstone Strait	Troll	65%	60%	45%	56%
NW Vancouver Island	Troll	51%	48%	45%	40%
SW Vancouver Island	Troll	49%	52%	51%	55%
Georgia Strait	Troll	62%	61%	62%	58%
Puget Sound					
Strait of Juan de Fuca (Area 5)	Recreational	67%	61%	58%	60%
Strait of Juan de Fuca (Area 6)	Recreational	67%	59%	60%	56%
San Juan Island (Area 7)	Recreational	47%	60%	56%	45%
North Puget Sound (Areas 6 & 7A)	Net	-	67%	57%	50%
Council Area					
Neah Bay (Area 4/4B)	Recreational	47%	63%	57%	63%
LaPush (Area 3)	Recreational	70%	64%	73%	59%
Westport (Area 2)	Recreational	77%	72%	67%	66%
Columbia River (Area 1)	Recreational	81%	81%	74%	77%
Tillamook	Recreational	72%	66%	64%	65%
New port	Recreational	68%	64%	63%	55%
Coos Bay	Recreational	65%	62%	57%	48%
Brookings	Recreational	62%	51%	45%	17%
Neah Bay (Area 4/4B)	Troll	54%	59%	58%	62%
LaPush (Area 3)	Troll	48%	59%	59%	62%
Westport (Area 2)	Troll	66%	63%	64%	59%
Columbia River (Area 1)	Troll	75%	74%	70%	65%
Tillamook	Troll	62%	62%	67%	61%
New port	Troll	64%	62%	63%	63%
Coos Bay	Troll	64%	62%	59%	48%
Brookings	Troll	57%	54%	57%	66%
Columbia River					
Buoy 10	Recreational	-	-	-	71%

TABLE 9. Preliminary projected exvessel value under Council-adopted 2019 non-Indian commercial troll regulatory Alternatives compared to 2018 and the 2014-2018 average (in inflation adjusted dollars).

Management Area	Alternative	Exvessel Value (thousands of dollars) <sup>a/</sup>				
		2019 Projected <sup>b/</sup>	2018 Actual	Percent Change from 2018	2014-2018 Average	Percent Change From 2014-2018 Average
North of Cape Falcon	I	3,800	2,371	+60%	3,240	+17%
	II	3,262		+38%		+1%
	III	2,331		-2%		-28%
Cape Falcon to Humbug Mt.	I	6,193	1,908	+225%	5,497	+13%
	II	4,098		+115%		-25%
	III	4,182		+119%		-24%
Humbug Mt. to OR/CA Border	I	975	441	+121%	432	+126%
	II	756		+71%		+75%
	III	527		+20%		+22%
OR/CA Border to Horse Mt.	I	519	709	-27%	154	+237%
	II	719		+1%		+367%
	III	1,438		+103%		+834%
Horse Mt. to Pt. Arena	I	4,698	848	+454%	2,591	+81%
	II	5,577		+557%		+115%
	III	4,934		+482%		+90%
Pt. Arena to Pigeon Pt.	I	7,980	3,918	+104%	3,960	+101%
	II	5,883		+50%		+49%
	III	3,918		-0%		-1%
South of Pigeon Pt.	I	3,189	2,390	+33%	1,439	+122%
	II	3,522		+47%		+145%
	III	3,486		+46%		+142%
Total South of Cape Falcon	I	23,553	10,213	+131%	14,073	+67%
	II	20,555		+101%		+46%
	III	18,485		+81%		+31%
West Coast Total	I	27,353	12,584	+117%	17,312	+58%
	II	23,817		+89%		+38%
	III	20,816		+65%		+20%

a/ Values are inflation-adjusted to 2018 dollars. Exvessel values are not comparable to the income impacts shown in Table 10.

b/ Projections are based on expected catches in the Council management area and estimated 2018 average weights and exvessel prices.

TABLE 10. Preliminary projected angler trips and coastal community income impacts generated under Council-adopted 2019 recreational ocean salmon fishery regulatory Alternatives compared to 2018 and the 2014-2018 average (in inflation adjusted dollars).

Management Area	Alternative	Angler Trips (thousands)			Community Income Impacts (thousands of dollars) <sup>a/</sup>			Percent Change in Income Impacts	
		Estimates Based on the Options	2018 Actual	2014-2018 Avg.	Estimates Based on the Options	2018 Actual	2014-2018 Avg.	Compared to 2018	Compared to 2014-2018 Avg.
North of Cape Falcon <sup>b/</sup>	I	166.0	55.7	80.1	29,793	9,993	18,538	+198%	+61%
	II	152.8			27,433			+175%	+48%
	III	92.8			16,654			+67%	-10%
Cape Falcon to Humbug Mt.	I	72.0	49.1	50.4	7,071	4,826	5,705	+47%	+24%
	II	62.7			6,156			+28%	+8%
	III	73.0			7,170			+49%	+26%
Humbug Mt. to OR/CA Border	I	13.7	7.0	7.8	1,785	587	767	+204%	+133%
	II	14.4			1,882			+220%	+145%
	III	14.1			1,836			+213%	+139%
OR/CA Border to Horse Mt.	I	18.7	7.4	9.2	2,438	1,288	1,976	+89%	+23%
	II	18.4			2,401			+86%	+22%
	III	18.3			2,383			+85%	+21%
Horse Mt. to Pt. Arena	I	18.5	9.9	10.7	3,999	2,126	2,777	+88%	+44%
	II	18.5			3,999			+88%	+44%
	III	15.6			3,358			+58%	+21%
Pt. Arena to Pigeon Pt.	I	65.9	65.3	52.8	20,136	21,807	22,496	-8%	-10%
	II	65.9			20,136			-8%	-10%
	III	55.7			16,999			-22%	-24%
South of Pigeon Pt.	I	32.6	13.9	15.9	9,968	2,378	3,380	+319%	+195%
	II	32.3			9,864			+315%	+192%
	III	32.1			9,795			+312%	+190%
Total South of Cape Falcon	I	221.5	152.6	146.7	45,396	33,013	37,101	+38%	+22%
	II	212.3			44,438			+35%	+20%
	III	208.6			41,541			+26%	+12%
West Coast Total	I	387.4	208.2	226.8	75,189	43,006	55,639	+75%	+35%
	II	365.1			71,871			+67%	+29%
	III	301.4			58,196			+35%	+5%

a/ Income impacts are not comparable to the exvessel values shown in Table 9. All dollar values are expressed in inflation-adjusted 2018 dollars.

b/ Does not include Buoy 10 fishery.

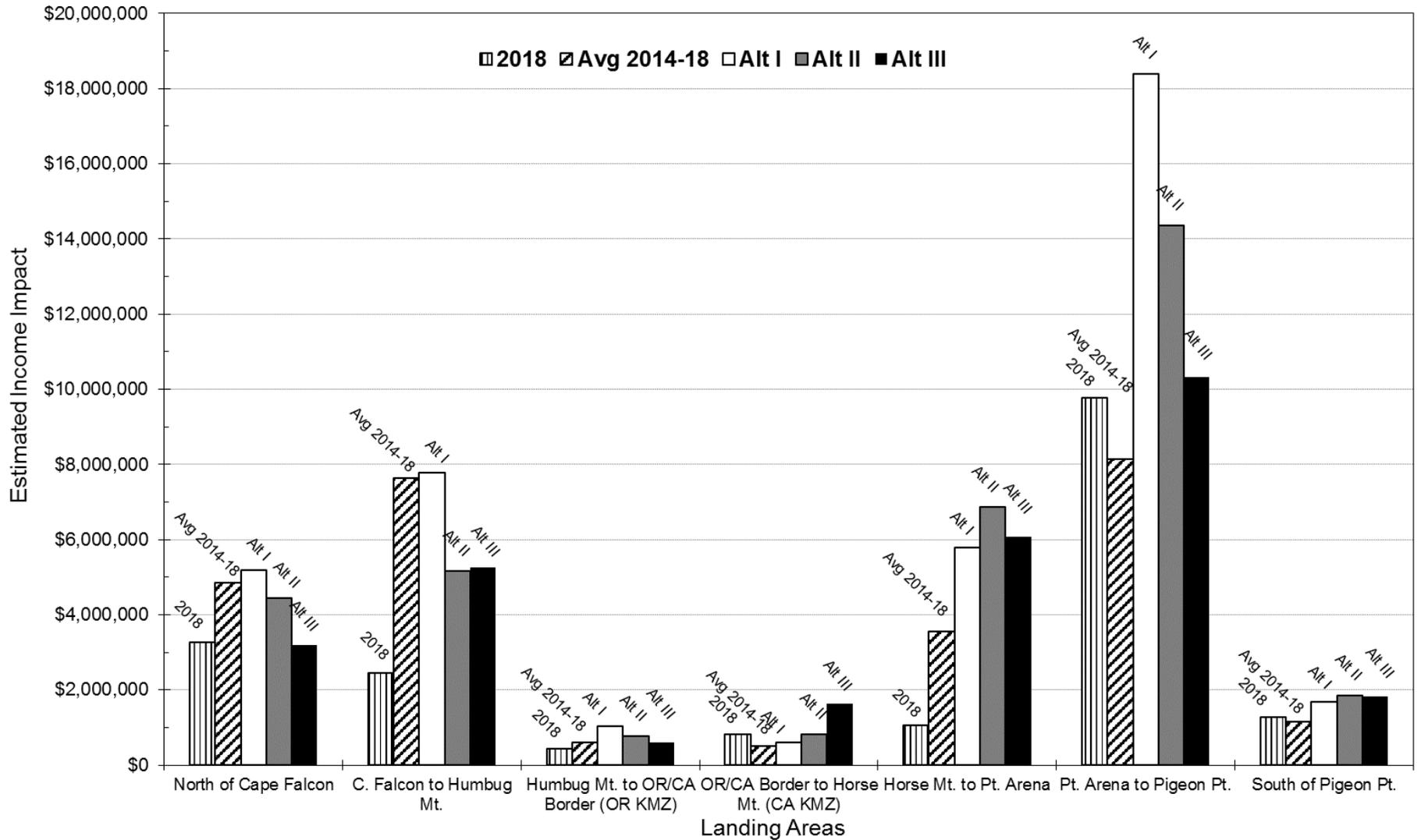


FIGURE 1. Projected community income impacts associated with landings projected under the Council adopted 2019 commercial fishery Alternatives compared to 2018 and the 2014-2018 average (in inflation-adjusted dollars).

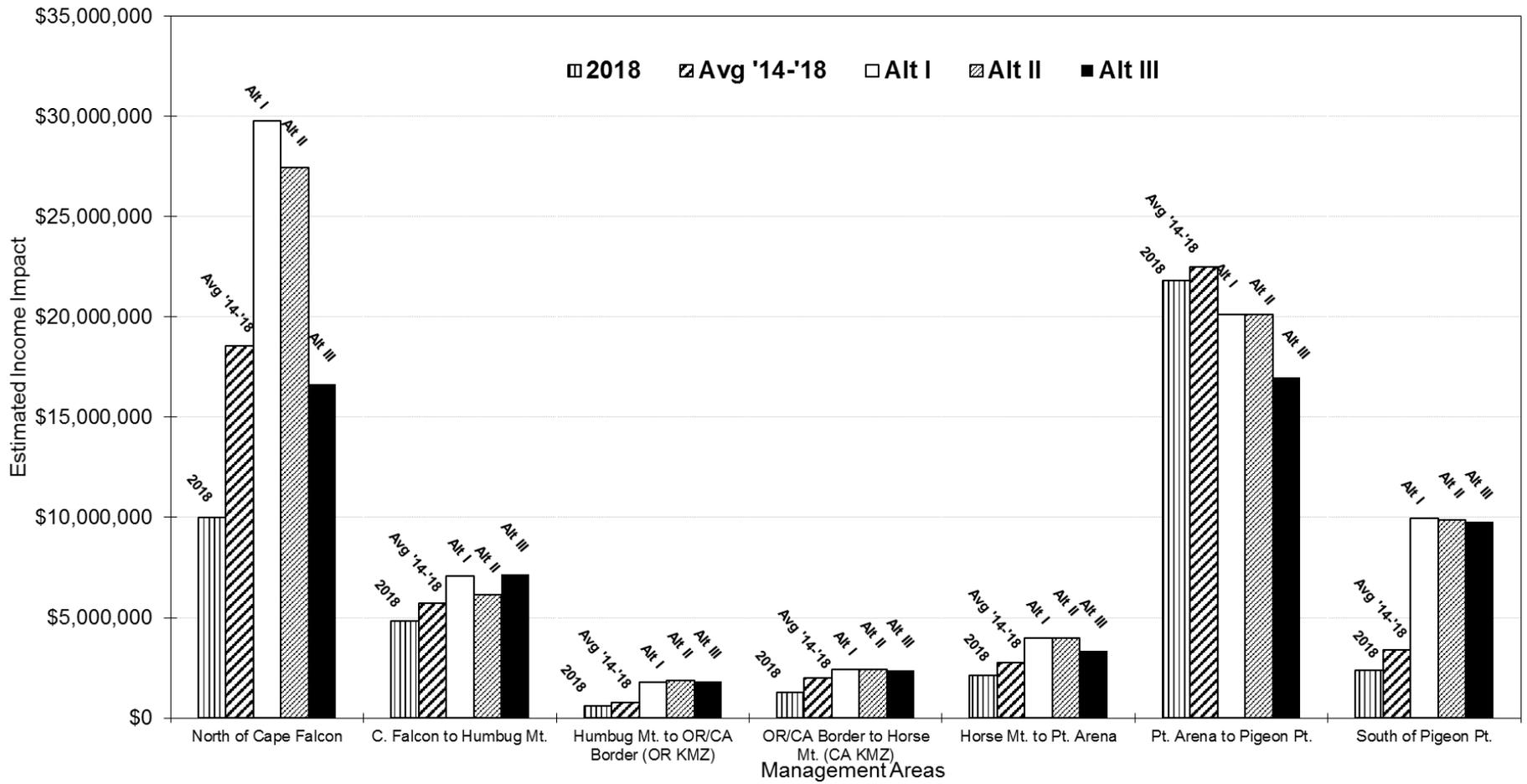


FIGURE 2. Projected community income impacts associated with angler effort projected under the Council adopted 2019 recreational fishery Alternatives compared to 2018 and the 2014-2018 average (in inflation-adjusted dollars).

## APPENDIX A: PROJECTED IMPACTS FOR AGE-3 SACRAMENTO RIVER WINTER CHINOOK, AGE-4 KLAMATH RIVER FALL CHINOOK, AND ADULT SACRAMENTO RIVER FALL CHINOOK.

Table A-1. Sacramento River winter run Chinook age-3 ocean impact rate south of Pt. Arena by fishery and Alternative. The age-3 SRWC impact rate was projected for each of the proposed 2019 fishing season Alternatives. The impacts are displayed as a percent for each Alternative by fishery, port area, and month. Max rate: 15.7.

Commercial										Recreational											
<b>Alternative I</b>					15.7 Total					<b>Alternative I</b>											
Port										Year	Port										Year
Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Area	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
SF	0.15	0.59	0.38	0.95	0.14	0.06			2.28	SF	0.20	0.40	1.27	1.97	0.75	0.10	0.22			4.90	
MO	0.44	1.19	0.66						2.28	MO	1.09	0.57	1.10	2.57	0.92					6.26	
Total	0.59	1.78	1.04	0.95	0.14	0.06			4.56	Total	1.29	0.97	2.37	4.54	1.66	0.10	0.22			11.15	
<b>Alternative II</b>					15.6 Total					<b>Alternative II</b>											
Port										Year	Port										Year
Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Area	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
SF	0.05	0.68	0.41	0.72	0.07				1.94	SF	0.20	0.40	1.27	1.96	0.74	0.10	0.22			4.88	
MO	0.42	1.59	0.73						2.74	MO	1.09	0.57	1.10	2.56	0.72					6.05	
Total	0.48	2.27	1.14	0.72	0.07				4.68	Total	1.29	0.97	2.37	4.52	1.46	0.10	0.22			10.93	
<b>Alternative III</b>					13.5 Total					<b>Alternative III</b>											
Port										Year	Port										Year
Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Area	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
SF	0.00	0.40	0.42	0.77					1.58	SF	0.20	0.40	0.38	2.01	0.76	0.11				3.84	
MO	0.58	0.79	0.74						2.11	MO	1.09	0.57	1.10	2.61	0.60					5.98	
Total	0.58	1.19	1.17	0.77					3.70	Total	1.29	0.97	1.48	4.62	1.35	0.11				9.82	

SF Pt. Arena to Pigeon Pt. (San Francisco)

MO Pigeon Pt. to the U.S./Mexico Border (Monterey)

Table A-2. Klamath River fall Chinook age-4 ocean harvest by fishery and Alternative. In 2019, a harvest of 16979 age-4 KRFC results in a 16% ocean harvest rate.

Commercial											Recreational											
Alternative I 15.9% Total											Alternative I											
Port Area	Fall 2018		Summer 2019						Summer Total	Year Total	Port Area	Fall 2018			Summer 2019					Summer Total	Year Total	
	Sep	Oct-Dec	Mar	Apr	May	Jun	Jul	Aug			Sep	Oct	Nov-Dec	Mar	Apr	May	Jun	Jul	Aug			
NO	85	0		53	278	102	116	472	1,021	1,106	NO	31	0		0	0	0	0	11	17	28	59
CO	0	0		166	466	484	540	1,126	2,782	2,782	CO	0	0	0	0	0	2	13	23	25	63	63
KO		0		0	115	392	362	171	1,040	1,040	KO		0			1	30	59	181		271	271
KC						517	352	379	1,248	1,248	KC	0				29	173	151	266		619	619
FB	44					3,652	2,557		6,209	6,253	FB	0	0		3	27	62	95	21		208	208
SF	0	0			587	852	826	356	2,621	2,621	SF	0	0		19	19	66	80	6		190	190
MO					206	106	84		396	396	MO				20	4	7	14	1		46	46
<b>Total</b>	<b>129</b>			<b>219</b>	<b>1,653</b>	<b>6,105</b>	<b>4,836</b>	<b>2,503</b>	<b>15,316</b>	<b>15,445</b>	<b>Total</b>	<b>31</b>			<b>41</b>	<b>83</b>	<b>350</b>	<b>432</b>	<b>517</b>	<b>1,423</b>	<b>1,454</b>	
14.6%											1.4%											
Alternative II 16.0% Total											Alternative II											
Port Area	Fall 2018		Summer 2019						Summer Total	Year Total	Port Area	Fall 2018			Summer 2019					Summer Total	Year Total	
	Sep	Oct-Dec	Mar	Apr	May	Jun	Jul	Aug			Sep	Oct	Nov-Dec	Mar	Apr	May	Jun	Jul	Aug			
NO	85	0			216	81	90	244	631	716	NO	31	0		0	0	0	0	11	12	23	54
CO	0	0			362	382	419	581	1,744	1,744	CO	0	0	0	0	0	2	7	23	22	54	54
KO		0			89	279	289	142	799	799	KO		0			1	29	59	200		289	289
KC						618	528	568	1,714	1,714	KC	0				29	171	151	265		616	616
FB	44				1,885	2,403	2,833	633	7,754	7,798	FB	0	0		3	27	61	95	21		207	207
SF	0	0			204	965	915	271	2,355	2,355	SF	0	0		19	19	65	80	6		189	189
MO					201	140	93		434	434	MO				20	4	6	14	1		45	45
<b>Total</b>	<b>129</b>				<b>2,957</b>	<b>4,868</b>	<b>5,169</b>	<b>2,439</b>	<b>15,433</b>	<b>15,562</b>	<b>Total</b>	<b>31</b>			<b>41</b>	<b>83</b>	<b>339</b>	<b>434</b>	<b>528</b>	<b>1,425</b>	<b>1,456</b>	
14.7%											1.4%											
Alternative III 15.3% Total											Alternative III											
Port Area	Fall 2018		Summer 2019						Summer Total	Year Total	Port Area	Fall 2018			Summer 2019					Summer Total	Year Total	
	Sep	Oct-Dec	Mar	Apr	May	Jun	Jul	Aug			Sep	Oct	Nov-Dec	Mar	Apr	May	Jun	Jul	Aug			
NO	85	0			216	83	92	249	640	725	NO	31	0		0	0	0	0	11	18	29	60
CO	0	0			362	391	430	593	1,776	1,776	CO	0	0	0	0	0	2	13	24	26	65	65
KO		0			89	168	146	144	547	547	KO		0			1	30	60	204		295	295
KC						1,187	1,012	1,087	3,286	3,286	KC	0				29	175	155	271		630	630
FB	44					2,540	2,966	676	6,182	6,226	FB	0	0		3	27	19	97	22		168	168
SF	0	0				574	939	287	1,800	1,800	SF	0	0		19	19	20	82	6		146	146
MO					275	72	96		443	443	MO				20	4	7	14	1		46	46
<b>Total</b>	<b>129</b>				<b>941</b>	<b>5,016</b>	<b>5,680</b>	<b>3,035</b>	<b>14,672</b>	<b>14,801</b>	<b>Total</b>	<b>31</b>			<b>41</b>	<b>83</b>	<b>264</b>	<b>445</b>	<b>548</b>	<b>1,381</b>	<b>1,412</b>	
13.9%											1.3%											

- NO Cape Falcon to S. End of Heceta Bank
- CO S. End of Heceta Bank to Humbug Mt.
- KO Humbug Mt. to OR/CA Border (Oregon KMZ)
- KC OR/CA Border to Horse Mt. (California KMZ)
- FB Horse Mt. to Pt. Arena (Fort Bragg)
- SF Pt. Arena to Pigeon Pt. (San Francisco)
- MO Pigeon Pt. to U.S./Mexico Border (Monterey)

Table A-3. Sacramento River fall Chinook ocean impacts in numbers of fish by fishery and Alternative.

Commercial											Recreational											
Alternative I 200,488 Total											Alternative I											
Port Area	Fall 2018		Mar	Summer 2019					Summer Total	Year Total	Port Area	Fall 2018			Mar	Summer 2019					Summer Total	Year Total
	Sep	Oct-Dec		Apr	May	Jun	Jul	Aug				Sep	Oct	Nov-Dec		Apr	May	Jun	Jul	Aug		
NO	0	0		762	3,376	2,246	3,467	5,077	14,928	14,928	NO	36	0		7	4	7	49	249	210	526	562
CO	15	0		1,130	2,806	3,182	1,697	2,933	11,748	11,763	CO	23	0	0	1	3	9	144	287	327	771	794
KO		0			597	1,241	1,049	300	3,187	3,187	KO		0				72	165	300	204	741	741
KC								512	1,960	1,960	KC	0					269	888	859	632	2,648	2,648
FB	44								28,132	28,176	FB	0	0			135	518	958	1,949	683	4,243	4,243
SF	5,067	1,088							59,688	65,843	SF	4,685	2,964			1,494	3,083	4,806	9,832	5,215	24,430	32,079
MO									23,694	23,694	MO					4,545	1,395	1,582	2,069	279	9,870	9,870
<b>Total</b>	<b>5,126</b>	<b>1,088</b>		<b>1,892</b>	<b>38,440</b>	<b>44,201</b>	<b>32,894</b>	<b>25,911</b>	<b>143,338</b>	<b>149,552</b>	<b>Total</b>	<b>4,744</b>	<b>2,964</b>		<b>8</b>	<b>6,181</b>	<b>5,353</b>	<b>8,591</b>	<b>15,545</b>	<b>7,550</b>	<b>43,228</b>	<b>50,936</b>
Alternative II 186,761 Total											Alternative II											
Port Area	Fall 2018		Mar	Summer 2019					Summer Total	Year Total	Port Area	Fall 2018			Mar	Summer 2019					Summer Total	Year Total
Sep	Oct-Dec	Apr		May	Jun	Jul	Aug	Sep			Oct	Nov-Dec	Apr	May		Jun	Jul	Aug				
NO	0	0		2,613	1,797	2,684	2,626	9,720	9,720	NO	36	0		7	4	7	19	249	148	434	470	
CO	15	0		2,173	2,545	1,314	1,517	7,549	7,564	CO	23	0	0	1	3	9	74	287	293	667	690	
KO		0			462	887	839	250	2,438	2,438	KO		0				72	165	300	226	763	763
KC								768	2,774	2,774	KC	0					269	888	859	632	2,648	2,648
FB	44							5,708	34,354	34,398	FB	0	0			135	518	958	1,949	683	4,243	4,243
SF	5,067	1,088						13,063	46,832	52,987	SF	4,685	2,964			1,494	3,083	4,806	9,832	5,215	24,430	32,079
MO									26,177	26,177	MO					4,545	1,395	1,582	2,069	220	9,811	9,811
<b>Total</b>	<b>5,126</b>	<b>1,088</b>		<b>28,814</b>	<b>42,419</b>	<b>34,680</b>	<b>23,932</b>	<b>129,845</b>	<b>129,845</b>	<b>136,059</b>	<b>Total</b>	<b>4,744</b>	<b>2,964</b>		<b>8</b>	<b>6,181</b>	<b>5,353</b>	<b>8,492</b>	<b>15,545</b>	<b>7,415</b>	<b>42,994</b>	<b>50,702</b>
Alternative III 167,768 Total											Alternative III											
Port Area	Fall 2018		Mar	Summer 2019					Summer Total	Year Total	Port Area	Fall 2018			Mar	Summer 2019					Summer Total	Year Total
Sep	Oct-Dec	Apr		May	Jun	Jul	Aug	Sep			Oct	Nov-Dec	Apr	May		Jun	Jul	Aug				
NO	0	0		2,613	1,797	2,684	2,626	9,720	9,720	NO	36	0		7	4	7	49	249	222	538	574	
CO	15	0		2,173	2,545	1,314	1,517	7,549	7,564	CO	23	0	0	1	3	9	144	287	333	777	800	
KO		0			462	532	419	250	1,663	1,663	KO		0				36	165	300	226	727	727
KC									5,547	5,547	KC	0					269	888	859	632	2,648	2,648
FB	44							5,912	30,317	30,361	FB	0	0			135	518	288	1,949	683	3,573	3,573
SF	5,067	1,088						13,530	34,062	40,217	SF	4,685	2,964			1,494	3,083	1,442	9,832	5,215	21,066	28,715
MO									25,889	25,889	MO					4,545	1,395	1,582	2,069	180	9,771	9,771
<b>Total</b>	<b>5,126</b>	<b>1,088</b>		<b>22,923</b>	<b>30,850</b>	<b>35,606</b>	<b>25,370</b>	<b>114,749</b>	<b>114,749</b>	<b>120,963</b>	<b>Total</b>	<b>4,744</b>	<b>2,964</b>		<b>8</b>	<b>6,181</b>	<b>5,317</b>	<b>4,556</b>	<b>15,545</b>	<b>7,490</b>	<b>39,097</b>	<b>46,805</b>

NO	Cape Falcon to S. End of Heceta Bank	FB	Horse Mt. to Pt. Arena (Fort Bragg)
CO	S. End of Heceta Bank to Humbug Mt.	SF	Pt. Arena to Pigeon Pt. (San Francisco)
KO	Humbug Mt. to OR/CA Border (Oregon KMZ)	MO	Pigeon Pt. to U.S./Mexico Border (Monterey)
KC	OR/CA Border to Horse Mt. (California KMZ)		

## APPENDIX B: NEPA AND ESA ANALYSES INCORPORATED BY REFERENCE

Several documents supporting the analyses of effects to the environment from the Alternatives have been incorporated by reference. Those documents are described and passages relevant to analyses contained in this EA are excerpted below.

### NMFS 2003: West Coast Salmon Harvest Programmatic EIS

This document evaluates how NMFS reviews annual salmon fishery plans in three jurisdictions, the North Pacific Fishery Management Council for Southeast Alaska; the Pacific Fishery Management Council for the Washington, Oregon, and California coast; and *U.S. v. Oregon* for the Columbia River Basin. In general, NMFS seeks to implement fisheries that are consistent with a variety of statutory and legal obligations related to resource conservation, socioeconomic benefits associated with resource use, and treaty trust obligations. Fishery plans are developed annually within the context of framework plans to meet the year-specific circumstances related to the status of stocks affected by the fisheries. This final PEIS evaluates different ways to balance these objectives and different strategies that can be used that may provide better solutions for meeting the obligations and objectives of the respective framework plans. The Alternatives considered in this final PEIS are programmatic in nature and are designed to provide an overview of fishery management methods and strategies that can be implemented as part of the annual planning processes.

This document includes the following statements relative to Council area salmon fisheries:

*While the levels of salmon catch fluctuate from year to year, the amount of groundfish taken as incidental catch is very low so that changes in the salmon fishery do not substantially alter the projections for harvest-related mortality in the groundfish fishery.*

*Other Council managed species such as halibut, highly migratory species (draft FMP), and coastal pelagic species are also landed jointly with salmon. For all of these stocks, fish caught on the same trip with salmon are documented. Data on the commercial segment of these fisheries show the co-occurrence rates for salmon and these other Council-managed species is low, as well as for non-Council-managed species. Changes in the salmon fishery are not expected to have a substantial impact on the directed fisheries for the non-salmon stocks.*

*The commercial troll fishery off the coasts of Washington, Oregon, and California is classified as a Category III fishery, indicating a remote or no likelihood of known incidental mortality or serious injury of marine mammals. In general, recreational fishery uses the same gear and techniques as the commercial fisheries and can be assumed to have similar rates of encounters and results.*

*After excluding ESA listed marine mammals, only three species of marine mammals are defined as strategic under MMPA within the coverage area: short-finned pilot whales, mesoplodont beaked whales, and Minke whales (Barlow et al. 1997). This strategic classification denotes that projected human-caused mortality exceeds the species' annual potential biological removal estimate under MMPA standards. As with ESA listed marine mammal species, there is no record of these three species being affected by the ocean salmon fisheries managed by the Council.*

*Steller sea lion interaction with the Pacific Coast salmon fisheries is rare and NMFS has determined mortality and serious injury incidental to commercial fishing operations would have a negligible effect.<sup>1</sup> Available information indicates that Pacific Coast salmon fisheries are not likely*

---

<sup>1</sup> The eastern DPS of Steller sea lions was delisted under the ESA on November 4, 2013 (78 FR 66140).

*to jeopardize the existence of the Guadalupe fur seal. No sea turtles have been reported taken by the ocean salmon fisheries off Washington, Oregon, or California. NMFS has determined that commercial fishing by Pacific Coast fisheries would pose a negligible threat to the Pacific species.*

*Short-term effects on seabirds are minimal, if any. The types of vessels used in the fishery and the conduct of the vessels are not conducive to collisions or the introduction of rats other non-indigenous species to seabird breeding colonies. Anecdotal information suggests accidental bird encounters are a rare event for commercial and recreational ocean salmon fisheries (Council 1999a). Long-term effects on seabirds from the ocean salmon fisheries are also minimal.*

*The removal of adult salmon by the ocean fisheries is not considered to significantly affect the lower trophic levels or the overall marine ecosystem because salmon are not the only or primary predator in the marine environment.*

### **PFMC 2006: EA for 2006 Ocean Salmon Management Measures**

The 2006 regulations EA analyzes the environmental and socioeconomic impacts of proposed management measures for ocean salmon fisheries occurring off the coasts of Washington, Oregon, and California. The document evaluated the 2006 annual ocean salmon harvest management measures with respect to compliance with the terms of the Salmon FMP, obligations under the Pacific Salmon Treaty (PST), and the level of protection required by all consultation standards for salmon species listed under the ESA. The range of alternatives analyzed in the 2006 Regulations EA included the effects of three levels of *de minimis* fishing strategies on KRFC when the stock was projected to fall below the 35,000 natural spawner floor for the third consecutive year. The escapement floor for naturally spawning KRFC was projected to not be attained even with complete closure of ocean salmon fisheries between Cape Falcon, Oregon, and Point Sur, California; therefore, the management measures required implementation by emergency rule. The NMFS-recommended 2006 salmon fishery management measures did not completely close fisheries between Cape Falcon and Point Sur, but limited fisheries to provide a minimum of 21,100 natural spawning adult KRFC in 2006. The 2006 EA supported NMFS' Finding of No Significant Impacts (FONSI) for the 2006 ocean salmon regulations.

*Appendix A of Amendment 18 (EFH Appendix A) describes salmon EFH and fishing and non-fishing impacts to this habitat. It found no evidence of direct gear effects on this habitat from Council-managed salmon fisheries. ... Because EFH impacts are extensively described and analyzed in EFH Appendix A, and this analysis demonstrates the fishery has no significant impacts, EFH will not be considered further in this environmental assessment.*

*Fisheries management can affect safety if, for example, season openings make it more likely that fishermen will have to go out in bad weather because fishing opportunities are limited. The EA incorporated into Amendment 8 to the Salmon FMP analyzed alternatives to adjust management measures if unsafe weather affected fishery access. The range of management measures considered for the proposed action would be within the range described in that EA. Since these types of potential impacts have been previously analyzed and found not to be significant, they are not discussed in this EA.*

### **NMFS 2009: Biological Opinion on Ocean Fisheries Effects on Southern Resident Killer Whales**

This document constitutes the National Marine Fisheries Service's (NMFS) biological opinion (Opinion) regarding the effects of proposed Pacific coast ocean salmon fisheries conducted under the Pacific Coast Salmon Plan on the Southern Resident killer whale (*Orcinus orca*) distinct population segment. The fisheries assessed by this Opinion would be conducted in the U.S. Exclusive Economic Zone (EEZ) of the

Pacific Ocean. These fisheries are managed under the jurisdiction of the Pacific Fishery Management Council (PFMC) and target primarily Chinook (*Oncorhynchus tshawytscha*) and coho salmon (*O. kisutch*), although pink salmon (*O. gorbuscha*) are taken incidentally during odd-numbered years (e.g., 2005, 2007).

*After reviewing the current status of the endangered population of Southern Resident killer whales and their critical habitat, the environmental baseline for the action area, the effects of the proposed actions, and cumulative effects, it is NMFS's biological opinion that the proposed action is not likely to jeopardize the continued existence of the Southern Resident killer whales or adversely modify critical habitat.*



This map is for reference only and is not intended for use in navigation or fishery regulation.

**PRESEASON REPORT III**  
**COUNCIL ADOPTED MANAGEMENT MEASURES**  
**AND**  
**ENVIRONMENTAL ASSESSMENT PART 3**  
**FOR**  
**2019 OCEAN SALMON FISHERY REGULATIONS**  
REGULATION IDENTIFIER NUMBER 0648-BI05



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**APRIL 2019**

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## LIST OF ACRONYMS AND ABBREVIATIONS

AABM	Aggregate Abundance Based Management
AEQ	adult equivalent
BO	biological opinion
CDFW	California Department of Fish and Wildlife
Council	Pacific Fishery Management Council
CPUE	catch per unit effort
EEZ	Economic Exclusive Zone
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FMP	fishery management plan
FONSI	finding of no significant impact
FRAM	Fishery Regulation Assessment Model
GSI	genetic stock identification
IPHC	International Pacific Halibut Commission
ISBM	Individual Stock Based Management
KMZ	Klamath Management Zone (Humbug Mountain to Horse Mountain)
KRFC	Klamath River fall Chinook
LCN	Lower Columbia Natural (wild Columbia River coho below Bonneville Dam)
LCR	Lower Columbia River (wild Col. River tule fall Chinook below Bonneville Dam)
LRH	Lower River Hatchery (hatchery Col. River tule fall Chinook below Bonneville Dam)
LRW	Lower River Wild (Columbia River bright fall wild Chinook below Bonneville Dam).
MSY	maximum sustainable yield
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
ODFW	Oregon Department of Fish and Wildlife
OCN	Oregon coastal natural (coho)
OPI	Oregon Production Index
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RMP	Resource Management Plan
RK	Rogue/Klamath (hatchery coho)
SAS	Salmon Advisory Subpanel
SCH	Spring Creek Hatchery (Col. R. tule fall Chinook returning to Spring Creek Hatchery [above Bonneville Dam])
SONCC	Southern Oregon/Northern California Coast (coho ESU)
SRFC	Sacramento River fall Chinook
SRFI	Snake River fall (Chinook) index
SRW	Snake River wild fall Chinook
SRWC	Sacramento River winter Chinook
STT	Salmon Technical Team
SWO	State Waters Only (fisheries off Oregon south of Cape Falcon)
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

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## **1.0 INTRODUCTION**

This is the last in an annual series of four reports prepared by the Salmon Technical Team (STT) of the Pacific Fishery Management Council (Council). The reports document and help guide salmon ocean fishery management off the coasts of Washington, Oregon, and California. This report describes the Council's 2019 ocean salmon management measures adopted for submission to the U.S. Secretary of Commerce, and characterizes the expected impacts on ocean salmon fisheries and the stocks which support them.

This report also constitutes the third and final part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2019 ocean salmon regulations and includes a description and analysis of a Proposed Action. An EA is used to determine whether an action being considered by a Federal agency has significant environmental impacts. The second part of the EA (Preseason Report II) presented a statement of the purpose and need, a description of the affected environment, a description of 2019 ocean salmon regulation alternatives being considered, and an analysis of the effects of those alternatives on the affected environment. The first part of the EA (Preseason Report I) included a description of the No-Action alternative and an analysis of the effects of the No-Action alternative on salmon stocks managed under the Pacific Coast Salmon Fishery Management Plan (FMP), which is one component of the affected environment. Along with the description and analysis of the Proposed Action in this report, these three parts of the EA will provide the necessary components to determine if a finding of no significant impact (FONSI) or Environmental Impact Statement (EIS) is warranted.

The Council's recommendations for the 2019 ocean salmon fishery regulations meet all objectives of the FMP (Section 3), including Annual Catch Limits (ACLs) set according to the FMP and described in Preseason Report I; the level of protection required by all consultation standards for salmon species listed under the Endangered Species Act (ESA) (Section 4), and; the obligations under the Pacific Salmon Treaty (PST) (Section 5).

Under the Council's recommended salmon fisheries, salmon stocks originating from Washington, Oregon, and California meet all of the applicable conservation objectives in the FMP.

Sacramento River fall Chinook, Klamath River fall Chinook, Queets coho, Strait of Juan de Fuca coho, and Snohomish coho salmon stocks were classified as overfished in 2018, and remain in that category for 2019.

## **2.0 SELECTION OF FINAL MANAGEMENT MEASURES**

The following figures and tables describe the Council-adopted management measures covering the period from May 1, 2019, to April 30, 2020:

- Table 1 - Non-Indian commercial ocean salmon management measures;
- Figure 1 - Geographic outline of commercial troll (non-Indian) ocean salmon seasons;
- Table 2 - Recreational ocean salmon management measures;
- Figure 2 - Geographic outline of recreational ocean salmon seasons;
- Table 3 - Treaty Indian commercial ocean management measures; and
- Table 4 - Allowable catch quotas for Chinook and coho.

In addition, Tables 5, 6, and 7 provide information on the biological impacts and landing estimates for the Council's management recommendations. Table 8 displays the expected mark (healed adipose fin-clip) rate for coho encountered in Council adopted mark-selective fisheries. Tables 9 and 10, and Figures 3 and 4, provide information on the economic impacts of the proposed fisheries. Table 11 summarizes environmental effects of the Proposed Action and Alternatives. The assessment of stock status with regard to overfished, overfishing, and approaching an overfished condition is described in Table 12.

The 2019 seasons are constrained primarily by: (1) Sacramento River fall Chinook (SRFC) and California coastal Chinook south Cape Falcon, (2) Oregon coastal natural coho and Columbia River summer Chinook north of the OR/CA border, and (3) and lower Columbia River natural tule and Puget Sound Chinook north of Cape Falcon.

Regulations and expected fishing patterns for the treaty Indian ocean fisheries were developed by the Hoh, S'Klallam, Makah, Quileute, and Quinault tribes for their respective fisheries.

## *2.1 Inseason Management*

Inseason changes are made to meet the preseason intent of the management measures described in this document, but must also meet the Council's FMP goals, especially in regard to conservation and allocation goals, Federally-recognized Indian fishing rights, consultation standards for ESA-listed salmon stocks, and obligations under the PST.

Inseason actions that are anticipated for the 2019-2020 management season include, but are not limited to, the following possibilities:

1. Adjustments in landing limits and days open for non-Indian commercial fisheries.
2. Changing the days or number of days of fishing allowed per calendar week for recreational fisheries.
3. Transfer of coho quotas among recreational port areas north of Cape Falcon.
4. Trading portions of Chinook and coho quotas between recreational and non-Indian commercial sectors north of Cape Falcon.
5. Routine openings and closings, and other management measures associated with quota management, including modifying open areas, bag limits, species retention limits, and mark-selective retention restrictions.
6. Transferring unused or exceeded quota to subsequent fisheries on an impact neutral, fishery equivalent basis.
7. Closing or postponing Oregon recreational and commercial fisheries scheduled to open March 15, 2020, if necessary to meet 2020 management objectives.
8. Closing or postponing California recreational fisheries scheduled to open April 4, 2020, or commercial fisheries scheduled to open April 16, 2020, if necessary to meet 2020 management objectives.
9. Adjustments to incidental Pacific halibut catch regulations in commercial fisheries, including landing and possession ratios and landing and possession limits per trip.

Inseason action will generally be accomplished through National Marine Fisheries Service (NMFS) sponsored conference calls attended by representatives of affected state and tribal management agencies, the Council, the Salmon Advisory Subpanel (SAS), and the STT. The Council may also make recommendations for inseason actions at any of its regularly scheduled meetings.

## *2.2 State Waters Fisheries*

In addition to the seasons shown in Tables 1 and 2, the Oregon Department of Fish and Wildlife (ODFW) may permit fall fisheries for salmon in certain areas within state marine waters. Potential seasons off the Oregon coast include commercial and recreational fisheries at the mouths of the Chetco, Elk, and other rivers. Washington may also establish limited recreational salmon fisheries in state marine waters if additional impacts on critical coho and/or Chinook stocks can be accommodated within management constraints. California will not establish any additional state marine water salmon fisheries in 2019.

### 3.0 SALMON FISHERY MANAGEMENT PLAN REQUIREMENTS

The Council's FMP includes objectives for setting annual management measures to regulate ocean salmon fisheries between the U.S./Canada border and the U.S./Mexico border. The objectives include biological, administrative, and allocation requirements. In recommending final management measures, the Council attempts to meet all objectives in a fair and balanced manner, while maintaining established priorities.

Biological objectives for stocks originating in the three west coast states and impacted by Council area ocean fisheries are listed in Table 3-1 of the FMP. The objectives generally consist of meeting spawning escapement numbers associated with maximum sustainable yield ( $S_{MSY}$ ), overfishing limits (OFL), acceptable biological catch (ABC), and annual catch limits (ACL), or exploitation rate limits designed to support recovery of depressed stocks or to rebuild overfished stocks, while encompassing a long-term average harvest approximating MSY. Impacts on these stocks relative to the applicable objectives are described in Table 5.

Administrative objectives are requirements for meeting other applicable law outside of the FMP. These requirements include ESA consultation standards, international treaties, and tribal trust responsibilities. The FMP defers to NMFS consultation standards for salmon stocks listed under the ESA in regards to biological conservation objectives. Section 4.0 of this document provides greater detail on ESA-listed stocks, while impacts of the Council-adopted salmon management measures on ESA-listed stocks are included in Table 5.

The FMP requires compliance with relevant terms of the PST. Section 5.0 of this document provides greater detail on PST provisions and stocks, while impacts of the Council-adopted salmon management measures on those stocks are included in Table 5.

The FMP also requires compliance with treaty fishing rights as described in Court orders in the *U.S. v. Washington* (Puget Sound), *Hoh v. Baldrige* (Washington coast), and *U.S. v. Oregon* (Columbia River) cases, and the Solicitor General opinion (Klamath River) governing allocation and management of shared salmon resources. Much of the North of Falcon forum is dedicated to annual negotiations establishing allocation among the tribes, non-Indian fishing sectors, and ocean and inside interests. The results of these negotiations inform the Council's adoption of final management measure recommendations while meeting its biological, administrative, and allocation objectives.

The Columbia River treaty tribes establish periodic management agreements with the state comanagers and Federal agencies. These agreements are approved pursuant to provisions of *U.S. v. Oregon* procedures. Recent agreements have included an entitlement for the treaty tribes of 50 percent of the coho return destined for areas upstream from Bonneville Dam. Council area fisheries are shaped in order to meet this requirement in some years.

The Yurok and Hoopa Valley tribes are entitled to 50 percent of the total KRFC harvest, which is calculated as a harvest of KRFC equal to that taken in all non-tribal fisheries. The Council must account for all harvest impacts when assessing the achievement of KRFC conservation objectives.

In addition to the allocation objectives associated with sharing between treaty Indian and non-Indian sectors, the Salmon FMP includes formulas for sharing Chinook and coho quotas north of Cape Falcon between commercial and recreational sectors, and among recreational port subareas, and for coho south of Cape Falcon between commercial and recreational sectors. The 2019 salmon management measures adopted by the Council meet all these allocation requirements.

## 4.0 SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

Since 1989, NMFS listed 17 Evolutionarily Significant Units (ESUs) of salmon under the ESA:

Species	ESU	Status	Most Recent		Original Listing	
<b>Chinook</b>						
Chinook Salmon ( <i>O. tshawytscha</i> )	Sacramento River Winter	Endangered	83 FR 18233	4/26/2018	54 FR 32085	8/1/1989
	Snake River Fall	Threatened	76 FR 50448	8/15/2011	57 FR 14653	4/22/1992
	Snake River Spring/Summer	Threatened	76 FR 50448	8/15/2011	57 FR 14653	4/22/1992
	Puget Sound	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Lower Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Upper Willamette River	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Upper Columbia River Spring	Endangered	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
	Central Valley Spring	Threatened	76 FR 50447	8/15/2011	64 FR 50394	9/16/1999
	California Coastal	Threatened	76 FR 50447	8/15/2011	64 FR 50394	9/16/1999
<b>Chum</b>						
Chum Salmon ( <i>O. keta</i> )	Hood Canal Summer-Run	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
	Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
<b>Coho</b>						
Coho Salmon ( <i>O. kisutch</i> )	Central California Coastal	Endangered	76 FR 50447	8/15/2011	61 FR 56138	10/31/1996
	S. Oregon/ N. California Coastal	Threatened	76 FR 50447	8/15/2011	62 FR 24588	5/6/1997
	Oregon Coastal	Threatened	76 FR 50448	8/15/2011	63 FR 42587	8/10/1998
	Lower Columbia River	Threatened	76 FR 50448	8/15/2011	70 FR 37160	6/28/2005
<b>Sockeye</b>						
Sockeye Salmon ( <i>O. nerka</i> )	Snake River	Endangered	76 FR 50448	8/15/2011	56 FR 58619	11/20/1991
	Ozette Lake	Threatened	76 FR 50448	8/15/2011	64 FR 14528	3/25/1999

As the listings have occurred, NMFS has initiated formal consultations and issued biological opinions (BOs) that consider the impacts resulting from implementation of the FMP, or from annual management measures, to listed salmonid species. NMFS has also reinitiated consultation on certain ESUs when new information has become available on the status of the stocks or on the impacts of the FMP on the stocks. The consultation standards referred to in this document include (1) reasonable and prudent alternatives, (2) conservation objectives for which NMFS conducted Section 7 consultations and arrived at a no-jeopardy conclusion, and (3) NMFS requirements under Section 4(d) determinations. A list of current BOs in effect, the species they apply to, and their duration follows:

Date	Evolutionarily Significant Unit covered and effective period
3/8/1996	Snake River spring/summer and fall Chinook and sockeye (until reinitiated)
4/28/1999	Oregon Coastal natural coho, Southern Oregon/ Northern California coastal coho, Central California coastal coho (until reinitiated)
4/28/2000	Central Valley spring Chinook (until reinitiated)
4/27/2001	Hood Canal summer chum 4(d) limit (until reinitiated)
4/30/2001	Upper Willamette Chinook, Upper Columbia spring Chinook, Lake Ozette sockeye, Columbia River chum, and 10 steelhead ESUs (until reinitiated)
4/30/2004	Puget Sound Chinook (until reinitiated)
6/13/2005	California coastal Chinook (until reinitiated)
4/26/2012	Lower Columbia River Chinook (until reinitiated)
4/9/2015	Lower Columbia River natural coho (until reinitiated)
4/26/2018	Sacramento River winter Chinook (until reinitiated)

Amendment 12 to the Salmon FMP added the generic category “species listed under the ESA” to the list of stocks in the salmon management unit and modified respective escapement goals to include “manage consistent with NMFS jeopardy standards or recovery plans to meet immediate conservation needs and

long-term recovery of the species.” Amendment 14 specified those listed ESUs and clarified which stocks in the FMP management unit were representative of the ESUs.

In a letter received by the Council on March 5, 2019, NMFS provided guidance on protective measures for species listed under the ESA during the 2019 fishing season. The letter summarized the requirements of NMFS’ BOs on the effects of potential actions under the salmon FMP on listed salmon and provided the anticipated consultation standards of the BOs in preparation for the 2019 management season, as well as further guidance and recommendations for the 2019 management season. Additional guidance was provided during the April Council meeting.

The ESA consultation standards, exploitation rates, and other criteria in place for the 2019 management season are presented in Table 5. Some listed stocks are either rarely caught in Council area fisheries (e.g., spring Chinook from the upper Columbia River) or already receive sufficient protection from other salmon FMP and ESA standards (e.g., Central Valley spring Chinook). NMFS has determined that management actions designed to limit catch from these ESUs, beyond what will be provided by harvest constraints for other stocks, are not necessary.

Of the ESA-listed Chinook and coho, Council-managed fisheries have substantive impacts on Sacramento River winter Chinook (SRWC), Central Valley spring Chinook, California coastal Chinook, Snake River wild (SRW) fall Chinook, lower Columbia River (LCR) fall Chinook, and all of the coho stocks. Impacts to Puget Sound Chinook are relatively low in Council area ocean fisheries, but may be a constraining stock when structuring both ocean and inside fisheries during the North of Falcon process.

Additional listed salmonid ESUs found within the Council area, but not substantively impacted by Council managed fisheries, include:

<b><u>Chinook</u></b>	<b><u>Steelhead</u></b>
Snake River spring/summer (threatened)	Southern California (endangered)
Upper Willamette (threatened)	South-central California coast (threatened)
Puget Sound (threatened)	Upper Columbia River (endangered)
Upper Columbia River spring (endangered)	Middle Columbia River (threatened)
	Snake River Basin (threatened)
<b><u>Sockeye</u></b>	Puget Sound (threatened)
Snake River (endangered)	Central Valley, California (threatened)
Ozette Lake Sockeye (threatened)	Central California coast (threatened)
	Upper Willamette River (threatened)
<b><u>Chum</u></b>	Lower Columbia River (threatened)
Columbia River (threatened)	Northern California (threatened)
Hood Canal summer (threatened)	

## **5.0 OBLIGATIONS UNDER THE PACIFIC SALMON TREATY**

In 1985 the PST was signed, setting long-term goals for the benefit of the shared salmon resources of the United States and Canada. The PSC is the body formed by the governments of Canada and the United States to implement the Pacific Salmon Treaty.

### **5.1 Chinook Salmon Management**

A new agreement under the PST was negotiated in 2018 and formally accepted by both the U.S. and Canada. The U.S. and Canada began managing fisheries in accordance with this new agreement on January 1, 2019. The new agreement includes reductions to catch ceilings for SEAK and WCVI AABM fisheries relative to the prior 2009 agreement. These reductions for SEAK and WCVI range from 7.5 percent and 12.5 percent, respectively, in years of low abundances to 1.5 percent and 2.4 percent, respectively, in years of higher

abundances. Under the terms of the 2019 PST Agreement, Council fisheries for Chinook salmon will be subject to a new set of ISBM fishery limits, identified in Attachment I of Chapter 3. These provisions require the calendar year exploitation rate (CYER) by all U.S. fisheries south of the U.S./Canada border on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives (see Attachment I in Chapter 3 of the 2019 Agreement for specifics).

Many Chinook stocks of concern to the Council are affected by fisheries off Canada and Alaska. Maximum allowable catches by Canadian AABM fishery complexes off the WCVI and Northern British Columbia are determined through the annual calibration of the PSC Chinook Model. Under the new Agreement, catch ceilings for Southeast Alaskan (SEAK) fisheries will be determined prior to February 1 in each year using estimated catch per unit effort (CPUE) from the winter power troll fishery. Canadian fisheries that are not included in AABM complexes are managed under ISBM constraints, which, similar to U.S. ISBM fisheries, require the CYER by Canadian ISBM fisheries on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives. Expectations for Canadian and Alaskan fisheries harvest and stock abundance forecasts are incorporated into the Chinook Fishery Regulation Assessment Model (FRAM) to estimate total exploitation rate impacts from all marine fisheries (Table 5).

Key considerations for Canadian domestic fishery management for Chinook in 2019 include: (1) meeting domestic conservation obligations for WCVI, Lower Strait of Georgia, Fraser River Spring 4.2 and 5.2, Fraser Summer 5.2, Fraser Summer 4.1 and Fraser Fall 4.1 (Harrison River) stocks; (2) meeting First Nations Food, Social and Ceremonial and treaty obligations for Chinook harvests in native fisheries; and (3) monitoring of incidental impacts during commercial and native fisheries directed at sockeye, and chum salmon. It is anticipated that the details of the fishery regulatory package off WCVI and in the Juan de Fuca-Strait of Georgia areas will be driven by levels of allowable impact on WCVI, Lower Strait of Georgia and Fraser River Chinook stocks, Interior Fraser (Thompson River) coho, and potentially Thompson and/or Chilcotin River Steelhead (depending on a listing decision under Canada's Species at Risk Act). Increasing the availability of Chinook salmon in key foraging areas of Southern Resident Killer Whales in the southern BC region is an additional consideration which will be supported through conservation actions implemented for Fraser River and other Chinook salmon.

## **5.2 Coho Salmon Management**

In 2002, the PSC adopted a management plan for coho salmon originating in Washington and Southern British Columbia river systems. The plan is directed at the conservation of key management units, four from Southern British Columbia (Interior Fraser, Lower Fraser, Strait of Georgia Mainland, and Strait of Georgia Vancouver Island) and nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Exploitation rate limits for intercepting fisheries are established for individual management units through formulas specified in the 2019 PST Southern Coho Management Plan, and are based on total allowable fishery exploitation rates.

The categorical status of U.S. coho management units is reported to comply with obligations pursuant to the 2019 PST Southern Coho Management Plan. Categorical status is employed by the PSC under the 2019 PST Southern Coho Management Plan to indicate general ranges of allowable total exploitation rates for U.S. and Canadian coho management units. Three categories are employed: low (total exploitation rate less than 20 percent), moderate (total exploitation rate 20 percent to 40 percent), and abundant (total exploitation rate greater than 40 percent). For the Puget Sound management units, the 2019 PST Southern Coho Management Plan uses the thresholds and stepped harvest rate goals from the Comprehensive Coho Agreement, developed by Washington and the Puget Sound tribes, and adopted by the Council as FMP conservation objectives in November 2009. Actual exploitation rate constraints for Canadian fisheries on U.S. coho management units are determined by formulas that specify sharing of allowable exploitation rates

and a “composite rule.” The composite rule adjusts constraints for Canadian fishery exploitation rates based on the number of U.S. management units which fall in a given category. For example, if only one Washington coastal or Puget Sound coho management unit is in low status, Canadian fisheries are constrained to a total exploitation rate on that unit of 12 percent; if two or more Washington coastal management units are in low status, the constraint becomes 10 percent. The most restrictive exploitation rate limit for Canadian fishery impacts on U.S. coho management units is 10 percent.

For several Washington coastal coho management units, management objectives are expressed as a range of spawning escapements expected to produce MSY. Allowable exploitation rates are calculated from the forecast abundance and the lower end of the escapement range and used to classify the categorical status of the management units. This rate is the maximum allowed under the PST when the management unit is in the moderate or abundant status. If the management unit is in the low abundance status, exploitation rates up to 20 percent are allowed.

For 2019, Puget Sound and Washington coast coho constraints are as follows:

<b>FMP</b>			
FMP Stock	Total Exploitation Rate Constraint <sup>a/</sup>	Categorical Status <sup>a/</sup>	
Skagit	35%	Low	
Stillaguamish	50%	Normal	
Snohomish	40%	Low	
Hood Canal	45%	Low	
Strait of Juan de Fuca	20%	Critical	
Quillayute Fall	59%		
Hoh	65%		
Queets	65%		
Grays Harbor	65%		

<b>PST Southern Coho Management Plan</b>			
U.S. Management Unit	Total Exploitation Rate Constraint <sup>b/</sup>	Categorical Status <sup>c/</sup>	
Skagit	35%	Moderate	
Stillaguamish	50%	Abundant	
Snohomish	40%	Moderate	
Hood Canal	45%	Moderate	
Strait of Juan de Fuca	20%	Low	
Quillayute Fall <sup>c/</sup>	57%	Abundant	
Hoh <sup>c/</sup>	71%	Abundant	
Queets <sup>c/</sup>	48%	Abundant	
Grays Harbor	51%	Abundant	

a/ Preliminary. For Puget Sound stocks, the exploitation rate constraints and categorical status (Normal, Low, Critical) reflect application of Comprehensive Coho Agreement rules, as adopted in the FMP. For Washington Coast stocks, exploitation rate constraints represent MFMT. Note that under *U.S. v. Washington* and *Hoh v. Baldrige* case law, the management objectives can differ from FMP objectives provided there is an annual agreement among the state and tribal comanagers; therefore, the exploitation rates used to report categorical status do not necessarily represent maximum allowable rates for these stocks.

b/ Preliminary. For Puget Sound and Washington Coast management units, the exploitation rate constraints reflect application of the 2019 PST Southern Coho Management Plan.

c/ Categories (Abundant, Moderate, Low) correspond to the general exploitation rate ranges depicted in paragraph 8(b)(iii) of the 2019 PST Southern Coho Management Plan. For Washington Coast stocks, categorical status is determined by the exploitation rate associated with meeting the escapement goal (or the lower end of the escapement goal range). This also becomes the maximum allowable rate unless the stock is in the "Low" status. In that case, an ER of up to 20% is allowed.

Key considerations for Canadian fishery management for coho in 2019 are expected to include: (1) meeting domestic conservation obligations for Interior Fraser (including Thompson River) coho; (2) coho harvests by First Nations fisheries; (3) incidental impacts during commercial and First Nations fisheries

directed at pink, Chinook, sockeye, and chum salmon; and (4) the desire to provide increased opportunity for sport fisheries through mark-selective retention regulations. The Canadian fishery regimes affecting coho are expected to be driven by Canadian domestic allowable impacts on the Thompson River component of the Interior Fraser management unit.

In previous years prior to 2014, Canadian fisheries were managed so as not to exceed a three percent maximum exploitation rate. In May 2014, Canada decided to permit up to a 16% exploitation rate on upper Fraser coho in Canadian fisheries to allow for impacts in fisheries directed at a record Fraser sockeye forecast. Since 2015, upper Fraser coho in Canadian fisheries have been managed per low status limitations. The projected status of Canadian coho management units in 2019 indicates continuing concerns for the condition of Interior Fraser coho. The Interior Fraser coho management unit is anticipated to remain in low status, resulting in a requirement to constrain the total mortality fishery exploitation rate for 2019 Southern U.S. fisheries to a maximum of 10.0 percent.

## **6.0 CHINOOK SALMON MANAGEMENT**

### **6.1 North of Cape Falcon**

Abundance projections important to Chinook harvest management north of Cape Falcon in 2019 are:

- *Columbia River hatchery tules.* Combined production of Lower River Hatchery (LRH) and Spring Creek Hatchery (SCH) stocks returning to the Columbia River is forecasted to be 100,500, which is lower than the 2018 preseason expectation of 112,500. The 2019 LRH forecast is 54,500, compared to the 2018 forecast of 62,400. The 2019 SCH forecast is 46,000, compared to the 2018 forecast of 50,100.

#### **6.1.1 Objectives**

Key Chinook salmon management objectives shaping management measures north of Cape Falcon are:

- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 4.0 above. Relevant stocks for the area north of Cape Falcon include LCR natural tule Chinook, Columbia Lower River Wild (LRW) fall Chinook, Snake River Wild (SRW) fall Chinook and Puget Sound Chinook.
- Fisheries north of Cape Falcon were shaped in 2019 to minimize impacts on Puget Sound Chinook.

#### **6.1.2 Achievement of Objectives**

Fishery quotas under the adopted management measures are presented in Table 4. Stock-specific management criteria and their forecast values are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality estimates are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR tule Chinook. Descriptions pertaining to the achievement of key objectives for Chinook salmon management north of Cape Falcon are as follows:

- *LCR natural tule fall Chinook.* The projected exploitation rate in the adopted management measures is 36.0 percent, below the 38.0 percent maximum for 2019.
- *LRW fall Chinook.* The adopted management measures have a projected ocean escapement of 14,100 adults, which is projected to be sufficient to meet the ESA consultation standard of an adult spawning escapement of at least 5,700 in the North Fork Lewis River.

- *SRW fall Chinook*. The adopted management measures have an ocean exploitation rate that is 58.7 percent of the base period exploitation rate, which is less than the ESA consultation standard of no more than 70 percent of the 1988-1993 base period exploitation rate for all ocean fisheries.
- *Puget Sound Chinook*. The State of Washington and the Puget Sound treaty tribes reached agreement on a package of fisheries to be modeled prior to the Council's final adoption of the proposed action. The impacts of Council-area fisheries on Puget Sound stocks, combined with this package of inside fisheries, meet all the requirements for ESA-listed Puget Sound Chinook described in the March 5, 2019 letter from NMFS and supplemental NMFS guidance received during the April 2019 PFMC meeting, and the applicable Biological Opinion.

The adopted management measures for Council-area Chinook fisheries north of Cape Falcon satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks (Table 5).

## 6.2 South of Cape Falcon

Status of Chinook stocks important to 2019 Chinook harvest management south of Cape Falcon are:

- *SRFC*. The Sacramento Index forecast is 379,632 adults, which is higher than last year's preseason forecast of 229,432.
- *KRFC*. The ocean abundance forecast for this stock is 167,504 age-3, 106,119 age-4, and 599 age-5 fish. Last year's preseason forecast was 330,049 age-3, 28,415 age-4, and 767 age-5 fish. The 2019 potential natural area spawner abundance forecast is 87,893 adults, which is higher than last year's preseason forecast of 59,733.
- *SRWC*. The forecast of age-3 escapement absent fishing is 1,924, which is higher than last year's forecast of 1,594.

### 6.2.1 Objectives

Key Chinook salmon management objectives shaping management measures south of Cape Falcon are:

- SRFC hatchery and natural area spawner escapement of at least 122,000 adults, which is produced, in expectation, by a maximum exploitation rate of 67.9 percent (FMP control rule). NMFS guidance provided at the March meeting included an escapement target around the upper end of the SRFC conservation objective range of 122,000–180,000 hatchery and natural area adults. NMFS provided more specific guidance at the April meeting to target a hatchery and natural area spawner escapement of at least 160,000 adults.
- KRFC natural area spawner escapement of at least 40,700 adults, which is produced, in expectation, by a maximum exploitation rate of 53.7 percent (FMP control rule). NMFS guidance provided at the March meeting included targeting spawner escapement levels greater than 40,700 ( $S_{MSY}$ ). At the April meeting, NMFS modified its guidance to target the control-rule defined minimum spawner objective rather than exceeding it.
- NMFS consultation standards and annual guidance for ESA-listed stocks as provided in Section 4.0 above. Relevant stocks for the area south of Cape Falcon include SRWC, California coastal Chinook, SRW fall Chinook, and LCR natural tule Chinook.

### 6.2.2 Achievement of Objectives

Fishery quotas under the adopted management measures are presented in Table 4. Stock-specific management criteria and their forecast values under the adopted management measures are provided in

Table 5. Projected fishery landings, bycatch, and bycatch mortality estimates are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR tule Chinook. Table 12 provides an assessment of stock status. Descriptions pertaining to the achievement of key objectives for Chinook salmon management south of Cape Falcon are found below.

- *SRFC*. The adopted management measures have a projected escapement of 160,159, which exceeds the control rule-defined minimum of 122,000 hatchery and natural area adult spawners and meets NMFS guidance provided at the April meeting to manage for an escapement of at least 160,000 adults.
- *KRFC*. The projected escapement is 40,700, which is consistent with the 2019 control rule-defined minimum of 40,700 natural area adult spawners.
- *SRWC*. The adopted management measures result in a projected age-3 impact rate of 14.8 percent, which is consistent with the ESA consultation standard that (1) limits the age-3 impact rate in 2019 fisheries south of Point Arena to a maximum of 15.7 percent and (2) specifies time/area closures and minimum size limit constraints south of Point Arena.
- *California coastal Chinook*. The adopted management measures result in a projected KRFC age-4 ocean harvest rate of 16.0 percent, which is consistent with the consultation standard limiting the KRFC age-4 ocean harvest rate to a maximum of 16.0 percent.
- *LCR natural tule fall Chinook*. The projected exploitation rate in the adopted management measures is 36.0 percent, below the 38.0 percent maximum for 2019.
- *SRW fall Chinook*. The adopted management measures have an ocean exploitation rate of 58.7 percent of the base period exploitation rate, which is less than the ESA consultation standard of no more than 70 percent of the 1988-1993 base period exploitation rate for all ocean fisheries.

The adopted management measures for Chinook fisheries south of Cape Falcon satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks (Table 5).

## 7.0 COHO SALMON MANAGEMENT

Abundance projections relevant to coho harvest management in Council area fisheries are:

- *OPI Hatchery coho*. The 2019 forecast for hatchery coho from the Columbia River and the coast south of Cape Falcon of 933,500 is higher than the 2018 forecast of 294,100. The Columbia River early coho forecast is 545,000 compared to the 2018 forecast of 164,700, and the Columbia River late coho forecast is 360,600, compared to the 2018 forecast of 121,500.
- *OCN coho*. The 2019 OCN forecast is 76,100 compared to the 2018 forecast of 54,900.
- *LCN coho*. The 2019 LCN forecast is 36,900 compared to the 2018 forecast of 29,100.
- *Puget Sound coho*. Among Puget Sound natural stocks, Strait of Juan de Fuca coho are in the critical category in 2019. Skagit, Snohomish, and Hood Canal coho are in the low category. Stillaguamish coho are in the normal category.
- *Interior Fraser (Thompson River) coho*. This Canadian stock continues to be depressed, but will not constrain ocean coho fisheries north of Cape Falcon in 2019.
- *Washington coastal wild coho*. 2019 forecasts for most Washington coastal coho stocks are higher compared to 2018. Quileute fall, Hoh, Queets, and Grays Harbor coho are in the abundant category under the PST Southern Coho Management Plan.

## 7.1 Objectives

Key coho management objectives shaping management measures in 2019 Council area fisheries are:

- NMFS consultation standards and annual guidance for ESA-listed stocks are provided in Section 4.0. Relevant stocks include Central California Coast coho (south of the Oregon/California border), Southern Oregon/Northern California Coastal (SONCC) coho, OCN coho, and LCN coho. The maximum allowable exploitation rates for 2019 are: (1) a combined marine/freshwater exploitation rate not to exceed 15.0 percent for OCN coho, (2) a combined exploitation rate in marine-area and mainstem Columbia River fisheries not to exceed 23.0 percent for LCN coho, and (3) a marine exploitation rate not to exceed 13.0 percent for Rogue/Klamath hatchery coho, used as a surrogate for the SONCC coho ESU. Furthermore, coho retention is prohibited in all California ocean fisheries.
- FMP conservation objectives and obligations under Section 5.2 of the PST Southern Coho Management Plan for stocks originating along the Washington coast, Puget Sound, and British Columbia. The forecasts for some Puget Sound coho stocks and for Interior Fraser coho in 2019 are low; however, the majority of the exploitation on these stocks occurs in Puget Sound and were addressed in development of fishing seasons for inside waters during the North of Falcon co-management process by the state and tribes. Because of their abundance status, Interior Fraser coho are subject to an exploitation rate ceiling of 10.0 percent in southern U.S. fisheries under the PST Southern Coho Management Plan.

## 7.2 Achievement of Objectives

Fishery quotas under the adopted management measures are presented in Table 4. Stock-specific management criteria and their forecast values are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCN, OCN, and RK coho. Table 8 provides expected coho mark rates for west coast fisheries by month. Table 12 provides an assessment of stock status.

- *LCN coho.* The adopted management measures satisfy the maximum 23.0 percent exploitation rate for combined marine and mainstem Columbia River fisheries, with a marine exploitation rate of 13.8 percent and a mainstem Columbia River exploitation rate of 4.2 percent.
- *OCN coho.* The adopted management measures satisfy the maximum 15.0 percent exploitation rate for combined marine and freshwater fisheries, with a marine exploitation rate of 12.3 percent and a freshwater exploitation rate of 1.4 percent.
- *Washington coastal wild coho.* The adopted management measures provide ocean escapement numbers of 65,900, 9,100, 5,800, and 13,700 for Grays Harbor, Queets, Hoh, and Quillayute natural coho respectively. These ocean escapement levels, when combined with scheduled in-river fisheries, meet FMP management objectives or objectives agreed to by WDFW and the treaty tribes for Grays Harbor, Queets, Hoh, and Quillayute.
- *Interior Fraser coho.* The Southern U.S. exploitation rates in the adopted management measures total 9.1 percent, which complies with the 10.0 percent maximum required by the PST Southern Coho Management Plan.

The adopted management measures for coho fisheries satisfy NMFS ESA consultation standards and guidance, FMP objectives, and all other objectives for relevant coho stocks other than and including those listed in Table 5.

## **8.0 PINK SALMON MANAGEMENT**

Pink salmon merit management consideration in 2019. Impacts on Chinook and coho in pink-directed fisheries were part of negotiations to reach a final agreement in north of Cape Falcon ocean and Puget Sound fisheries.

## **9.0 IMPORTANT FEATURES OF THE ADOPTED MANAGEMENT MEASURES**

Significant changes from recent seasons are highlighted below, but this section is not intended to be a comprehensive description of the adopted management measures. For detailed information on the adopted ocean salmon seasons see Table 1 (non-Indian commercial), Table 2 (recreational), and Table 3 (treaty Indian).

Adopted management measures in the area north of Cape Falcon were shaped to meet NMFS consultation standards and annual guidance for Chinook stocks of concern. The 2019 Chinook TAC is decreased relative to 2018 due to a slightly lower abundance of LCR natural tule Chinook and to help meet overall conservation objectives for Puget Sound Chinook. The 2019 coho TAC is increased relative to 2018 due to higher abundance forecasts for Columbia River and coastal Washington coho stocks.

Fisheries south of Cape Falcon are primarily constrained by SRFC and California coastal Chinook. The adopted management measures reflect NMFS guidance to achieve, in expectation, a minimum hatchery and natural area escapement of 160,000 SRFC adults.

### **9.1 Commercial**

North of Cape Falcon, the non-Indian troll Chinook quota is split almost evenly between the spring (May-June) fishery and the summer fishery (July-September). Chinook subarea guidelines apply to the area between the U.S./Canada border and the Queets River, and to the area between Leadbetter Point and Cape Falcon during the spring fishery. Landing and possession limits per vessel per landing week (defined as Thursday through Wednesday) are in effect for some areas during the spring fishery. The non-Indian commercial Chinook quota of 26,250 is decreased slightly compared to 27,500 Chinook quota in 2018. The non-Indian commercial coho quota of 30,400 is increased relative to the 2018 quota of 5,600 coho.

The spring fishery in the area north of Cape Falcon will be open for Chinook seven days per week May 6 through June 28. Chinook landing and possession limits are in effect in the area between the U.S./Canada border and the Queets River and in the area between Leadbetter Point and Cape Falcon. Coho retention is not allowed during the spring fishery.

The summer fishery in the area north of Cape Falcon will be open for all salmon seven days per week July 1 through September 30. A landing and possession limit of 150 marked coho per vessel per landing week is in effect coastwide, and all landed coho must be marked with a healed adipose fin clip.

For the Oregon coast between Cape Falcon and Humbug Mountain, Chinook fisheries will be open beginning April 20, most of May and then continuously through late August. Weekly landing and possession limits will be in place for September and October.

For the Oregon portion of the KMZ, from Humbug Mountain to the Oregon/California border, the season will be open for portions of April and May, followed by monthly quotas in June, July, and August. The summer quota fisheries have weekly landing and possession limits. For the California portion of the KMZ, from the Oregon/California border to Humboldt South Jetty, there will be monthly quotas in June, July, and August. The quota fisheries will be open five days per week with daily landing and possession limits. The commercial fishery is closed between Humboldt South Jetty and Horse Mountain.

The fishery from Horse Mountain to Point Arena, the Fort Bragg management area, will be open for most of June, three weeks in July, and nearly all of August.

The San Francisco management area, from Point Arena to Pigeon Point, will open in mid-May. Season dates in June, July, and August are identical to the season dates in Fort Bragg. The fishery will also be open for the month of September, and the Monday through Friday fall area target zone fishery between Point Reyes and Point San Pedro will occur during the first half of October.

Fisheries south of Pigeon Point will be open for all of May, most of June, and three weeks in July.

## **9.2 Recreational**

The recreational fishery north of Cape Falcon will open for all salmon on June 22 in all areas and will continue through September 30, or when Chinook subarea guidelines or coho subarea quotas are attained. All subareas are open seven days per week. Daily bag limits of two salmon include only one Chinook in subareas south of the Queets River; in subareas north of the Queets River, up to two Chinook are allowed. The recreational Chinook quota of 26,250 is decreased compared to 27,500 Chinook quota in 2018. The recreational coho quota of 159,600 is increased relative to the 2018 quota of 42,000 coho. All coho must be marked with a healed adipose fin clip.

For the north and central Oregon coast south of Cape Falcon, the Chinook fishery opened March 15 and will run uninterrupted through October. Coho fisheries consist of a mark-selective coho quota beginning on June 22 and a non-mark-selective coho quota beginning on August 31 in the area from Cape Falcon to Humbug Mountain.

For both the Oregon and California KMZ, the season will run from Saturday of the Memorial Day weekend through Labor Day. The minimum size limit will be 24 inches in the Oregon KMZ and 20 inches in the California KMZ.

The area from Horse Mountain to Pigeon Point, which includes the Fort Bragg and San Francisco management areas, will be open for the second half of April. After a closure during the first half of May, the fishery will re-open on May 18 and run continuously through the end of October. The minimum size limit in the Fort Bragg area will be 20 inches for the entire season. In the San Francisco area, the minimum size limit will be 24 inches through the end of April, then 20 inches for the rest of the season.

South of Pigeon Point, the season will be open from April 6 through August 28 with a 24 inch minimum size limit.

## **9.3 Treaty Indian**

The adopted management measures for Chinook fisheries are generally similar in structure to recent years, and coho retention is allowed in the summer season. The Treaty Indian troll fishery opens on May 1 with a Chinook only fishery and runs through June 30 with a 17,500 sub-quota. The summer fishery opens on July 1 and runs through September 15 with a sub-quota of 17,500 Chinook and 55,000 coho. The Treaty Indian fishery management areas are located between the U.S./Canada border and Pt. Chehalis, Washington (Table 3, C.1).

# **10.0 SOCIOECONOMIC IMPACTS OF THE ADOPTED MANAGEMENT MEASURES**

## **10.1 Economic Impacts**

The short-term economic effects of the Council-adopted management measures for non-Indian fisheries are shown in Tables 9 and 10. Table 9 shows projected commercial troll impacts by management area expressed

in terms of estimated potential exvessel value. Table 10 shows projected recreational fishery impacts by management area in terms of the number of projected angler-trips and community personal income impacts generated by those activities. Note that exvessel revenue values shown for the commercial troll fishery in Table 9 and income impact values shown for the recreational fishery in Table 10 are not directly comparable. More directly comparable measures of short-term economic impacts from commercial and recreational salmon fisheries appear in Figures 3 and 4, which show estimated community income impacts under the Council-adopted commercial troll and recreational fishery management measures, respectively, compared to historic levels in real (inflation-adjusted) dollars. Income impacts indicate the amount of income generated by the economic linkages associated with commercial and recreational fishing. While a reduction in income impacts associated with commercial or recreational fishing activity may not necessarily reflect a net loss, it is likely to indicate losses to businesses and individuals in communities that depend on that activity for livelihood, depending on the availability of substitute activities.

Total economic effects may vary from what is indicated by the short-term impacts from ocean fisheries activities reported in Tables 9 and 10 and Figures 3 and 4. Salmon that remain unharvested in the ocean do not necessarily represent an economic loss, as they may augment inside harvest or provide additional spawning escapement that contributes to ocean abundance in subsequent years. Restricting ocean harvests may increase opportunities for inside harvesters (e.g., higher commercial revenue or more angler trips) or contribute to higher inside catch per unit effort (CPUE) representing lower costs for commercial harvesters and/or higher success rates for recreational fishers. Salmon that remain unharvested by both ocean fisheries and inside fisheries may impact future production, although the magnitude of this effect varies depending on the biology of the affected stocks, habitat, and environmental factors.

Exvessel revenues in Table 9 are based on estimated harvest by catch area, while commercial income impacts in Figure 3 are based on projected deliveries by landing area. Historically there has been a divergence between catch and deliveries (landings) associated with a particular area. The difference is due to salmon caught in certain management areas being delivered to ports in neighboring management areas. In an attempt to account for this effect and assign income impacts to the “correct” landing area, adjustments are made based on historical patterns. The patterns are typically inferred from the most recent year’s catch and landings data. For example, in 2018 there were deliveries of salmon: (1) caught between Cape Falcon and Humbug Mountain to landing ports in the Oregon KMZ region, (2) caught between Point Arena and Pigeon Point to landing ports in the Fort Bragg region, and (3) caught south of Pigeon Point to landing ports in the San Francisco region.

The expected harvest levels used to model commercial fishery impacts are taken from Table 6. Estimated harvests include relatively small amounts occurring in state waters only (SWO) fisheries off central and southern Oregon. These total harvest estimates combined with the prior year’s average Chinook weights per fish and exvessel prices per pound were assumed to be the best indicators of expected revenues in the coming season. Coastwide average Chinook weight per fish in 2018 was three percent higher than the prior year but slightly lower than the recent five-year average; while coastwide average Chinook exvessel prices in 2018 were 14 percent lower than the prior year but the fourth highest in inflation-adjusted terms since 1976. If this year’s actual average weight per fish or exvessel prices diverge significantly from what was observed in 2018, then salmon exvessel revenues and resulting commercial fisheries income impacts projected in this document may prove to be correspondingly biased. Unless otherwise noted, the economic effects of the commercial and recreational fisheries summarized below are compared in terms of estimated community income impacts.

Fishing effort estimates for the recreational fishery south of Cape Falcon are based on measures developed by the STT for modeling biological impacts. STT estimates for south of Cape Falcon use multi-year averages to predict effort for the coming year. Consequently, if the multi-year average for a particular time period and area happens to be higher than last year’s effort level, then the model may forecast an increase

in effort for the coming year even though management measures may actually be relatively more constraining, or *vice-versa*. Estimated effort includes relatively small amounts occurring in SWO fisheries off central and southern Oregon.

Recreational fishery effort north of Cape Falcon was estimated using historical CPUE estimates (“success rates”) applied to salmon quotas and expected harvest levels. Adopted coho quotas north of Cape Falcon for the summer mark-selective coho fishery are much higher than last year’s, which were lower than recent years’ averages. The adopted quota for Chinook is slightly reduced from last year, and restrictive compared with the recent past. Projections of recreational catch north of Cape Falcon were made by multiplying the proposed quotas for the two species by the historic shares of the quotas that were actually caught. Effort and economic impacts were then estimated by summing recent year weighted average coho and Chinook angler success rates multiplied by the projected coho and Chinook catch under the Proposed Action.

## 10.2 Community Impacts

Projected income impacts under the Proposed Action in coastal communities adjacent to commercial and recreational salmon fishery management areas are shown in Figure 3 and Figure 4, and comparisons of impacts under the Proposed Action with impacts under Alternatives I, II and III are summarized in Table 11. Projected coastwide income impacts from commercial salmon landings and processing under the Proposed Action are near the top of the range analyzed under the Alternatives, and overall are approximately 96 percent higher than estimated total coastwide commercial fisheries income impacts last year (Figure 3 and Table 11). Regionally the picture is somewhat mixed, with income impacts from commercial salmon fisheries under the Proposed Action projected to be considerably above last year’s levels in all regions except the California KMZ (Oregon/California Border to Horse Mountain) where they are projected to be 22 percent below last year’s level. With respect to the 2014-2018 inflation-adjusted average, income impacts from commercial salmon fisheries under the Proposed Action are projected to be 42 percent higher overall coastwide and at least 23 percent above the 2014-2018 inflation-adjusted average in all regions along the coast, except 12 percent lower North of Cape Falcon and three percent lower between Cape Falcon and Humbug Mountain (Figure 3 and Table 11).

Projected income impacts from expenditures by recreational salmon anglers under the Proposed Action are near the top of the range analyzed under the Alternatives, and overall are about 67 percent above the estimated total coastwide recreational fisheries income impacts from last year’s activity (Table 11 and Figure 4). Regionally the picture is mostly positive, with recreational fisheries income impacts under the Proposed Action projected to be 13 percent lower than last year’s level in the area from Point Arena to Pigeon Point but at least 33 percent above last year’s levels in all other regions, respectively. Compared with the 2014-2018 inflation-adjusted average, recreational fisheries income impacts under the Proposed Action are projected to be 56 percent higher overall coastwide, and higher in every region, although only five percent above the 2014-2018 inflation-adjusted average in the area from Point Arena to Pigeon Point (Figure 4 and Table 10, Table 11).

## 10.3 Social Impacts

The effect of the Proposed Action on other indicators of community social welfare (e.g., poverty, divorce rates, graduation/dropout rates, incidents of domestic violence, etc.) cannot be directly measured. Change in personal income in communities may be used as a rough proxy for other socioeconomic effects to the degree change in these indicators correlates with potential change in income. However, changes in the broader regional economy (“cumulative effects”) and long-term trends in fishery-related employment are more likely to drive these indicators of social wellbeing than the short-term economic effects of the Proposed Action.

To the extent practicable, social impacts were considered when non-tribal commercial and recreational salmon seasons were shaped. To minimize regulatory complexity in recreational fisheries, season dates and regulations were kept as consistent as possible within major management areas. Bag limits allow a greater number of fishers to participate in the fishery. Minimum size limits remain consistent throughout the season in most areas, which, in addition to biological benefits, tend to increase regulatory compliance. Efforts were made to accommodate important cultural events such as the Independence Day and Labor Day holidays as well as traditional fishing derby events. Commercial fisheries often include vessel limits per trip or per open period in an effort to stretch quota attainment over a longer period of time. Doing so can provide greater access for smaller vessels, increase safety at sea by making it easier to avoid fishing in inclement weather, improve marketing opportunities, and extend the period during which consumers have access to fresh, wild caught salmon. Notification mechanisms by phone or email allow commercial vessels greater flexibility in choosing a port of landing to take advantage of better markets or to access better infrastructure.

Salmon are an important part of tribal culture and have been since time immemorial. Salmon provide economic, cultural, ceremonial, and subsistence benefits to west coast tribal communities. Under the Proposed Action, based on the adopted Chinook and coho quotas, Washington coastal treaty tribes are projected to have somewhat improved ocean salmon fishery opportunities compared with 2018 (Table 6). The Klamath River tribal share under the Proposed Action is 32,401 adult KRFC, a substantial increase from the 2018, 2017 and 2016 allocations of 18,122, 814 and 7,404 adult KRFC, respectively.

## **11.0 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION**

The Proposed Action, adoption of the 2019 ocean salmon regulations, was assessed relative to the environmental components and criteria established in Preseason Report II (Part 2 of this EA). The impacts of the Proposed Action on most target stocks and ESA-listed salmon fall within the range of impacts analyzed for the Alternatives in Preseason Report II. For stocks where the impacts of the Proposed Action fall outside the range of impacts under the Alternatives in Preseason Report II, such impacts result from shaping fisheries within Puget Sound, and are within the impact limitations of the FMP, ESA consultation standards, and PST (Table 11). Economic impacts of the Proposed Action fall within the range of impacts projected for the Alternatives in Preseason Report II as summarized in Table 11.

Under No Action, the seasons would be the same as in 2018. Although not true for all regions, relative to No Action (as represented by the 2018 values) the Proposed Action would provide greater overall coastwide income impacts from both commercial and recreational fishing (Table 11).

As stated in Preseason Report II, it was not possible to discern differences in the effects of the Alternatives or Proposed Action on other components of the environment (non-target fish species, marine mammals, other ESA-listed species, sea birds, biodiversity and ecosystem function, and public health and safety), and the effects were not expected to be significant.

TABLE 1. 2019 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 6)

<b>A. SEASON DESCRIPTIONS</b>
<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1. Overall non-Indian TAC: 52,500 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).                      2. Non-Indian commercial troll TAC: 26,250 Chinook and 30,400 marked coho</p>
<p>Model run: Coho1925, Chin2719</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>• May 6 through the earlier of June 28, or 13,200 Chinook. No more than 5,000 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 1,800 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>Open seven days per week (C.1).</p> <p>In the area between the U.S./Canada border and the Queets River: May 6-15 the landing and possession limit is 100 Chinook per vessel for the open period. May 16-June 28 the landing and possession limit is 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon: May 6-15 the landing and possession limit is 100 Chinook per vessel for the open period. During May 16-June 28 the landing and possession limit is 50 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>All salmon, except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>When it is projected that approximately 60% of the overall Chinook guideline has been landed, approximately 60% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 60% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded.</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>• July 1 through the earlier of September 30, or 13,050 Chinook or 30,400 marked coho (C.8).</li> </ul> <p>Open seven days per week. All salmon. Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.d). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>Landing and possession limit of 150 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>
<p><b>For all commercial troll fisheries north of Cape Falcon:</b> Mandatory closed areas include: Salmon troll Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 12, Grays Harbor Control Zone (C.5). Vessels must land and deliver their salmon within 24 hours of any closure of this fishery.</p> <p>Vessels fishing or in possession of salmon <u>north</u> of Leadbetter Point must land and deliver all species of fish in a <u>Washington port and must possess a Washington troll license</u>. Vessels may not land fish east of the Sekiu River or east of the Megler-Astoria bridge. For delivery to Washington ports south of Leadbetter Point, vessels must notify the Washington Department of Fish and Wildlife at 360-249-1215 prior to crossing the Leadbetter Point line with area fished, total Chinook, coho, and halibut catch aboard, and destination with approximate time of delivery. During any single trip, only one side of the Leadbetter Point line may be fished (C.11).</p> <p>Vessels fishing or in possession of salmon <u>south</u> of Leadbetter Point must land and deliver all species of fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land all species of fish in Garibaldi, Oregon.</p> <p>Under state law, vessels must report their catch on a state fish receiving ticket. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 ext. 271 or sending notification via e-mail to <a href="mailto:nfalcon.trollreport@state.or.us">nfalcon.trollreport@state.or.us</a>. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery.</p> <p>Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).</p> <p>Vessels in possession of salmon <u>north</u> of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho, and halibut catch aboard, and destination.</p> <p>Vessels in possession of salmon <u>south</u> of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho, and halibut catch aboard, and destination.</p>

TABLE 1. 2019 Commercial troll management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 2 of 6)
<b>A. SEASON DESCRIPTIONS</b>
<b>South of Cape Falcon</b>
<b>Supplemental Management Information</b>
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 160,159 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 57.8%.</li> <li>3. Klamath River recreational fishery allocation: 7,637 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 32,401 adult Klamath River fall Chinook.</li> <li>5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 70% / 30%.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• April 20-30;</li> <li>• May 6-30;</li> <li>• June 1-August 29;</li> <li>• September 1-October 31 (C.9.a).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All vessels fishing in the area must land their salmon in the State of Oregon. See compliance requirements (C.1), and gear restrictions and definitions (C.2, C.3).</p> <p>Beginning September 1 no more than 75 Chinook allowed per vessel per landing week (Thurs.-Wed.).</p> <p>In 2020, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2019. This opening could be modified following Council review at its March 2020 meeting.</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• April 20-30;</li> <li>• May 6-30;</li> <li>• June 1 through the earlier of June 30, or a 3,200 Chinook quota;</li> <li>• July 1 through the earlier of July 31, or a 2,500 Chinook quota;</li> <li>• August 1 through the earlier of August 29, or a 1,200 Chinook quota (C.9.a).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Prior to June 1, all salmon caught in this area must be landed and delivered in the State of Oregon.</p> <p>June 1-August 29 weekly landing and possession limit of 50 Chinook per vessel per landing week (Thurs.-Wed.). Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>All vessels fishing in this area during June, July, and August must land and deliver all salmon within this area or into Port Orford within 24 hours of any closure of this fishery and prior to fishing outside of this area.</p> <p>For all quota managed seasons (June, July, and August), Oregon state regulations require fishers to notify ODFW within one hour of landing and prior to transport away from the port of landing by calling 541-867-0300 Ext. 252 or sending notification via e-mail to kmzor.trollreport@state.or.us, with vessel name and number, number of salmon by species, location of delivery, and estimated time of delivery.</p> <p>In 2020, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2019. This opening could be modified following Council review at its March 2020 meeting.</p>
<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• June 1 through the earlier of June 30, or a 2,500 Chinook quota;</li> <li>• July 1 through the earlier of July 30, or a 2,500 Chinook quota;</li> <li>• August 2 through the earlier of August 31, or a 2,000 Chinook quota (C.9.b).</li> </ul> <p>Open five days per week (Fri.-Tue.). All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). Landing and possession limit of 20 Chinook per vessel per day (C.8.f).</p> <p>Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>All fish caught in this area must be landed within the area, within 24 hours of any closure of the fishery, and prior to fishing outside the area (C.10). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed (C.5.e). See California State regulations for additional closures adjacent to the Smith and Klamath rivers.</p>
<p><b>Humboldt South Jetty to Horse Mt.</b></p> <ul style="list-style-type: none"> <li>• Closed.</li> </ul> <p>When the fishery is closed between the OR/CA border and Humbug Mountain and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival (C.6).</p>

TABLE 1. 2019 Commercial troll management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 3 of 6)

<b>A. SEASON DESCRIPTIONS</b>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• June 4-30;</li> <li>• July 11-31;</li> <li>• August 1-28 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6).</p> <p>In 2020, the season will open April 16-30 for all salmon except coho, with a 27 inch Chinook minimum size limit and the same gear restrictions as in 2019. All salmon caught in the area must be landed in the area. This opening could be modified following Council review at its March 2020 meeting.</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• May 16-31;</li> <li>• June 4-30;</li> <li>• July 11-31;</li> <li>• August 1-28;</li> <li>• September 1-30 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6).</p> <p style="padding-left: 20px;"><b>Point Reyes to Point San Pedro (Fall Area Target Zone)</b></p> <ul style="list-style-type: none"> <li>• October 1-4, 7-11, 14-15.</li> </ul> <p>Open five days per week (Mon.-Fri.). All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). All salmon caught in this area must be landed between Point Arena and Pigeon Point (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• May 1-31;</li> <li>• June 4-30;</li> <li>• July 11-31 (C.9.b).</li> </ul> <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California.</p> <p>All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 5 (C.6).</p> <p>When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours (C.6).</p>
<p><b>For all commercial troll fisheries In California:</b> California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the State (California Fish and Game Code §8226).</p>

TABLE 1. 2019 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 4 of 6)

**B. MINIMUM SIZE (Inches) (See C.1)**

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28	21.5	16	12	None
Cape Falcon to Humbug Mt.	28	21.5	-	-	None
Humbug Mt. to OR/CA Border	28	21.5	-	-	None
OR/CA Border to Humboldt South Jetty	27	20.5	-	-	27
Horse Mt. to Pt. Arena	27	20.5	-	-	27
Pt. Arena to Pigeon Pt.	27	20.5	-	-	27
Pigeon Pt. to U.S./Mexico Border	27	20.5	-	-	27

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

C.1. **Compliance with Minimum Size or Other Special Restrictions:** All salmon on board a vessel must meet the minimum size, landing/possession limit, or other special requirements for the area being fished and the area in which they are landed if the area is open or has been closed less than 48 hours for that species of salmon. Salmon may be landed in an area that has been closed for a species of salmon more than 48 hours only if they meet the minimum size, landing/possession limit, or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.

Any person who is required to report a salmon landing by applicable state law must include on the state landing receipt for that landing both the number and weight of salmon landed by species. States may require fish landing/receiving tickets be kept on board the vessel for 90 days or more after landing to account for all previous salmon landings.

C.2. **Gear Restrictions:**

- a. Salmon may be taken only by hook and line using single point, single shank, barbless hooks.
- b. Cape Falcon, Oregon, to the OR/CA border: No more than 4 spreads are allowed per line.
- c. OR/CA border to U.S./Mexico border: No more than 6 lines are allowed per vessel, and barbless circle hooks are required when fishing with bait by any means other than trolling.

C.3. **Gear Definitions:**

*Trolling defined:* Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

*Troll fishing gear defined:* One or more lines that drag hooks behind a moving fishing vessel engaged in trolling. In that portion of the fishery management area off Oregon and Washington, the line or lines must be affixed to the vessel and must not be intentionally disengaged from the vessel at any time during the fishing operation.

*Spread defined:* A single leader connected to an individual lure and/or bait.

*Circle hook defined:* A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

C.4. **Vessel Operation in Closed Areas with Salmon on Board:**

- a. Except as provided under C.4.b below, it is unlawful for a vessel to have troll or recreational gear in the water while in any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species, and no salmon are in possession.
- b. When Genetic Stock Identification (GSI) samples will be collected in an area closed to commercial salmon fishing, the scientific research permit holder shall notify NOAA OLE, USCG, CDFW, WDFW, ODFW and OSP at least 24 hours prior to sampling and provide the following information: the vessel name, date, location and time collection activities will be done. Any vessel collecting GSI samples in a closed area shall not possess any salmon other than those from which GSI samples are being collected. Salmon caught for collection of GSI samples must be immediately released in good condition after collection of samples.

C.5. **Control Zone Definitions:**

- a. *Cape Flattery Control Zone* - The area from Cape Flattery (48°23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48°10'00" N. lat.) and east of 125°05'00" W. long.
- b. *Mandatory Yelloweye Rockfish Conservation Area* - The area in Washington Marine Catch Area 3 from 48°00.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°16.50' W. long. to 48°00.00' N. lat.; 125°16.50' W. long. and connecting back to 48°00.00' N. lat.; 125°14.00' W. long.
- c. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 55'36" N. lat., 124°10'51" W. long.).
- d. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

**C.5. Control Zone Definitions (continued):**

northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.), and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

- e. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west by 124°23'00" W. long. (approximately 12 nautical miles off shore); and on the south by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).
- f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70).
 

45°46.00' N. lat., 124°04.49' W. long.;	44°41.68' N. lat., 124°15.38' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°34.87' N. lat., 124°15.80' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°33.74' N. lat., 124°14.44' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	44°27.66' N. lat., 124°16.99' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	44°19.13' N. lat., 124°19.22' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	44°15.35' N. lat., 124°17.38' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	44°14.38' N. lat., 124°17.78' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	44°12.80' N. lat., 124°17.18' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	44°09.23' N. lat., 124°15.96' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
44°51.28' N. lat., 124°10.21' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
44°49.49' N. lat., 124°10.90' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
44°44.96' N. lat., 124°14.39' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
44°43.44' N. lat., 124°14.78' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;	42°40.50' N. lat., 124°31.98' W. long.;
44°42.26' N. lat., 124°13.81' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;	

**C.6. Notification When Unsafe Conditions Prevent Compliance with Regulations:** If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate number of salmon (by species) on board, the estimated time of arrival, and the specific reason the vessel is not able to meet special management area landing restrictions.

In addition to contacting the U.S. Coast Guard, vessels fishing south of the Oregon/California border must notify CDFW within one hour of leaving the management area by calling 800-889-8346 and providing the same information as reported to the U.S. Coast Guard. All salmon must be offloaded within 24 hours of reaching port.

**C.7. Incidental Halibut Harvest:** During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length, measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on. When halibut are caught and landed incidental to commercial salmon fishing by an IPHC license holder, any person who is required to report the salmon landing by applicable state law must include on the state landing receipt for that landing both the number of halibut landed, and the total dressed, head-on weight of halibut landed, in pounds, as well as the number and species of salmon landed.

License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone: 206-634-1838). Applicants must apply prior to mid-March 2020 for 2020 permits (*exact date to be set by the IPHC in early 2020*). Incidental harvest is authorized only during April, May, and June of the 2019 troll seasons, and after June 30 in 2019 if quota remains and if announced on the NMFS hotline (phone: 800-662-9825 or 206-526-6667). WDFW, ODFW, and CDFW will monitor landings. If the landings are projected to exceed the IPHC's 44,899 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to prohibit retention of halibut in the non-Indian salmon troll fishery.

May 1, 2019 until the end of the 2019 salmon troll season, and April 1-30, 2020, license holders may land or possess no more than one Pacific halibut per two Chinook, except one halibut may be possessed or landed without meeting the ratio requirement, and no more than 35 halibut may be possessed or landed per trip. Halibut retained must be no less than 32 inches in total length (with head on). Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2019, prior to any 2019 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2020 unless otherwise modified by inseason action at the March 2020 Council meeting.

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS** *(continued)*

- a. "C-shaped" yelloweye rockfish conservation area is an area to be voluntarily avoided for salmon trolling. NMFS and the Council request salmon trollers voluntarily avoid this area in order to protect yelloweye rockfish. The area is defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (Washington marine area 3), with the following coordinates in the order listed:

48°18' N. lat.; 125°18' W. long.;  
 48°18' N. lat.; 124°59' W. long.;  
 48°11' N. lat.; 124°59' W. long.;  
 48°11' N. lat.; 125°11' W. long.;  
 48°04' N. lat.; 125°11' W. long.;  
 48°04' N. lat.; 124°59' W. long.;  
 48°00' N. lat.; 124°59' W. long.;  
 48°00' N. lat.; 125°18' W. long.;  
 and connecting back to 48°18' N. lat.; 125°18' W. long.

- C.8. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Chinook remaining from the May through June non-Indian commercial troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline if the transfer would not result in exceeding preseason impact expectations on any stocks.
- b. Chinook remaining from May, June, and/or July non-Indian commercial troll quotas in the Oregon or California KMZ may be transferred to the Chinook quota for the next open period if the transfer would not result in exceeding preseason impact expectations on any stocks.
- c. NMFS may transfer salmon between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the areas' representatives on the Salmon Advisory Subpanel (SAS), and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- d. At the March 2020 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2019).
- e. If retention of unmarked coho (adipose fin intact) is permitted by inseason action, the allowable coho quota will be adjusted to ensure preseason projected impacts on all stocks is not exceeded.
- f. Landing limits may be modified inseason to sustain season length and keep harvest within overall quotas.

- C.9. State Waters Fisheries: Consistent with Council management objectives:

- a. The State of Oregon may establish additional late-season fisheries in state waters.
- b. The State of California may establish limited fisheries in selected state waters.
- c. Check state regulations for details.

- C.10. For the purposes of California Fish and Game Code, Section 8232.5, the definition of the Klamath Management Zone (KMZ) for the ocean salmon season shall be that area from Humbug Mountain, Oregon, to Horse Mountain, California.

- C.11. Latitudes for geographical reference of major landmarks along the west coast. Source: 2018 West Coast federal salmon regulations.

<https://www.govinfo.gov/content/pkg/FR-2018-05-01/pdf/2018-09164.pdf>

Cape Flattery, WA	48°23'00" N lat.	Humboldt South Jetty, CA.	40°45'53" N lat.
Cape Alava, WA	48°10'00" N lat.	Horse Mountain, CA	40°05'00" N lat.
Queets River, WA	47°31'42" N lat.	Point Arena, CA	38°57'30" N lat.
Leadbetter Point, WA	46°38'10" N lat.	Point Reyes, CA	37°59'44" N lat.
Cape Falcon, OR	45°46'00" N lat.	Point San Pedro, CA	37°35'40" N lat.
Florence South Jetty, OR	44°00'54" N lat.	Pigeon Point, CA	37°11'00" N lat.
Humbug Mountain, OR	42°40'30" N lat.	Point Sur, CA	36°18'00" N lat.
Oregon-California border	42°00'00" N lat.	Point Conception, CA	34°27'00" N lat.

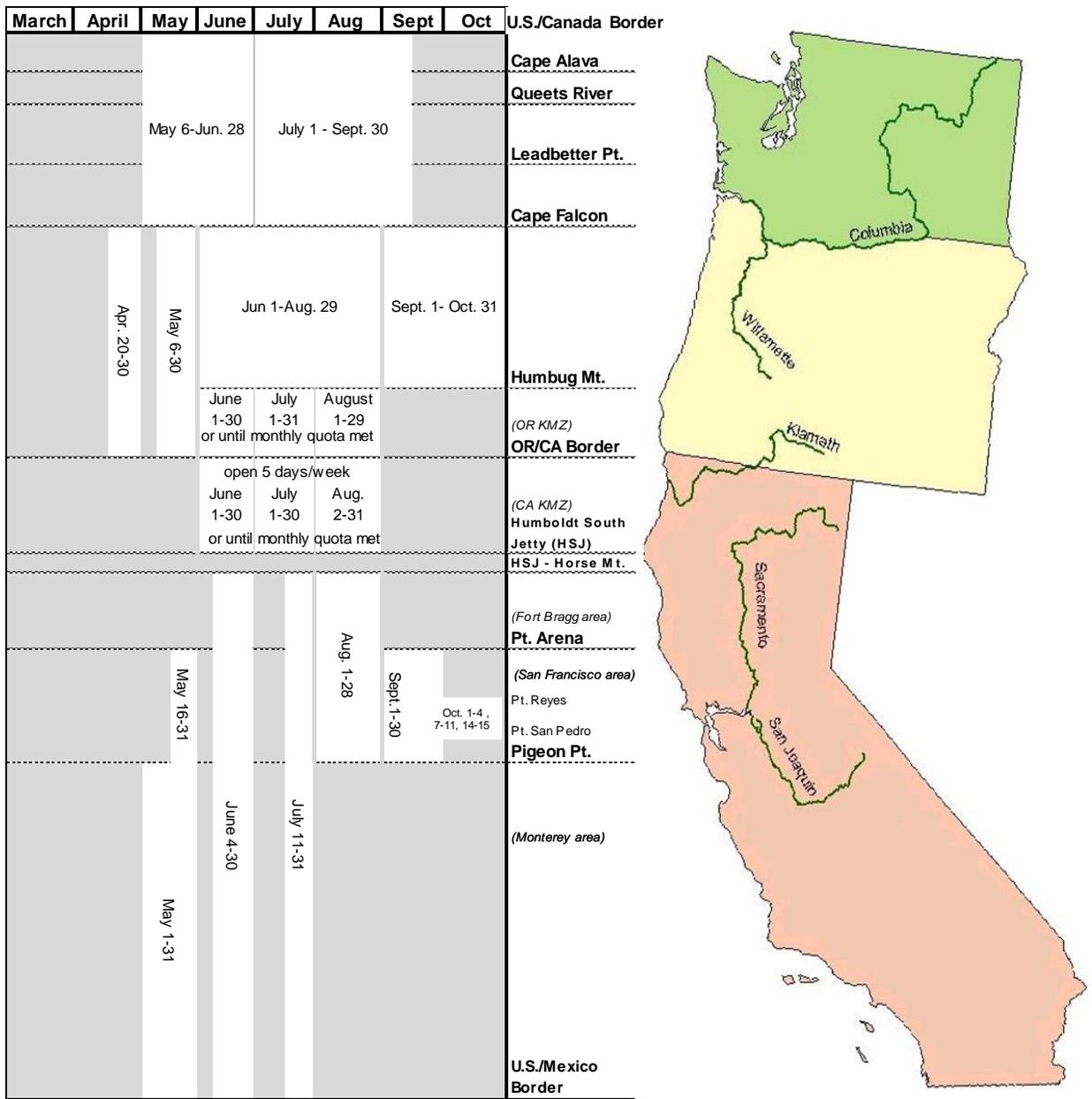


FIGURE 1. 2019 non-Indian commercial salmon seasons – Council adopted.

TABLE 2. 2019 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1. Overall non-Indian TAC: 52,500 Chinook and 190,000 coho marked with a healed adipose fin clip (marked).                      2. Recreational TAC: 26,250 Chinook and 159,600 marked coho; all retained coho must be marked.                      3. No Area 4B add-on fishery.                      4. Buoy 10 fishery opens August 1 with an expected landed catch of 50,000 marked coho in August and September</p>
<p><b>U.S./Canada Border to Cape Alava (Neah Bay Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 16,600 marked coho subarea quota, with a subarea guideline of 5,200 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon, except no chum beginning August 1; two salmon per day. All coho must be marked with a healed adipose fin clip (B, C.1).</p> <p>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 4,050 marked coho subarea quota, with a subarea guideline of 1,100 Chinook (C.5).</li> <li>• October 1 through earlier of October 13, or 100 marked coho quota, or 100 Chinook quota (C.5) in the area north of 47°50'00" N. lat. and south of 48°00'00" N. lat.</li> </ul> <p>Open seven days per week. All salmon, two salmon per day. All coho must be marked with a healed adipose fin clip (C.1). See gear restrictions and definitions (B, C.2, C.3).</p> <p>Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 59,050 marked coho subarea quota, with a subarea guideline of 12,700 Chinook (C.5)</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (B, C.1).</p> <p>See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 12 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>• June 22 through earlier of September 30, or 79,800 marked coho subarea quota, with a subarea guideline of 7,150 Chinook (C.5).</li> </ul> <p>Open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (B, C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).</p>

TABLE 2. 2019 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 2 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<b>South of Cape Falcon</b>
<b>Supplemental Management Information</b>
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 160,159 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 57.8%.</li> <li>3. Klamath River recreational fishery allocation: 7,637 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 32,401 adult Klamath River fall Chinook.</li> <li>5. Overall recreational coho TAC: 90,000 coho marked with a healed adipose fin clip (marked), and 9,000 coho in the non-mark-selective coho fishery.</li> <li>6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the CFGC.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• March 15-October 31 (C.6), except as provided below during the all-salmon mark-selective fishery and the non-mark-selective coho fishery (C.5).</li> </ul> <p>Open seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, the season will open March 15 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p>
<p><b>Cape Falcon to OR/CA Border</b> <u>Mark-selective coho fishery:</u></p> <ul style="list-style-type: none"> <li>• June 22 through the earlier of August 25, or 90,000 marked coho quota.</li> </ul> <p>Open seven days per week. All salmon, two salmon per day. All retained coho must be marked with a healed adipose fin clip (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Any remainder of the mark-selective coho quota may be transferred inseason on an impact neutral basis to the non-selective coho quota from Cape Falcon to Humbug Mountain (C.5).</p>
<p><b>Cape Falcon to Humbug Mt.</b> <u>Non-mark-selective coho fishery:</u></p> <ul style="list-style-type: none"> <li>• August 31-September 30, open each Friday through Sunday, or 9,000 non-mark-selective coho quota (C.6). Open days may be modified inseason (C.5).</li> </ul> <p>All salmon, two salmon per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 25-September 2 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, <u>except</u> as described above in the "Cape Falcon to OR/CA Border all-salmon mark-selective coho fishery." Two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p>
<p><b>For Recreational Fisheries from Cape Falcon to Humbug Mt.:</b> Fishing in the Stonewall Bank yelloweye rockfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).</p>

TABLE 2. 2019 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 3 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 25-September 2 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath Rivers.</p>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• April 13-30;</li> <li>• May 18-October 31 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, season opens April 4 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• April 13-30;</li> <li>• May 18-October 31 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length through April 30, then 20 inches thereafter (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, season opens April 4 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b></p> <ul style="list-style-type: none"> <li>• April 6-August 28 (C.6).</li> </ul> <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2020, season opens April 4 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2019 (C.2, C.3). This opening could be modified following Council review at its March 2020 meeting.</p> <p>California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the State (California Code of Regulations Title 14 Section 1.73).</p>

**B. MINIMUM SIZE (Inches) (See C.1)**

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24	16	None
Cape Falcon to Humbug Mt.	24	16	None
Humbug Mt. to OR/CA Border	24	16	None
OR/CA Border to Horse Mt.	20	-	20
Horse Mt. to Pt. Arena	20	-	20
Pt. Arena to Pigeon Pt. (April 13-30)	24	-	24
Pt. Arena to Pigeon Pt. (May 18-October 31)	20	-	20
Pigeon Pt. to U.S./Mexico Border	24	-	24

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.

*Ocean Boat Limits*: Off the coast of Washington, Oregon, and California, each fisher aboard a vessel may continue to use angling gear until the combined daily limits of Chinook and coho salmon for all licensed and juvenile anglers aboard have been attained (additional state restrictions may apply).

C.2. Gear Restrictions: Salmon may be taken only by hook and line using barbless hooks. All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

- a. *U.S./Canada Border to Pt. Conception, California*: No more than one rod may be used per angler; and no more than two single point, single shank, barbless hooks are required for all fishing gear.
- b. *Horse Mt., California, to Pt. Conception, California*: Single point, single shank, barbless circle hooks (see gear definitions below) are required when fishing with bait by any means other than trolling, and no more than two such hooks shall be used. When angling with two hooks, the distance between the hooks must not exceed five inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

C.3. Gear Definitions:

- a. *Recreational fishing gear defined*: Off Oregon and Washington, angling tackle consists of a single line that must be attached to a rod and reel held by hand or closely attended; the rod and reel must be held by hand while playing a hooked fish. No person may use more than one rod and line while fishing off Oregon or Washington. Off California, the line must be attached to a rod and reel held by hand or closely attended; weights directly attached to a line may not exceed four pounds (1.8 kg). While fishing off California north of Pt. Conception, no person fishing for salmon, and no person fishing from a boat with salmon on board, may use more than one rod and line. Fishing includes any activity which can reasonably be expected to result in the catching, taking, or harvesting of fish.
- b. *Trolling defined*: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.
- c. *Circle hook defined*: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

C.4. Control Zone Definitions:

- a. *The Bonilla-Tatoosh Line*: A line running from the western end of Cape Flattery to Tatoosh Island Lighthouse (48°23'30" N. lat., 124°44'12" W. long.) to the buoy adjacent to Duntze Rock (48°24'37" N. lat., 124°44'37" W. long.), then in a straight line to Bonilla Pt. (48°35'39" N. lat., 124°42'58" W. long.) on Vancouver Island, British Columbia.
- b. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 55'36" N. lat., 124°10'51" W. long.).
- c. *Columbia Control Zone*: An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long. and then along the north jetty to the point of intersection with the Buoy #10 line; and on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.
- d. *Stonewall Bank Yelloweye Rockfish Conservation Area*: The area defined by the following coordinates in the order listed:  
 44°37.46' N. lat.; 124°24.92' W. long.  
 44°37.46' N. lat.; 124°23.63' W. long.  
 44°28.71' N. lat.; 124°21.80' W. long.  
 44°28.71' N. lat.; 124°24.10' W. long.  
 44°31.42' N. lat.; 124°25.47' W. long.  
 and connecting back to 44°37.46' N. lat.; 124°24.92' W. long.
- e. *Klamath Control Zone*: The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS** *(continued)*

f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70).

45°46.00' N. lat., 124°04.49' W. long.;	44°41.68' N. lat., 124°15.38' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°34.87' N. lat., 124°15.80' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°33.74' N. lat., 124°14.44' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	44°27.66' N. lat., 124°16.99' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	44°19.13' N. lat., 124°19.22' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	44°15.35' N. lat., 124°17.38' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	44°14.38' N. lat., 124°17.78' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	44°12.80' N. lat., 124°17.18' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	44°09.23' N. lat., 124°15.96' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
44°51.28' N. lat., 124°10.21' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
44°49.49' N. lat., 124°10.90' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
44°44.96' N. lat., 124°14.39' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
44°43.44' N. lat., 124°14.78' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;	42°40.50' N. lat., 124°31.98' W. long.;
44°42.26' N. lat., 124°13.81' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;	

C.5. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines, and season duration. In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Actions could include modifications to bag limits, or days open to fishing, and extensions or reductions in areas open to fishing.
- b. Coho may be transferred inseason among recreational subareas north of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Council's SAS recreational representatives north of Cape Falcon, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- c. Chinook and coho may be transferred between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the representatives of the SAS, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
- d. Fishery managers may consider inseason action modifying regulations restricting retention of unmarked (adipose fin intact) coho. To remain consistent with preseason expectations, any inseason action shall consider, if significant, the difference between observed and preseason forecasted (adipose-clipped) mark rates. Such a consideration may also include a change in bag limit of two salmon, no more than one of which may be a coho.
- e. Marked coho remaining from the Cape Falcon to Oregon/California Border recreational mark-selective coho quota may be transferred inseason to the Cape Falcon to Humbug Mt. non-mark-selective recreational fishery if the transfer would not result in exceeding preseason impact expectations on any stocks.

C.6. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the States of Washington, Oregon, and California may establish limited seasons in state waters. Check state regulations for details.



TABLE 3. 2019 Treaty Indian ocean troll management measures for ocean salmon fisheries - Council adopted. (Page 1 of 2)

<b>A. SEASON ALTERNATIVE DESCRIPTIONS</b>
<b>Supplemental Management Information</b>
1. Overall Treaty-Indian TAC: 35,000 Chinook and 55,000 coho.
<ul style="list-style-type: none"> <li>May 1 through the earlier of June 30 or 17,500 Chinook quota.</li> </ul> <p>All salmon may be retained except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C).</p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 15, or 17,500 Chinook quota or 55,000 coho quota</li> </ul> <p>All salmon. See size limit (B) and other restrictions (C).</p>

**B. MINIMUM SIZE (INCHES)**

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	24.0 (61.0 cm)	18.0 (45.7 cm)	16.0 (40.6 cm)	12.0 (30.5 cm)	None

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

C.1. Tribe and Area Boundaries. All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

S'KLALLAM - Washington State Statistical Area 4B (defined to include those waters of Puget Sound easterly of a line projected from the Bonilla Point light on Vancouver Island to the Tatoosh Island light, thence to the most westerly point on Cape Flattery and westerly of a line projected true north from the fishing boundary marker at the mouth of the Sekiu River [WAC 220-301-030]).

MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.

QUILEUTE - A polygon commencing at Cape Alava, located at latitude 48°10'00" north, longitude 124°43'56.9" west; then proceeding west approximately forty nautical miles at that latitude to a northwestern point located at latitude 48°10'00" north, longitude 125°44'00" west; then proceeding in a southeasterly direction mirroring the coastline at a distance no farther than forty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 47°31'42" north, longitude 125°20'26" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 47°31'42" north, longitude 124°21'9.0" west.

HOH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River) and east of 125°44'00" W. long.

QUINAULT - A polygon commencing at the Pacific coast shoreline near Destruction Island, located at latitude 47°40'06" north, longitude 124°23'51.362" west; then proceeding west approximately thirty nautical miles at that latitude to a northwestern point located at latitude 47°40'06" north, longitude 125°08'30" west; then proceeding in a southeasterly direction mirroring the coastline no farther than thirty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 46°53'18" north, longitude 124°53'53" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 46°53'18" north, longitude 124°7'36.6" west.

C.2. Gear restrictions

- a. Single point, single shank, barbless hooks are required in all fisheries.
- b. No more than eight fixed lines per boat.
- c. No more than four hand held lines per person in the Makah area fishery (Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.)

C.3. Quotas

- a. The quotas include troll catches by the S'Klallam and Makah Tribes in Washington State Statistical Area 4B from May 1 through September 15.
- b. The Quileute Tribe may continue a ceremonial and subsistence fishery during the time frame of October 1 through October 15 in the same manner as in 2004-2015. Fish taken during this fishery are to be counted against treaty troll quotas established for the 2019 season (estimated harvest during the October ceremonial and subsistence fishery: 20 Chinook; 40 coho).

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS** *(continued)*

C.4. Area Closures

- a. The area within a six nautical mile radius of the mouths of the Queets River (47°31'42" N. lat.) and the Hoh River (47°45'12" N. lat.) will be closed to commercial fishing.
- b. A closure within two nautical miles of the mouth of the Quinault River (47°21'00" N. lat.) may be enacted by the Quinault Nation and/or the State of Washington and will not adversely affect the Secretary of Commerce's management regime.

C.5. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Chinook remaining from the May through June treaty-Indian ocean troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline on a fishery impact equivalent basis.

TABLE 4. Chinook and coho harvest quotas and guidelines for 2019 ocean salmon fishery management measures - Council adopted.

Fishery or Quota Designation	Chinook	Coho
<b>NORTH OF CAPE FALCON</b>		
TREATY INDIAN OCEAN TROLL <sup>a/</sup>		
U.S./Canada Border to Cape Falcon (All Except Coho)	17,500	-
U.S./Canada Border to Cape Falcon (All Species)	17,500	55,000
Subtotal Treaty Indian Ocean Troll	35,000	55,000
NON-INDIAN COMMERCIAL TROLL <sup>b/</sup>		
U.S./Canada Border to Cape Falcon (All Except Coho)	13,200	-
U.S./Canada Border to Cape Falcon (All Species)	13,050	30,400
Subtotal Non-Indian Commercial Troll	26,250	30,400
RECREATIONAL		
U.S./Canada Border to Cape Alava <sup>b/</sup>	5,200	16,600
Cape Alava to Queets River <sup>b/</sup>	1,200	4,150
Queets River to Leadbetter Pt. <sup>b/</sup>	12,700	59,050
Leadbetter Pt. to Cape Falcon <sup>b/c/</sup>	7,150	79,800
Subtotal Recreational	26,250	159,600
<b>TOTAL NORTH OF CAPE FALCON</b>	<b>87,500</b>	<b>245,000</b>
<b>SOUTH OF CAPE FALCON</b>		
COMMERCIAL TROLL <sup>a/</sup>		
Humbog Mt. to OR/CA Border	6,900	-
OR/CA Border to Humboldt South Jetty	7,000	-
Subtotal Troll	13,900	-
RECREATIONAL		
Cape Falcon to OR/CA Border	-	99,000 <sup>d/</sup>
<b>TOTAL SOUTH OF CAPE FALCON</b>	<b>13,900</b>	<b>99,000</b>

a/ Quotas are non-mark selective for both Chinook and coho.

b/ Quotas are non-mark-selective for Chinook and mark-selective for coho.

c/ Does not include Buoy 10 fishery. Expected catch of 10,700 Chinook and 50,000 marked coho.

d/ The quota consists of both mark-selective and non-mark-selective quotas of 90,000 and 9,000, respectively.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean salmon fishery management measures - Council adopted.<sup>a/</sup> (Page 1 of 4)

Key Stock/Criteria	2019		Spawner Objective or Other Comparative Standard as Noted <sup>b/</sup>
	Projected	Criteria	
<b>CHINOOK</b>	<b>CHINOOK</b>		<b>CHINOOK</b>
<u>PUGET SOUND:</u>			
Elwha Summer/Fall	1.4%	≤ 10.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Dungeness Spring	1.2%	≤ 10.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Mid-Hood Canal Summer/Fall	11.8%	≤ 12.0%	Preterminal Southern U.S. exploitation rate (NMFS ESA consultation standard).
Skokomish Summer/Fall	48.2%	≤ 50.0%	Total exploitation rate (NMFS ESA consultation standard).
Nooksack Spring	10.5%	≤ 10.5%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
	0.95	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Skagit Summer/Fall	36.7%	--	Total exploitation rate.
	12.224	≥ 8.242	Aggregate Rebuilding abundance threshold NOR (NMFS ESA consultation standard).
	--	≤ 0.95	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Skagit Spring	32.1%	--	Total exploitation rate.
	1.616	≥ 0.841	Aggregate Rebuilding abundance threshold NOR (NMFS ESA consultation standard).
	--	≤ 0.95	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Stillaguamish Summer/Fall	18.0%	≤ 22.0%	Rebuilding exploitation rate (NMFS ESA consultation standard).
	0.53	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Snohomish Summer/Fall	15.8%	≤ 20.0%	Rebuilding exploitation rate (NMFS ESA consultation standard).
	0.55	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Lake Washington Summer/Fall	0.844	≥ 0.500	Natural-origin escapement in the Cedar River (NMFS ESA consultation standard).
Green River Summer/Fall	2.161	≥ 1.200	Natural-origin spawning escapement (NMFS ESA consultation standard).
White River Spring	16.7%	≤ 22.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Puyallup Summer/Fall	1.115	≥ 0.750	Natural-origin spawning escapement (NMFS ESA consultation standard).
Nisqually River Summer/Fall	47.0% (48.7%)	≤ 47.0% (49.0%)	Total exploitation rate, (additional 2% contingent on mark selective fishery plan for river; NMFS ESA consultation standard).
Puget Sound Spring	1.8%	≤ 3.0%	Exploitation rate in PFMC fisheries (NMFS ESA consultation standard).
Puget Sound Summer/Fall	4.7%	≤ 6.0%	Exploitation rate in PFMC fisheries (NMFS ESA consultation standard).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery management measures - Council adopted.<sup>a/</sup> (Page 2 of 4)

Key Stock/Criteria	Projected	2019 Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>
<b>CHINOOK</b>	<b>CHINOOK</b>	<b>CHINOOK</b>	<b>CHINOOK</b>
<u>WASHINGTON COAST:</u>			
Hoko Fall	2.32	0.85	FMP MSY spawning escapement objective.
	2.4%	≤ 10.0%	Calendar year exploitation rate ISBM obligation. Compliance assessed postseason by the PSC.
Quillayute Fall	>3.0	3.0	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Hoh Fall	>1.2	1.2	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Queets Fall	>2.5	2.5	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Grays Harbor Fall	>13.3	13.3	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
<u>COLUMBIA RIVER:</u>			
Columbia Upriver Brights	162.6	74.0	Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest. The management goal has been increased to 60.0 by Columbia River managers.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Mid-Columbia Brights	66.4	14.9	Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules <sup>e/</sup>	55.1	25.0	Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules (threatened)	36.0%	≤ 38.0%	Total adult equivalent fishery exploitation rate (2019 NMFS ESA guidance).
Columbia Lower River Wild <sup>f/</sup> (threatened)	14.1	6.9	Minimum ocean escapement to attain MSY spaw ner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Spring Creek Hatchery Tules	48.4	8.2	Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Snake River Fall (threatened) SRFI	58.7%	≤ 70.0%	Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Columbia Upriver Summers	36.3	29.0	Aggregate escapement to mouth of Columbia River (2019 NMFS guidance). Minimum ocean escapement to attain 12.1 adults over Rock Island Dam.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery management measures - Council adopted.<sup>a/</sup> (Page 3 of 4)

Key Stock/Criteria	Projected	2019 Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>
<b>CHINOOK</b>	<b>CHINOOK</b>	<b>CHINOOK</b>	
<u>OREGON COAST:</u>			
Nehalem Fall	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Siletz Fall	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Siuslaw Fall	--	≤ 0.85	ISBM obligation applicable, escapement goal not expected to be met. Compliance assessed postseason by the PSC.
South Umpqua	--	≤ 0.85	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Coquille	--	≤ 0.85	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
<u>CALIFORNIA:</u>			
Klamath River Fall	40.7	≥ 40.7	2019 minimum natural area adult escapement (FMP control rule).
Federally recognized tribal harvest	50.0%	50.0%	Equals 32.4 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spaw ner reduction) rate	53.7%	≤ 53.7%	FMP control rule.
Adult river mouth return	97.9	NA	Total adults in thousands.
Age-4 ocean harvest rate	16.0%	≤ 16.0%	NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	7.0%	NA	Includes 0.0 (thousand) adult fish impacted in the KMZ sport fishery during fall (Sept-Dec) 2018.
River recreational fishery share	23.6%	NA	Equals 7.6 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	14.8%	≤ 15.7%	Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: Recreational- Pt. Arena to Pigeon Pt. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. Commercial- Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2019 ESA Guidance).
Sacramento River Fall	160.2	≥ 160.0	2019 minimum hatchery and natural area adult escapement (NMFS guidance).
Sacramento Index Exploitation Rate	57.8%	≤ 67.9%	FMP control rule.
Ocean commercial impacts	142.3	NA	Includes fall (Sept-Dec) 2018 impacts (6.2 thousand SRFC).
Ocean recreational impacts	48.9	NA	Includes fall 2018 impacts (7.7 thousand SRFC).
River recreational impacts	28.3	NA	Equals 12.9% of the total harvest.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2019 ocean fishery management measures - Council adopted.<sup>a/</sup> (Page 4 of 4)

Key Stock/Criteria	Projected	2019 Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>
<b>COHO</b>	<b>COHO</b>	<b>COHO</b>	<b>COHO</b>
Interior Fraser (Thompson River)	9.1%(5.3%)	≤ 10.0%	2019 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	32.5%(4.8%)	≤ 35.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Stillaguamish	22.5%(3.4%)	≤ 50.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Snohomish	19.4%(3.4%)	≤ 40.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Hood Canal	44.3%(5.3%)	≤ 45.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Strait of Juan de Fuca	8.9%(4.2%)	≤ 20.0%	2019 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Quillayute Fall	13.7	6.3	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Hoh	5.8	2.0	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Queets Wild	9.1	5.8	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Grays Harbor	65.9	24.4	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Willapa Bay Natural	56.3	17.2	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Low er Columbia River Natural (threatened)	18.0%	≤ 23.0%	Total marine and mainstem Columbia R. fishery exploitation rate (NMFS ESA guidance).
Upper Columbia	63%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	340.5	77.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.7 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	213.3	9.7	Minimum ocean escapement to attain hatchery egg-take goal of 6.4 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural	13.7%	≤ 15.0%	Marine and freshw ater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)	5.8%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

a/ Reflects 2019 fisheries and abundance estimates.

b/ ISBM obligation is assessed as a proportion of the 2009-2015 average calendar year exploitation rate. Ocean escapement is the number of salmon escaping ocean fisheries and entering freshw ater w ith the follow ing clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spaw ner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for LCN coho include marine and mainstem Columbia River impacts. Exploitation rates for OCN coho represent marine and freshw ater impacts. Values reported for Klamath River fall Chinook are natural area adult spaw ners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spaw ners.

c/ Includes minor contributions from East Fork Lewis River and Sandy River.

d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2019 ocean salmon fishery management measures - Council adopted. (Page 1 of 2)

Area and Fishery	Catch Projection	Bycatch Mortality <sup>a/</sup> Projection	Bycatch Projection <sup>b/</sup>	Observed in 2018	
				Catch	Bycatch Mortality
<b>OCEAN FISHERIES:</b>					
<b>CHINOOK (thousands of fish)</b>					
<b>NORTH OF CAPE FALCON</b>					
Treaty Indian Ocean Troll	35.0	3.6	9.0	23.7	2.5
Non-Indian Commercial Troll	26.2	10.8	38.5	23.9	11.8
Recreational	26.2	4.3	22.4	10.6	1.8
<b>CAPE FALCON TO HUMBUGH MT.<sup>c/</sup></b>					
Commercial Troll	61.8	21.0	63.6	20.2	8.2
Recreational	7.6	1.2	4.8	2.7	0.2
<b>HUMBUGH MT. TO OR/CA BORDER<sup>e/</sup></b>					
Commercial Troll	8.1	2.7	8.3	3.9	1.9 <sup>e/</sup>
Recreational	3.7	0.6	2.3	1.6	0.5 <sup>e/</sup>
<b>OR/CA BORDER TO HORSE MT.<sup>d/</sup></b>					
Commercial Troll	7.0	2.4	7.2	9.0	4.4 <sup>e/</sup>
Recreational	8.5	1.3	5.4	3.7	1.2 <sup>e/</sup>
<b>HORSE MT. TO PT. ARENA</b>					
Commercial Troll	68.5	23.2	70.5	10.6	4.9 <sup>e/</sup>
Recreational	6.8	1.1	4.4	5.6	1.0 <sup>e/</sup>
<b>PT. ARENA TO PIGEON PT.</b>					
Commercial Troll	64.9	22.0	66.8	39.5	15.5 <sup>e/</sup>
Recreational	35.0	5.5	21.4	72.0	10.8 <sup>e/</sup>
<b>SOUTH OF PIGEON PT.</b>					
Commercial Troll	27.4	9.3	28.2	19.4	1.8 <sup>e/</sup>
Recreational	10.6	1.7	6.5	5.7	0.6 <sup>e/</sup>
<b>TOTAL OCEAN FISHERIES</b>					
Commercial Troll	299.0	95.0	292.1	150.1	51.0
Recreational	98.5	15.6	67.3	101.9	16.1
<b>INSIDE FISHERIES:</b>					
Area 4B	-	-	-	-	-
Buoy 10	10.7	1.9	9.0	11.6	5.0 <sup>e/</sup>

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2019 ocean salmon fishery management measures - Council adopted. (Page 2 of 2)

Area and Fishery	Catch Projection	Bycatch Mortality <sup>a/</sup> Projection	Bycatch Projection <sup>b/</sup>	Observed in 2018	
				Catch	Bycatch Mortality
<b>OCEAN FISHERIES:</b>					
<b>COHO (thousands of fish)</b>					
<b>NORTH OF CAPE FALCON</b>					
Treaty Indian Ocean Troll <sup>f/</sup>	55.0	3.4	5.4	11.3	0.7
Non-Indian Commercial Troll	30.4	10.4	32.3	1.4	0.4
Recreational	159.6	24.8	101.1	41.8	11.3
<b>SOUTH OF CAPE FALCON</b>					
Commercial Troll	-	11.4	43.8	-	1.9
Recreational <sup>f/</sup>	99.0	20.1	88.2	18.5	9.4
<b>TOTAL OCEAN FISHERIES</b>					
Commercial Troll	85.4	25.2	81.5	12.7	3.0
Recreational	258.6	44.9	189.3	60.3	20.7
<b>INSIDE FISHERIES:</b>					
Area 4B	-	-	-	-	-
Buoy 10	50.0	8.7	32.7	6.8	1.5 <sup>e/</sup>

a/ The bycatch mortality reported in this table consists of drop-off mortality (includes predation on hooked fish) plus hook-and-release mortality of Chinook and coho salmon in Council-area fisheries. Drop-off mortality for both Chinook and coho is assumed to be equal to 5% of total encounters. The hook-and-release mortality (HRM) rates used for both Chinook and coho are:

Commercial: 26%.

Recreational, north of Pt. Arena: 14%.

Recreational, south of Pt. Arena: 15% (based on the expected proportion of fish that will be caught using mooching versus trolling gear, and the HRMs of 42.2% and 14% for these two respective gear types).

b/ Bycatch calculated as dropoff mortality plus fish released.

c/ Includes Oregon territorial water, late season Chinook fisheries.

d/ The commercial fishery in this area is closed between Humboldt South Jetty and Horse Mountain.

e/ Based on reported released Chinook or coho. Reported releases in California fisheries are used as a surrogate in Oregon fisheries.

f/ Includes fisheries that allow retention of all legal sized coho.

TABLE 7. Expected coastwide lower Columbia Natural (LCN), Oregon coastal natural (OCN), and Rogue/Klamath (RK) coho, and Lower Columbia River (LCR) natural tule Chinook exploitation rates by fishery for 2019 ocean salmon fisheries - Council adopted.

Fishery	Exploitation Rate (Percent)			
	LCN Coho	OCN Coho	RK Coho	LCR Tule
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	1.6%
BRITISH COLUMBIA	0.2%	0.5%	0.3%	11.9%
PUGET SOUND/STRAIT/BAY	0.1%	0.0%	0.0%	0.7%
NORTH OF CAPE FALCON				
Treaty Indian Ocean Troll	2.7%	0.6%	0.0%	2.0%
Recreational	5.0%	0.9%	0.1%	4.5%
Non-Indian Troll	1.5%	0.3%	0.0%	5.3%
SOUTH OF CAPE FALCON				
Recreational:				0.2%
Cape Falcon to Humbug Mt.	3.4%	7.0%	0.4%	
Humbug Mt. to OR/CA border (KMZ)	0.1%	0.4%	0.8%	
OR/CA border to Horse Mt. (KMZ)	0.0%	0.3%	1.1%	
Fort Bragg	0.0%	0.2%	0.6%	
South of Pt. Arena	0.0%	0.1%	0.2%	
Troll:				1.5%
Cape Falcon to Humbug Mt.	0.7%	0.9%	0.2%	
Humbug Mt. OR/CA border (KMZ)	0.0%	0.1%	0.2%	
OR/CA border to Horse Mt. (KMZ)	0.0%	0.2%	0.8%	
Fort Bragg	0.0%	0.4%	1.0%	
South of Pt. Arena	0.0%	0.3%	0.2%	
BUOY 10	1.8%	0.1%	-	8.2%
ESTUARY/FRESHWATER	2.4%	1.4%	-	
TOTAL	18.0%	13.7%	5.8%	36.0%

TABLE 8. 2019 projected coho mark rates for mark-selective fisheries under Council adopted management measures (percent marked).

Area	Fishery	June	July	August	September
<b>Canada</b>					
Johnstone Strait	Recreational	50%	45%	38%	--
West Coast Vancouver Island	Recreational	58%	43%	46%	45%
North Georgia Strait	Recreational	57%	59%	58%	53%
South Georgia Strait	Recreational	30%	62%	48%	59%
Juan de Fuca Strait	Recreational	58%	58%	58%	52%
Johnstone Strait	Troll	--	--	--	--
NW Vancouver Island	Troll	48%	43%	41%	23%
SW Vancouver Island	Troll	49%	51%	49%	51%
Georgia Strait	Troll	--	--	--	--
<b>Puget Sound</b>					
Strait of Juan de Fuca (Area 5)	Recreational	67%	60%	56%	58%
Strait of Juan de Fuca (Area 6)	Recreational	67%	59%	59%	54%
San Juan Island (Area 7)	Recreational	--	61%	--	40%
North Puget Sound (Areas 6 & 7A)	Net	--	67%	58%	46%
<b>Council Area</b>					
Neah Bay (Area 4/4B)	Recreational	47%	62%	55%	57%
LaPush (Area 3)	Recreational	70%	64%	72%	54%
Westport (Area 2)	Recreational	77%	72%	65%	61%
Columbia River (Area 1)	Recreational	81%	81%	71%	72%
Tillamook	Recreational	73%	66%	61%	56%
New port	Recreational	68%	64%	60%	45%
Coos Bay	Recreational	66%	62%	53%	39%
Brookings	Recreational	63%	50%	41%	15%
Neah Bay (Area 4/4B)	Troll	53%	59%	56%	56%
LaPush (Area 3)	Troll	48%	59%	57%	58%
Westport (Area 2)	Troll	66%	63%	62%	52%
Columbia River (Area 1)	Troll	76%	74%	67%	59%
Tillamook	Troll	63%	62%	65%	54%
New port	Troll	65%	63%	60%	56%
Coos Bay	Troll	65%	62%	56%	40%
Brookings	Troll	58%	53%	54%	--
<b>Columbia River</b>					
Buoy 10	Recreational	--	--	--	66%

TABLE 9. Preliminary projected exvessel value by catch area under Council-adopted 2019 non-Indian commercial troll management measures compared with 2018 and the 2014-2018 average (inflation-adjusted 2018 dollars).

Management Area	Exvessel Value (thousands of dollars) <sup>a/</sup>				
	2019 Projected <sup>b/</sup>	2018	2014-2018 Average	Percent Change	
				From 2018 (Modeled)	From 2014-2018 Average
North of Cape Falcon	3,138	2,371	3,240	+32%	-3%
Cape Falcon to Humbug Mt.	5,901	1,908	5,497	+209%	+7%
Humbug Mt. to OR/CA Border (OR KMZ)	924	441	432	+109%	+114%
OR/CA Border to Horse Mt. (CA KMZ)	559	709	154	-21%	+263%
Horse Mt. to Pt. Arena (Fort Bragg)	5,514	848	2,591	+550%	+113%
Pt. Arena to Pigeon Pt. (SF)	6,504	3,918	3,960	+66%	+64%
South of Pigeon Pt. (MO)	3,416	2,390	1,439	+43%	+137%
Total South of Cape Falcon	22,818	10,213	14,073	+123%	+62%
West Coast Total	25,956	12,584	17,312	+106%	+50%

a/ Exvessel value estimates are not comparable to the community income impacts shown in Table 10.

b/ 2019 projections are based on expected catches in the Council management areas, 2018 exvessel prices and 2018 average weight per fish.

TABLE 10. Preliminary projected angler trips and associated state level personal income impacts under Council-adopted 2019 recreational ocean salmon fishery management measures compared to estimated 2018 and the 2014-2018 average.

Management Area	Coastal Community Income Impacts <sup>a/</sup>									
	Angler Trips (thousands)				(thousands of dollars) <sup>b/</sup>				Percent Change in Income Impacts	
	2019 Projected	2018	2014-2018 Avg.	2003-2007 Avg.	2019 Projected	2018	2014-2018 Avg.	2007 Avg. <sup>b/</sup>	Compared to 2018	Compared to 2014-2018 Avg.
North of Cape Falcon	155.9	55.7	80.1	105.6	27,831	9,940	15,370	11,533	+180%	+81%
Cape Falcon to Humbug Mt.	70.5	49.1	50.4	75.5	6,886	4,801	5,001	5,011	+43%	+38%
Humbug Mt. to OR/CA Border (OR KMZ)	14.1	7.0	7.8	13.5	1,827	584	693	671	+213%	+164%
OR/CA Border to Horse Mt. (CA KMZ)	18.3	7.4	9.2	19.1	2,370	1,282	1,708	1,105	+85%	+39%
Horse Mt. to Pt. Arena (Fort Bragg)	17.5	9.9	10.7	23.3	3,745	2,114	2,321	2,025	+77%	+61%
Pt. Arena to Pigeon Pt. (SF)	62.0	65.3	52.8	72.4	18,849	21,692	17,904	9,041	-13%	+5%
South of Pigeon Pt. (MO)	32.6	13.9	15.9	36.7	9,915	2,365	2,907	3,276	+319%	+241%
Total South of Cape Falcon	215.0	152.6	146.7	240.6	43,593	32,839	30,535	21,128	+33%	+43%
West Coast Total	370.8	208.2	226.8	346.2	71,424	42,779	45,904	32,661	+67%	+56%

a/ Income impacts are not comparable to exvessel values shown in Table 9.

b/ Dollar amounts are in inflation-adjusted 2018 values.

TABLE 11. Environmental effects of the Proposed Action relative to criteria and Alternatives analyzed in Preseason Reports I and II.<sup>ai</sup> (Page 1 of 2)

Environmental Component	No-Action	Alternative			Proposed Action	2019 Criteria	Objective or Other Comparative Standard as Noted
	Alternative <sup>bi</sup>	I	II	III			
<b>Chinook</b>							
KRFC Spaw ning Escapement	58,729	40,700	40,700	45,000	40,700	≥ 40,700	2019 minimum natural area adult escapement.
Exploitation (spaw ner reduction) rate	33.2%	53.7%	53.7%	48.8%	53.7%	≤ 53.7%	FMP control rule.
SRFC Spaw ning Escapement	230,486	<b>152,272</b>	163,939	180,085	160,159	≥ 160,000	2019 minimum hatchery and natural area adult escapement (2019 NMFS guidance).
Exploitation Rate	39.3%	59.9%	56.8%	52.6%	57.8%	≤ 67.9%	FMP control rule.
<b>Canadian Stocks</b>							
Interior Fraser Coho	7.5%	<b>11.0%(6.3%)</b>	<b>10.1%(5.4%)</b>	7.7%(3.0%)	9.1%(5.3%)	≤ 10.0%	2019 Southern U.S. exploitation rate ceiling; PSC coho agreement.
<b>Puget Sound Coho</b>							
Skagit	8.6%	33.8%(5.7%)	33.2%(4.9%)	31.4%(2.7%)	32.5%(4.8%)	≤ 35.0%	2019 total exploitation rate ceiling; FMP matrix <sup>ci</sup>
Stillaguamish	8.1%	32.5%(4.1%)	31.9%(3.4%)	30.5%(1.9%)	22.5%(3.4%)	≤ 50.0%	2019 total exploitation rate ceiling; FMP matrix <sup>ci</sup>
Snohomish	19.5%	33.7%(4.1%)	33.1%(3.4%)	31.6%(1.9%)	19.4%(3.4%)	≤ 40.0%	2019 total exploitation rate ceiling; FMP matrix <sup>ci</sup>
Hood Canal	41.5%	<b>48.8%(6.3%)</b>	<b>48.2%(5.4%)</b>	<b>46.8%(2.9%)</b>	44.3%(5.3%)	≤ 45.0%	2019 total exploitation rate ceiling; FMP matrix <sup>ci</sup>
Strait of Juan de Fuca	5.3%	9.6%(5.0%)	8.9%(4.3%)	7.0%(2.4%)	8.9%(4.2%)	≤ 20.0%	2019 total exploitation rate ceiling; FMP matrix <sup>ci</sup>
<b>Washington Coastal Coho</b> (in thousands of fish)							
Quillayute Fall Coho	10.2	13.6	13.7	14.1	13.7	6.3	<u>For all Washington Coastal coho stocks listed:</u>
Hoh Coho	5.3	5.6	5.8	6.2	5.8	2.0	FMP MSY adult spaw ner estimate.
Queets Wild Coho	6.1	8.9	9.1	9.7	9.1	5.8	Value depicted is ocean escapement.
Grays Harbor Coho	40.3	65.3	66.1	68.1	65.9	24.4	
Willapa Bay Natural Coho	19.1	55.5	56.3	58.5	56.3	17.2	
<b>ESA-Listed Salmon</b>							
California Coastal Chinook	10.2%	15.9%	16.0%	15.3%	16.0%	≤ 16.0%	KRFC age-4 ocean harvest rate.
SRWC	9.1%	15.7%	15.6%	13.5%	14.8%	≤ 15.7%	SRWC age-3 ocean impact rate in fisheries south of Pt. Arena.
LCR Natural Tule Chinook	NA	<b>39.2%</b>	36.7%	34.8%	36.0%	≤ 38.0%	Total adult equivalent fishery exploitation rate.
LCN Coho <sup>di</sup>	14.2%	18.5%	16.6%	12.6%	18.0%	≤ 23.0%	Total marine and mainstem Columbia fishery exploitation rate. (2019 NMFS ESA guidance).
OCN coho <sup>di</sup>	13.9%	14.6%	13.0%	10.4%	13.7%	≤ 15.0%	Marine and freshw ater fishery exploitation rate (NMFS ESA consultation standard).
SONCC (RK) coho	4.7%	5.8%	5.8%	6.2%	5.8%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

TABLE 11. Environmental effects of the Proposed Action relative to criteria and Alternatives analyzed in Preseason Reports I and II.<sup>a/</sup> (Page 2 of 2)

Environmental Component	No-Action	Alternative			Proposed Action
	Alternative <sup>b/</sup>	I	II	III	
<b>Socioeconomics</b>					
Commercial Community Personal Income Impacts (thousands of dollars)					
North of Cape Falcon	3,270	5,179	4,444	3,187	4,274
Cape Falcon to Humbug Mt.	2,444	7,787	5,155	5,259	7,419
Humbug to OR/CA border (OR KMZ)	428	1,033	766	599	980
OR/CA border to Horse Mt. (CA KMZ)	813	590	816	1,633	635
Horse Mt. to Pt. Arena (Fort Bragg)	1,058	5,780	6,856	6,064	6,780
Pt. Arena to Pigeon Pt. (San Francisco)	9,775	18,391	14,351	10,329	15,542
South of Pigeon Pt. (Monterey)	1,269	1,676	1,851	1,832	1,795
West Coast Total	19,057	40,435	34,240	28,902	37,425
Recreational Community Personal Income Impacts (thousands of dollars)					
North of Cape Falcon	9,940	29,636	27,288	16,566	27,831
Cape Falcon to Humbug Mt.	4,801	7,034	6,123	7,132	6,886
Humbug to OR/CA border (OR KMZ)	584	1,775	1,872	1,827	1,827
OR/CA border to Horse Mt. (CA KMZ)	1,282	2,425	2,389	2,370	2,370
Horse Mt. to Pt. Arena (Fort Bragg)	2,114	3,978	3,978	3,340	3,745
Pt. Arena to Pigeon Pt. (San Francisco)	21,692	20,029	20,029	16,909	18,849
South of Pigeon Pt. (Monterey)	2,365	9,915	9,812	9,744	9,915
West Coast Total	42,779	74,792	71,492	57,888	71,424

a/ Impacts assumed when Alternatives were adopted in March may have changed due to updated information from the PSC, North of Falcon process, or other sources.

b/ Socioeconomic impacts under the No-Action Alternative are assumed equal to 2018 estimates.

c/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. Values in parentheses indicate impacts in Council-area fisheries.

d/ Includes projected impacts of inriver fisheries.

TABLE 12. Stock status relative to overfished and overfishing criteria. A stock is approaching an overfished condition if the 3-year geometric mean of the most recent two years and the forecasted spawning escapement is less than the minimum stock size threshold (MSST); a stock would experience overfishing if the total annual exploitation rate exceeds the maximum fishing mortality threshold (MFMT). Occurrences of stocks approaching an overfished condition, or experiencing overfishing, are indicated in bold. 2019 spawning escapement and exploitation rate estimates are based on 2019 preseason abundance forecasts and 2019 adopted Council regulations.

	Estimated Adult Spawning Escapement									Total Exploitation Rate						
	2014	2015	2016	2017	2018 <sup>a/</sup>	Forecast 2019 <sup>b/</sup>	3-yr Geo Mean	MSST	S <sub>MSY</sub>	2014	2015	2016	2017	2018 <sup>a/</sup>	2019 <sup>b/</sup>	MFMT
	<b>Chinook</b>															
Sacramento Fall	212,468	114,085	89,699	42,714	105,739	160,159	89,767	91,500	122,000	0.61	0.55	0.56	0.68	0.53	0.58	0.78
Klamath River Fall	95,104	28,112	13,937	19,904	53,624	40,700	35,153	30,525	40,700	0.36	0.59	0.37	0.10	0.28	0.54	0.71
Southern Oregon <sup>c/</sup>	53,546	30,462	27,278	91,977	39,497	NA	46,276	20,500	34,992	NA	NA	NA	NA	NA	NA	0.54
Central and Northern OR	157	247	118	114	92	NA	107	30 fish/mi	60 fish/mi	0.43	0.42	0.47	NA	NA	NA	0.78
Upper Columbia Bright - Fall <sup>d/</sup>	233,934	323,276	151,373	97,789	58,540	63,864	71,504	19,182	39,625	0.53	0.40	0.51	NA	NA	NA	0.86
Upper Columbia - Summer <sup>d/</sup>	77,982	88,691	79,253	56,265	38,816	33,452	41,805	6,072	12,143	0.69	0.67	0.63	NA	NA	NA	0.75
Willapa Bay - Fall <sup>e/</sup>	2,075	2,824	1,887	3,078	NA	NA	2,541	1,696	3,393	0.57	0.47	0.59	NA	NA	NA	0.78
Grays Harbor Fall <sup>e/</sup>	11,893	17,305	11,248	17,145	NA	NA	14,944	5,694	13,326	0.57	0.47	0.59	NA	NA	NA	0.78
Grays Harbor Spring	1,583	1,841	926	1,384	493	NA	858	700	1,400	NA	NA	NA	NA	NA	NA	0.78
Queets - Fall <sup>d/</sup>	3,820	5,313	2,915	2,702	NA	NA	3,472	1,250	2,500	0.57	0.47	0.59	NA	NA	NA	0.87
Queets - Sp/Su	377	532	704	NA	NA	NA	521	350	700	NA	NA	NA	NA	NA	NA	0.78
Hoh - Fall <sup>e/</sup>	1,933	1,795	2,831	1,808	NA	NA	2,094	600	1,200	0.57	0.47	0.59	NA	NA	NA	0.90
Hoh Sp/Su	744	1,070	1,144	1,364	NA	NA	1,186	450	900	NA	NA	NA	NA	NA	NA	0.78
Quillayute - Fall <sup>e/</sup>	2,782	3,440	3,654	3,604	4,031	NA	3,758	1,500	3,000	0.57	0.47	0.59	NA	NA	NA	0.87
Quillayute - Sp/Su	608	794	900	1,097	1,232	NA	1,067	600	1,200	NA	NA	NA	NA	NA	NA	0.78
Hoko -Su/Fa <sup>d/</sup>	1,760	2,877	1,324	1,188	2,179	NA	1,508	425	850	0.42	0.30	0.30	NA	NA	NA	0.78
<b>Coho</b>																
Willapa Bay	47,154	10,790	25,290	9,091	NA	40,750	21,081	8,600	17,200	0.51	0.44	0.38	0.33	NA	0.42	0.74
Grays Harbor	105,039	21,278	38,595	26,907	NA	41,582	35,083	18,320	24,426	0.45	0.49	0.12	0.32	NA	0.42	0.65
Queets	7,558	2,028	5,156	5,232	NA	6,729	5,662	4,350	5,800	0.41	0.26	0.15	0.23	NA	0.40	0.65
Hoh	4,565	1,794	5,009	4,478	NA	3,180	4,147	1,890	2,520	0.52	0.39	0.08	0.43	NA	0.55	0.65
Quillayute Fall	7,425	2,571	9,630	7,474	5,157	7,271	6,544	4,725	6,300	0.57	0.47	0.18	0.42	NA	0.51	0.59
Juan de Fuca	11,488	3,859	8,435	5,530	NA	8,044	7,213	7,000	11,000	0.17	0.18	0.03	0.06	NA	0.09	0.60
Hood Canal	26,787	26,926	24,313	22,519	NA	22,415	23,066	10,750	14,350	<b>0.68</b>	0.59	0.40	0.35	NA	0.44	0.65
Skagit	24,820	5,794	35,822	20,184	NA	39,317	30,520	14,875	25,000	0.52	<b>0.63</b>	0.20	0.09	NA	0.33	0.60
Stillaguamish	35,829	2,914	13,048	6,099	NA	18,488	11,374	6,100	10,000	0.27	0.48	0.16	0.12	NA	0.23	0.50
Snohomish	46,244	12,804	44,141	18,195	NA	50,564	34,373	31,000	50,000	0.31	0.55	0.18	0.21	NA	0.19	0.60

a/ Preliminary.

b/ Preliminary approximations based on preseason forecasts and Council adopted (preseason) fishing regulations.

c/ MSST 18,440 (20,500 as measured at Huntley Park).

d/ CWT based exploitation rates from PSC-CTC 2018 Exploitation Rate Analysis.

e/ Queets River fall Chinook CWT exploitation rates used as a proxy. Exploitation rates in the terminal fisheries will differ from those calculated for Queets fall CWTs.

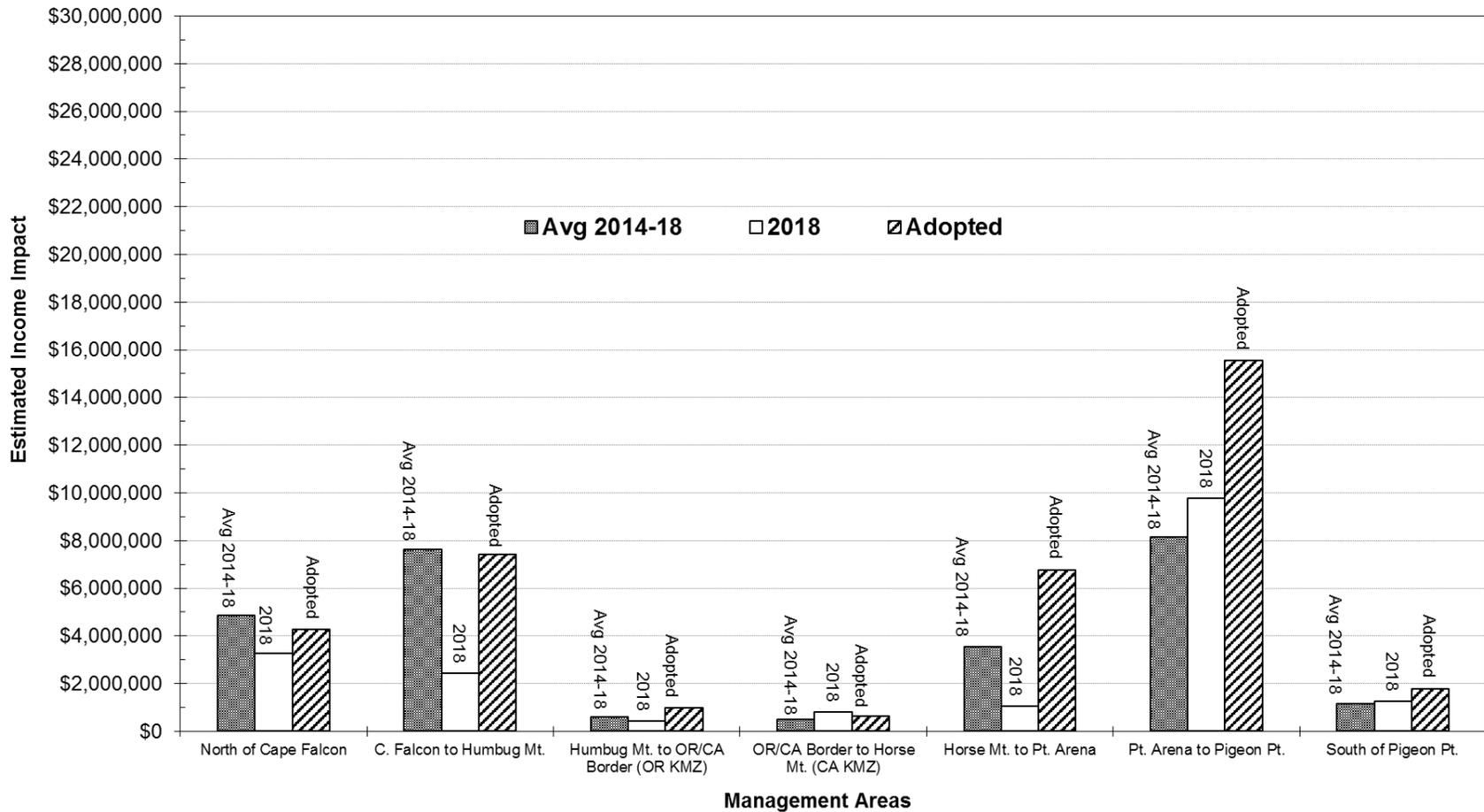


FIGURE 3. Projected coastal community personal income impacts associated with the 2019 commercial troll fishery under Council-adopted management measures compared to estimated 2018 and the 2014-2018 inflation-adjusted average (in 2018 dollars).

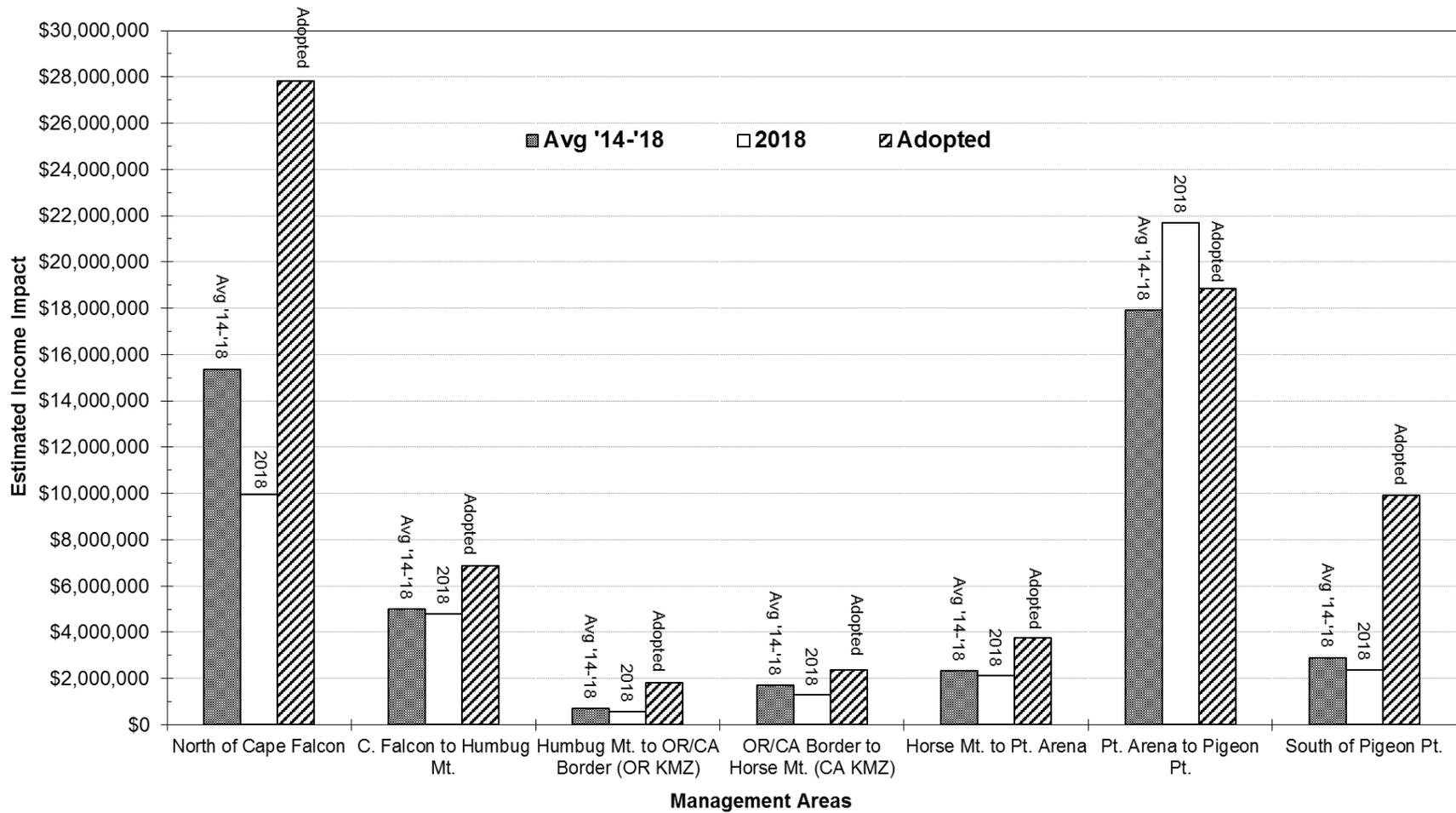


FIGURE 4. Projected coastal community personal income impacts associated with the 2019 recreational fishery under Council-adopted management measures compared to estimated 2018 and the 2014-2018 inflation-adjusted average (in 2018 dollars).



This map is for reference only and is not intended for use in navigation or fishery regulation.

TABLE 1: DESCRIPTION OF FISHERY REGULATIONS AND SUMMARY OF CHINOOK CATCH TARGETS

TABLE 1

Run Number: **SLC-Chin2719** Version: 2.19 04/15/19  
 Run Description: SLC-Chin2719 03:42 PM  
 Impacts are expressed as total fishery-related mortality, which includes landed catch, non-retention mortality, and other fishery-related mortality; not to be used for allocation computations.

Fishery	Fishery-related Mortality	Fishery Description and/or Comments:
<b>CANADIAN (B.C.) FISHERIES:</b>		
WCVI Troll/Sport	133,608	2019 TACs from calibration 1905; WCVI sport ISBM 3-yr post-season avg
Area 20 Net	330	09-15 post-season average multiplied by 0.875
Georgia St./JDF Troll	8	09-15 post-season average multiplied by 0.875
Georgia St./JDF Sport	67,513	09-15 post-season average multiplied by 0.875
<b>SOUTH OF CAPE FALCON:</b>		
		April PFMC Preseason Report
<b>NORTH OF CAPE FALCON OCEAN:</b>		
Treaty Ocean Troll:	38,600	Chinook TAC: 35,000
NT Ocean Troll	37,047	Chinook TAC: 26,250
NT Ocean Sport	30,514	Chinook TAC: 26,250
NT NOF Impacts:	67,561	
4B Add-on		Included with Area 4
Canadian License catch		(For Areas 4 and 4B)
Buoy 10	>>>>	see In-River models
<b>PUGET SOUND SPORT &amp; TROLL:</b>		
Treaty Strait&Winter Troll	7,190	Winter Troll: 3500 Summer Troll: 762
Puget Sound Sport (landed + non-retention mortality):		
Area 5	12,452	Area 5 5/1-6/30 clsd; 7/1-8/15, bag 2, ch MSF & co MSF, cm NR, ch 22" min size; 8/16-9/30, bag 2, co MSF, cm & ch NR; 10/1-2/29 clsd; 3/1-4/30 bag 2, ch MSF, cm & ch NR; 5/1-6/30 clsd; 7/1-8/15 bag 2, co msf, ch MSF expt ch NR East of Ediz, cm NR, ch 22" min size, see LOAF for additional spatial closures within A6; 8/16-9/30 bag 2, co MSF ch NR, 10/1-2/29 clsd; 3/1-4/15 2 bag, ch MSF, co MSF, ch 22" min size
Area 6	7,840	Area 6 5/1-6/30 clsd; 7/1-8/15 bag 2, co msf, ch MSF expt ch NR East of Ediz, cm NR, ch 22" min size, see LOAF for additional spatial closures within A6; 8/16-9/30 bag 2, co MSF ch NR, 10/1-2/29 clsd; 3/1-4/15 2 bag, ch MSF, co MSF, ch 22" min size
Area 7	7,457	Area 7 5/1-6/30 clsd; 7/1-7/31, bag 2, ch MSF, co, ch 22" min size, B'Bay & Samish Bay clsd; Rosario closure in effect 8/1-8/31clsd; 9/1-9/30, bag 2 ch NR, see LOAF for spatial closures within area 7 during this time period;
Areas 8-1,2 8D	2,397	Area 8-1 5/1-7/31 clsd; 8/1 - 10/31 bag 2 co, ch NR; 11/1-1/31 clsd; 2/1-4/30 bag 2 ch MSF, co NR Area 8-2 5/1-8/15 clsd, 8/16-9/15, bag 2 co, ch NR, co only South and West from Clinton/Mukilteo line; 9/17-1/31 clsd; 2/1-4/30 bag 2, ch MSF, co NR, ch 22" min size; Area 8D 6/1-9/3 Friday - Monday only, except clsd 6/9, bag 2, ch 22" min size, 2 pole option, clsd east of Mission Pt./Hermosa Pt. line, open only in Tulalip Sp 9/4-9/7 clsd;
Area 9	8,859	Area 9 5/1-7/24 clsd; 7/25-8/15, bag 2, ch MSF, co MSF, cm NR, ch 22" min size, south and west of line from Foulweather Bluff to Olele open to shoreline on 8/16-9/30 s bag-2, co MSF, cm & ch NR; 10/1-1/31 clsd; 2/1-4/15 bag 2, ch MSF, co MSF, ch 22" min size; 4/16-4/30 clsd; Edmonds PR recreational - Yr-round: bag 2, 1 ch NR 8/1-8/31, ch 22" min size
Ar 10, 10A, 10E	7,302	Area 10 5/1-5/31, closed; 6/1-7/24 bag 2, co, ch & cm NR; 7/25-8/30 bag 2, ch MSF, co, cm NR; 9/1-11/15 co, ch NR, cm NR through 9/15; 11/16-12/31 clsd 1/1-3/30 bag 2, ch MSF, co, ch 22" min size; 4/1-4/30 clsd Elliot Bay - Clsd 7/1-8/31, except 8/2-8/5 (12:00pm) bag 2, co MSF, cm NR; additional salmon fishing ISU dependent; Shilshole Bay - clsd to salmon 7. Sinc SAF - 7/1-9/30, bag 3, 2 pole option, ch & co MSF, cm NR from 8/1-9/15, ch 22" min size; Piers (except Sinclair Inlet Piers) Yr-round: bag 2, 1 ch, cm NR from 8/1-9/15, ch 22" min size;
Area 11	5,051	Area 11 5/1-6/31 clsd; 7/1-9/30 (Sat.-Wed.) bag 2, 1 ch MSF, co, ch 22" min size, (Thurs.-Fri) shore only, ch NR; Commencement Bay closed to salmon through 10/1-12/31 clsd; 1/1-4/30 bag 2, ch MSF, ch 22" min size
Area 13	3,282	Area 13 5/1-6/30 bag 2, 2 pole option, ch MSF, co MSF, ch 22" min size; 7/1-9/30 bag 2, 2 pole option, ch MSF, co MSF, ch 20" min size 10/1-4/30 bag 2, 2 pole option, ch MSF, co MSF, ch 22" min size
Area 12	2,223	Area 12 No. Ayock - 5/1-7/31 clsd; 8/1-9/30, bag 4, ch & cm NR, see LOAF for additional spatial closures within No. Ayock; 10/1-12/31, bag-4, 2 ch MSF, cm N So Ayock - 5/1-6/30 clsd; 7/1-9/30, bag 4, 2 pole option, 2 ch MSF, cm NR; 10/1-12/31, bag 4, 2 ch MSF, cm NR through 10/15; 1/1-4/30, bag-2, ch N Hoodspout - Same as A12 except from 7/1-12/31, bag 4, 2 pole option from 7/1-10/15, ch MSF, cm NR from 7/1-10/15, no min size

**Final 2019 PFMC Chinook; Chin2719**

Non-Treaty Quota Total 52,500  
 Treaty Quota Total 35,000

	JUL-SEP	Oct-Apr	TOTAL
PUGET SOUND NET:			
JDF Net (4B/5/6C/6)	0	0	0
Treaty	455	28	483
SJI Net (7/7A) NT	3,574	166	3,740
Treaty	4,717	30	4,747
B6/9Net NT			
Treaty	500	11	511

**2019 Total Mortality (Fraser Panel and other)**

JDF Chinook:	Trty (GN): wb 6/16 through wb 8/11, Set Gillnet Only, 7 days/wk
JDF Sockeye:	Trty (GN): wb 7/21 through wb 9/15, Schedule TBD by Fraser Panel
JDF Coho:	Trty (GN): end of Fraser Panel control through wb 10/6, 6 days/wk
JDF Chum:	Trty (GN): wb 10/13 through wb 11/3, 6 days/wk
SJI Coho:	Ntrty (RN): Open 7 d/wk from end of Fraser Panel control thru chum mgmt. period of Wk. 45 beginning 11/3. MSF coho and Chinook thru Wk 40 beginning 9/2 Trty (RN): 7 days/wk beginning at end of Fraser Panel management through wb 11/10; wild ch NR before 9/30, ch NR after 9/30; wild co NR through 9/30, coho retention after 9/30; cm NR through 9/30, cm retention after 9/30.
SJI Sockeye/Pink:	Ntrty (GN/PS/RN): Schedule TBD by Fraser Panel, modeled as weeks 31-37: 0-2-1-2-0-2-0, PS: coho, chum & chinook NR. RN: MSF coho & chinook (chinook Trty (GN/PS/RN): Schedule TBD by Fraser Panel, modeled as: wk 31 (wb 7/28) thru wk 38 (wb 9/15). RN: wild co, wild ch, and cm NR; may retain marked Chinook through 9/30.
SJI Chum:	Ntrty (GN/PS/RN): Opens Wk. 41 beginning 10/6, PS & GN schedule to be determined with co-mgr. modeled wks 41-45, 4-7-7-7-7, PS co&ch NR, RN: 7 days/wk with release requirements per coho fishery. Trty (GN/PS/RN): Schedule TBD by co-managers, modeled as: wk 41 (wb 10/6) - wk 46 (wb 11/10). RN: 7 days/wk with release requirements per coho fishery.

Stock	Management Criteria			Model Prediction			
	Abundance Tier	ER Ceiling	ER Type	Escapement	Total ER	SUS ER	PT-SUS ER
<b>Spring/Early:</b>							
<b>Nooksack - Total</b>		10.5%	SUS		33.2%	<u>10.5%</u>	5.8%
North/Middle Fork	< LAT			167			
South Fork	< LAT			75			
<b>Skagit - Total</b>	> LAT	37.5%	Total	1,616	<u>32.1%</u>	21.2%	4.6%
Upper Sauk	> LAT			957			
Upper Cascade	> LAT			182			
Suiattle	> LAT			478			
<b>White</b>	> UMT	22.0%	SUS	1,834	24.3%	<u>16.7%</u>	5.1%
<b>Dungeness</b>	> UMT	10.0%	SUS	945	5.5%	<u>1.2%</u>	1.1%
<b>Summer/Fall:</b>							
<b>Skagit - Total</b>	> LAT	48.0%	Total	12,504	<u>36.7%</u>	16.4%	3.8%
Upper Skagit	> LAT			9,274			
Sauk	> LAT			587			
Lower Skagit	> LAT			2,363			
<b>Stillaguamish - Total</b>	900-1200	24.0%	Total	943			
Unmarked ER		8.0%	UM SUS		<u>18.0%</u>	<u>8.0%</u>	5.2%
Marked ER		12.0%	M SUS		20.4%	<u>10.9%</u>	8.2%
<b>Snohomish - Total</b>	< LAT	21.0%	Total	3,208	<u>15.8%</u>	<u>6.5%</u>	5.0%
Skykomish	< LAT	15.0%	SUS	2,414			
Snoqualmie				794			
<b>Lake WA (Cedar R.)</b>	> UMT	13.0%	PT-SUS	1,217	33.2%	22.0%	<u>12.9%</u>
<b>Green</b>	> UB	13.0%	PT-SUS	5,842	53.8%	42.6%	<u>12.9%</u>
				9,500			
<b>Puyallup</b>	> UMT	13.0%	PT-SUS	2,695	51.1%	39.9%	<u>12.9%</u>
				4,613			
<b>Nisqually</b>	> LAT	47%	Total	11,467	<u>48.7%</u>	41.9%	15.3%
<b>Western Strait-Hoko</b>	> UMT	10%	SUS	2,315	20.7%	<u>2.4%</u>	2.4%
<b>Elwha</b>	> UMT	10%	SUS	6,662	5.8%	<u>1.4%</u>	1.4%
<b>Mid-Hood Canal</b>	< LAT	12%	PT-SUS	286	21.8%	12.1%	<u>11.8%</u>
<b>Skokomish</b>	> UMT	50%	Total	2,667	<u>48.2%</u>	38.6%	12.4%
				22,568			

Model Run: SLC-Chin2719

Run Date & Time: 04/15/19 15:42

SRFI =	58.7%	(70% Ceiling)
Lower Col Nat Tule ER =	36.0%	(38% Ceiling)

# Puget Sound Recreational Chinook Seasons 2019-20 Modeling Proposal

Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
5	M	M	M	M	NR							
6	M	M	M	M	NR							
7	M	M	M	M	NR							
81				NR								
82				NR								
9			M*	M	NR							
10	NR	NR	M	M	NR							
11	M	M	M	M	M	M	M	M	M	M	M	M
12 NoA				NR								
12 SoA				M	M	M	M	M	M	M	M	M
13	M	M	M	M	M	M	M	M	M	M	M	M

<p><b>Nooksack</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Sammish</b> <span style="border: 1px solid black; padding: 2px;">NS</span></p> <p><b>Elliot Bay SAF</b> <span style="border: 1px solid black; padding: 2px;">NS</span></p> <p><b>Duwamish</b> <span style="border: 1px solid black; padding: 2px;">NS</span></p>	<p><b>Skykomish</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Skagit/Cascade</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Sinclair Inlet</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Bellingham</b> <span style="border: 1px solid black; padding: 2px;">NS</span></p>	<p><b>Sammamish</b> <span style="border: 1px solid black; padding: 2px;">NR</span></p> <p><b>Puyallup</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Tulalip Bubble</b> <span style="border: 1px solid black; padding: 2px;">NS</span></p>	<p><b>Nisqually</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Skokomish</b> <span style="border: 1px solid black; padding: 2px;">M</span></p> <p><b>Year-round piers</b> <span style="border: 1px solid black; padding: 2px;">NS</span></p>
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<p><b>NR</b> <span style="border: 1px solid black; padding: 2px;">Non-Retention</span></p>	<p><b>NS</b> <span style="border: 1px solid black; padding: 2px;">non-sel</span></p>	<p><b>M</b> <span style="border: 1px solid black; padding: 2px;">Mark selective</span></p>	<p><span style="background-color: black; color: black;">Closed</span></p>
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4/14/2019 \* Opens July 25th

**TABLE 6A. Guidelines And Predicted Exploitation Rates For KEY NATURAL PUGET SOUND Chinook Stocks, And Proportion of the total AEQ Mortality Occurring in Each Fishery Aggregate.**

FRAM Run Number: SLC-Chin2719  
 Run Description: SLC-Chin2719  
 Version: 2.19  
 Date: 04/22/19  
 Time: 03:42 PM

STOCK->	Total Mortality All Stocks	SKAGIT S/F Nat V4		STILLAGUAMISH Summer/Fall		SNOHOMISH S/F Nat V4		NOOKSACK V2 Early		SKAGIT Spring		WHITE RIVER V3 Spring		
		Total	% MORT	Overview a	ExpIRate	Overview a	ExpIRate	Overview a	ExpIRate	SUS	% MORT	Total	% MORT	SUS
<b>Exploitation Rate Objective 1a</b>														
Predicted Expl Rate - All Fisheries		48%		19%		16%		10.5%		38%		22%		
Predicted Expl Rate - Southern U.S. Fisheries		37%		9%		6%		46%		32%		24%		
FISHERY AGGREGATE		16%						19%		21%		16%		
		% MORT	ExpIRate	% MORT	ExpIRate	% MORT	ExpIRate	% MORT	ExpIRate	% MORT	ExpIRate	% MORT	ExpIRate	
Alaska	170,340	13.9%	5%	5.3%	1%	1.4%	0%	6.1%	3%	1.0%	0%	0.9%	0%	
Canada:	348,493	41.6%	15%	44.4%	9%	58.6%	9%	50.3%	23%	33.0%	11%	30.2%	7%	
S. Of Falcon Ocean	209,913	0.0%	0%	0.0%	0%	0.0%	0%	0.0%	0%	0.0%	0%	0.0%	0%	
NOF Ocean Troll:	37,047	0.4%	0%	0.2%	0%	2.4%	0%	0.4%	0%	0.0%	0%	0.2%	0%	
Nirty NOF Ocean & Buoy10 Spt	38,600	1.4%	1%	2.9%	1%	5.9%	1%	5.1%	2%	2.8%	1%	4.1%	1%	
Nirty NOF Ocean & Buoy10 Spt	30,514	1.2%	0%	0.8%	0%	1.2%	0%	0.8%	0%	0.1%	0%	2.8%	1%	
Pgt Snd Trty Troll	7,190	1.0%	0%	6.9%	1%	4.1%	1%	2.3%	1%	2.1%	1%	1.2%	0%	
Pgt Snd 5 Sport	12,452	0.6%	0%	4.5%	1%	4.6%	1%	2.4%	1%	1.8%	1%	0.5%	0%	
Pgt Snd 7 Sport	7,457	1.2%	0%	8.7%	2%	3.6%	1%	2.8%	1%	1.8%	1%	0.9%	0%	
Pgt Snd 8-13 Sport	28,092	0.6%	0%	9.0%	2%	6.2%	1%	1.3%	1%	1.8%	1%	7.7%	2%	
Out-of-Region V1 Net:	3,740	1.4%	1%	0.0%	0%	0.9%	0%	0.0%	0%	0.8%	0%	1.3%	0%	
Treaty	5,741	1.1%	0%	0.3%	0%	2.2%	0%	0.1%	0%	2.1%	1%	1.0%	0%	
Local Terminal Net:	na	0.0%	0%	0.0%	0%	0.0%	0%	0.0%	0%	0.0%	0%	0.0%	0%	
Treaty	na	0.4%	0%	3.7%	1%	2.2%	0%	2.8%	1%	4.2%	1%	0.0%	0%	
Freshwater Sport:	na	0.6%	0%	0.0%	0%	5.6%	1%	0.0%	0%	2.2%	1%	0.0%	0%	
Freshwater Net:	na	33.7%	12%	10.5%	2%	0.0%	0%	24.1%	11%	45.3%	15%	47.8%	12%	

This table presents the proportion (in percent) of the total (landed + nonlanded) mortality for this stock occurring in the indicated fishery.  
 "Exploitation Rate" refers to the proportion of the population (defined as the sum of AEQ fishery-related mortality plus spawning escapement) killed in the specified fishery or groups of fisheries.  
 "AEQ" = "Adult Equivalent". Figures in this table are adjusted so they are comparable across age classes, and represent fish that would have contributed to escapement if they had not been caught.

V1 "Out-of-Region" means all net fishery catches outside the local "region of origin", including pre-terminal and nonlocal terminal.  
 V2 "Nooksack Early" stock comprises an aggregation of North Fork and South Fork Early ("Spring" or "Native") stocks. Appendix C reg's derives the So. U.S. ER for this stock.  
 V3 "White River Spring" stock is represented by fingerlings originating from the White River.  
 V4 Only the portion of Skagit and Snohomish fingerling and yearling stocks representing wild chinook are presented in this table.  
 a) Total exploitation rate unless noted otherwise.



**TABLE 6C. Guidelines And Predicted Exploitation Rates For SOUTH PUGET SOUND Chinook Stocks, And Proportion of the total AEQ Mortality Occurring in Each Fishery Aggregate.**

FRAM Run Number:	SLC-Chin2719	Version:	2.19	TABLE 6C	
Run Description:	SLC-Chin2719			04/22/19	03:42 PM
STOCK->	LAKE WASHINGTON Summer/Fall	GREEN RIVER Summer/Fall	PUYALLUP RIVER Summer/Fall	NISQUALLY RIVER Summer/Fall	
Exploitation Rate Objective a)	PT-SUS 13%	PT-SUS 13%	PT-SUS 13%	Total 47%	
Predicted Expl Rate - All Fisheries	36%	55%	60%	59%	
Predicted Expl Rate - Southern U.S. Fisheries	24%	43%	48%	52%	
<b>FISHERY AGGREGATE:</b>	<b>% MORT</b>	<b>ExpIRate</b>	<b>% MORT</b>	<b>% MORT</b>	<b>ExpIRate</b>
Alaska	0.4%	0%	0.2%	0.1%	0%
Canada	28.2%	10%	16.6%	11.0%	7%
S. Of Falcon Ocean	0.3%	0%	0.2%	0.3%	0%
NOF Ocean Troll:	3.5%	1%	2.1%	1.1%	1%
Treaty	7.7%	3%	4.6%	7.1%	4%
Nirty NOF Ocean & Buoy10 Spt	2.8%	1%	1.6%	1.7%	1%
Pgt Snd Trfy Troll	2.9%	1%	1.7%	2.1%	1%
Pgt Snd 5 Sport	6.1%	2%	3.7%	4.3%	3%
Pgt Snd 7 Sport	2.2%	1%	1.4%	1.3%	1%
Pgt Snd 8-13 Sport	15.5%	6%	9.7%	18.9%	11%
Out-of-Region Y1 Net:	0.0%	0%	0.0%	0.1%	0%
Treaty	0.9%	0%	0.5%	0.7%	0%
Local Terminal V2 Net:	0.8%	0%	0.1%	0.2%	0%
Treaty	2.6%	1%	0.5%	2.8%	2%
Freshwater Sport:	0.2%	0%	14.3%	12.0%	7%
Freshwater Net:	20.8%	7%	39.2%	35.0%	21%

This table presents the proportion (in percent) of the total (landed + nonlanded) mortality for this stock occurring in the indicated fishery.  
 "Exploitation Rate" refers to the proportion of the population (defined as the sum of AEQ fishery-related mortality plus spawning escapement) killed in the specified fishery or groups of fisheries.  
 "AEQ" = "Adult Equivalent": figures are adjusted so they are comparable across age classes, and represent fish that would have contributed to escapement if they had.  
 11 "Out-of-Region" means all net fishery catches outside the local "region of origin", including pre-terminal and nonlocal terminal.  
 12 "Local Term." means: AREAS 10/11, 10A, 10E, 13A, 13+, and may include NT SAF fisheries, if so modeled.  
 Note: Within-South-Puget-Sound stock breakouts are based on CWT recoveries for areas 10A, 10E, 13A fingerlings, PSF proportions for area 13+, UW Acc, and yearlings. Refer to Tables 14D, 14F, & 14H.  
 a) Preterminal Southern US Exploitation Rate; Preterminal is defined as all areas outside of Area 10  
 b) Total Exploitation Rate

TABLE 6D. Guidelines And Predicted Exploitation Rates For SOUTH PUGET SOUND Chinook Stocks										TABLE 6D
And Proportion of the total AEQ Mortality Occurring in Each Fishery Aggregate.										04/22/19
FRAM Run Number:	Version:									2.19
Run Description:										03:42 PM
STOCK ->	MISC. 10 & 10E	CARR INLET	CHAMBERS BAY	McALLISTER CREEK	DESCHUTES & 13D-K					
	Summer/Fall	Summer/Fall	Summer/Fall	Summer/Fall	Summer/Fall					
Predicted Expl Rate - All Fisheries	65%	91%	95%	34%	51%					
Predicted Expl Rate - Southern U.S. Fisheries	52%	84%	88%	27%	44%					
<b>FISHERY AGGREGATE:</b>	% MORT	ExplRate	% MORT	ExplRate	% MORT	ExplRate	% MORT	ExplRate	% MORT	ExplRate
Alaska	0.2%	0%	0.1%	0%	0.1%	0%	0.2%	0%	0.1%	0%
Canada	15.7%	10%	7.1%	7%	6.8%	7%	19.1%	7%	12.8%	7%
S. Of Falcon Ocean	0.2%	0%	0.2%	0%	0.2%	0%	0.4%	0%	0.3%	0%
NOF Ocean Troll:	1.9%	1%	0.7%	1%	0.7%	1%	2.0%	1%	1.3%	1%
Treaty	4.3%	3%	4.6%	4%	4.4%	4%	12.2%	4%	8.2%	4%
Nirty NOF Ocean & Buoy10 Spt	1.5%	1%	1.1%	1%	1.1%	1%	3.0%	1%	2.0%	1%
Pgt Snd Trty Troll	1.6%	1%	1.3%	1%	1.3%	1%	3.6%	1%	2.4%	1%
Pgt Snd 5 Sport	3.4%	2%	2.9%	3%	2.8%	3%	7.8%	3%	5.2%	3%
Pgt Snd 7 Sport	1.3%	1%	0.9%	1%	0.9%	1%	2.4%	1%	1.6%	1%
Pgt Snd 8-13 Sport	8.8%	6%	12.9%	12%	12.3%	12%	34.7%	12%	23.0%	12%
Out-of-Region 11 Net:	0.0%	0%	0.0%	0%	0.0%	0%	0.1%	0%	0.1%	0%
Treaty	0.5%	0%	0.5%	0%	0.4%	0%	1.2%	0%	0.8%	0%
Local Terminal 12 Net:	4.2%	3%	0.2%	0%	0.2%	0%	0.4%	0%	0.3%	0%
Treaty	53.4%	34%	18.0%	16%	7.1%	7%	10.7%	4%	40.4%	21%
Freshwater Sport:	0.0%	0%	48.6%	44%	0.9%	1%	0.0%	0%	0.1%	0%
Freshwater Net:	0.0%	0%	0.0%	0%	60.1%	57%	0.0%	0%	0.0%	0%
This table presents the proportion (in percent) of the total (landed + nonlanded) mortality for this stock occurring in the indicated fishery.										
"Exploitation Rate" refers to the proportion of the population (defined as the sum of AEQ fishery-related mortality plus spawning escapement) killed in the specified fishery or groups of fisheries.										
"AEQ" = "Adult Equivalent"; figures are adjusted so they are comparable across age classes, and represent fish that would have contributed to escapement if they had not been caught										
11 "Out-of-Region" means all net fishery catches outside the local "region of origin", including pre-terminal and nonlocal terminal.										
12 "Local Term." means: AREAS 10/11, 10A, 10E, 13A, 13+, and may include NT SAF fisheries, if so modeled.										
Note: Within-South-Puget-Sound stock breakouts are based on CWT recoveries for areas 10A, 10E, 13A, 13A+ fingerings, PSF proportions for area 13+, UW Acc, and yearlings. Refer to Tables 14D, 14F, & 14H.										

**TABLE 2A: KEY NATURAL PUGET SOUND CHINOOK STOCKS - FISHERY IMPACT SUMMARY**

**TABLE 2A**

Estimated fishery impacts from regulations described by FRAM model run # SLC-Chin271 Version: 2.19

04/22/19

Run Description: SLC-Chin2719

03:42 PM

Impacts are expressed as total fishery-related mortality, and Adult Equivalent (AEQ) fishery-related mortality, which includes catch, non-retention mortality and other fishery-related mortality; not to be used for allocation computations.

Treaty/non-treaty splits are NOT based on CWT recovery data.

FISHERY	TOTAL MORTALITY ALL STOCKS	AEQ May-April Total Fishery-Related Mortality						
		23% NOOKSACK Early *	38% SKAGIT Spr H+W	25% SKAGIT S/F H+W	52% STILLAG. Sum/Fall	85% SNOHOM S/F H+W	86% Skykomish S/F H+W	22% WHITE R. Spring***
Canada	170,340	328	28	1,002	11	29	27	10
	348,493	2,703	872	3,009	93	1,129	1,043	350
S. Of Falcon Ocean	209,913	0	0	0	0	0	0	0
N.Flc. Ocean Troll: NTrty	37,047	20	0	32	0	45	41	2
Trty	38,600	274	73	103	6	108	99	47
Ntrty N.Flc. Ocean & CMoy10 Spt	30,514	41	4	90	2	18	16	32
Pgt Snd Trty Troll	7,190	124	63	73	14	77	71	14
Pgt Snd 6 Sport	7,840	93	70	75	6	59	57	16
Pgt Snd 5 Sport	12,452	128	86	44	9	166	159	6
Pgt Snd 7 Sport	7,457	149	159	99	18	191	186	11
Pgt Snd 8-13 Sport	28,092	69	117	48	19	314	304	90
Preterm. Pgt Snd or NTrty	3,740	0	25	101	0	12	10	15
Out-of-Region net: Trty	5,741	3	57	80	1	38	35	11
Terminal Pgt Snd or NTrty	5,553	0	0	0	0	0	0	0
Local Terminal Net: Trty	40,799	8	98	28	8	46	43	0
Freshwater Sport: NTrty	NA	0	948	40	0	761	760	0
Freshwater Net: Trty	NA	1,295	1,979	1,884	22	0	0	553
Freshwater Test	na	na	55	547	0	0	0	na
Total Marine Catch	953,769	3,940	1,653	4,784	188	2,231	2,093	604
Extr. Term. Catch	NA	1,295	2,982	2,471	22	761	760	553
<b>TOTAL CATCH</b>	<b>953,769</b>	<b>5,235</b>	<b>4,635</b>	<b>7,255</b>	<b>210</b>	<b>2,992</b>	<b>2,853</b>	<b>1,157</b>
Escapement (from TAMMs)		6,313	3,057	12,504	872	9,520	8,718	3603
<b>TOTAL ACMNDANCE</b>		<b>11,548</b>	<b>7,692</b>	<b>19,759</b>	<b>1,082</b>	<b>12,512</b>	<b>11,572</b>	<b>4760</b>
Total Exploitation		45.33%	60.26%	36.72%	19.4%	23.9%	24.7%	24.3%
Exploitation in Southern U.S. Fisheries		19.09%	48.55%	16.41%	9.76%	14.66%	15.40%	16.75%
		5,235	4,635	7,255	210	2,992	2,853	1,157

\* Nooksack Native" stock comprises an aggregation of North Fork and South Fork Native (Spring) stocks.

\*\* Only the portion of Skagit and Snohomish spring, fingerling and yearling stocks representing wild chinook are presented in this table.

\*\*\* White River Springs are fingerlings

"Out-of-Region" net includes traditional Puget Sound preterminal net as well as non local terminal net and Coastal/Col. R.

"Freshwater sport" for NTrty includes freshwater sport and some SAF catches.

**TABLE 2B: OTHER PUGET SOUND CHINOOK STOCKS - FISHERY IMPACT SUMMARY**

**TABLE 2B**

Estimated fishery impacts from regulations described by FRAM model run # SLC-Chin271 Version: 2.19

04/22/19

Run Description: SLC-Chin2719

03:42 PM

Impacts are expressed as total fishery-related mortality, and Adult Equivalent (AEQ) fishery-related mortality, which includes catch, non-retention mortality and other fishery-related mortality; not to be used for allocation computations.

Treaty/non-treaty splits are NOT based on CWT recovery data.

FISHERY	TOTAL MORTALITY ALL STOCKS	AEQ May-April Total Fishery-Related Mortality						
		58% NOOKSACK S/F N&H	31% TULALIP S/F H	36% HDCNL S/F N&H	54% Mid-HDCNL (12B) Natural	18% Skok. R Natural	62% Dung/Elwha S/F N&H	67% Hoko S/F N&H
Alaska	170,340	42	168	318	1	2	39	176
Canada	348,493	2,222	8,454	8,218	34	62	353	360
S. Of Falcon Ocean	209,913	24	0	280	1	2	0	0
N.Flc. Ocean Troll: NTrty	37,047	563	0	1,240	5	10	3	26
Trty	38,600	1,045	1,410	3,068	13	23	18	22
Ntrty N.Flc. Ocean & CMoy10 Spt	30,514	205	336	941	4	7	5	8
Pgt Snd Trty Troll	7,190	146	337	444	2	4	24	1
Pgt Snd 6 Sport	7,840	390	1,192	2,501	3	5	22	0
Pgt Snd 5 Sport	12,452	328	945	1,777	2	4	17	13
Pgt Snd 7 Sport	7,457	625	1,874	887	1	2	7	0
Pgt Snd 8-13 sport	28,092	249	1,714	5,487	7	17	20	0
Out-of-Region net: NTrty	3,740	186	64	152	1	1	0	0
Trty	5,741	160	192	1,044	4	8	4	0
Local Terminal Net: NTrty	5,553	2,582	2	33	0	0	1	0
Trty	40,799	5,194	11,985	5,529	1	46	0	0
Freshwater Sport: \1 NTrty	NA	4,905	NA	9,815	0	0	0.00	0.00
Freshwater Net: Trty	NA	861	NA	29,926	0	129	0.00	0.00
Freshwater Test	NA	na	na	na	na	na	na	na
Total Marine Catch	953,769	13,960	28,672	31,918	80	194	514	606
Extr. Term. Catch	NA	5,766	0	39,741	0	129	0	0
<b>TOTAL CATCH</b>	<b>953,769</b>	<b>19,727</b>	<b>28,672</b>	<b>71,659</b>	<b>80</b>	<b>323</b>	<b>514</b>	<b>606</b>
Escapement (from TAMMs)		7,653	2,083	20,935	286	347	8,355	2,315
<b>TOTAL ACMNDANCE</b>		<b>27,380</b>	<b>30,755</b>	<b>92,594</b>	<b>365,751</b>	<b>670</b>	<b>8,869</b>	<b>2,921</b>
Total Exploitation		72.05%	93.23%	77.39%	21.82%	48.22%	5.80%	20.74%
Exploitation in Southern U.S. Fisheries		63.78%	65.19%	68.17%	12.09%	38.55%	1.38%	2.39%
		19,727	28,672	71,659			514	597

"Out-of-Region" net includes traditional Puget Sound preterminal net as well as non local terminal net and Coastal/Col. R.

"Freshwater sport" for NTrty includes freshwater sport and some SAF catches.

\1 The category "freshwater sport" for Hood Canal includes nontreaty net catch in areas 12A and 9A.

**TABLE 2C: SOUTH PUGET SOUND CHINOOK STOCKS - FISHERY IMPACT SUMMARY HIGHLIGHTS**

**TABLE 2C**

Run Description: SLC-Chin2719		SLC-Chin271	Version:	2.19						
Estimated fishery impacts from regulations described by FRAM model run #										
Impacts are expressed as total fishery-related mortality, and Adult Equivalent (AEQ) fishery-related mortality, which includes catch, non-retention mortality and other fishery-related mortality; not to be used for allocation computations. Treaty/non-treaty splits and some SPS stock breakouts are NOT based on CWT recovery data.										
		29%	51%	30%	44%	74%	21%	46%	77%	40%
		----- AEQ Total May-April Fishery-Related Mortality (Natural & Hatchery) -----								
FISHERY		Misc 10 & 10E	Lake Wash.	Green River	Puyallup River	Carr Inlet	Chambers	Nisq. River	McAll. Creek	Deschutes & 13D-K
Alaska		19	10	49	27	10	0	16	4	12
Canada		1,486	750	3,604	2,063	1,186	39	1,836	471	1,364
S. Of Falcon Ocean		17	9	38	24	27	1	42	11	31
N.Flc. Ocean Troll:	NTrty	184	92	433	257	123	4	190	49	142
	Trty	407	205	989	565	759	25	1,176	302	873
Ntrty N.Flc. Ocean & CMoy10 Spt		146	73	354	202	187	6	289	74	215
Pgt Snd Trty Troll		152	77	402	207	224	7	349	89	258
Pgt Snd 6 Sport		285	139	477	417	140	5	203	56	160
Pgt Snd 5 Sport		327	162	692	464	481	16	721	192	550
Pgt Snd 7 Sport		123	60	215	179	148	5	217	59	169
Pgt Snd 8-13 Sport		839	412	1,608	1,207	2,143	71	3,145	857	2,446
Out-of-Region net:	NTrty	0	0	1	0	7	0	11	0	8
	Trty	49	25	122	67	78	3	121	0	89
Local Terminal Net: (&/or SAF sport)	NTrty	394	20	374	18	26	1	41	0	30
	Trty	5,067	68	942	67	2,999	41	469	0	4,299
Freshwater Sport:	NTrty	na	4	349	1,767	8,079	5	1,996	0	7
Freshwater Net:	Trty	na	553	8,116	4,861	0	345	5,817	0	0
Freshwater Test		na	na	na	na	na	na	na	na	na
Total Marine Catch		9,494	2,103	10,299	5,764	8,539	224	8,827	2,164	10,647
Extr. Term. Catch		0	557	8,465	6,628	8,079	350	7,813	0	7
<b>TOTAL CATCH</b>		<b>9,494</b>	<b>2,660</b>	<b>18,764</b>	<b>12,392</b>	<b>16,618</b>	<b>575</b>	<b>16,640</b>	<b>2,164</b>	<b>10,654</b>
Escapement (from TAMMs)		5,201	4,721	15,635	8,126	1,616	29	11,467	0	10,285
<b>TOTAL ACMNDANCE</b>		<b>14,695</b>	<b>7,382</b>	<b>34,399</b>	<b>20,518</b>	<b>18,233</b>	<b>603</b>	<b>28,107</b>	<b>2,164</b>	<b>20,939</b>
Total Exploitation		64.61%	36.04%	54.55%	60.40%	91.14%	95.25%	59.20%	0.00%	50.88%
Exploitation in Southern U.S. Fish		54.36%	25.75%	43.93%	50.21%	84.58%	88.68%	52.61%	78.03%	44.31%
		9,494	2,660	18,764	12,392	16,618	575	16,640	2,164	10,654
"Out-of-Region" net includes traditional Puget Sound preterminal net and "nonlocal terminal net" such as Bellingham Bay and Coastal/Col. R.										
"Local Term." means: AREAS 10/11, 10A, 10E, 13A, 13+, and may include NT SAF fisheries, if so modeled.										
"Freshwater" means: no FW Wash. & Sar Green R. Puy. R. Minter Ck. 13C+Ch Ck Nisq. R. McA. Ck. Misc. tribs										
Extreme Terminal" for NTrty includes freshwater sport; SAF catches in extreme terminal marine areas are shown under NT local terminal net.										
Note: Within-South-Puget-Sound stock breakouts are based on CWT recoveries for areas 10A, 10E, 13A fingerlings, PSF proportions for area 13+, UW Acc, and yearlings. Refer to Tables 14D and 14F.										
	Ntrty TM	2,314	972	4,540	4,535	11,362	114	6,856	1,298	3,758
	Trty TM	5,675	929	10,570	5,768	4,060	421	7,932	391	5,520

**Final 2019 Chinook Allocation Accounting Summary by Puget Sound Management Units.**

Allocation Unit & Stock (stk specific AEQ preterm+term)	Treaty		
	Hatchery	Natural	Total
Nooksack/Samish	9,081	29	9,110
Skagit	1,931	2,808	4,739
Stilly-Snoh	14,139	106	14,245
So. Puget Sound	41,561	330	41,891
Hood Canal	39,736	275	40,011
Str. Juan de Fuca	49	20	70
<b>Total</b>	<b>106,497</b>	<b>3,568</b>	<b>110,065</b>

Nontreaty			
Hatchery	Natural	Total	
10,547	9	10,556	0.54
1,396	843	2,238	0.32
7,582	163	7,745	0.35
35,249	671	35,921	0.46
22,980	133	23,113	0.37
79	35	114	0.62
<b>77,833</b>	<b>1,855</b>	<b>79,688</b>	<b>0.42</b>
<b>42%</b>	<b>34%</b>	<b>42%</b>	

Allocation Unit & Stock (preterm AEQ+term all stk TM)	Treaty			
	Hatchery	Natural	Mixed a/	Total
Nooksack/Samish	9,081	29	2364	11,474
Skagit	1,931	2808	-396	4,344
Stilly-Snoh	14,139	106	27	14,272
So. Puget Sound	41,561	330	1603	43,493
Hood Canal	39,736	275	51	40,061
Str. Juan de Fuca	49	20	0	70
<b>Total</b>	<b>106,497</b>	<b>3,568</b>	<b>3,649</b>	<b>113,714</b>

Nontreaty			
Hatchery	Natural	Mixed a/	Total
10,547	9	1588	12,144
1,396	843	-301	1,937
7,582	163	0	7,745
35,249	671	416	36,337
22,980	133	28	23,141
79	35	8	122
<b>77,833</b>	<b>1,855</b>	<b>1,739</b>	<b>81,427</b>
<b>42%</b>	<b>34%</b>	<b>32%</b>	<b>42%</b>

a/ Catch of mixed origin (non local Chinook) in terminal area fisheries.

**Puget Sound Stocks in Puget Sound Fisheries**

Hat		Nat	
T	NT	T	NT
95,607	71,173	2,680	1,084

H+N	
T	NT
98,288	72,257

**Table 1. Accounting of mortality in 2019 final preseason Chinook and Coho FRAM**

Final PFMC--Chinook: 52.5k NT, 35k T; Coho: 190k mk NT, 55k T

Allocation Unit & Stock	Chinook (Chin2719)		Coho (Coho1925)	
	AEQ Mortality		Total Mortality	
	Nontreaty	Treaty	Nontreaty	Treaty
Nooksack/Samish	10,556	9,110	15,672	37,333
Skagit	2,238	4,739	8,437	11,656
Stilly-Snoh	7,745	14,245	11,826	41,182
So. Puget Sound	35,921	41,891	61,059	80,066
Hood Canal	23,113	40,011	36,264	37,528
Str. Juan de Fuca	114	70	6,185	2,742
<b>Total</b>	<b>79,688</b>	<b>110,065</b>	<b>139,443</b>	<b>210,507</b>
<b>Nontreaty % of Total</b>	<b>42%</b>		<b>40%</b>	

**Table 2. Final Preseason Fishery Distribution of Adult Mortality for Puget Sound Chinook**

Allocation Unit & Stock (preterm AEQ+term all stk TM)	Nontreaty			Treaty		
	Preterminal	Terminal	Total	Preterminal	Terminal	Total
Nooksack/Samish	3,069	9,075	12,144	1,752	9,722	11,474
Skagit	949	988	1,937	449	3,894	4,344
Stilly-Snoh	6,982	763	7,745	2,184	12,088	14,272
So. Puget Sound	22,809	13,528	36,337	7,693	35,800	43,493
Hood Canal	13,265	9,875	23,141	4,555	35,506	40,061
Str. Juan de Fuca	121	1	122	70	0	70
<b>Total</b>	<b>47,196</b>	<b>34,230</b>	<b>81,427</b>	<b>16,703</b>	<b>97,011</b>	<b>113,714</b>
<b>Nontreaty % of Total</b>	<b>74%</b>	<b>26%</b>	<b>42%</b>			

**Landed Chinook Catch in Marine Sport Fisheries**

Fishery	UM	M	Total
Area 5	34	0	34
Area 6	28	0	28
Area 7	36	0	36
Area 8.1/8.2	8	0	8
Area 8D	17	0	17
Area 9	14	0	14
Area 10	23	0	23
Area 10A	157	0	157
Area 10E	2	0	2
Area 11	16	0	16
Area 12	1	0	1
Area 13	4	0	4
	<b>339</b>	<b>0</b>	<b>339</b>

### Total Mortality in Marine Sport Fisheries

<b>Fishery</b>	<b>UM</b>	<b>M</b>	<b>Total</b>
Area 5	2736	9715	12452
Area 6	741	7099	7840
Area 7	1336	6120	7457
Area 8.1/8.2	270	1790	2060
Area 8D	19	318	337
Area 9	809	8049	8859
Area 10	933	5347	6280
Area 10A	252	388	639
Area 10E	75	308	383
Area 11	444	4608	5051
Area 12	90	2134	2223
Area 13	81	3201	3282
	<b>7786</b>	<b>49078</b>	<b>56863</b>

FRAM Chinook Fishery mortality landed catch report; sum ages Chin2719

Fishery	T1: Oct - Apr	T2: May - Jun	T3: Jul - Sep	T4: Oct - Apr	subtotal T2:T4
SEAK Troll	20572	14309	62312	20572	97193
SEAK Net	0	4924	12076	0	17000
SEAK Sport	0	17241	8889	0	26130
N/C BC Net	0	2645	2590	0	5235
WCVI Net	1	11	544	2	557
GeoStr Net	5	17	135	5	157
BC JDF Net	0	0	197	0	197
BCOutSport	0	11238	26663	0	37901
N/C BC Trl	0	49431	37468	0	86899
WCVI Troll	4933	24057	13751	4933	42741
WCVI Sport	0	10925	63915	0	74840
GeoS Troll	0	0	0	0	0
N GS Sport	65	5846	22088	76	28010
S GS Sport	50	3435	3177	98	6710
BC JDF Spt	2009	4004	17180	1814	22998
NT 3:4 Trl	0	5000	6180	0	11180
Tr 3:4 Trl	362	17184	16658	3438	37280
Ar 3:4 Spt	0	740	5660	0	6400
NoWACstNet	0	0	0	0	0
NT 2 Troll	0	6400	5328	0	11728
Tr 2 Troll	0	316	842	0	1158
Ar 2 Sport	0	1395	11305	0	12700
NT GHb Net	0	0	707	0	707
Tr GHb Net	0	0	912	0	912
WillapaNet	0	0	17700	0	17700
NT 1 Troll	0	1800	1542	0	3342
Ar 1 Sport	0	1106	6044	0	7150
ColRvr Net	0	0	0	0	0
Buoy10 Spt	0	0	0	0	0
Cen OR Trl	5131	10893	5212	5495	21600
Cen OR Spt	1	386	3585	1	3972
KMZ Troll	0	3789	4974	0	8763
KMZ Sport	0	2081	2356	0	4437
So Cal Trl	0	45673	52517	0	98190
So Cal Spt	12834	3926	21185	12643	37754

Ar 7 Sport	3715	0	1467	3277	4744
NT 7:7ANet	166	0	3541	164	3705
Tr 7:7ANet	30	0	4670	30	4700
NT 7BCDNet	0	0	4069	19	4088
Tr 7BCDNet	6	0	7492	0	7492
Tr JDF Trl	276	340	422	62	824
Ar 5 Sport	564	0	4666	554	5220
NT JDF Net	0	0	0	0	0
Tr JDF Net	22	0	442	27	469
Ar 8-1 Spt	970	0	0	803	803
NT SkagNet	0	0	0	0	0
Tr SkagNet	2	0	28	3	31
Area8D Spt	0	0	304	0	304
NT StSnNet	0	0	0	0	0
Tr StSnNet	0	0	191	0	191
NT TulaNet	0	0	1	1	2
Tr TulaNet	0	0	11638	0	11638
Ar 9 Sport	2078	0	3501	1281	4782
Ar 6 Sport	1988	0	4392	1453	5845
Tr 6B:9Net	11	0	490	11	501
A 10 Sport	792	0	3079	229	3308
A 11 Sport	550	0	2818	466	3284
NT10:11Net	316	0	11	282	293
Tr10:11Net	11	0	12	123	135
A 10A Sprt	0	0	432	0	432
Tr 10A Net	0	0	1573	1	1574
A 10E Sprt	0	0	206	0	206
Tr 10E Net	0	0	5040	0	5040
A 12 Sport	389	0	943	441	1384
NT HC Net	63	0	0	60	60
Tr HC Net	5	0	5407	63	5470
A 13 Sport	83	196	2366	99	2661
NT SPS Net	0	0	0	0	0
Tr SPS Net	73	0	5426	1	5427
NT 13A Net	0	0	0	0	0
Tr 13A Net	0	0	3037	36	3073

Table 1. FRAM Estimates of Chinook encounters and mortalities in WA sport MSFs (Model Run: SLC-Chin2719, Report Created: 4/22/2019)

Ar 7 Sport	Jul-Sep	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		1,663	1,959	3,622	1,552	311	1,863	1,447	20	1,467
Sublegal		1,895	1,366	3,261	379	273	652	0	0	0
<b>Total</b>		<b>3,558</b>	<b>3,325</b>	<b>6,883</b>	<b>1,931</b>	<b>585</b>	<b>2,515</b>	<b>1,447</b>	<b>20</b>	<b>1,467</b>
Ar 7 Sport	Oct-Apr	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		3,749	1,616	5,365	3,497	257	3,754	3,261	16	3,277
Sublegal		2,623	1,764	4,387	525	353	877	0	0	0
<b>Total</b>		<b>6,371</b>	<b>3,380</b>	<b>9,752</b>	<b>4,022</b>	<b>610</b>	<b>4,632</b>	<b>3,261</b>	<b>16</b>	<b>3,277</b>
Ar 5 Sport	Jul-Sep	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		5,329	2,965	8,294	4,972	471	5,443	4,636	30	4,666
Sublegal		12,534	6,618	19,152	2,507	1,324	3,830	0	0	0
<b>Total</b>		<b>17,863</b>	<b>9,583</b>	<b>27,446</b>	<b>7,479</b>	<b>1,795</b>	<b>9,274</b>	<b>4,636</b>	<b>30</b>	<b>4,666</b>
Ar 5 Sport	Oct-Apr	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		632	200	832	590	34	623	550	4	554
Sublegal		1,116	722	1,838	223	144	368	0	0	0
<b>Total</b>		<b>1,748</b>	<b>923</b>	<b>2,671</b>	<b>813</b>	<b>178</b>	<b>991</b>	<b>550</b>	<b>4</b>	<b>554</b>
Ar 8-1 Spt	Oct-Apr	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		915	254	1,168	853	45	898	796	8	803
Sublegal		2,522	640	3,162	504	128	632	0	0	0
<b>Total</b>		<b>3,436</b>	<b>894</b>	<b>4,330</b>	<b>1,358</b>	<b>173</b>	<b>1,530</b>	<b>796</b>	<b>8</b>	<b>803</b>
Ar 9 Sport	Jul-Sep	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		4,013	959	4,972	3,744	152	3,897	3,491	10	3,501
Sublegal		3,919	444	4,363	784	89	873	0	0	0
<b>Total</b>		<b>7,932</b>	<b>1,403</b>	<b>9,335</b>	<b>4,528</b>	<b>241</b>	<b>4,769</b>	<b>3,491</b>	<b>10</b>	<b>3,501</b>
Ar 9 Sport	Oct-Apr	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		1,468	460	1,927	1,369	73	1,442	1,277	5	1,281
Sublegal		1,739	1,011	2,750	348	202	550	0	0	0
<b>Total</b>		<b>3,207</b>	<b>1,471</b>	<b>4,677</b>	<b>1,717</b>	<b>275</b>	<b>1,992</b>	<b>1,277</b>	<b>5</b>	<b>1,281</b>
Ar 6 Sport	Jul-Sep	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		5,028	1,737	6,766	4,691	276	4,968	4,375	17	4,392
Sublegal		2,189	840	3,029	438	168	606	0	0	0
<b>Total</b>		<b>7,218</b>	<b>2,577</b>	<b>9,794</b>	<b>5,129</b>	<b>444</b>	<b>5,573</b>	<b>4,375</b>	<b>17</b>	<b>4,392</b>
Ar 6 Sport	Oct-Apr	Total Encounters			Total Mortality			Total Landed		
		Mark	Unmark	Total	Mark	Unmark	Total	Mark	Unmark	Total
Legal		1,659	526	2,185	1,547	88	1,636	1,443	11	1,453
Sublegal		1,022	654	1,676	204	131	335	0	0	0
<b>Total</b>		<b>2,680</b>	<b>1,180</b>	<b>3,860</b>	<b>1,752</b>	<b>219</b>	<b>1,971</b>	<b>1,443</b>	<b>11</b>	<b>1,453</b>

**Table 1. FRAM Estimates of Chinook encounters and mortalities in WA sport MSFs (Model Run: SLC-Chin2719, Report Created: 4/22/2019 4:28:36 PM)**

A 10 Sport	Jul-Sep	Total Encounters				Total Mortality				Total Landed		
		Mark	Unmark	Total		Mark	Unmark	Total		Mark	Unmark	Total
Legal		3,513	1,097	4,610		3,278	184	3,462		3,057	22	3,079
Sublegal		3,539	1,793	5,332		708	359	1,066		0	0	0
	<b>Total</b>	<b>7,052</b>	<b>2,890</b>	<b>9,942</b>		<b>3,986</b>	<b>543</b>	<b>4,529</b>		<b>3,057</b>	<b>22</b>	<b>3,079</b>
A 10 Sport	Oct-Apr	Total Encounters				Total Mortality				Total Landed		
Legal		263	76	339		245	12	257		229	1	229
Sublegal		2,079	515	2,594		416	103	519		0	0	0
	<b>Total</b>	<b>2,342</b>	<b>591</b>	<b>2,933</b>		<b>661</b>	<b>115</b>	<b>776</b>		<b>229</b>	<b>1</b>	<b>229</b>
A 11 Sport	Jul-Sep	Total Encounters				Total Mortality				Total Landed		
Legal		3,224	673	3,896		3,008	113	3,121		2,805	13	2,818
Sublegal		3,945	1,205	5,149		789	241	1,030		0	0	0
	<b>Total</b>	<b>7,168</b>	<b>1,877</b>	<b>9,046</b>		<b>3,797</b>	<b>354</b>	<b>4,150</b>		<b>2,805</b>	<b>13</b>	<b>2,818</b>
A 11 Sport	Oct-Apr	Total Encounters				Total Mortality				Total Landed		
Legal		532	150	682		496	25	522		463	3	466
Sublegal		1,573	322	1,895		315	64	379		0	0	0
	<b>Total</b>	<b>2,105</b>	<b>472</b>	<b>2,577</b>		<b>811</b>	<b>90</b>	<b>901</b>		<b>463</b>	<b>3</b>	<b>466</b>
A 10E Sprt	Jul-Sep	Total Encounters				Total Mortality				Total Landed		
Legal		234	117	351		218	20	238		204	2	206
Sublegal		447	277	725		89	55	145		0	0	0
	<b>Total</b>	<b>682</b>	<b>394</b>	<b>1,076</b>		<b>308</b>	<b>75</b>	<b>383</b>		<b>204</b>	<b>2</b>	<b>206</b>
A 12 Sport	Jul-Sep	Total Encounters				Total Mortality				Total Landed		
Legal		1,083	97	1,180		1,011	15	1,026		942	1	943
Sublegal		1,900	197	2,097		380	39	419		0	0	0
	<b>Total</b>	<b>2,983</b>	<b>294</b>	<b>3,277</b>		<b>1,391</b>	<b>55</b>	<b>1,445</b>		<b>942</b>	<b>1</b>	<b>943</b>
A 12 Sport	Oct-Apr	Total Encounters				Total Mortality				Total Landed		
Legal		507	47	554		473	7	480		441	0	441
Sublegal		711	73	783		142	15	157		0	0	0
	<b>Total</b>	<b>1,217</b>	<b>120</b>	<b>1,337</b>		<b>615</b>	<b>22</b>	<b>637</b>		<b>441</b>	<b>0</b>	<b>441</b>
A 13 Sport	May-Jun	Total Encounters				Total Mortality				Total Landed		
Legal		225	23	248		210	4	213		196	0	196
Sublegal		122	10	131		24	2	26		0	0	0
	<b>Total</b>	<b>346</b>	<b>33</b>	<b>380</b>		<b>234</b>	<b>6</b>	<b>240</b>		<b>196</b>	<b>0</b>	<b>196</b>
A 13 Sport	Jul-Sep	Total Encounters				Total Mortality				Total Landed		
Legal		2,717	263	2,979		2,535	42	2,576		2,363	3	2,366
Sublegal		844	67	912		169	13	182		0	0	0
	<b>Total</b>	<b>3,561</b>	<b>330</b>	<b>3,891</b>		<b>2,704</b>	<b>55</b>	<b>2,759</b>		<b>2,363</b>	<b>3</b>	<b>2,366</b>
A 13 Sport	Oct-Apr	Total Encounters				Total Mortality				Total Landed		
Legal		112	12	124		105	3	108		98	1	99
Sublegal		791	87	878		158	17	176		0	0	0
	<b>Total</b>	<b>903</b>	<b>99</b>	<b>1,003</b>		<b>263</b>	<b>20</b>	<b>283</b>		<b>98</b>	<b>1</b>	<b>99</b>

**TABLE 1: DESCRIPTION OF FISHERY REGULATIONS AND SUMMARY OF COHO CATCH TARGETS**

FRAM Run Number: bc-Coho1925  
 Run Description: PPMC April 15 Council Adopted  
 Impacts expressed as total fishery-related mortality, including landed catch, non-retention mortality, and other fishery-related mortality, except where noted.

04/16/19  
 08:07 AM

Fishery	Catch + Mortality	Comments
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CANADIAN (B.C.) FISHERIES:		
WCVI Troll	2,006	<b>Final 2019 PPMC April Coho; Coho1925 NT 190,000 mk, T 55,000</b>
Area 20 Net	0	
Georgia St. Sport	17,015	
Georgia St. Troll	0	

**SOUTH OF CAPE FALCON: 130,493 Sport TAC 90,000 marked and 9,000 non-marked coho**

NORTH OF CAPE FALCON OCEAN:		
Treaty Ocean Troll	58,429	<b>TAC 55,000 coho</b>
NT Ocean Troll	40,798	<b>Troll TAC 30,400 marked coho</b>
NT Ocean Sport	184,439	<b>Sport TAC 159,600 marked coho</b>
NT North-of-Falc. total:	225,237	
4B Add-on	0	4B Add-on fishery of 0
Canadian License catch	50	(For Areas 4 and 4B) Landed catch only, static value
Buoy 10	58,708	<b>Sport 60,000 marked coho</b>

**PUGET SOUND SPORT & TROLL:**  
 Treaty Strait Troll 406 **Summer treaty troll - 8/15-9/30 7 day/wk, model input source data 2013-2018 (no 2016 fishery/data).**

Puget Sound Sport:	Area	Catch + Mortality	Comments
	Area 5	23,937	5/1-6/30 clsd; 7/1-8/15, bag 2, ch MSF & co MSF, cm NR, ch 22" min size; 8/16-9/30, bag 2, co MSF, cm & ch NR; 10/1-2/29 clsd; 3/1-4/30 b
	Area 6	1,502	5/1-6/30 clsd; 7/1-8/15 bag 2, co msf, ch MSF expt ch NR East of Ediz, cm NR, ch 22" min size, see LOAF for additional spatial closures with 8/16-9/30 bag 2, co MSF ch NR, 10/1-2/29 clsd; 3/1-4/15 2 bag, ch MSF, co MSF, ch 22" min size Area 6D recreational, 5/1-9/30 clsd; 10/1-10/31 bag 2, hat co only; 11/1-4/30 clsd
	Area 7	1,124	5/1-6/30 clsd; 7/1-7/31, bag 2, ch MSF, co, ch 22" min size, B'Bay & Samish Bay clsd; Rosario closure in effect 8/1-8/31 clsd; 9/1-9/30, bag 2 ch NR, see LOAF for spatial closures within area 7 during this time period;  Bellingham Bay 8/16-9/30, bag 4, 2 ch, co, ch 22" min size; 10/1-1/31 clsd; 2/1-4/15 bag 2, ch MSF, co NR, ch 22" min size; 4/16-4/30 clsd
	Area 8-1	2,708	5/1-7/31 clsd; 8/1 - 10/31 bag 2 co, ch NR; 11/1-1/31 clsd; 2/1-4/30 bag 2 ch MSF, co NR
	Area 8-2	2,138	5/1-8/15 clsd, 8/16-9/15, bag 2 co, ch NR, co only South and West from Clinton/Mukilteo line; 9/17-1/31 clsd; 2/1-4/30 bag 2, ch MSF, co NR, ch 22" min size;
	Area 9	16,601	5/1-7/24 clsd; 7/25-8/15, bag 2, ch MSF, co MSF, cm NR, ch 22" min size, south and west of line from Foulweather Bluff to Clele open to shore 8/16-9/30 s bag-2, co MSF, cm & ch NR; 10/1-1/31 clsd; 2/1-4/15 bag 2, ch MSF, co MSF, ch 22" min size; 4/16-4/30 clsd; Edmonds PR recreational - Yr-round: bag 2, 1 ch, cm NR 8/1-8/31, ch 22" min size
	Area 10	21,981	5/1-6/31, closed; 6/1-7/24 bag 2, co, ch & cm NR; 7/25-8/30 bag 2, ch MSF, co, cm NR; 9/1-11/15 co, ch NR, cm NR through 9/15; 11/16-12/31 clsd 1/1-3/30 bag 2, ch MSF, co, ch 22" min size; 4/1-4/30 clsd Elliot Bay - Clsd 7/1-8/31, except 8/2-8/5 (12:00pm) bag 2, co MSF, cm NR; additional salmon fishing ISU dependent; Shishole Bay - clsd to s. Sinc SAF - 7/1-9/30, bag 3, 2 pole option, ch & co MSF, cm NR from 8/1-9/15, ch 22" min size; Piers (except Sinclair Inlet Piers) Yr-round: bag 2, 1 ch, cm NR from 8/1-9/15, ch 22" min size;
	Area 11	2,764	5/1-6/31 clsd; 7/1-9/30 (Sat.-Wed.) bag 2, 1 ch MSF, co, ch 22" min size, (Thurs.-Fri) shore only, ch NR; Commencement Bay closed to salmon 10/1-12/31 clsd; 1/1-4/30 bag 2, ch MSF, ch 22" min size Commencement Bay clsd 4/1-4/30; Piers Yr-Round: bag 2, 1 ch, ch 22" min size
	Area 13	675	5/1-6/30 bag 2, 2 pole option, ch MSF, co MSF, ch 22" min size; 7/1-9/30 bag 2, 2 pole option, ch MSF, co MSF, ch 20" min size 10/1-4/30 bag 2, 2 pole option, ch MSF, co MSF, ch 22" min size Minter Creek mouth - clsd 4/16-9/30; Lower Budd Inlet - clsd 7/16-10/31; Fox Island Pr - Yr-Round: bag 2, 1 ch, ch 22" min size
	Area 12	2,979	No. Ayock - 5/1-7/31 clsd; 8/1-9/30, bag 4, ch & cm NR, see LOAF for additional spatial closures within No. Ayock; 10/1-12/31, bag-4, 2 ch MSF Sp. Ayock - 5/1-6/30 clsd; 7/1-9/30, bag 4, 2 pole option, 2 ch MSF, cm NR; 10/1-12/31, bag 4, 2 ch MSF, cm NR through 10/15; 1/1-4/30, bag Hoodsport - Same as A12 except from 7/1-12/31, bag 4, 2 pole option from 7/1-10/15, ch MSF, cm NR from 7/1-10/15, no min size

PUGET SOUND NET:	JUL	AUG	SEP	OCT-DEC	TOTAL
JDF 4B/5/6C Net NTrty	0	0	0	0	0
Trty	159	1,045	101	1,013	2,318
SJ16/77A Net NTrty	1	231	961	3,058	4,251
Trty	0	297	418	5,914	6,629

2019 Total Mortality (Fraser Panel and other)

JDF Chinook: Trty (GN): wb 6/16 through wb 8/11, Set Gillnet Only, 7 days/wk  
 JDF Sockeye: Trty (GN): wb 7/21 through wb 9/15, Schedule TBD by Fraser Panel  
 JDF Coho: Trty (GN): end of Fraser Panel control through wb 10/6, 6 days/wk  
 JDF Chum: Trty (GN): wb 10/13 through wb 11/3, 6 days/wk

SJ1 Coho: NTrty (RN): Open 7 d/wk from end of Fraser Panel control thru chum mgmt. period of Wk. 45 beginning 11/3. MSF coho and Chinook thru Wk 40 beginning 9/29, chum NR though 9/29, chinook NR after 9/29.  
 Trty (RN): 7 days/wk beginning at end of Fraser Panel management through wb 11/10; wild ch NR before 9/30, ch NR after 9/30; wild co NR through 9/30, coho retention after 9/30; cm NR through 9/30, cm retention after 9/30.

SJ1 Sockeye/Pink: NTrty (GN/PS/RN): Schedule TBD by Fraser Panel, modeled as weeks 31-37: 0-2-1-2-0-2-0, PS: coho, chum & chinook NR. RN: MSF coho & chinook (chinook 300 cap).  
 Trty (GN/PS/RN): Schedule TBD by Fraser Panel, modeled as: wk 31 (wb 7/28) thru wk 38 (wb 9/15). RN: wild co, wild ch, and cm NR; may retain marked Chinook through 9/30.

SJ1 Chum: NTrty (GN/PS/RN): Opens Wk. 41 beginning 10/6, PS & GN schedule to be determined with co-mgr. modeled wks 41-45, 4-7-7-7-7, PS co&ch NR, RN: 7 days/wk with release requirements per coho fishery.  
 Trty (GN/PS/RN): Schedule TBD by co-managers, modeled as: wk 41 (wb 10/6) - wk 46 (wb 11/10). RN: 7 days/wk with release requirements per coho fishery.

**LANDED CATCH--ALL STOCKS**

2:26:26 PM

FRAM Run:		bc-Coho1925					
Run Description:		PFMC April 15 Council Adopted					
Fishery	Area	Jan-Jun	Jul	Aug	Sep	Oct-Dec	Total
Alaska	all	18832	339806	276534	87889	0	723061
BC	all	9416	207470	108331	27214	1101	353532
<b>North of Falcon:</b>							
<b>Troll:</b>	<b>Treaty Total</b>	0	8325	33725	12949	0	54999
	Cape Flat	0	5410	23248	10864	0	39522
	Quillayut	0	2673	9580	1887	0	14140
	Grays H	0	242	897	198	0	1337
	<b>Nontreaty Total</b>	0	8063	10845	11493	0	30401
	Cape Flat	0	261	307	321	0	889
	Quillayut	0	1712	3810	1592	0	7114
	Grays H	0	3196	3892	3730	0	10818
	Col River	0	2894	2836	5850	0	11580
<b>Sport:</b>	Cape Flat	618	6194	7185	2604	0	16601
	Quillayut	124	573	2440	1014	0	4151
	Gr Harbor	3353	16786	28318	10594	0	59051
	Col River	3674	17158	48003	10965	0	79800
	Buoy 10	0	0	0	50000	0	50000
<b>NOF TOTAL w/ B10</b>		<b>7769</b>	<b>57099</b>	<b>130516</b>	<b>99619</b>	<b>0</b>	<b>295003</b>
<b>South of Falcon:</b>							
<b>Troll:</b>	Tillmk	0	0	0	0	0	0
	Newprt	0	0	0	0	0	0
	Coos B	0	0	0	0	0	0
	Brookngs	0	0	0	0	0	0
	CaKMZ	0	0	0	0	0	0
	Ft Bragg	0	0	0	0	0	0
	So. Calif	0	0	0	0	0	0
<b>Sport:</b>	Tillmk	3060	15057	9864	2635	0	30616
	Newprt	2905	25161	14692	4491	0	47249
	Coos B	1371	12256	3189	1874	0	18690
	Brookngs	331	1591	522	0	0	2444
	CaKMZ	0	0	0	0	0	0
	Ft Bragg	0	0	0	0	0	0
	So. Calif	0	0	0	0	0	0
<b>SOF TOTAL</b>		<b>7667</b>	<b>54065</b>	<b>28267</b>	<b>9000</b>	<b>0</b>	<b>98999</b>
<b>Puget Sound</b>							
<b>Troll:</b>	JDF	35	10	241	97	0	383
<b>Sport:</b>	Area 5	0	2949	6332	11246	0	20527
	Area 6	0	62	429	777	0	1268
	Area 7	0	114	0	956	0	1070
	Area 8-1	0	0	331	1700	547	2578
	Area 8-2	0	0	234	1334	0	1568
	Area 9	3	199	1765	11469	0	13436
	Area 10	1970	1791	2642	12897	1634	20934
	Area 11	41	155	623	1813	0	2632
	Area 13	113	30	30	232	155	560
	Area 12	0	0	1100	1543	194	2837
<b>Net:</b>	JDF NTrty	0	0	0	0	0	0
	JDF Trty	0	156	1025	99	993	2273
	San Juan I NTrty	0	0	21	130	803	954
	San Juan I Trty	0	0	291	410	5800	6501
	BhamBay NTrty	0	0	0	4738	407	5145
	BhamBay Trty	0	0	0	16163	1332	17495
	Area 8 NTrty	0	0	0	0	0	0
	Area 8 Trty	0	0	0	192	125	317
	Area 8A NTrty	0	0	0	0	0	0
	Area 8A Trty	0	0	0	5087	2409	7496
	Area 8D NTrty	0	0	0	381	522	903
	Area 8D Trty	0	0	0	20177	10475	30652
	Area 9 NTrty,Trty	0	0	0	0	0	0
	Area 9a/12a NTrty	0	0	0	3483	514	3997
	Area 9a/12a Trty	0	0	0	15509	1785	17294
	HC 12, 12B-D NTrty	0	0	0	0	3428	3428
	HC 12, 12B-D Trty	0	0	0	671	7812	8483
	Area 10, 10A, 10E NTrty	0	0	0	37	531	568
	Area 10, 10A, 10E Trty	0	0	0	5897	3895	9792
	Area 11, 11A NTrty	0	0	0	0	169	169
	Area 11, 11A Trty	0	0	0	384	321	705
	Area 13, 13A-K NTrty	0	0	0	0	500	500
	Area 13, 13A-K Trty	0	0	0	10087	13137	23224
<b>AK to CA total</b>		<b>45846</b>	<b>663906</b>	<b>558712</b>	<b>351231</b>	<b>58589</b>	<b>1678284</b>

TOTAL MORTALITY--ALL STOCKS							
FRAM Run:	bc-Coho1925						
Run Description:	PFMC April 15 Council Adopted						
Fishery	Area	Jan-Jun	Jul	Aug	Sep	Oct-Dec	Total
Alaska	all	19774	356797	290360	92284	0	759215
BC	all	10111	233472	139001	30273	2173	415030
<b>North of Falcon:</b>							
<b>Troll:</b>	<b>Treaty Total</b>	677	8741	35411	13596	3	58428
	Cape Flat	525	5680	24410	11407	3	42025
	Quillayut	135	2807	10059	1981	0	14982
	Grays H	17	254	942	208	0	1421
	<b>Nontreaty Total</b>	1636	10015	13911	15236	0	40798
	Cape Flat	64	339	408	427	0	1238
	Quillayut	176	2216	5040	2083	0	9515
	Grays H	810	4024	4966	5113	0	14913
	Col River	586	3436	3497	7613	0	15132
<b>Sport:</b>	<b>Cape Flat</b>	791	7326	8834	3161	0	20112
	Quillayut	142	672	2789	1247	0	4850
	Gr Harbor	3756	19164	33217	12644	0	68781
	Col River	4069	19070	54999	12557	0	90695
	Buoy 10	0	0	0	58708	0	58708
<b>NOF TOTAL w/ B10</b>		11071	64988	149161	117149	3	342372
<b>South of Falcon:</b>							
<b>Troll:</b>	<b>Tillmk</b>	569	172	231	109	0	1081
	Newprt	1873	984	1349	283	0	4489
	Coos B	1676	575	750	42	0	3043
	Brookngs	60	224	24	0	0	308
	CaKMZ	379	290	153	0	0	822
	Ft Bragg	561	377	48	0	0	986
	So. Calif	586	54	20	11	0	671
<b>Sport:</b>	<b>Tillmk</b>	3528	17583	11799	2934	0	35844
	Newprt	3401	29615	17680	4873	0	55569
	Coos B	1778	14548	4131	2075	0	22532
	Brookngs	475	2008	754	15	0	3252
	CaKMZ	718	212	102	1	0	1033
	Ft Bragg	429	158	30	24	0	641
	So. Calif	113	92	13	6	0	224
<b>SOF TOTAL</b>		16146	66892	37084	10373	0	130495
<b>Puget Sound</b>							
<b>Troll:</b>	JDF	37	10	253	102	1	403
<b>Sport:</b>	<b>Area 5</b>	1	3401	7421	13114	0	23937
	Area 6	7	72	500	923	0	1502
	Area 7	0	120	0	1004	0	1124
	Area 8-1	0	0	348	1785	575	2708
	Area 8-2	1	4	263	1870	0	2138
	Area 9	5	240	2140	14216	0	16601
	Area 10	2069	1881	2774	13542	1716	21982
	Area 11	43	163	654	1904	0	2764
	Area 13	135	35	36	281	188	675
	Area 12	0	0	1155	1620	204	2979
<b>Net:</b>	<b>JDF NTrty</b>	0	0	0	0	0	0
	JDF Trty	0	159	1045	101	1013	2318
	San Juan I NTrty	0	1	231	961	3058	4251
	San Juan I Trty	0	0	297	418	5914	6629
	BhamBay NTrty	0	0	0	4832	415	5247
	BhamBay Trty	0	0	0	16486	1359	17845
	Area 8 NTrty	0	0	0	0	0	0
	Area 8 Trty	0	0	0	196	127	323
	Area 8A NTrty	0	0	0	0	0	0
	Area 8A Trty	0	0	0	5188	2457	7645
	Area 8D NTrty	0	0	0	389	683	1072
	Area 8D Trty	0	0	0	20581	10685	31266
	Area 9 NTrty, Trty	0	0	0	0	0	0
	Area 9a/12a NTrty	0	0	0	3552	525	4077
	Area 9a/12a Trty	0	0	0	15819	1933	17752
	HC 12, 12B-D NTrty	0	0	0	5	3496	3501
	HC 12, 12B-D Trty	0	0	0	684	8016	8700
	Area 10, 10A, 10E NTrty	0	0	0	38	542	580
	Area 10, 10A, 10E Trty	0	0	0	6015	3973	9988
	Area 11, 11A NTrty	0	0	0	0	173	173
	Area 11, 11A Trty	0	0	0	392	328	720
	Area 13, 13A-K NTrty	0	0	0	0	510	510
	Area 13, 13A-K Trty	0	0	0	10289	13399	23688
<b>AK to CA total</b>		59400	728235	632723	386386	63466	1870210

**TABLE 2A: COHO FISHERY IMPACT SUMMARY HIGHLIGHTS**

Estimated fishery impacts from regulations described by the following FRAM run:

FRAM Run Number:

bc-Coho1925

bc-Coho192

Run Description:

PFMC April 15 Council Adopted

PFMC April 15 Council Adopted

Impacts are expressed as total fishery-related mortality, incl. landed catch, non-retention mort., and other fishery-related mort.

FISHERY	ALL STOCKS MORTALITY			SKAGIT			SKAGIT	STILLY	SNOHOM	STILLY/SNOHOM		STILLY/S
	Marked	UnMarked	Total	Wild	Marked	UnMarked	Total	Wild	Wild	Marked	UnMarked	Total
Projected Spawning Escapement				39,317	4,761	40,093	44,853	18,488	50,564	6,972	70,686	77,658
Spawning Low/Normal Esc. Breakpoint				25,000				10,000	50,000			
Projected Exploitation Rate (all fisheries)				32.5%				22.5%	19.4%			
Exploitation Rate Ceiling (updated annually)				35%				50%	40%			
Exploitation in Southern U.S. Fisheries				30%				21%	18%			
CANADIAN	67,943	362,343	430,286	1,221	642	1,245	1,887	284	751	1,386	1,061	2,447
ALASKA	162,804	3,451,602	3,614,406	1	0	1	1	0	0	0	0	0
S. of Falcon Troll	6,560	4,842	11,402	13	1	13	14	5	13	8	20	28
S. of Falcon Sport	100,229	18,860	119,089	48	27	49	76	21	56	146	78	224
NORTH OF CAPE FALCON OCEAN:												
Treaty Troll	32,579	25,850	58,429	2,018	284	2,057	2,341	572	1,509	952	2,130	3,082
NT Troll N. Leadbtr	20,470	5,197	25,667	207	87	210	297	73	191	337	270	607
NT Troll S. Leadbtr	12,679	2,453	15,132	22	9	23	32	7	19	32	27	59
Sport: Area 1	84,080	6,615	90,695	21	15	22	37	6	17	51	23	74
Buoy 10	52,467	6,241	58,708	2	1	2	3	0	0	1	0	1
Area 2	62,027	6,754	68,781	112	78	114	192	36	95	297	135	432
Area 3	4,358	493	4,851	17	12	18	30	10	27	82	38	120
Area 4 *	17,349	2,763	20,112	345	238	352	590	82	217	668	307	975
PUGET SOUND:												
Treaty Troll	226	178	404	24	3	24	27	16	42	27	59	86
Sport: Areas 5	21,672	2,265	23,937	352	356	359	715	98	258	1,161	364	1,525
Area 6	1,336	166	1,502	34	30	34	64	9	23	90	32	122
Area 7	473	651	1,124	129	17	132	149	14	37	22	53	75
Area 8-1,2	2,283	2,563	4,846	1,351	195	1,377	1,572	187	578	879	789	1,668
Area 9	14,214	2,388	16,602	424	244	432	676	180	475	1,220	670	1,890
Area 12	1,869	1,110	2,979	1	0	1	1	0	0	0	0	0
Area 10	15,702	6,279	21,981	757	109	771	880	97	256	161	362	523
Area 11	1,906	857	2,763	19	3	20	23	8	21	13	29	42
Area 13	592	83	675	6	2	6	8	0	1	1	1	2
Freshwater Sport	n/a	n/a	n/a	2,178	n/a	n/a	2,905	1,025	1,114	128	2,178	2,306
Pre-terminal net:												
6/7/7A NTrty	2,608	1,643	4,251	124	18	127	145	6	16	10	23	33
6/7/7A Trty	4,244	2,385	6,629	156	21	159	180	6	15	8	22	30
4B/5/6C NTrty	0	0	0	0	0	0	0	0	0	0	0	0
4B/5/6C Trty	1,302	1,016	2,318	126	17	128	145	41	108	61	153	214
	0	0	0	-	0	0	0	-	-	0	0	0
	0	0	0	-	0	0	0	-	-	0	0	0
Terminal net:												
Skagit Bay (8) NTrty	0	0	0	0	0	0	0	0	0	0	0	0
Skagit Bay (8) Trty	45	278	323	268	41	274	315	0	1	1	2	3
Area 8A NTrty	752	0	752	0	0	0	0	0	0	0	0	0
Area 8A Trty	2,992	4,654	7,646	811	107	826	933	906	2,662	2,371	3,648	6,019
Hood Canal NTrty	4,982	2,595	7,577	11	1	11	12	5	14	4	20	24
Hood Canal Trty	19,108	7,344	26,452	20	3	20	23	11	28	11	39	50
South Pgt Snd NTrty	1,021	242	1,263	4	0	4	4	1	5	1	6	7
South Pgt Snd Trty	29,446	4,947	34,393	40	5	41	46	14	38	22	54	76
B'ham Bay(7B) NTrty	3,606	1,845	5,451	85	11	11	11	3	9	5	13	18
B'ham Bay(7B) Trty	11,860	5,985	17,845	259	34	264	298	11	29	17	40	57
Local Extreme Terminal Net:												
Nontreaty	Refer to TAMMs for individual stocks			0	0	0	0	85	223	752	319	1,071
Treaty				6,604	654	6,694	7,348	1,559	3,328	26,352	5,213	31,565
Test				1,107	196	1,138	1,334	n/a	n/a			

\* Area 4 Sport numbers include 4B add-on, if any, and a number of fish caught on Canadian licenses in areas 4 and 4B.

FRAM assumes that there are no changes in the relative exploitation rates of model stocks estimated from the base period (1986-91). The possibility exists that with the changes to the structure of a fishery the relative exploitation rates of the stock may change as well, though an analysis of the data has yet to be done.

**RECAPITULATION OF IMPACTS ACCOUNTING:**

	WILD	TOTAL	WILD	WILD	TOTAL
Nontreaty Total Wild Impacts:	6,262	8,436	1,958	3,665	11,826
Treaty Total Wild Impacts:	10,326	11,656	3,136	7,760	41,182
Amt NT above (or below) T:	(4,064)	(3,220)	(1,178)	(4,095)	#####
Nontreaty Wild Impacts w/o SOF:	6,201	8,346	1,932	3,596	11,574
Treaty Wild Impacts w/o SOF:	10,326	11,656	3,136	7,760	41,182
Amt NT above (or below) T w/o SOF:	(4,125)	(3,310)	(1,204)	(4,164)	#####

**TABLE 2B: COHO FISHERY IMPACT SUMMARY HIGHLIGHTS**

04/16/19

Estimated fishery impacts from regulations described by the following FRAM run:

08:07 AM

FRAM Run Number:

Run Description:

Impacts are expressed as total fishery-related mortality, including landed catch, non-retention mortality, and other fishery-related mortality. Treaty/NonTreaty splits are NOT based on CWT recovery data.

FISHERY	HOOD CANAL			HOOD CANAL Total	JUAN DE FUCA TRIBS			JUAN DE FUCA TRIBS Total
	Wild	Marked	UnMarked		Wild	Marked	UnMarked	
Projected Spawning Escapement	22,415	25,160	24,491	49,651	8,044	5,320	10,926	16,246
Spawning Low/Normal Esc. Breakpoint	14,350			49,651	11,000			16,245
Projected Exploitation Rate (all fisheries)	44.3%				8.9%			
Exploitation Rate Ceiling (updated annually)	45%				(up to 10% US ER)			
Exploitation in Southern U.S. Fisheries	42%				7.1%			
<b>CANADIAN</b>	<b>921</b>	<b>4,888</b>	<b>1,019</b>	<b>5,907</b>	<b>108</b>	<b>465</b>	<b>161</b>	<b>626</b>
ALASKA	11	21	12	33	48	63	71	134
S. of Falcon Troll	17	31	17	48	5	6	7	13
S. of Falcon Sport	39	374	45	419	31	93	48	141
<b>NORTH OF CAPE FALCON OCEAN:</b>								
Treaty Troll	1,472	2,904	1,630	4,534	261	348	391	739
NT Troll N. Leadbtr	169	921	189	1,110	31	129	47	176
NT Troll S. Leadbtr	13	70	14	84	4	15	6	21
Sport: Area 1	21	202	23	225	4	30	7	37
Buoy 10	7	54	7	61	0	0	0	0
Area 2	101	962	112	1,074	19	122	28	150
Area 3	63	545	69	614	3	19	4	23
Area 4 *	250	2,370	277	2,647	14	91	21	112
<b>PUGET SOUND:</b>								
Treaty Troll	39	76	43	119	3	3	4	7
Sport: Areas 5	371	5,086	411	5,497	73	700	111	811
Area 6	34	412	38	450	7	56	10	66
Area 7	31	57	34	91	0	0	0	0
Area 8	9	78	9	87	0	0	0	0
Area 9	716	5,344	795	6,139	6	33	9	42
Area 12	832	1,471	928	2,399	0	0	0	0
Area 10	1,784	3,051	1,969	5,020	9	11	13	24
Area 11	70	119	78	197	0	0	0	0
Area 13	5	20	6	26	0	0	0	0
Freshwater Sport	104	2,556	138	2,694	0	783	56	839
<b>Pre-terminal net:</b>								
6/7/7A NTrty	21	36	24	60	8	11	13	24
6/7/7A Trty	28	40	31	71	14	18	22	40
4B/5/6C NTrty	0	0	0	0	0	0	0	0
4B/5/6C Trty	190	337	210	547	105	130	158	288
6B/9 NTrty	-	0	0	0	-	0	0	0
6B/9 Trty	-	0	0	0	-	0	0	0
<b>Terminal net:</b>								
Skagit Bay (8) NTrty	0	0	0	0	0	0	0	0
Skagit Bay (8) Trty	0	1	0	1	0	0	0	0
Area 8A NTrty	0	0	0	0	0	0	0	0
Area 8A Trty	41	67	46	113	1	1	1	2
Hood Canal NTrty	1,766	1,362	1,875	3,237	9	12	13	25
Hood Canal Trty	5,009	2,921	5,360	8,281	15	19	23	42
South Pgt Snd NTrty	48	64	52	116	0	1	1	2
South Pgt Snd Trty	485	792	538	1,330	5	6	7	13
B'ham Bay(7B) NTrty	2	4	2	6	0	0	0	0
B'ham Bay(7B) Trty	6	10	6	16	0	0	0	0
<b>Local Extreme Terminal Net:</b>								
Nontreaty	444	3,336	594	3,930	0	2,759	786	3,545
Treaty	2,740	18,682	3,834	22,516	0	1,258	353	1,611
Test	n/a			n/a	n/a			n/a
<b>Total</b>	<b>17859</b>			<b>79699</b>	<b>783</b>			<b>9553</b>

\* Area 4 Sport numbers include 4B add-on, if any, and a number of fish caught on Canadian licenses in areas 4 and 4B.

RECAPITULATION OF IMPACTS ACCORDING TO WILD				TOTAL WILD			
Nontreaty Total Wild Impacts:	6,917		36,231	223		6,051	
Treaty Total Wild Impacts:	10,010		37,528	404		2,742	
Amt NT above (or below) T:	(3,093)		(1,297)	(181)		3,309	
<b>Nontreaty Wild Impacts w/o SOF:</b>	<b>6,861</b>		<b>35,764</b>	<b>187</b>		<b>5,897</b>	
<b>Treaty Wild Impacts w/o SOF:</b>	<b>10,010</b>		<b>37,528</b>	<b>404</b>		<b>2,742</b>	
<b>Amt NT above (or below) T w/o SOF:</b>	<b>(3,149)</b>		<b>(1,764)</b>	<b>(217)</b>		<b>3,155</b>	

**TABLE 2C: COHO FISHERY IMPACT SUMMARY HIGHLIGHTS**

Estimated fishery impacts from regulations described by the following **FRAM** run:

FRAM Run Number: bc-Coho 1925

04/16/19

Run Description: PFMC April 15 Council Adopted.

08:07 AM

Impacts are expressed as total fishery-related mortality, incl. landed catch, non-retention mort., and other fishery-related mort. Try/NonTry splits are NOT based on CWT recovery data.

FISHERY	QUIL FALL			HOH			QUIL FALL H&W			QUEETS			QUEETS			GRAYS HARBOR		
	Wild	Marked	UnMarked	Wild	Marked	UnMarked	Wild	Marked	UnMarked	Wild	Hatchery	Marked	UnMarked	Wild	Marked	UnMarked		
Projected Ocean Escapement	13,731	5,787	12,642	15,920	9,124	8,672	7,436	10,360	65,931	51,841	68,189							
<b>Spawning Escapement Objective</b>	6,300	2,000	5,800						35,400									
Projected Marine Exploitation Rate	6.6%	16.9%	16.3%						7.7%									
<b>Projected Exploitation Rate (all fisheries)</b>	50.8%	54.6%	39.9%						42.1%									
Exploitation in Southern U.S. Marine Fisheries	6.2%	14.5%	13.7%						6.0%									
<b>CANADIAN</b>	50	139	142	60	268	652	618	306	871	1,380	902							
<b>ALASKA</b>	11	29	11	13	21	22	19	23	313	251	324							
S. of Falcon Troll	22	15	22	27	35	40	35	40	60	50	64							
S. of Falcon Sport	44	49	203	50	138	547	528	157	415	1,075	430							
<b>NORTH OF CAPE FALCON OCEAN:</b>																		
Treaty Troll	534	601	509	618	658	694	604	748	2,106	1,704	2,178							
NT Troll N. Leadbtr	141	141	391	164	200	546	519	227	402	973	417							
NT Troll S. Leadbtr	13	14	35	15	33	93	88	37	132	317	136							
Coastal terminal area "dip-ins"	81	43	80	95	301	375	323	354	372	286	385							
Sport: Area 1	26	18	117	30	70	319	309	79	182	714	189							
Buoy 10	3	2	14	4	4	17	17	5	33	126	35							
Area 2	59	86	270	68	206	947	919	235	768	2,914	794							
Area 3	7	20	33	8	33	146	141	38	31	117	32							
Area 4 *	28	33	127	32	50	234	227	57	74	293	77							
<b>PUGET SOUND CATCHES:</b>																		
Treaty Troll	0	0	0	0	0	0	0	0	1	1	1							
Sport:	16	15	109	18	16	107	105	18	40	238	41							
Area 5	0	0	1	0	0	1	1	0	0	2	0							
Area 6	10	6	9	11	4	3	2	4	0	0	0							
Areas 7-13	0	0	0	0	11	10	9	12	5	4	5							
Nontreaty Net	11	13	11	13	32	30	26	36	41	33	42							
Treaty Net																		
<b>LOCAL TERMINAL</b>																		
<b>Nontreaty Net</b>																		
<b>Treaty Net</b>	4543	2000			1772	4626			14131									
<b>Sport</b>	1918	608			623	455			6991									

\* Area 4 Sport numbers include 4B add-on, if any, and a number of fish caught on Canadian licenses in areas 4 and 4B.

71,777

FRAM assumes that there are no changes in the relative exploitation rates of model stocks estimated from the base period (1986-91). The possibility exists that with the changes to the structure of a fishery the relative exploitation rates of the stock may change as well, though an analysis of the data has yet to be done.

TABLE 2D: COHO FISHERY IMPACT SUMMARY HIGHLIGHTS		
Estimated fishery impacts from regulations described by the following		04/16/19
FRAM Run Number:		08:07 AM
Run Description:		
Impacts are expressed as total fishery-related mortality, incl. landed catch, non-retention mort., and other fishery-related mort. Trty/N		
=====		
	SOUTH PUGET SOUND	NOOKSACK-SAMISH
FISHERY	Total	Total
Projected Spawning Escapement	65,602	25,680
Spawning Escapement Objective		
Projected Exploitation Rate (all fisheries)		
Exploitation in Southern U.S. Fisheries		
CANADIAN	6,569	7,383
ALASKA	13	13
S. of Falcon Troll	66	16
S. of Falcon Sport	553	197
NORTH OF CAPE FALCON OCEAN:		
Treaty Troll	6,783	2,814
NT Troll N. Leadbtr	2,070	449
NT Troll S. Leadbtr	157	28
Sport: Area 1	350	80
Buoy 10	8	4
Area 2	1,565	491
Area 3	268	128
Area 4 *	4,044	1,773
PUGET SOUND:		
Treaty Troll	73	6
Sport: Areas 5	8,096	1,701
Area 6	551	123
Area 7	90	273
Area 8	390	1,128
Area 9	7,602	176
Area 12	0	578
Area 10	12,912	99
Area 11	4,843	0
Area 13	640	0
Freshwater Sport	15,209	2,414
Pre-terminal net:		
6/7/7A NTrty	159	1,024
6/7/7A Trty	163	1,535
4B/5/6C NTrty	0	0
4B/5/6C Trty	456	91
	--	--
	--	--
Terminal net:		
Skagit Bay (8) NTrty	0	0
Skagit Bay (8) Trty	0	3
Area 8A NTrty	0	0
Area 8A Trty	545	15
Hood Canal NTrty	315	20
Hood Canal Trty	642	32
South Pgt Snd NTrty	1,101	8
South Pgt Snd Trty	32,832	45
B'ham Bay(7B) NTrty	57	4,949
B'ham Bay(7B) Trty	188	16,414
Local Extreme Terminal Net:		
Nontreaty	n/a	n/a
Treaty	38,384	16,378
Test		n/a
=====		
* Area 4 Sport numbers include 4B add-on, if any, and a number of fish caught on Canadian		
=====		
RECAPITULATION OF WILD IMPACTS ACCOUNTING:		
Nontreaty Total Wild Impacts:	61,046	15,659
Treaty Total Wild Impacts:	80,066	37,333
Amt NT above (or below) T:	(19,020)	(21,674)
=====		
Nontreaty Wild Impacts w/o SOF:	60,427	15,446
Treaty Wild Impacts w/o SOF:	80,066	37,333
Amt NT above (or below) T w/o SOF:	(19,639)	(21,887)
=====		

**TABLE 2E: COHO FISHERY IMPACT SUMMARY HIGHLIGHTS**

Estimated fishery impacts from regulations described by the following FRAM run:

FRAM Run Number:

bc-Coho1925

Run Description:

PFMC April 15 Council Adopted

Impacts are expressed as total fishery-related mortality, incl. landed catch, non-retention mort., and other fishery-related mort.

FISHERY	Lummi Bay Skookum Crk Hatchery		Skagit/ Marblemount		Snoh/ Wallace		Tulalp Hatchery		Issaquah Lake WA		Green River (Soos+Keta)		Puyallup/ Voights		Minter Hatchery		Nisqually Hatchery		George Adams		Quilcene NFH		Dungeness Hatchery		Elwha Hatchery	
	941	14,960	4,875	5,861	18	4,890	20,638	10,078	5,899	3,574	1,280	550	17,297	9,928	3,145	2,869	350									
Projected Spawning Escapement	3,500	3,500	400	5,861	11.5%	2,000	8,000	1,800	2,410	5,899	1,280	550	17,297	9,928	3,145	2,869	350									
Hatchery Escapement Goal (*2016)	54.3%	74.5%	39.8%	13.1%	100.0%	57.1%	70.3%	69.0%	45.7%	66.8%	63.4%	57.0%	65.8%	59.8%	68.1%	16.8%										
Projected Exploitation Rate (all fisheries)	43.0%	63.6%	33.3%	20.8%	96.7%	53.7%	66.8%	65.9%	42.2%	63.4%	63.9%	51.8%	59.8%	63.9%	13.2%											
Exploitation in Southern U.S. Fisheries																										
CANADIAN	234	6375	528	218	1150	376	2398	998	376	364	364	1076	3009	364	364	109										
ALASKA	0	9	0	0	0	0	4	2	0	0	0	5	13	49	18											
S. of Falcon Troll	0	10	1	1	8	3	20	10	3	3	3	7	20	4	1											
S. of Falcon Sport	6	173	20	24	121	32	205	84	32	32	32	83	238	72	22											
NORTH OF CAPE FALCON OCEAN:																										
Treaty Troll	68	1866	262	179	801	343	2192	1037	342	329	329	709	1787	274	98											
(Area 2/3/4/4B)	13	376	71	53	283	118	757	327	120	482	482	205	576	102	30											
(Area 1)	1	23	7	6	23	9	57	24	9	9	9	16	44	12	3											
Sport: Area 1	3	71	11	8	43	21	132	54	21	20	20	43	124	24	7											
Buoy 10	0	3	1	0	1	0	3	1	0	0	0	13	35	0	0											
Area 2	16	434	63	46	247	93	587	238	92	89	89	211	605	95	29											
Area 3	4	113	9	13	68	16	101	41	16	15	15	119	340	15	4											
Area 4	57	1564	194	104	560	239	1516	615	239	230	230	509	1465	71	21											
Area 4*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
Columbia River Fisheries																										
PUGET SOUND:																										
Treaty Troll	0	4	3	5	22	4	24	11	4	3	3	19	47	2	1											
(Area 5-6C)	56	1543	287	177	967	483	3074	1230	485	467	467	1078	3141	548	199											
Areas 5	4	111	25	14	11	33	208	83	33	32	32	89	257	44	13											
Area 6	7	179	16	4	19	4	29	14	4	4	4	14	35	0	0											
Area 7	27	735	180	322	510	23	145	99	23	22	22	17	49	0	0											
Area 8-1-2	6	152	200	193	1026	443	2824	1156	445	429	429	1198	3426	26	7											
Area 9	14	383	0	0	0	0	0	0	0	0	0	374	943	0	0											
Area 12	2	65	99	31	135	821	5253	1684	826	474	474	797	1930	8	3											
Area 10	0	0	2	3	11	36	313	481	245	225	225	31	79	0	0											
Area 11	0	0	0	0	1	1	73	39	84	125	125	5	13	0	0											
Area 13	0	1507	245	146	0	360	2351	7887	0	1857	1857	0	0	785	0											
Freshwater Sport																										
Pre-terminal net																										
6/7/7A NTRY	24	671	16	2	9	7	53	24	8	8	8	10	23	8	3											
6/7/7A TRY	36	997	20	1	7	7	53	24	8	8	8	12	25	14	5											
4B/5/6C NTRY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
4B/5/6C TRY	2	60	16	13	51	22	151	71	22	22	22	84	226	102	38											
Terminal net																										
Skagit Bay (8) NTRY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
Skagit Bay (6) TRY	0	0	40	0	1	0	0	0	0	0	0	0	0	0	0											
Area 8A NTRY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
Area 8A TRY	0	10	99	229	2161	26	174	84	27	26	26	18	44	1	0											
Hood Canal NTRY	1	13	1	2	4	12	110	50	15	15	15	556	2181	9	3											
Hood Canal TRY	20	20	2	2	8	28	220	100	30	30	30	1962	10607	15	6											
South Pgt Snd NTRY	0	5	0	0	1	14	151	97	520	28	28	20	44	0	0											
South Pgt Snd TRY	1	29	5	18	82	69	2352	658	918	102	102	271	671	5	1											
B'ham Bay (7BCD) NTRY	125	3300	11	1	4	3	19	9	3	3	3	1	2	0	0											
B'ham Bay (7BCD) TRY	413	10947	32	4	14	9	60	28	9	9	9	2	6	0	0											
Local Extreme Terminal Net																										
Non-treaty					750																					
Treaty	11851	761			26493	2575	23194	5225		1736		2272	1211	2783	1269	0										
Coastal Terminal Net & Sport	0	0	0	0	1	0	1	0	0	0	0	0	3	0	0											

**TABLE 4: SUMMARY OF COHO EXPLOITATION RATES BY FISHERY AGGREGATE**

Predicted Exploitation Rates for Total Fishery-Related Mortality

FRAM Run Number:

bc-Coho1925

04/16/19

Run Description:

PFMC April 15 Council Adopted

08:07 AM

STOCK->	Skagit Wild	Stilly Wild	Snohom Wild	HdCnl Wild	JDF Tribs Wild	Quillayute Fall Wild	Hoh Wild	Queets Wild	Grys Hbr Wild
Predicted Spawning Escapement	39,317	18,488	50,564	22,415	8,044	n/a	n/a	n/a	n/a
Ocean Escapement *	n/a	n/a	n/a	n/a	n/a	13,731	5,787	9,124	65,931
<b>RUN RECONSTRUCTION<sup>1</sup></b>									
Ocean/Pre-term. Marine Fishery Mortality	7,530	1,758	4,725	7,214	753	975	1,181	1,779	5,474
Nonlocal Mixed-terminal Fishery Mortality	1,230	45	124	582	30	81	43	301	372
Local Mixed Term. Marine Fishery Mortality	268	906	2,662	6,775	0	n/a	n/a	n/a	n/a
Extreme Terminal & FW NTRTY	2,178	1,110	1,337	548	0	n/a	n/a	n/a	n/a
Extreme Terminal & FW TRTY	6,604	1,559	3,328	2,740	0	n/a	n/a	n/a	n/a
Extr. Term. TEST	1,107	0	0	0	0	n/a	n/a	n/a	n/a
Escapement <sup>2</sup>	39,317	18,488	50,564	22,415	8,044	13,731	5,787	9,124	65,931
<b>TOTAL ABUNDANCE<sup>3</sup></b>	<b>58,234</b>	<b>23,866</b>	<b>62,740</b>	<b>40,274</b>	<b>8,827</b>	<b>14,706</b>	<b>6,968</b>	<b>10,903</b>	<b>71,405</b>
<b>"TOTAL" PREDICTED EXPL. RATE<sup>4</sup></b>	<b>32.5%</b>	<b>22.5%</b>	<b>19.4%</b>	<b>44.3%</b>	<b>8.9%</b>	<b>6.6%</b>	<b>16.9%</b>	<b>16.3%</b>	<b>7.7%</b>
Canada	2.1%	1.2%	1.2%	2.3%	1.2%	0.3%	2.0%	2.5%	1.2%
Alaska	0.0%	0.0%	0.0%	0.0%	0.5%	0.1%	0.4%	0.2%	0.4%
<b>Subtotal Southern U.S. EXPL. RATE<sup>5</sup></b>	<b>30.4%</b>	<b>21.3%</b>	<b>18.2%</b>	<b>42.0%</b>	<b>7.1%</b>	<b>6.2%</b>	<b>14.5%</b>	<b>13.7%</b>	<b>6.0%</b>
S. Of Falcon Ocean	0.1%	0.1%	0.1%	0.1%	0.4%	0.4%	0.9%	1.6%	0.7%
NOF Ocean Troll:	Ntrty	0.4%	0.3%	0.3%	0.5%	0.4%	1.0%	2.2%	0.7%
	Trty	3.5%	2.4%	2.4%	3.7%	3.0%	3.6%	8.6%	2.9%
Ntrty NOF Ocean & Buoy10 Spt	0.9%	0.6%	0.6%	1.1%	0.5%	0.8%	2.3%	3.3%	1.5%
<b>Total Ocean ER<sup>4</sup></b>	<b>4.8%</b>	<b>3.4%</b>	<b>3.4%</b>	<b>5.3%</b>	<b>4.2%</b>	<b>6.0%</b>	<b>14.0%</b>	<b>13.1%</b>	<b>5.9%</b>
Pgt Snd 5,6C Troll	Trty	0.0%	0.1%	0.1%	0.1%	0.0%	All Puget Sound Combined:		
							0.3%	0.5%	0.6%
Pgt Snd 5,6 Sport		0.7%	0.4%	0.4%	1.0%	0.9%			
Pgt Snd 7 Sport		0.2%	0.1%	0.1%	0.1%	0.0%			
Pgt Snd 8 Sport		2.3%	0.8%	0.9%	0.0%	0.0%			
Pgt Snd 9 Sport		0.7%	0.8%	0.8%	1.8%	0.1%			
Pgt Snd 10,11,13		1.3%	0.4%	0.4%	4.6%	0.1%			
Pgt Snd 12 Sport		0.0%	0.0%	0.0%	2.1%	0.0%			
Pgt Snd Extr. Term. & FW Sport		3.7%	4.3%	1.8%	0.3%	0.0%			
PS Preterminal Net**:	Ntrty	0.2%	0.0%	0.0%	0.1%	0.1%			
	Trty	0.5%	0.2%	0.2%	0.5%	1.3%			
Nonlocal Term. Net:	Ntrty	0.2%	0.0%	0.0%	0.1%	0.1%			
	Trty	1.9%	0.2%	0.2%	1.3%	0.2%			
Local Terminal Net:	Ntrty	0.0%	0.0%	0.0%	4.4%	--			
	Trty	0.5%	3.8%	4.2%	12.4%	--			
Extreme Term. Net	Ntrty	0.0%	0.4%	0.4%	1.1%	0.0%			
	Trty	11.3%	6.5%	5.3%	6.8%	0.0%			
	TEST	1.9%	0.0%	0.0%	0.0%	0.0%			

\* Model-predicted Escapement for Washington Coastal stock aggregates represents run returning to their terminal area or "Ocean Escapement".

Footnotes:

<sup>1</sup> From TAMM Tables 2.

<sup>2</sup> Puget Sound Stocks' values are Spawner Escapement ; Coastal stocks' values are "escapement from pre-terminal fisheries" equivalent to "Runsize Entering Term

<sup>3</sup> TOTAL ABUNDANCE is 'Fishery-related Mortality Plus Escapement', does not include 'natural mortality' nor 'dip-in mortality' of non-local stocks in coastal terminal

<sup>4</sup> For coastal stocks the presented ER is for pre-terminal fisheries only. See Table 2 for Total ER for coastal stocks.

<sup>5</sup> Sum of exploitation rates for Southern U.S. only: SoF, Ocean areas 1-4, Col. R., Puget Sound; however does not include WA coastal terminal area impacts.



**TABLE C-Nat: COLUMBIA RIVER COHO FISHERY IMPACT SUMMARY FOR LOWER COL NATURAL COHO**

Estimated fishery impacts from regulations described by the following FRAM run:

FRAM Run Number: bc-Coho1925

Run Description: PFMC April 15 Council Adopted

Impacts are expressed as total fishery-related mortality, incl. landed catch, non-retention mort., and other fishery-related mort.

FISHERY	Oregon Nat	WA Early Nat	WA Late Nat	New TRS Total
Ocean Escapement (after B10)	7,438	8,308	15,630	31,376
Marine Exploitation Rate	16.1%	16.2%	15.1%	15.6%
<b>Marine ER to Col R before B10 (PFMC Pre Rpts)</b>	13.4%	13.4%	14.2%	<b>13.8%</b>
PFMC Ocean Fisheries ER	13.1%	13.1%	13.9%	13.51%
PFMC InRivers Ers (incl B10)	4.1%	4.1%	4.4%	4.21%
<b>PFMC TOTAL ER</b>	<b>17.16%</b>	<b>17.19%</b>	<b>18.26%</b>	<b>17.71%</b>
ER in So. U.S. Marine Fisheries	15.9%	16.0%	14.9%	15.4%
<b>TOTAL ER ALL FISHERIES</b>	<b>17.4%</b>	<b>17.5%</b>	<b>18.6%</b>	<b>18.0%</b>
<b>CANADIAN</b>	18	21	30	69
<b>ALASKA</b>	0	0	0	0
S. of Falcon Troll	94	106	100	300
S. of Falcon Sport	381	427	506	1,314
<b>NORTH OF CAPE FALCON OCEAN:</b>				
Treaty Troll	220	247	526	993
NT Troll N. Leadbtr	64	70	159	293
NT Troll S. Leadbtr	71	80	122	273
Sport: Area 1	201	224	639	1,064
Buoy 10	246	275	158	679
Area 2	115	129	430	674
Area 3	5	6	20	31
Area 4 *	11	12	58	81
<b>PUGET SOUND CATCHES:</b>				
Treaty Troll	0	0	2	2
Sport: Areas 5-13	4	4	14	22
Nontreaty Net	0	0	0	0
Treaty Net	1	1	2	4
<b>COASTAL CATCHES:</b>				
Bay Sport	0	0	2	2
Nontreaty Net	1	2	8	11
Treaty Net	0	0	0	0
<b>LOWER COLUMBIA:</b>				
Mainstem Nontreaty Net	101	112	358	571
SAFE	14	15	0	29
Sport	0	0	285	285
<b>Total Abundance</b>	<b>8,870</b>	<b>9,912</b>	<b>18,406</b>	<b>37,188</b>
In River	7,684	8,583	15,788	32,055
Ocean Harvest	1,186	1,329	2,618	5,133
Sum	8,870	9,912	18,406	37,188
PFMC Ocean Catch	1,162	1,301	2,560	5,023

**Table OR. Total mortality and exploitation rates for OCN and Rogue/Klamath**

Estimated fishery impacts from regulations described by the following FRAM run:

FRAM Run Number: bc-Coho1925  
 Run Description: PFMC April 15 Council Adopted

Fishery	Area	OR Coastal Natural		Rogue/Klam. H Unmrkd	
		Total Mort	Exp. Rt.	Total Mort	Exp. Rt.
Alaska	all	0	0.0%	0	0.0%
BC	all	356	0.5%	41	0.3%
Puget Sound/Straits		23	0.0%	0	0.0%
<b>North of Falcon:</b>					
Troll:	Treaty	469	0.6%	0	0.0%
	Nontreaty	238	0.3%	0	0.0%
Sport:		655	0.9%	7	0.1%
Buoy 10		91	0.1%	0	0.0%
<b>South of Falcon:</b>					
Troll:	Tillmk	39	0.1%	0	0.0%
	Newprt	286	0.4%	4	0.0%
	Coos B	381	0.5%	17	0.1%
	Brookngs	46	0.1%	20	0.2%
	CaKMZ	186	0.2%	107	0.8%
	Ft Bragg	322	0.4%	128	1.0%
	So. Calif	222	0.3%	24	0.2%
Sport:	Tillmk	1139	1.5%	9	0.1%
	Newprt	2253	2.9%	9	0.1%
	Coos B	1973	2.6%	37	0.3%
	Brookngs	272	0.4%	101	0.8%
	CaKMZ	206	0.3%	149	1.1%
	Ft Bragg	173	0.2%	85	0.6%
	So. Calif	73	0.1%	31	0.2%
Freshwater		1097	1.4%	32	0.2%
AK to CA total		10500	13.72%	801	6.0%
Escapement		66022		12464	
Ocean ER			12.3%		5.8%
					5.5%
		<b>Terminal Run</b>	<b>Landed Catch</b>	<b>CNR Morts</b>	<b>dropoff</b>
OR N. Coast		14044	900	131	45
OR N. Mid Cst		24438	1800	226	90
OR S. Mid Cst		37383	2850	345	143
		<b>Terminal Run</b>	<b>Landed Catch</b>	<b>CNR Morts</b>	<b>dropoff</b>
OR N. Coast		10364	664	97	33
OR N. Mid Cst		21062	1551	195	78
OR S. Mid Cst		35692	2721	330	136
					794
					1824
					3187

**TABLE 7: COHO RUN SIZES FOR SALMON TECHNICAL TEAM REFERENCE**

FRAM Run Number: bc-Coho1925  
 Run Description: PFMC April 15 Council Adopted  
 Includes landed catch plus all fishery-related mortality

**PUGET SOUND COHO RUN SIZES:**

Stock	Hat +Wild Run Entering Area 4B Net \1	Hat + Wild Terminal Area Abundance \2	Hat + Wild Escapement	Wild Run Entering Area 4B Net	Wild Run Entering USJDF-PS	Wild Escapement
Skagit		58,719	44,853	47,632	54,207	39,317
Stillag.-Snohomish		120,534	77,658			
	Stilly:			19,706	22,770	18,488
	Snohom:			53,275	59,845	50,564
Hood Canal		92,208	49,651	32,517	37,190	22,415
South Puget Sound		170,043	65,603	21,886	28,852	13,168
Nooksack-Samish		66,676	25,681	21,564	23,416	9,780
Strait Tributaries		22,047	16,245	8,161	8,299	8,044

1) Note: 4B Run sizes differ from exact Status Report frame of reference because Area 6B/9 impacts are accounted for as per FRAM CWT-based  
 2) RR\_Term compatible (landed + esc) = 530,227 = PS Runsize (landed catch plus escapement)

**OTHER WA-CA RUNSIZES:** all Truns values (fishing mortality plus escapement)

Terminal Area	Ocean Escapement		
	All w/ dip Ins	Local Wild	Local Hatchery
Quillayute	32,629	14,833	17,796
Hoh	6,285	5,787	0
Queets	18,452	9,124	8,672
Quinault	33,852	12,427	20,791
Grays Harbor	120,178	65,931	54,099
Willapa Bay	139,493	56,272	82,602

Stock/Area	Ocean Escapement (fishing mortality + esc)
Quillayute Summer Hatchery	2,966
Quillayute Summer Natural	1,102
Columbia Early (after B10)	340,516
Columbia Late (after B10)	213,328
Total	553,843
Oregon N. Coast Natural	10,372
Oregon N. Mid Coast Nat.	21,074
Oregon S. Mid Coast Nat.	35,726
Total	67,173

<b>Puget Sound Runsize (all Time Steps):</b>	
Puget Sound Terminal Fishery Catch:	261,534
Puget Sound Stocks' Escapement:	279,690
Total:	541,224

**TABLE T: THOMPSON AND UPPER FRASER COHO FISHERY IMPACT SUM**

Estimated fishery impacts from regulations described by the following FRAM run:

FRAM Run Number: bc-Coho1925

Run Description: PFMC April 15 Council Adopted

Impacts are expressed as total fishery-related mortality, incl. landed catch, non-retention mort., and other fishery-related mortality.

FISHERY	Interior Fraser	
	Wild	
Projected Escapement	35,225	
Projected Pre-Terminal Exploitation Rate	13.5%	
<b>Exploitation in U.S. Fisheries</b>	<b>9.1%</b>	
	Mortality	Expl. Rate
CANADIAN (marine)	1265	3.11%
CANADIAN (freshwater)	452	1.11%
ALASKA	91	0.22%
SOUTH OF FALCON & COL R	57	0.14%
NORTH OF CAPE FALCON OCEAN:		
Treaty Troll Area 2	13	0.03%
Treaty Troll Area 3	223	0.55%
Treaty Troll Area 4	1367	3.36%
NT Troll Area 1	4	0.01%
NT Troll Area 2	51	0.13%
NT Troll Area 3	62	0.15%
NT Troll Area 4	18	0.04%
NT Sport Buoy 10 & Area 1	26	0.06%
NT Sport Area 2	96	0.24%
NT Sport Area 3	28	0.07%
NT Sport Area 4*	220	0.54%
PUGET SOUND:		
JDF Troll and Net	37	0.09%
SJI 6/7/7A NT Net	239	0.59%
SJI 6/7/7A T Net	120	0.29%
Sport: Area 5	222	0.55%
Area 6	14	0.03%
Area 7	241	0.59%
Area 8-13	40	0.10%
Puget Sound Terminal net	609	1.50%
WA Extreme Terminal Net & FW Sport	3	0.01%
<b>Total:</b>	<b>5498</b>	<b>13.50%</b>

\* Area 4 Sport numbers include 4B add-on, if any, and a number of fish caught on Canadian licenses in areas 4 and 4B.



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
1201 NE Lloyd Boulevard, Suite 1100  
PORTLAND, OREGON 97232-1274

March 5, 2019

Mr. Phil Anderson, Chair  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 101  
Portland, Oregon 97220-1384

Dear Chair Anderson:

The Pacific Coast Salmon Fishery Management Plan (FMP) requires that the Pacific Fishery Management Council (Council) develop management recommendations for fisheries under the FMP consistent with consultation standards analyzed and/or described in biological opinions on the fishery developed by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) to protect species listed as threatened or endangered under the Endangered Species Act (ESA). This letter summarizes the consultation standards for salmon and steelhead and provides NMFS' preliminary guidance regarding their implementation for the 2019 ocean salmon fishing season, as in previous years. We will provide guidance for the 2019 season and work related to effects of Council fisheries on endangered Southern Resident killer whales separately in a supplemental guidance letter.

We also use this opportunity to comment on other subjects of general interest and provide additional recommendations for non-ESA-listed salmon stocks of particular relevance to Council fisheries. For the 2019 fishing season, these other subjects include: recommendations for fisheries affecting Sacramento River fall-run Chinook salmon and Klamath River fall-run Chinook salmon, including a proposal for genetic sampling in closed areas; implementing provisions of the new *United States (U.S.) v. Oregon* Management Agreement; and relevant coho provisions for the new Pacific Salmon Treaty (PST) Agreement, as applied January 1, 2019. In this letter, we first address the topics of general interest and non-ESA salmon stocks, followed by guidance related to consultation standards on ESA-listed salmon species.

## Guidance related to non-ESA related topics

### **Coho Provisions under the PST**

**Background:** A new harvest sharing agreement under the PST has been reached between the United States and Canada (provisionally applied January 1, 2019). The coho chapter of the new Agreement contains refinements to the recent management approach and applies to coho stocks in British Columbia, Washington, and Oregon. Retained in the new Agreement is the ability to request increases in any management unit's (MU) annual exploitation rate (ER) cap specified within the chapter, but new, per Section 8(g), is a commitment by both the United States and Canada to "not change the status or associated ER caps for an MU after March 31" in any given year. Therefore, any requests for modifying ER caps necessary to complete a Party's domestic process will need to be exchanged prior to March 31<sup>st</sup>.



The 2019 preseason planning manager-to-manager meeting between the U.S. and Canada will occur on March 18, 2019. The Parties will exchange preseason expectations of stock status and anticipated fishery structure that can be readily incorporated into model inputs. Canada's Thompson River coho stock remains in critical status under the PST Agreement. Conservation concerns regarding this stock will shape the 2019 Canadian fisheries.

**Guidance:** U.S. representatives that attend the meeting between the United States and Canada will share information on Canadian fishing levels and structure in 2019 with the Council's Salmon Technical Team (STT) for incorporation into planning U.S. domestic fisheries. Council fisheries, together with other southern United States fisheries, must be managed to stay within the ER caps. In 2017 and 2018, the Council adopted fisheries that resulted in slightly greater impacts on coho stocks in U.S. fisheries than were agreed to under the PST – Queets coho in 2017 and Grays Harbor coho in 2018. Provisions of the coho chapter of the PST allow for exceedance under certain conditions if both countries agree. In 2017, Canada agreed to the exceedance. In 2018, Canada did not agree, but did not object. Canada is unlikely to accept a third consecutive year of exceeding the agreed upon impacts.

### **Genetic Stock Identification (GSI) Sampling**

**Background:** The West Coast Salmon Genetic Stock Identification (WCGSI) collaboration is a partnership of west coast fishermen's organizations, universities, states, and NMFS that was formed in 2006 to explore potential uses of genetic stock identification (GSI) for west coast salmon fisheries management. Various levels of at-sea tissue sampling have occurred since the inception of the WCGSI, both in open fisheries and in times and areas closed to salmon fishing.

In 2019, WCGSI partners intend to conduct sampling of Chinook salmon off the coast of California to examine fine scale ocean distribution patterns of Klamath River Chinook salmon compared to other stocks of interest, including ESA-listed California Coastal Chinook salmon. A proposal for the 2019 sampling plan has been submitted to the Council for its consideration. The proposed sampling scheme incorporates GSI sampling of Chinook salmon caught in commercial fisheries and non-retention GSI sampling of Chinook salmon in times and areas closed to salmon fishing. Proposed areas for non-retention sampling include part of the Klamath Management Zone that has been closed to commercial salmon fishing for approximately the last 30 years to conserve coho and Chinook salmon stocks from the Klamath River and the northern California coast.

**Guidance:** We recommend the Council consider the relative merits of implementing the non-retention GSI sampling portion of the project in 2019 and evaluate the proposal through the Council's usual fishery planning process. Impacts associated with hook-and-release mortality in non-retention GSI sampling should be accounted for in the STT's analysis of fisheries impacts. We encourage communication between scientists, advisory committees, and the Council in considering the proposal and to help direct development of GSI technologies that can best serve salmon management over the long term.

If the 2019 proposal is recommended by the Council, the WCGSI partnership would have to submit an application to NMFS' West Coast Region for a scientific research permit authorizing non-retention sampling of Chinook salmon in times and areas closed to commercial harvest.

## **Sacramento River Fall-run Chinook (SRFC) Salmon**

**Background:** SRFC have declined in recent years to the point that in 2018 the three-year geometric mean of hatchery and natural area adult spawners was lower than the minimum stock size threshold (MSST), thereby resulting in an overfished status determination for this stock. As required in the FMP, the STT and other contributors are working to develop a rebuilding plan for Council consideration in 2019. In the interim, the FMP requires that the Council “structure Council-area fisheries to reduce the likelihood of the stock remaining overfished and to mitigate the effects on stock status” (Section 3.1.1 of the FMP).

Recent information helps inform decisions related to management in 2019. Forecasts of the Sacramento Index and the number of SRFC spawners have been higher than the post-season estimates in each of the last four years, although the 2018 Sacramento Index was relatively close to the preseason forecast (Table 1). The projected exploitation rates have also been consistently lower than the post-season estimates, substantially in most years. Spawner abundance declined by an order of magnitude from 2013 to 2017 from a high of 406,200 in 2013 to just 44,574 in 2017. The escapement in 2017 was near a record low. The post-season escapement in 2018 was a significant improvement but, again, below preseason expectations and remained below the floor of 122,000 associated with the FMP objective. The three-year geometric mean of spawners is 73,994 (2016-2018) and must increase to at least 122,000 to achieve rebuilt status. An escapement of 402,040 would be required to meet the FMP’s criteria for rebuilt status in 2019. It is impractical to expect to achieve rebuilding so quickly, but progress can be made in 2019 toward that end.

**Table 1. SRFC preseason abundance, escapement, and exploitation rate forecasts for 2015-2018, and comparison to post-season estimates.**

<b>Year</b>	<b>Sacramento Index Forecast</b>	<b>Preseason Forecasted Spawning escapement</b>	<b>Preseason Exploitation Rate</b>	<b>Sacramento Index Post Season</b>	<b>Post-Season Spawning escapement</b>	<b>Post-Season Exploitation Rate</b>
<b>2015</b>	651,985	341,017	48%	254,240	112,947	56%
<b>2016</b>	299,609	151,128	50%	205,289	89,674	56%
<b>2017</b>	230,700	133,242	42%	135,500	44,574	68%
<b>2018</b>	229,432	151,000	34%	223,900	105,739	53%
<b>2019</b>	379,632	-	-	-	-	-

The harvest control rule in the FMP specifies an exploitation rate that produces an expected escapement of 122,000 adults, corresponding to maximum sustainable yield (S<sub>MSY</sub>). The conservation objective for SRFC in the FMP specifies a range of 122,000 – 180,000 adult spawners.

**Guidance:** Although the 2019 forecast of SRFC abundance is higher than forecasts in the previous three years, we recommend caution given the tendency of the model to over-forecast. A risk-averse management approach is warranted, so the 2019 fisheries should be structured to target an escapement

around the upper end of the SRFC conservation objective range, with at least one of the options adopted for public review and comment at the March Council meeting including a target escapement of 180,000 adult spawners.

**Klamath River Fall-run Chinook (KRFC) Salmon**

**Background:** The status of KRFC has also declined to the point that it has been declared overfished. As with SRFC, the STT and other contributors are working to develop a KRFC rebuilding plan for Council consideration in 2019. In the interim, the FMP requires that the Council “structure Council-area fisheries to reduce the likelihood of the stock remaining overfished and to mitigate the effects on stock status” (Section 3.1.1 of the FMP).

Recent information can help inform decisions related to management in 2019. Performance has been mixed over the last four years (Table 2). The ocean abundance forecasts and projected number of spawners have been substantially higher than the post-season estimates in the first two years and substantially lower in the last two years of the data series. The post-season escapement in 2018 was the highest escapement since 2014. However, interim escapements have been much lower. The projected exploitation rate in 2016 was lower than the post-season estimate, but preseason forecasts of exploitation rates were close to or below preseason projections in three of the last four years. The number of natural-area adult spawners since 2014 has declined substantially from the levels of escapement observed during the previous five years, nearing a record low in 2016. The three-year geometric mean (2016-2018), 24,594 is sixty percent of the  $S_{MSY}$  escapement objective of 40,700. An escapement of 63,165 would be required to meet the FMP’s criteria for rebuilt status in 2019. Escapements of this magnitude have occurred in the past under ocean abundances greater than 400,000. It may be impractical to expect to achieve rebuilding so quickly given the forecast ocean abundance for 2019 but progress can be made in 2019 toward that end.

**Table 2. KRFC preseason abundance, escapement, and exploitation rate forecasts for 2015-2018, and comparison to post-season estimates.**

Year	Ocean Abundance Forecast	Resulting Forecasted Spawning escapement	Preseason Exploitation Rate	Post-Season Ocean Abundance	Post-Season Spawning escapement	Post-Season Exploitation Rate
2015	423,753	40,700	59%	171,600	28,112	59%
2016	142,169	30,909	25%	57,500	13,937	37%
2017	54, 246	11,379	8%	73,200	19,904	10%
2018	359, 231	40,700	32%	408,600	53,624	28%
2019	274, 200	-	-	-	-	-

The KRFC harvest control rule specifies maximum allowable exploitation rates that vary with abundance, but generally seeks to provide for an  $S_{MSY}$  escapement level of 40,700 *natural-area adults* (i.e., adult fish that spawn in natural areas). The 2019 forecast provides for an expected escapement of

87,893 natural-area adult spawners absent fishing and, under the control rule, would allow for an exploitation rate of 53.7 percent.

**Guidance:** Given the fact that KRFC have met the criteria for an overfished determination, the status of escapement relative to the FMP conservation objective and the FMP mandate to the Council, we believe that a cautious approach is warranted. We recommend the Council target a natural-area adult KRFC escapement greater than 40,700 for 2019 fisheries to further stabilize the population and promote rebuilding.

### **Upper Columbia River Summer-run Chinook Salmon ESU**

**Background:** In 2018 the management entities within the Columbia River completed a new *U.S. v. Oregon* Management Agreement for 2018-2027. The new agreement includes provisions for escaping a minimum aggregate of 29,000 Upper Columbia River summer Chinook salmon adults to the mouth of the Columbia River. The agreement also includes provisions about how adult equivalent harvest of non-treaty fisheries in the Pacific Ocean south of the southwesterly projection of the U.S.-Canada boundary between British Columbia and Washington will be counted as part of the total run size for allocation purposes.

**Guidance:** The FMP recognizes the agreement's determination as the conservation objective and, therefore, in 2019 Council fisheries must be managed to ensure an aggregate escapement of 29,000 adult Upper Columbia River Summer Chinook Salmon to the mouth of the Columbia River.

### **ESA-listed Chinook Salmon Species**

#### **California Coastal (CC) Chinook Salmon Evolutionarily Significant Unit (ESU)**

**Background:** The CC Chinook salmon ESU has been listed as threatened under the ESA since 1999. The current consultation standard for CC Chinook is described in the FMP and is based on a 2000 NMFS biological opinion and additional ESA consultation on the ESU completed in 2005, which specified actions necessary to implement the reasonable and prudent alternatives (RPAs) of the 2000 opinion.

**Guidance:** The Council fisheries should be designed consistent with the RPA of the 2000 opinion (i.e., limits on the forecast KRFC age-4 ocean harvest rates would serve as the consultation standard to ensure that CC Chinook are not subject to increasing harvest rates in the future) and the 2005 consultation (i.e., management measures shall result in a forecast KRFC age-4 ocean harvest rate of no greater than 16 percent).

#### **Sacramento River Winter-run Chinook Salmon (SRWC) ESU**

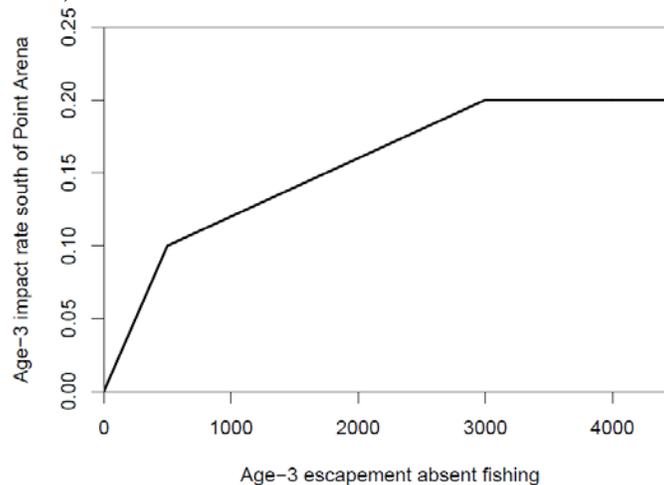
**Background:** The SRWC ESU was listed under the ESA as threatened in 1990 and relisted as endangered in 1994. SRWC is one of eight species identified in NMFS' "Species in the Spotlight"

initiative because it is at high risk of extinction. For more information about actions for its conservation and recovery, please refer to its Species in the Spotlight Priority Action Plan<sup>1</sup>.

NMFS has completed several ESA consultations regarding the impacts of the ocean salmon fishery on SRWC. The most recent and currently applicable opinion was completed in March 2018. That opinion analyzed the Council’s proposed new abundance-based control rule, informed by extensive analysis by the Council’s Ad Hoc Sacramento River Winter-run Chinook Salmon Workgroup (Workgroup), in conjunction with size and season limits previously implemented.

The terms and conditions in the opinion require that the fishery management framework, including the harvest control rule, be reviewed periodically beginning after the fifth year of implementation of the framework, as detailed in the terms and conditions of the 2018 opinion. The purpose of the review would be to assess performance, assumptions, and expectations described in the Workgroup’s analysis<sup>2</sup>.

The 2018 opinion concluded that fisheries managed under this new control rule, and maintaining the fishery season and size restrictions that were part of the previous RPA, are not likely to jeopardize SRWC. The harvest control rule uses a forecast of SRWC age-3 escapement in the absence of fisheries ( $E_3^0$ ) to determine the allowable impact rate<sup>3</sup>. If  $E_3^0$  is above 3,000, a maximum impact rate of 20 percent is allowed. If  $E_3^0$  is between 3,000 and 500, then the impact rate ranges from 0.20 to 0.10. If  $E_3^0$  is below 500, then the impact rate has a steeper decline from 10 percent until it reaches zero at an  $E_3^0$  of zero (Figure 1).



**Figure 1. The adopted harvest control rule for management of ocean fisheries that affect Sacramento River winter-run Chinook salmon.**

<sup>1</sup> Spotlight Priority Action Plan: <https://www.fisheries.noaa.gov/resource/document/species-spotlight-priority-actions-2016-2020-sacramento-river-winter-run>

<sup>2</sup> SRWC Workgroup. 2017a. Evaluation of Sacramento River winter Chinook salmon control rules: updated Management Strategy Evaluation analysis, dated August 14, 2017. Pacific Fishery Management Council Briefing Book for September 2017, 24 p. and SRWC Workgroup. 2017b. Further evaluation of Sacramento River winter Chinook control rules, dated October 18, 2017. Pacific Fishery Management Council Briefing Book for November 2017, 9 p.

<sup>3</sup> O’Farrell, M., N. Hendrix, and M. Mohr. 2016. An evaluation of preseason abundance forecasts for Sacramento River winter Chinook salmon. Pacific Fishery Management Council Briefing Book for November 2016, 35 pages.

**Guidance:** The 2019 forecast of SRWC age-3 escapement in the absence of fisheries is 1,924. Applying this abundance forecast to the control rule results in a maximum allowable age-3 impact rate of 15.7 percent in 2019 fisheries south of Point Arena, California. Council fisheries in 2019 should be designed to not exceed 15.7 percent age-3 impact rate on SRWC.

### **Central Valley Spring-run Chinook Salmon ESU**

**Background:** The Central Valley spring-run Chinook salmon ESU was first listed as threatened in 1999. Effects of the ocean salmon fishery on this ESU were most recently analyzed in NMFS' 2000 biological opinion. That opinion concluded that the fishery, as regulated under the FMP and NMFS' consultation standards for SRWC, is not likely to jeopardize the continued existence of Central Valley spring-run Chinook salmon.

The management framework for SRWC that includes the updated harvest control rule recommended by the Council in 2017 and size and season limits from the previous RPA for SRWC contains equivalent and/or additional restrictions on the fishery to previous management measures and is more responsive than prior management frameworks to information related to the status of Central Valley spring-run Chinook salmon by accounting for changes in freshwater conditions in the Central Valley for SRWC. As a result, NMFS concluded that the current management framework for SRWC, along with other regulatory measures in the FMP, limits impacts to Central Valley spring-run Chinook salmon for the 2019 fishing year in a manner that is more protective than anticipated in the 2000 opinion and, therefore, reinitiation of ESA consultation is not required at this time.

**Guidance:** Council fisheries in 2019 should be managed to meet the consultation standard for SRWC to be sufficiently protective of the Central Valley spring-run Chinook salmon ESU.

### **Lower Columbia River (LCR) Chinook Salmon ESU**

**Background:** The LCR Chinook salmon ESU was listed as threatened under the ESA in 1999. In 2011, the Council recommended implementation of an abundance-based framework for limiting fishery impacts on this ESU. NMFS analyzed the effects of using this framework to manage ocean fisheries on LCR Chinook salmon in a 2012 biological opinion. The Council's abundance-based framework and the 2012 opinion provide the basis for our guidance in 2019.

LCR Chinook salmon includes a spring-run component, a "far-north" migrating bright component, and a component of north-migrating tules. The bright and tule components both have fall run timing. Of nine historical spring-run Chinook salmon populations, two are considered extinct, including the White Salmon and Hood River populations, which were both located in the Columbia River Gorge above Bonneville Dam. Four of the remaining seven populations are targeted to achieve high viability including the Upper Cowlitz, Cispus (a tributary of the Cowlitz), North Fork Lewis, and Sandy River populations. The historic spawning habitat for the Upper Cowlitz, Cispus, and Lewis River populations in Washington is now largely inaccessible to salmon due to impassable dams. These populations are therefore dependent, for the time being, on the associated hatchery programs.

a) Cowlitz and Lewis River Hatcheries populations – The Lower Columbia Salmon and Steelhead Recovery Plan<sup>4</sup> specifies actions to be taken to facilitate recovery of LCR spring-run Chinook salmon populations in Washington State. The Cowlitz Salmon Hatchery and Lewis River Salmon Hatchery are being used, for example, for reintroduction of LCR spring-run Chinook salmon into the upper basins above the existing dams. The hatchery programs are critical to the overall recovery effort. Given the circumstances, maintaining the hatchery brood stocks for the Cowlitz and Lewis River Hatcheries is essential for implementation of specified recovery actions. The Cowlitz Salmon Hatchery has met its escapement objective in every year since 2002. Lewis River Salmon Hatchery escapements have routinely been above goal, but have been declining in recent years.

b) North Fork Lewis and Sandy River populations – There are two extant natural-origin bright populations in the LCR Chinook salmon ESU: the North Fork Lewis and Sandy River populations. Both populations are considered to be relatively healthy. The North Fork Lewis River population is used as a harvest indicator for ocean and in-river fisheries. The escapement goal used for management purposes for the North Fork Lewis population is 5,700, based on estimates of maximum sustainable yield derived from spawner-recruit analysis. Escapements averaged 10,400 since 2006 and, with few exceptions, have met or exceeded the goal since at least 1980. The Sandy River population is considered to be viable under current harvest conditions in the Lower Columbia River Salmon and Steelhead Recovery Plan (NMFS 2013). Given the long history of healthy returns and management constraints that will be in place this year for other stocks (e.g., tules and upriver brights), NMFS does not anticipate the need to take specific management actions in the ocean to protect the bright component of the LCR Chinook salmon ESU in 2019. NMFS does expect that the states of Washington and Oregon will continue to monitor the status of the LCR Chinook salmon bright populations, and take the specific actions necessary through their usual authorities to deliver spawning escapement through the in-river fisheries they manage sufficient to maintain the health of these populations.

c) LCR tule Chinook salmon – There are twenty-one separate populations within the tule component of the LCR Chinook salmon ESU. Unlike the spring-run or bright populations of the ESU, LCR tule Chinook salmon populations are caught in large numbers in Council fisheries, as well as fisheries to the north and in the Columbia River. NMFS' 2012 biological opinion on the abundance-based management (ABM) framework concluded that fisheries managed under this framework are not likely to jeopardize LCR Chinook salmon. The ABM framework sets the annual exploitation rate limit depending on the abundance of Lower River Hatchery (LRH) tule Chinook salmon (Table 3).

Since implementation of the framework, the preseason forecasts for LCR tule Chinook salmon have been high due in large part to favorable ocean survival conditions allowing for an exploitation rate of 0.41. In 2018, the framework allowed for an exploitation rate of 0.38. The terms and conditions of the 2012 opinion require that a postseason summary of the previous year's Council fisheries shall be provided annually by February 28; however, the estimated post season exploitation rate for LCR tule Chinok salmon in 2018 is not available at this time.

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<sup>4</sup>[http://www.westcoast.fisheries.noaa.gov/protected\\_species/salmon\\_steelhead/recovery\\_planning\\_and\\_implementation/lower\\_columbia\\_river/lower\\_columbia\\_river\\_salmon\\_recovery\\_sub\\_domain.html](http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/lower_columbia_river/lower_columbia_river_salmon_recovery_sub_domain.html)

The 2012 opinion called for a review of the harvest framework every three years which is complimentary to an ongoing review of the recovery strategy. NMFS is finalizing its recommended harvest framework review in March 2019, a draft of which was provided to the Council in November 2018 inviting their review and comment. The harvest framework review concluded that the LRH abundance criteria currently used in the matrix has not been affected by recent changes in hatchery production.

**Table 3. Variable exploitation rate limits based on the preseason forecast of LRH Chinook salmon.**

<b>Lower River Hatchery Abundance</b>	<b>Total Exploitation Rate Limit</b>
0-30,000	0.30
30,000-40,000	0.35
40,000-85,000	0.38
> 85,000	0.41

**Guidance:** a) Cowlitz and Lewis River Hatcheries populations – The 2019 forecast for Cowlitz Salmon Hatchery escapement is 1,300 adults which will not meet the minimum hatchery escapement of 1,550 adults. The 2019 forecast for Lewis River Salmon Hatchery fish is 1,600 adults compared to an escapement goal of 1,380. We understand that the States of Washington and Oregon will manage the mainstem Columbia River spring season fisheries to ensure the escapement goal for the Lewis River Hatchery is met and the escapement to the Cowlitz Salmon Hatchery is maximized to the extent the forecast allows. Although additional progress is required to meet the high viability objective for the Sandy River, harvest objectives specified for the population through recovery planning are being met. We expect that the management agencies will continue to manage in-river fisheries, coordinating between mainstem and terminal tributary fisheries management, to meet hatchery escapement goals.

b) North Fork Lewis and Sandy River populations – Given the long history of healthy returns and management constraints that will be in place this year for other stocks (e.g., tules and upriver brights), we do not anticipate the need to take specific management actions in the ocean to protect the bright component of the LCR Chinook salmon ESU in 2019. We expect that the states of Washington and Oregon will continue to monitor the status of the LCR Chinook salmon bright populations, and take the specific actions necessary through their usual authorities to deliver spawning escapement through the in-river fisheries they manage sufficient to maintain the health of these populations.

c) LRH tule Chinook salmon – The preseason forecast for LRH tule Chinook salmon in 2019 is 54,500; therefore, Council fisheries in 2019 should be managed such that the total exploitation rate on LCR tule Chinook salmon in all ocean fisheries and all mainstem Columbia River fisheries below Bonneville Dam combined does not exceed 38 percent.

NMFS will continue to focus on implementing the comprehensive transitional strategy described in the recovery plan that links harvest actions to progress on the suite of actions necessary to achieve long-term recovery. In that regard, it is crucial for fishery managers to continue focusing on all aspects of the overall recovery strategy. Monitoring will be critical to verify that the actions specified in the plan are being taken and that populations are responding as expected. Success on both fronts will be necessary to avoid further constraints on harvest in the future.

## **Upper Columbia River Spring-run Chinook Salmon, Upper Willamette River Chinook Salmon, Snake River Spring/Summer-run Chinook Salmon ESUs**

**Background:** NMFS has considered the effects of Council fisheries on spring-run Chinook salmon stocks from the Upper Columbia River and Upper Willamette River Basins and spring/summer-run Chinook salmon stocks from the Snake River in several biological opinions. In these opinions we concluded that the expected take in Council salmon fisheries of salmon originating from any one of these ESUs is at most an occasional event; therefore, the fisheries were not likely to jeopardize any of these ESUs.

**Guidance:** Consistent with the findings of the opinions, management actions designed to limit catch from these ESUs beyond what will be provided by harvest constraints for other stocks in 2019 are not necessary.

## **Snake River Fall-run Chinook Salmon ESU**

**Background:** NMFS completed a biological opinion on the impacts of Council salmon fisheries on Snake River fall-run Chinook salmon in 1996. In that opinion, NMFS concluded that a 30.0 percent reduction in the age-3 and age-4 adult equivalent total exploitation rate in ocean salmon fisheries relative to the 1988-1993 base period standard provided a necessary and appropriate level of protection for Snake River fall-run Chinook salmon. Since this ESU has shown continued progress towards recovery with the 1996 opinion's standard in place, that standard still applies.

**Guidance:** 2019 Council salmon fisheries must be managed to ensure that the 30.0 percent base period reduction criterion for the aggregate of all ocean fisheries, including Southeast Alaska, Canada, and Council fisheries, is achieved.

## **Puget Sound Chinook Salmon ESU**

**Background:** The following summarizes guidance for the Puget Sound Chinook salmon ESU. While NMFS is providing guidance for the 2019 Council salmon fisheries, we acknowledge the importance of, and continue to strongly support, the integrated management structure between the Council and North of Falcon planning processes. The FMP describes conservation objectives for each Puget Sound Chinook salmon stock, although these have evolved over time. The consultation standards for Puget Sound Chinook salmon stocks that NMFS includes in this letter are described in terms of total or southern U.S. fisheries (SUS) impacts rather than Council fisheries specific impacts. Under the current management structure, Council fisheries are included as part of the suite of fisheries that comprise the fishing regime negotiated each year by the co-managers under *U.S. v. Washington* to meet management objectives for Puget Sound and Washington Coastal salmon stocks.

Although Council and Puget Sound fisheries are intertwined, it is worth noting that impacts on Puget Sound Chinook salmon stocks in Council fisheries are generally quite low. In 2004, NMFS issued a biological opinion on the anticipated effects of Council fisheries on the listed Puget Sound Chinook

ESU for 2004 and future fishing years (NMFS 2004). The 2004 opinion found that exploitation rates in Council area fisheries within the range observed for brood years 1991-1998 would not jeopardize the continued existence of the species. Exploitation rates on Puget Sound spring- and fall-run Chinook stock aggregates in Council fisheries have been less than two percent and five percent on average, respectively, in recent years.

NMFS has consulted on a series of proposed harvest plans for the Puget Sound Chinook Salmon ESU since the ESU was listed in 1999. NMFS is currently reviewing a new comprehensive, multi-year joint Resource Management Plan (RMP) developed by the Washington Department of Fish and Wildlife and the Puget Sound Treaty Tribes (collectively the Puget Sound co-managers) submitted for consideration in December 2017 for the 2018-2028 fishing years. However, discussions between NMFS and the Puget Sound co-managers regarding the provisions of the RMP are on-going and review of that RMP will not be complete in time for the 2019 fishing season. Therefore, NMFS expects to consult on a Bureau of Indian Affairs proposed action encompassing the 2019 fishing season. We expect to issue the biological opinion for the Puget Sound fisheries by early May 2019. The following guidance reflects NMFS' discussions with the Puget Sound co-managers to date and our best preliminary assessment of appropriate conservation objectives for 2019.

The status of populations in the Puget Sound Chinook salmon ESU varies. However, there is no question that the status of the ESU as a whole has declined over the past 10 years. NMFS' most recent (2016) five-year status review of West Coast ESA-listed salmonids reported negative trends from 1999 to 2014 in natural-origin spawners for 17 of the 22 Puget Sound Chinook salmon populations. The proportion of natural-origin fish on the spawning grounds has decreased steadily over time. Natural-origin escapement of 7 of the 22 populations in the ESU are below their critical thresholds which, for all but one of the populations, means less than 200 natural-origin spawners. Six of those populations are essential to recovery of the ESU. The recent decline in the status of the ESU in general is primarily due to factors other than harvest, but with consideration of the status of the ESU as-a-whole and the critical populations, in particular, our guidance reflects additional conservatism.

**Guidance:** For the Puget Sound Chinook salmon ESU, consistent with the 2004 opinion, the 2019 Council fisheries should be managed such that exploitation rates on Puget Sound spring- and fall-run Chinook salmon populations do not exceed 3 and 6 percent, respectively. Also, in adopting its 2019 salmon fisheries recommendations, the Council should determine that its fisheries, when combined with the suite of other fisheries impacting the Puget Sound Chinook salmon ESU, meet the management targets set for populations within this ESU. For that reason, we provide detailed guidance below for Council fisheries and describe our expectation for the full suite of SUS fisheries that will affect Puget Sound Chinook salmon stocks in 2019.

Our 2019 guidance for conservation objectives for all Puget Sound Chinook salmon populations is summarized in Table 4. The guidance is a mixture of total and southern U.S. exploitation rates, escapement goals, or noted expectations in place of specific objectives. Primary factors considered in developing the guidance were: the status and trends of the individual populations and their various roles

in recovery of the ESU, NMFS' updated Fishery Regulation and Assessment Model (FRAM) equivalent Rebuilding Exploitation Rates (RERs), the forecast abundance of the population in 2019, and provisions in the proposed RMP.

We understand that the Puget Sound co-managers may provide management objectives to the Council for the 2019 season that are derived from various sources including the proposed 2018-2028 RMP, or that are specific to the circumstances in 2019, but that may differ from some of the guidance presented here. Where the conservation objectives differ, NMFS and the co-managers will continue working together to reconcile some or all of the differences. We may provide additional guidance to the Council in April pending further discussions with the Puget Sound co-managers and based on information developed through the North of Falcon process. This guidance is specific to the 2019 season and is not intended to limit the on-going discussions between NMFS and the co-managers with regard to the longer-term RMP.

Considerations for several Puget Sound Chinook populations, specific to circumstances in 2019, where we expect based on these considerations that the final objective that is produced during the preseason planning process will meet the conservation needs for the populations:

1. Puget Sound preseason run size information for 2019 indicates that the North and South Fork Nooksack early-run, Mid-Hood Canal, and the Stillaguamish populations will be at very low abundance in 2019. One or more of these stocks will likely have a limiting impact on some Puget Sound pre-terminal fisheries, such that full attainment of the exploitation rate ceilings as proposed by the co-managers, may not occur for several Puget Sound populations.
2. For the Skagit summer/fall run, the co-managers proposed exploitation rate ceiling of 48 percent (%) for the summer/fall aggregate population is higher than the NMFS' updated RERs for two of the three component populations—Upper Skagit (45%) and Lower Skagit (36%)—but lower than the 49% RER for the Lower Sauk population. Given the following conditions, we expect that the final objective that is produced during the preseason planning process will meet conservation needs for the population:
  - a. the likely constraints on 2019 SUS pre-terminal harvest due to the low abundance status of several Puget Sound stocks (as described above);
  - b. the recent status and trends of the natural-origin components of these Skagit populations—5 and 10-year natural-origin escapement average shows all three populations well above critical abundance levels and two of three above rebuilding abundance levels, with the third very near rebuilding levels;
  - c. recent 5-year average total exploitation rate below 40%; and
  - d. the 2019 natural-origin forecast is near the recent 5-year average.
3. Similarly, for the Skagit River spring run, the co-managers proposed exploitation rate ceiling (37.5%), on the aggregate spring run, is higher than NMFS' updated RERs of 24%, 32%, and 36%, respectively, for the Upper Sauk, Suiattle, and Cascade populations. Given the following

conditions we expect that the final objective that is produced during the preseason planning process will meet conservation needs for the population:

- a. the likely constraints on pre-terminal harvest due to the low abundance status of several Puget Sound stocks (as described above);
  - b. the recent status and trends of the natural-origin components of these populations—5 and 10-year natural-origin escapement average shows all three populations above rebuilding abundance levels;
  - c. recent 5-year average total exploitation rate below 20%; and
  - d. the 2019 natural-origin forecast above the recent 5-year average.
4. For the Stillaguamish River, the co-manager's proposed exploitation total rate ceiling (24%), on the summer/fall run, is higher than NMFS' updated RER of 22%. As mentioned in the text above, the Stillaguamish run is forecast to be at very low abundance this year and has been proposed to be managed for a SUS exploitation rate of no greater than 8%. This 8% SUS limit could be further reduced if northern exploitation rates in 2019 exceed 16% (the total rate cannot exceed 24% under the RMP). The recent 5-year average total exploitation rate for the Stillaguamish population has been 23%, with 9.2% of this occurring in the SUS and 13.8% in northern fisheries. The co-manager's proposed SUS critical exploitation rate (maximum 8%) combined with the recent years' northern exploitation rates as a reasonable assumption for this year's fishery would result in an exploitation rate at or below the NMFS RER. We expect that the final objective that is produced during the preseason planning process will meet conservation needs for the population.
5. For the Snohomish River, the co-manager's proposed exploitation ceiling (21%), on the summer/fall run aggregate, is higher than NMFS' updated RERs of 19% and 20%, respectively, for the summer and fall components. Given the following conditions we expect that the final objective that is produced during the preseason planning process will meet conservation needs for the population:
- a. the likely constraints on pre-terminal harvest due to the low abundance status of several Puget Sound stocks (as described above);
  - b. the recent status and trends of the natural-origin components of these populations—5 and 10-year natural-origin escapement average shows both populations above rebuilding abundance levels; and
  - c. recent 5-year average total exploitation rate below 20%.
6. For the Mid-Puget Sound fall Chinook populations—Green River, Puyallup River and Lake Washington— based on discussions with the co-managers, we have developed interim conservation objectives for the 2019 fishing season. These objectives represent recent-year average natural-origin spawner escapement, in the Green and Puyallup Rivers, and a natural-origin spawner escapement goal in the Cedar River (Lake WA) which looks to maximize spawner productivity. These interim objectives conserve recent gains in natural-origin escapement, consistent with these populations' role in recovery of the ESU. In all three of these

systems, hatchery broodstock collection goals are additional, important objectives that can limit the overall attainable harvest rates. Additionally, in the Green and Puyallup River systems, natural-origin adults can be captured at the hatchery facilities. These natural-origin fish are utilized in the hatchery program broodstock but adults that are in excess of that need can be transported to spawning reaches in the rivers to contribute to the natural-origin spawning objective. We expect that the co-manager's fishery management actions, in the case of Lake Washington, and fishery management actions and hatchery broodstock actions in the Green and Puyallup Rivers, for 2019 will result in spawning ground escapements that meet the objectives outlined in Table 4. We anticipate that these objectives will meet conservation needs for the populations.

If, during the North of Falcon process, circumstances are inconsistent with our expectations, we will work with the co-managers to develop appropriate measures.

*(Continued next page)*

**Table 4. NMFS' guidance for Puget Sound Chinook salmon conservation objectives for the 2019 fishing year.**

Management Unit/Population	NMFS' Exploitation Rate Ceilings or Escapement objectives (Grayed/Bolded cells are agreed-to by NMFS and the Puget Sound Co-managers)		Puget Sound Co-manager's Proposed Exploitation Rate Ceilings	
	Total	Southern U.S. (SUS)	Total	Southern U.S. (SUS)
<b>Nooksack spring</b> NF Nooksack SF Nooksack	-	10.5%	-	10.5%
<b>Skagit Summer/Fall</b> Upper Skagit Lower Skagit Lower Sauk	See Bullet 2 above	-	48%	-
<b>Skagit Spring</b> Suiattle Upper Sauk Cascade	See Bullet 3 above	-	37.5%	-
<b>Stillaguamish<sup>a</sup></b> NF Stillaguamish SF Stillaguamish	See Bullet 4 above	-	24%	8%
<b>Snohomish</b> Skykomish Snoqualmie	See Bullet 5 above	-	21%	
<b>Lake Washington</b> Cedar River	500 NOR spawners in the Cedar River (bullet 6 above)	-	500 Escapement (13% PT SUS)	
<b>Green</b>	A combination of fishery and NOR broodstocking actions taken to achieve a minimum of 1,200 NOR spawners (bullet 6 above).	-	2,003 Escapement (13% PT SUS)	
<b>White River</b>		22% <sup>b</sup>	22%	
<b>Puyallup</b>	A combination of fishery and NOR broodstocking actions taken to achieve a minimum of 750 NOR spawners (bullet 6 above).	-	1,170 Escapement (13% PT SUS)	
<b>Nisqually<sup>c</sup></b>	49% (47% base +2% for experimental selective fishery)	-	49% Total (47% + no more than 900 fish experimental selective fishery)	
<b>Skokomish<sup>d</sup></b>	50%	-	50%	
<b>Mid-Hood Canal</b>	-	12.0% PT SUS	-	12% PT SUS
<b>Dungeness</b>	-	10.0%	-	10% SUS
<b>Elwha</b>	-	10.0%	-	10% SUS

<sup>a</sup> Provisions of the 2018 RMP state that the total exploitation rate (including AK and Canadian salmon fisheries) cannot exceed 24%. If northern fisheries exceed 11%, Southern U.S. impacts will be lowered to maintain Natural Origin Recruit impacts to not exceed a 24% exploitation rate.

<sup>b</sup> NMFS expects Canadian fisheries to remain constrained similar to the recent 5 years. Therefore, the total exploitation rate for White River Chinook salmon in 2019 is expected to be 28% or less.

<sup>c</sup> Implementation of experimental selective fishery in 2019 is dependent on NMFS receipt of rationale for 2% increase to the 47% ceiling and detailed implementation plan for the experimental fishery prior to completion of the biological opinion.

<sup>d</sup> Skokomish LAT is escapement of 800 natural spawners and 500 escapement to the hatchery. Anticipated hatchery or natural escapements below these spawner abundances trigger specific additional management actions. Contingent on continued implementation of the provisions of the Addendum to 2014 Plan for Management of Fall Chinook salmon in the Skokomish River (October 31, 2015).

In summary, while the primary purpose of this document is to provide guidance for the Council salmon fisheries in 2019, we acknowledge the importance of the integrated management structure between the Council and North of Falcon planning processes. Because impacts on Puget Sound Chinook salmon in Council fisheries are low, management actions taken to meet the above-described conservation objectives will occur primarily in Puget Sound fisheries. However, since impacts in both fisheries are considered in meeting the objectives, any delay in reaching the necessary agreements through the North of Falcon process by the end of the April 2019 Council meeting will complicate NMFS' ability to approve regulations for Council area fisheries and to complete the biological opinion for Puget Sound fisheries by May 2019. To avoid such complications, we strongly recommend that the Council provide assurance that the final option adopted at its April 2019 Council meeting, when combined with Puget Sound fisheries negotiated during the North of Falcon process, results in harvest impacts that are consistent with the conservation objectives for each Puget Sound Chinook management unit included in Table 4 based on the anticipated 2019 abundances.

## ESA-listed Coho Salmon Species

### Oregon Coast (OC) Coho Salmon ESU

**Background:** The ESA listing status of the OC coho ESU has changed over the years. Since February 2008, the OC coho ESU has been ESA-listed as threatened. Regardless of its listing status, the Council has managed OC coho consistent with the terms of Amendment 13 of the FMP as modified by the Council's 2000 ad-hoc OC Natural Coho Workgroup. NMFS concluded in its 1999 ESA section 7 consultation on Amendment 13 to the FMP that management of fisheries consistent with the Amendment was not likely to jeopardize this ESU. The 2000 modifications to the framework in Amendment 13 added management tiers to address lower marine survival and parent brood conditions. With these modifications, the framework has provided equivalent and/or additional restrictions on the ocean salmon fishery for OC coho salmon when compared to the provisions of the 1999 opinion. Therefore, reinitiation of consultation was not required.

Prior to FMP Amendment 13 (January 1999), coho originating in coastal Oregon streams from the Necanicum River in the north to the Winchuck River in the south were managed as one aggregate stock, Oregon Coast Natural (OCN) coho. Amendment 13 disaggregated OCN coho management into four sub-aggregates: northern (Necanicum River to Neskowin River), north central (Salmon River to Siuslaw River), south central (Siltcoos River to Sixes River), and southern (Elk River to

Winchuck River). Three of these (northern, north central, and south central) comprise the OC coho ESU. The southern sub-aggregate is within the Southern Oregon/Northern California Coastal coho ESU (SONCC coho), discussed below. Additionally, under Amendment 13, allowable fishery impact rates for OC coho are set based on measures of parental escapement and marine survival. Impact rates are set for each of the three OC coho sub-aggregates, with the ocean impacts rate being limited by the lowest of the three.

**Guidance:** For the 2019 season, the spawner status for the northern sub-aggregate is high, the north-central sub-aggregate is low, and the south-central sub-aggregate is medium. The marine survival index is in the low category. Under these circumstances, the 2000 Workgroup report<sup>5</sup> requires that the total exploitation rate in 2019 marine and freshwater fisheries be limited to no more than 15 percent for all three of the OC coho sub-aggregates. Although the south sub-aggregate is included in the harvest matrix described in Amendment 13 as modified by the 2000 Workgroup, as described above the south sub-aggregate is part of the Southern Oregon/Northern California Coastal coho ESU and is managed subject to provisions that are described below for that ESU consistent with the 1999 opinion referenced above.

For 2019, fishery managers should continue to coordinate ocean fishery impacts with desired terminal fishery opportunities for wild coho salmon to ensure that the impacts for each of the sub-aggregates remain within the overall limits specified for the sport fishery consistent with the Fishery Management and Evaluation Plans for the rivers and lakes of the OC coho ESU<sup>6</sup>. For 2019, the ocean fisheries plus the specific river sport fisheries are subject to a limit of 15 percent in each sub-aggregate.

### **Lower Columbia River (LCR coho) Coho Salmon ESU**

**Background:** The LCR coho ESU was listed as threatened under the ESA in 2005. In 2014, the Council recommended a harvest management matrix for managing impacts to LCR coho. NMFS completed a biological opinion concluding that Council fisheries managed using this matrix are not likely to jeopardize LCR coho. The matrix and the 2015 opinion provides the basis for our guidance in 2019.

The total exploitation rate limit for LCR coho is set each year based on measures of parental escapement and marine survival (Table 5). The total exploitation rate on LCR coho salmon in all marine area fisheries and fisheries in the mainstem Columbia River below Bonneville Dam must not exceed the year-specific exploitation rate limit.

*(Continued next page)*

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<sup>5</sup> OCN Work Group Report, dated October 12, 2000: [https://www.pcouncil.org/bb/2000/1100/B3b\\_OCN\\_WGR\\_Nov00BB.pdf](https://www.pcouncil.org/bb/2000/1100/B3b_OCN_WGR_Nov00BB.pdf)

<sup>6</sup> NMFS. 2009. Letter from Barry Thom, NMFS, to Ed Bowles, ODFW, dated September 1, 2009, concurring with ODFW's "Oregon Coastal Coho, Coastal Rivers Coho Sports Fishery" Fisheries Management and Evaluation Plan under limit 4 of the 4(d) rule.

**Table 5. Harvest management matrix for LCR coho showing allowable fishery exploitation rates based on parental escapement and marine survival index.**

Parental Escapement (rate of full seeding)		Marine Survival Index (based on return of jacks per hatchery smolt)					Allowable exploitation rate
		Very Low (≤ 0.06%)	Low (≤ 0.08%)	Medium (≤ 0.17%)	High (≤ 0.40%)	Very High (> 0.40%)	
Normal	≥ 0.30	10%	15%	18%	23%	30%	
Very Low	< 0.30	≤ 10%	≤ 15%	≤ 18%	≤ 23%	≤ 30%	

The 2015 opinion called for a review of the abundance-based management framework every three years or as needed to consider new information. NMFS is finalizing its recommended harvest framework review in March 2019, a draft of which was provided to the Council in November 2018 inviting their review and comment. The harvest framework review included information about, forecast methods, natural-origin spawner escapement, proportion of hatchery-origin spawners, marine survival, and other information used in the Beamesderfer et al. (2014) risk analysis<sup>7</sup>. Results of the harvest framework review did not suggest changes to the approach at this time. However, a longer time series of data is needed to allow for a more comprehensive review that would include comparisons of the estimates of exploitation rates from FRAM to independent exploitation rate estimates derived from coded-wire tag groups.

**Guidance:** For the 2019 season, parent escapement is in the normal category. The marine survival index is in the high category. Therefore, Council fisheries in 2019 should be managed such that the total exploitation rate in all fisheries on LCR coho below Bonneville Dam does not exceed 23 percent.

**Southern Oregon/Northern California Coastal (SONCC) Coho Salmon ESU**

**Background:** The SONCC coho ESU has been listed as threatened under the ESA since 1997. The current consultation standard for SONCC coho, described in the FMP, is from a 1999 NMFS biological opinion. The Rogue/Klamath coho hatchery stock is used as an indicator of fishery impacts on SONCC coho.

**Guidance:** 2019 fisheries should be consistent with the consultation standard, which requires that management measures developed under the FMP achieve an ocean exploitation rate on Rogue/Klamath coho hatchery stocks of no more than 0.13.

<sup>7</sup> Beamesderfer, R., S. Ellis, J. Jording, C. Kern, C. LeFleur, D. Milward, E. Patiño, A. Rankis, and J. Whisler. 2014. Allowable Fishery Impacts To Lower Columbia River Natural Coho. A Review of the 2006 Harvest Control Rule for Possible Policy Reconsideration. Pages 53 p in PFMC, editor. Lower Columbia River Natural Coho Workgroup.

## **Central California Coastal (CCC) Coho Salmon ESU**

**Background:** The CCC coho ESU was listed as threatened under the ESA in 1996 and relisted as endangered in 2005. The current consultation standard for CCC coho is from a 1999 NMFS biological opinion. Information on past harvest or non-retention mortality rates is lacking for CCC coho. In the absence of more specific information, the consultation standard requires that directed fishing for coho and retention of coho in Chinook salmon-directed fisheries be prohibited off California.

CCC coho are one of eight species identified in NMFS' "Species in the Spotlight" initiative because it is at high risk of extinction. For more information about actions for its conservation and recovery, please refer to its Species in the Spotlight Priority Action Plan.<sup>8</sup>

**Guidance:** 2019 fisheries should be consistent with the consultation standard to prohibit directed fishing for coho and retention of coho in Chinook salmon-directed fisheries off California.

## **ESA-listed Chum Salmon Species**

### **Hood Canal Summer-run Chum Salmon ESU**

**Background:** Chum salmon are not targeted and are rarely caught in Council salmon fisheries. However, the FMP requires fisheries to be managed consistent with NMFS' ESA standards for listed species, which includes the Hood Canal summer-run chum salmon ESU. The Summer Chum Salmon Conservation Initiative<sup>9</sup>, approved by NMFS under Limit 6 of the ESA 4(d) Rule describes the harvest actions that must be taken to protect listed Hood Canal summer-run chum salmon both in Washington fisheries managed under the jurisdiction of the Council and Puget Sound fisheries managed by the state and tribal fishery managers.

Under the terms of the Conservation Initiative, chum salmon must be released in non-treaty sport and troll fisheries in Washington catch Area 4 from August 1 through September 30. The Conservation Initiative does not require release of chum salmon in tribal fisheries in catch Area 4 during the same period, but does recommend that release provisions be implemented. As in previous years, tribal managers will discuss implementation of these provisions during the North of Falcon planning process.

**Guidance:** 2019 Council fisheries should be managed consistent with the terms of the Chum Salmon Conservation Initiative.

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<sup>8</sup> <https://www.fisheries.noaa.gov/species/coho-salmon-protected/spotlight>

<sup>9</sup> Washington Department of Fish and Wildlife and Point No Point Treaty Tribes. 2000. Summer Chum Salmon Conservation Initiative: An Implementation Plan to Recover Summer Chum in the Hood Canal and Strait of Juan de Fuca Region. Dated April 2000. 797 p.

## ESA-listed Sockeye Salmon Species

### Snake River Sockeye Salmon and Ozette Lake Sockeye Salmon ESUs

**Background:** Sockeye salmon are rarely caught in Council salmon fisheries. In previous biological opinions, NMFS determined that Council fisheries were not likely to adversely affect Snake River or Ozette Lake sockeye salmon.

**Guidance:** Management constraints in the 2019 ocean fisheries for the protection of listed sockeye salmon are not considered necessary.

## ESA-listed Steelhead Species

**Background:** One Distinct Population Segment (DPS) of steelhead is currently listed as endangered, and ten DPSs are listed as threatened in Washington, Oregon, Idaho, and California. All eleven ESA-listed DPSs have been considered in NMFS' biological opinions on the effects of Council fisheries. Steelhead are rarely caught in ocean fisheries and retention of steelhead in non-treaty commercial ocean fisheries is currently prohibited.

**Guidance:** Based on currently available information, we conclude that no additional measures are required at this time to avoid effects not already considered in prior opinions. The Council and states should continue to prohibit the retention of steelhead with intact adipose fins in ocean recreational fisheries and we encourage the same in treaty tribal fisheries to minimize the effect of whatever catch may occur.

The NMFS West Coast Region looks forward to working with the Council to develop 2019 ocean salmon fisheries consistent with the conservation and management objectives of the FMP, the Magnuson-Stevens Fishery Management and Conservation Act, and the ESA. We are committed to working with the Council to address the issues outlined in this letter. If you have questions, please contact Ryan Wulff, Assistant Regional Administrator for Sustainable Fisheries at 916-930-3733 or [Ryan.Wulff@noaa.gov](mailto:Ryan.Wulff@noaa.gov).

Sincerely,



Barry A. Thom  
Regional Administrator

cc: Chuck Tracy, Executive Director, Pacific Fishery Management Council  
Ryan Wulff, Assistant Regional Administrator for Sustainable Fisheries, NMFS WCR



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
1201 NE Lloyd Boulevard, Suite 1100  
PORTLAND, OREGON 97232-1274

March 6, 2019

Mr. Phil Anderson, Chair  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 101  
Portland, Oregon 97220-1384

Dear Chair Anderson:

This letter supplements our annual guidance letter, dated March 5, 2019, on developing the Pacific Fishery Management Council's (Council) recommendations for the 2019 ocean salmon fisheries. This letter specifically addresses NOAA's National Marine Fisheries Service (NMFS) guidance related to effects of these fisheries on endangered Southern Resident killer whales (SRKW).

### ***Background***

SRKW are listed as endangered under the ESA. Over the last decade, the population has declined from 87 whales down to an historical low of 74 whales, and future projections under status quo conditions suggest a continued decline over the next 50 years (NMFS 2016). SRKW are one of eight species identified in NMFS' "Species in the Spotlight" initiative because it is at high risk of extinction. We are taking many actions to conserve and recover SRKW<sup>1</sup> and particularly to address the three main threats to the whales: prey limitation, vessel traffic and noise, and chemical contaminants.

Chinook salmon, the whales' primary prey, are important to SRKW survival and recovery. Any activities that affect the abundance of Chinook salmon available to SRKW have the potential to impact the survival and population growth of the whales. Fisheries can reduce the prey available to the whales and in some cases can interfere directly with their feeding. Insufficient prey can impact their energetics (causing them to search more for fewer prey), health (decreasing their body condition), and reproduction (reducing fecundity and calf survival).

NMFS consulted on the effects of Council fisheries under the ESA in 2009 and concluded that Council fisheries did not jeopardize the survival and recovery of SRKW. Since the 2009 consultation was completed, a substantial amount of new information is available on SRKW and their prey. Therefore, NMFS will re-initiate ESA consultation on the Council fisheries in 2019. NMFS would like to work with the Council to reassess the effects of Council fisheries on SRKW in light of this new information and as needed to develop a long-term approach that ensures these fisheries appropriately limit any adverse effects on SRKW. We anticipate that developing such a long-term approach will take some time, thus we do not anticipate that it will be available for 2019 fisheries. However, we are interested in establishing firm plans for this work as soon as possible, as discussed in more detail below.

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<sup>1</sup> More information about conservation and recovery actions can be found in our SRKW Species in the Spotlight Priority Action Plan (<https://www.fisheries.noaa.gov/species/killer-whale#spotlight>) and in our ESA recovery plan for SRKW ([https://www.westcoast.fisheries.noaa.gov/protected\\_species/marine\\_mammals/killer\\_whale/index.html](https://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/index.html))



## *Ongoing research and analysis*

SRKW consume Chinook salmon from a variety of runs throughout the year. In 2018, NMFS worked with the Washington Department of Fish and Wildlife (WDFW) and other partners to develop a framework to identify Chinook salmon stocks that are important to SRKW to assist in prioritizing actions to increase critical prey for the whales<sup>2</sup>. The framework gives extra weight to salmon runs that have high overlap spatially and temporally with SRKW, and have been documented as part of their diet, especially during winter when the whales may have a harder time finding sufficient food. Several of the high priority Chinook salmon stocks currently identified in the framework contribute substantially to Council fisheries, including **lower Columbia River, Sacramento River, and Klamath River fall-run Chinook salmon stocks**. Identifying high priority Chinook salmon stocks for SRKW is an important step to assess impacts and prioritize management and recovery actions that will benefit the whales. As we continue to gather additional information to refine and update this framework, we welcome Council input.

Additionally, NMFS is working on a risk assessment that comprehensively analyzes the effects of salmon fisheries on the availability of SRKW prey throughout their geographic range and identifies conditions that may pose a risk to recovery of the whales. This comprehensive risk assessment describes the spatial and temporal overlap of each fishery with the whales, uses a retrospective analysis to assess the impacts of salmon fisheries on the total prey available in the past (including the last decade of decline for the whales), and assesses potential impacts to future prey availability for a variety of fisheries management regimes on the West Coast. In conjunction with the risk assessment, NMFS is developing an adaptive management framework that could help inform fisheries management regarding conditions that pose a risk to the recovery of the whales. If adjustments are needed, this framework could guide fisheries actions to limit impacts to prey availability in specific areas and times that are believed to create the greatest benefit to the whales. We believe adaptive frameworks like this, or other equally protective tools, provide confidence that fisheries can respond to the highest risk conditions and help improve conditions for SRKW in the future. We are very interested in sharing and discussing these ideas with the Council.

NMFS continues to focus on understanding the whales' migration patterns, feeding habits, health conditions, and preference for Chinook salmon as prey so that we can develop and prioritize strategies to increase abundance and availability of Chinook salmon to support SRKW recovery.

In addition to considering impacts to SRKW from fishing, we are also working closely with partners to reduce vessel disturbance and interference with foraging, so that the Chinook salmon are more accessible to the whales. Working with a variety of partners, we are implementing actions identified in our review of our existing vessel regulations<sup>3</sup> to improve compliance with these regulations, improve habitat conditions for the whales, and implement actions recommended through the Governor of Washington's Task Force process. For more information about SRKW conservation and recovery actions underway, please refer to NMFS' West Coast Region website.<sup>1</sup>

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<sup>2</sup> [https://www.westcoast.fisheries.noaa.gov/stories/2018/18\\_07182018\\_prioritized\\_salmon\\_stocks\\_for\\_srkw\\_recovery.html](https://www.westcoast.fisheries.noaa.gov/stories/2018/18_07182018_prioritized_salmon_stocks_for_srkw_recovery.html)

<sup>3</sup> Ferrara, G.A., T.M. Mongillo, L.M. Barre. 2017. Reducing disturbance from vessels to Southern Resident killer whales: Assessing the effectiveness of the 2011 federal regulations in advancing recovery goals. NOAA Tech. Memo. NMFS-OPR-58, 76 p. [https://www.westcoast.fisheries.noaa.gov/publications/protected\\_species/marine\\_mammals/killer\\_whales/noaa\\_techmemo\\_nmfsopr-58\\_dec2017.pdf](https://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/noaa_techmemo_nmfsopr-58_dec2017.pdf)

## ***2019 Pre-Season Ocean Salmon Fisheries Management Process***

NMFS is currently evaluating recently available information about 2019 Chinook salmon abundance projections for the ocean and Puget Sound. We are looking at this information in conjunction with the best available information on which salmon stocks contribute most to the SRKW diet (see 2018 framework referenced above). As noted, there are at least three stocks included in the priority prey stock framework that are caught in substantial numbers in Council area fisheries: **Lower Columbia River, Sacramento River, and Klamath River fall-run Chinook salmon**. We would like the Council's participation between now and the April meeting to help us understand the potential impact of proposed Council fisheries on the draft priority SRKW prey stocks.

### ***Work towards long-term approach and biological opinion***

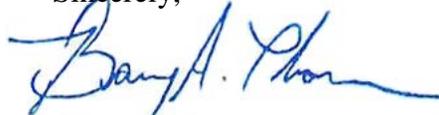
We would like to work collaboratively with the Council and its advisory bodies to reassess the effects of the Council-area fisheries on SRKW and to develop a long-term approach to address any identified effects as soon as practicable. We expect this collaborative process will include consideration of management tools, e.g. possibly an adaptive framework similar to that described previously, that under high risk conditions would trigger action that could reduce impacts on prey in a meaningful way. The goal is to help ensure that Council's harvest management is responsive to the status of SRKW and supports recovery to the extent necessary.

We also recommend that the Council consider scheduling a discussion about developing this collaborative process under its Future Agenda Planning agenda item at the March meeting, with time for discussion during the April meeting. We believe an ad hoc workgroup similar to those formed to assess effects and develop approaches for managing impacts to ESA-listed salmon stocks would be beneficial. NMFS would provide experts on SRKW and salmon fisheries to be part of the effort. We also suggest involving interested fishery participants and non-governmental organizations. A small technical workgroup at the direction of NMFS and the Council would be responsible for conducting the work and reporting back to the Council on progress and to receive additional guidance. We recommend beginning scoping the process, participants, and schedule at the April Council meeting.

The NMFS West Coast Region looks forward to working with the Council to develop 2019 ocean salmon fisheries consistent with the conservation and management objectives of the Pacific Coast Salmon Fishery Management Plan, the Magnuson-Stevens Fishery Management and Conservation Act, and the ESA. We are committed to working with the Council to address the issues outlined in this letter.

If you have questions, please contact Ryan Wulff, Assistant Regional Administrator for Sustainable Fisheries, at 916-930-3733 or [Ryan.Wulff@noaa.gov](mailto:Ryan.Wulff@noaa.gov).

Sincerely,



Barry A. Thom  
Regional Administrator

cc: Chuck Tracy, Executive Director, Pacific Fishery Management Council  
Ryan Wulff, Assistant Regional Administrator for Sustainable Fisheries, NMFS WCR

## SECTION 6 CONCISE EXPLANATORY STATEMENT

# **Recreational Salmon Regulations for 2019 Concise Explanatory Statement**



X/XX/2019

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## Recreational Salmon Regulations for 2019

This Concise Explanatory Statement (CES) describes the Washington Department of Fish and Wildlife's (WDFW) reasons for adopting the 2019 recreational salmon fishing rules and responds to public comments received on the proposed rules. The adopted rules are set forth in Washington Administrative Code (WAC) 220-220-160, 220-312-020, 220-312-030, 220-312-040, 220-312-050, 220-312-060, 220-313-060 and 220-313-070.

The CES contains three principle sections. **Section I** describes the rule being adopted, the process used in adopting the rule, and the resource management objectives advanced by adoption of the rule. **Section II** describes the changes from the proposed rule to the adopted rule. **Section III** discusses comments received during rulemaking and the agency's analysis and resolution of those comments.

### I. Rule Development Process

The CR 101 notice of intended rulemaking was filed on January 23, 2019 (WSR 19-03-137). Thereafter, the Department relied upon several forums to gather information and interact with regional fishery managers and constituent groups in order to develop a draft rule that was presented in the CR 102 filing on **June 6, 2018** for formal public review and comment (**WSR 18-12-120**).

State, federal, tribal fishery managers and the Oregon Department of Fish and Wildlife (ODFW) work collaboratively with recreational and commercial stakeholders during the North of Falcon and Pacific Fishery Management Council (PFMC) meetings, to develop fishing plans based on best available science regarding expected salmon returns, Endangered Species Act (ESA) limits and agency and commission policies. The name "North of Falcon" (NOF) refers to Cape Falcon, Oregon, which is the southern border of active management for Washington salmon stocks. This process consists of a series of public meetings involving federal, state, tribal and industry representatives and other concerned citizens. The NOF planning process coincides with the March and April meetings of the PMFC, the federal authority responsible for setting ocean salmon seasons 3 to 200 miles off the Pacific coast. In addition to the two PFMC meetings, the states of Washington and Oregon and the Treaty Tribes sponsor additional meetings to discuss alternative fishing seasons that meet conservation and harvest sharing objectives. Additionally, WDFW solicits input from advisory groups whose representatives represent a diverse range of user group interests.

The development of salmon fishing seasons begins with completion of previous year's spawning grounds and hatchery escapement surveys and estimates by state and tribal

biologists. Biologists apportion catch in each area to specific management groups and calculate a total run-size for each group. Biologists complete this analysis, also known as a run-reconstruction, each fall or early winter. Based on total run-size and the associated survival rates, state and tribal biologists forecast the number of salmon and steelhead returning for the coming year. State and tribal biologists typically complete the forecasts each year by late-February, thus achieving a significant amount of work prior to start of developing fishing seasons. From the run size forecasts, fisheries managers determine the amount available for directed or incidental harvest according to the management objectives. Once the forecasts and the number of fish available for harvest are determined, state and tribal fisheries managers can begin the process of developing specific fishing regulation proposals.

The 2019 annual public process for developing salmon fishery regulation proposals, known as the North of Falcon process, began on February 27 at the Lacey Community Center in Olympia. WDFW presented and discussed the 2019 preseason forecasts of salmon abundance with interested stakeholders. Implications of the forecasts and 2019 season planning were discussed in break-out sessions for the Columbia River, Ocean, and Puget Sound (all) during this meeting. Additional public meetings were as shown below in the Public Meeting Table.

**Public Meeting Table.** All meetings occurred in Washington State unless noted otherwise.

Geographic Area	Date(s)	Location
Willapa/Grays	February 26	Montesano
All	February 27	Olympia
Ocean	March 7-12	Vancouver, WA
Columbia/Ocean	March 18	Ridgefield
All	March 19	Olympia
Puget Sound	March 21	Sequim
Ocean	March 25	Westport
Grays Harbor	March 26	Montesano
Upper Columbia	March 26	East Wenatchee
Mid-Columbia/Snake	March 27	Kennewick
Puget Sound	March 27	Mill Creek
Willapa Bay	March 27	Raymond
Snake River	March 28	Clarkston
Columbia/Ocean	April 2	Ridgefield
All	April 3	Lynnwood
All	April 11-15	Rohnert Park, CA

During these public meetings, WDFW gathered input on structuring fishing seasons, possible rule changes, and provided the public with information on the status of the 2019 planning process. WDFW considered the fishing regulation proposals shared at public meetings as a work in progress (i.e., not final proposals) that would be further informed by comments received from meeting participants. Additionally, fishing proposals were informed by the public comments received online via the North of Falcon WDFW website, for those individuals who could not attend the public meetings.

In the Puget Sound, during the 2019 North of Falcon season planning process, the tribal co-Managers and WDFW conducted technical meetings and policy level discussions to agree on conservation objectives, run-size forecasts, and estimates of the allowable tribal and non-tribal catch shares for the various salmon runs considered in defining fishing levels. WDFW and the tribes also developed fishing schedules for both tribal- and state-managed salmon fisheries. Written and oral comments received during this process were considered in the development of WDFW's own package of rules. The recreational salmon fishing seasons proposed for adoption by WDFW in 2019 are product of both the government-to-government, tribal-state negotiation component, and the open public process component of the annual North of Falcon process. The formal public rule-making process undertaken by WDFW is in pursuant to the Administrative Procedures Act.

In the Columbia River, the fisheries are managed under the *U.S. v Oregon* Management Agreement. This agreement outlines the escapement goals, ESA limits and tribal and non-tribal harvest sharing. Tribal fisheries in the Columbia River are determined at in-season hearings and are developed by the four Columbia River treaty tribes. Written and oral comments received during the NOF process were considered in the development of WDFW's own package of rules. The Columbia River recreational salmon fishing seasons proposed for adoption by WDFW in 2019 are a product of both the *U.S v Oregon* Management Agreement, agency and commission policy guidance and the open public process component of the annual North of Falcon process. In addition, rule proposals developed in connection with these processes have been vetted based upon public input obtained in the formal public rule-making process undertaken by WDFW pursuant to the Administrative Procedures Act.

Based upon all of the information and outreach generated through these forums, a draft rule was developed for consideration in the public rule-making process that follows the filing of a proposed rule. Accordingly, the CR-102 was filed on June 6 and published in WSR 18-12-120, as part of WDFW's initial rule-making proposals for 2019. The filing included changes to Code (WAC) 220-220-160, 220-312-020, 220-312-030, 220-312-040, 220-312-050, 220-312-060, 220-313-060 and 220-313-070. Information regarding the proposed rule changes was electronically and physically mailed out to participants in the North of

Falcon process who provided their contact information at meetings as well as posting it on WDFW's website.

Formal rule-making hearings were held on July 10, 2018 (Puget Sound Marine and Freshwater in the Natural Resource Building) July 10, 2018 (Columbia River at the Region 5 office), July 10, 2018 (Coastal Marine at the Region 6 office) and on July 11, 2018 (Coastal Freshwater at the Region 6 office) to provide an additional opportunity for comments to be received on the proposed rules as published in the Washington State Register. Of the four hearings, a total of 3 individuals attended the hearings for coastal marine and freshwater. No individuals provided verbal and written comments, which are mentioned in Section III. In addition to input during the public meetings, comments received by letter, electronic mail, and online on the North of Falcon WDFW website during the North of Falcon process were considered as part of the rule-making process.

### **Rationale for Adoption of Rules**

WDFW considered all the facts and circumstances surrounding the proposed 2018 recreational salmon season. The agency carefully reviewed all input from the general public regarding preferred fishing rules during North of Falcon public meetings and the state's rule-making process. WDFW considered and relied upon the best technical and scientific information available to tribal and state fishery management experts, including pre-season forecasts of the abundance of salmon stocks and data that will be used during the season to update forecasts. Important characteristics of the recreational salmon fishery were considered, including the catch likely to result from the proposed rules, providing significant harvest opportunities, and the economic value of these fisheries. WDFW also considered fishing schedules of state commercial fisheries and the schedules of tribal fisheries, as in some cases these schedules must be coordinated with the state's recreational fishing schedules as part of the co-management process developed under sub-proceedings of *U.S. v Washington* and *U.S. v Oregon*.

Regulations for the 2019 recreational salmon fisheries were considered with respect to established objectives. These objectives include generally applied statewide objectives, together with detailed regional specific objectives described within regional sections below. These objectives were shared with recreational angler representatives during the 2019 North of Falcon and APA public processes, and are listed below in order of priority:

- 1) Conserve the wildlife and food fish, game fish, and shellfish resources in a manner that does not impair the resource (RCW 77.04.012) by achieving conservation objectives for all species and stocks

a) Ensure primary stocks meet escapement goals and/or management objectives (e.g., exploitation rate).

b) Manage fisheries consistent with Fish and Wildlife Commission Policies POLC3608 (2018-2019 North of Falcon) and C3619 (Hatchery and Fishery Reform).

c) Monitor fisheries to ensure a & b are met.

2) Harvest the non-treaty share of harvestable salmon.

3) WDFW shall promote orderly fisheries and shall enhance and improve recreational and commercial fishing in this state.

4) WDFW shall seek to maintain the economic well-being and stability of the fishing industry in the state.

### **Regional Specific Rationale**

#### **North Coast**

Modifications to North Coastal sport fishing regulations adopted for 2018 through this rulemaking process were:

- The Hoh River will close to all recreational fishing from May 1 through May 31, and September 1 – 15 to protect depressed wild spring/summer Chinook salmon. The Hoh will open June 1 – August 31 for trout, and retention of dip-in hatchery Chinook will be allowed June 1 – 30. Bait is not allowed June 1 – September 15.
- The fall salmon season will open for the traditional September 1 through November 30 season in the Quillayute System. In the Hoh River the season will be September 16th through November 30, and the usual October 16 through November 30 in the section of the Hoh from the oxbow boat ramp upstream to Morgan’s Crossing. The Clearwater and Salmon rivers in the Queets system will open September 1 and close early, on October 1 because of a low wild coho forecast. Escapement of Queets River natural coho is projected to be below the escapement goal of 5,800. However, the co-managers agreed to model fisheries at levels that produce a lower escapement for 2018. While season lengths vary, daily bag limits in all the North Coast rivers will still reflect a conservative approach for wild coho salmon, as detailed below.

- The rivers in the Quillayute System: Where returning hatchery coho salmon are expected to be present (Quillayute River and Sol Duc River below the hatchery), the daily bag limit will be 6 salmon, of which only three may be adults, only one may be a Chinook, only one a sockeye, and release wild adult coho.
- The daily bag limit in the Bogachiel, a tributary of the Quillayute system, will remain as in 2017 at 3 salmon, only one of which may be an adult. The Calawah and Dickey rivers, also tributaries to the Quillayute system, will open with daily bag limits of 3 salmon, only one of which may be an adult, release wild coho.
- The daily bag limit in the Hoh River will be 6 salmon, 2 adults, of which only one may be a Chinook.
- Clearwater River, a tributary to the Queets River, will have a daily bag limit of 3 salmon, only one adult, and release wild coho. Salmon River, tributary to the Queets River, will have a daily bag limit of 6 salmon, 2 adults, only one of which may be a Chinook. Release wild coho. Both rivers close October 1 – November 30 to avoid wild coho encounters.

The wild coho stocks and the Hoh River spring/summer Chinook stock were the focus on the North Coast for the 2018 season planning process. The management objective for Hoh River spring/summer Chinook is an escapement rate of 69% with an escapement floor of 900 fish. The 2018 return to the river is expected to be near this floor, with the run forecast at 1,092. In response to the low forecast, and to address Objectives 1a, 1b, and 2 above, the adopted rules have the sport fishery in the Hoh River closed to all fishing in May 2018, then opening to trout and other game fish June 1 through August 31, with hatchery origin Chinook retention allowed June 1 – 30. The fishery then closes again September 1 – 15 out of concern for the spring/summer Chinook stock. In 2015, 2016, and 2017 the river was also closed during some or all of the summer period to all recreational fishing in response to the low spring/summer Chinook numbers. Since the 2008, season anglers have been required to release wild (unclipped) Hoh spring/summer Chinook. The Hoh Tribe's fishery and the sport fishery in 2018 are targeting hatchery dip-in Chinook. Like the sport fishery, the Tribe is also closing for two weeks in early September to allow the remaining spring/summer Chinook to move up the river.

### **Grays Harbor**

The Washington Fish and Wildlife Commission adopted the Grays Harbor Basin Salmon Management Policy (C-3621) in February of 2014. This action followed an extensive public process with multiple public comment periods. The policy provides management direction

to WDFW in terms of sharing between the recreational and commercial sectors and between freshwater and marine water recreational sectors, and achievement of conservation objectives.

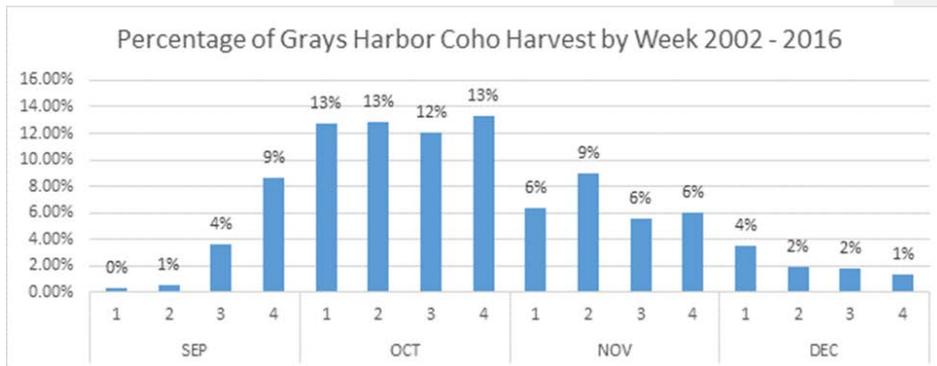
Regulations for the 2018 Grays Harbor freshwater recreational salmon fisheries were evaluated with respect to objectives in the policy. These objectives were shared with industry representatives, members of the Advisory Group, and the public during the North of Falcon public process. General or recreational specific pre-season planning objectives are:

1. Fisheries will be managed with the intent of achieving escapement goals for natural origin salmon.
2. For spring Chinook, prioritize freshwater recreational fisheries, with an objective of opening freshwater areas no later than May 1.
3. The fishery management objectives for fall Chinook salmon, in priority order, are to:
  - Achieve spawner goals;
  - Provide meaningful recreational fishing opportunities; and
  - Limit commercial fishery impacts to the incidental harvest of fall Chinook during fisheries directed at other species.

4. For Chehalis River basin natural-origin fall Chinook, the predicted fishery impact in WDFW-managed fisheries will not exceed 5% of those adults returning to Grays Harbor because the number of natural-origin spawners was less than the goal in 3 out of the last 5 years.

5. For Humptulips River Chinook, the WDFW-managed fisheries will be managed with the intent of achieving escapement goals.

6. Grays Harbor Coho will be managed to no more than a 20.5% total exploitation rate as directed by the Pacific Salmon Treaty. This is Guiding Principle number 3 in the Grays Harbor Salmon Management Policy.



7. Fisheries will be managed with the intent of achieving escapement goals for wild and hatchery Chum salmon. No fisheries directed at Chum salmon shall occur unless the adult Coho salmon return exceeds spawner objectives, or if Coho salmon impacts remain after Coho and Chinook salmon fisheries.

The rules, as noticed in the CR-102, were proposed based upon a conclusion that they would produce fisheries consistent with the overriding conservation objectives identified above, and with the Commission policy direction to provide “meaningful” opportunities for both recreational anglers and commercial harvesters.

WDFW concludes that the final adopted 2018 Grays Harbor recreational fishing regulations are consistent with these management objectives based on the following rationale:

1. Fisheries will be managed with the intent of achieving escapement goals for natural origin salmon.

Fisheries modeled in Grays Harbor (including treaty harvest) are expected to result in achievement of escapement goals for Chehalis River spring Chinook, Chehalis River natural-origin Coho, Humptulips River natural-origin Chinook, and Grays Harbor Chum. Chehalis River natural-origin Chinook are forecast to return at a level that is less than 10% above the goal. The adopted rules do not allow any directed fisheries on Chehalis River natural-origin Chinook. Thus, a low level of incidental bycatch mortality due to catch and release will occur while targeting healthy stocks, but are less than the criteria in Objective 4. Humptulips River natural-origin Coho are forecast to return at a level that is below the escapement goal. That is, the Coho are not expected to meet the goal regardless of whether fisheries occur or not. The adopted rules do not have any directed fisheries on Humptulips River natural-origin Coho and anglers must release them unharmed. Thus, a low level of

incidental bycatch mortality due to catch and release will occur while targeting healthy stocks, but it is less than the criteria in objective 6.

Stock	Objective Type	Objective Criteria	Modeled Results
Chehalis Natural-origin fall Chinook	Harvest Impact Rate	< 5.0%	3.1%
Chehalis Natural-origin Spring Chinook	Escapement Goal	1,400	1,530
Humtulpis Natural-origin Chinook	Escapement Goal	3,573	3,909
Grays Harbor Natural-origin Coho	Total Exploitation Rate	≤ 20.5%	20.5%
Grays Harbor Chum	Escapement Goal	21,000	36,347

2. For spring Chinook, prioritize freshwater recreational fisheries, with an objective of opening freshwater areas no later than May 1.

The adopted rule provides freshwater recreational fisheries on Chehalis River spring Chinook that is predicted to result in 4.4% impact. The escapement estimate after all fisheries is 1,530, 130 fish above the goal.

3. The fishery management objectives for fall Chinook salmon, in priority order, are to:

- Achieve spawner goals.

The scheduled fisheries in the adopted rule are expected to result in 3,909 Humtulpis River natural-origin spawners compared to a spawning goal of 3,573.

- Provide meaningful recreational fishing opportunities.

Within the constraints of the policy, recreational fishing opportunities have been provided for Humtulpis River Chinook in both the marine area and the Humtulpis River.

1. For Chehalis River basin natural-origin fall Chinook, the predicted fishery impact in WDFW managed fisheries will not exceed 5% of the adult return to Grays Harbor because the number of natural-origin spawners was less than the goal in 3 out of the last 5 years.

The predicted impact on Chehalis River natural-origin fall Chinook during the scheduled fisheries in the adopted rule is 1.75%. Including all WDFW managed non-treaty fishery

(commercial and recreational marine and freshwater) results in a predicted impact of 3.1%. This is well within the guidance of the Policy.

5. For Humptulips River natural-origin fall Chinook, the WDFW managed fisheries will be managed with the intent of achieving escapement goal.

The scheduled fisheries in the adopted rule are expected to result in an escapement of 4,214 Humptulips River natural-origin spawners compared to a spawning goal of 3,573.

6. Grays Harbor natural-origin Coho will be managed to no more than a 20.7% total exploitation rate as directed by the Pacific Salmon Treaty. This is Guiding Principle number 3 in the Grays Harbor Salmon Management Policy.

- PST obligations supersede Grays Harbor Salmon Management Policy.
- Chehalis Coho predicted to escape 29,869, which is above the basin goal of 28,506. Adopted rule 4.9% impact
- Humptulips forecast is 4,717 which is 2,177 less than the goal, policy 5%, adopted rule 3.95%.

The total predicted impact on Humptulips River natural-origin Coho during the scheduled fisheries in the adopted rule and including the WDFW managed non-treaty commercial fishery is 3.49%.

7. Fisheries will be managed with the intent of achieving escapement goals for wild and hatchery Chum salmon. No fisheries directed at Chum salmon shall occur unless the adult Coho salmon return exceeds spawner objectives, or if Coho salmon impacts remain after Coho and Chinook salmon fisheries.

The scheduled fisheries in the adopted rule are expected to result in an impact of 1,409 Grays Harbor Chum. This impact is far less than half the available surplus. The forecasted return of Grays Harbor chum is 61,144 and predicted escapement after all Grays Harbor fisheries, treaty and non-treaty, is 36,347 compared to the goal of 21,000.

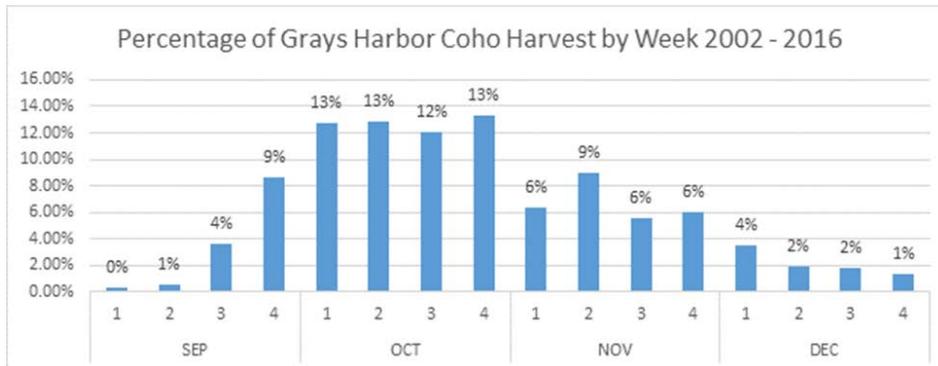
To address the second part of the objective, scheduled fisheries in the adopted rule achieve the policy objective guidelines, including achieving the escapement goal for Chehalis River natural-origin Coho and minimizing total WDFW managed fisheries to 5% or less impact on Humptulips River natural-origin Coho, and therefore Coho impacts remain allowing for directed Chum fisheries to occur.

Comments Received to Date

Several comments were received requesting to extend the season into December. This included two categories of comments, one, extend the season into December by delaying the opening date later in October, and two, extend the season into December by reducing the bag limit to one, thus providing impact saving.

WDFW evaluated shifting the current proposed freshwater salmon season for October 1 through November 30 to October 16 through December 15. The model evaluation showed that this approach could essentially be impact neutral in regards to wild Coho. Further evaluation of total Coho harvest under this “shifting of the season” approach would result in the reduction of harvest of hatchery Coho by 278 fish; this would represent a harvest reduction of 7.1% of the total freshwater Coho harvest. WDFW also evaluated reducing the bag limit during freshwater salmon season from a two fish to a one fish adult bag limit in order to extend freshwater recreational salmon opportunity into the month of December. Similar to the open-dates change, our analysis of the reduction in bag limit would result in a small reduction in total impacts to wild Coho by approximately 30 fish, but once again, reduce the total harvest of hatchery Coho. Catch Record Card (CRC) data indicates that 78% of the total Coho harvest occurs within the October to November period (Figure 1). Conversely, only 6% of the total Coho harvest takes place during the first two weeks of December.

Figure 1. Percentage of Grays Harbor Coho harvest using CRC data for the years 2002 through 2016.



After careful consideration of the input received, Commission policy on salmon management in the Grays Harbor Basin, conservation objectives, and the additional analysis summarized above, the proposed rule provides the best opportunity for harvest of the abundant hatchery Coho returning to Grays Harbor.

### Willapa Bay

The Washington Fish and Wildlife Commission adopted a new Willapa Bay Salmon Management policy (C-3622) in June of 2015. This action followed an extensive public process

with multiple public comment periods. The policy provides general management guidance to WDFW in terms of sharing between the recreational and commercial sectors, and achievement of conservation objectives.

Regulations for the 2018 Willapa Bay recreational salmon fisheries were evaluated with respect to the objectives in the policy. These objectives were shared with industry representatives, members of the Advisory Group, and the public during the North of Falcon process. General or recreational specific pre-season planning objectives are:

1. The recreational fishery management objectives for fall Chinook salmon in 2018, in priority order, are to:
  - Not exceed a 20% impact rate during Willapa Bay fisheries on Willapa and Naselle river natural-origin fall Chinook. Within the impact rate cap, the priority shall be to maintain a full season of recreational fisheries for Chinook salmon in the Willapa Bay Basin;
  - Provide enhanced recreational fishing opportunities.
    - Increase participation and/or catch including consideration of increased daily limits, earlier openings, and use of multiple rods;
    - Conservation actions, as necessary, shall be shared equally between marine and freshwater fisheries; and
2. The recreational fishery management objectives for Coho and Chum salmon, in priority order, are to:
  - Achieve spawner goals;
  - Provide recreational fishing opportunities.

The rules, as originally noticed in the CR-102, were proposed based upon a conclusion that they would produce fisheries consistent with conservation objectives, with the guidance identified above, and with the Commission policy direction to provide “enhanced” opportunities for recreational fisheries anglers.

On February 16, 2018, the Fish and Wildlife Commission (FWC) provided the Department with additional guidance on the implementation of policy C-3622 for the 2018 season. The general guidance provided states that “policy implementation in 2018 to achieve priorities or goals for one fishing sector should not result in eliminating the opportunity of any fishing sector”. More specifically, for recreational salmon fisheries prosecuted in Willapa Bay for the 2018 season, the FWC’s guidance directed the Department to design the 2018 fishery to:

- Explore a reduction in the four adult salmon bag limit;
- Curtail high catch periods in June, July and early August if necessary to conform to this guidance;
- Focus on mark selective fishing where ever practical;

- Not exceed 20% impact on wild Chinook after accounting for incidental impacts needed in commercial fisheries (see below); and
- Include active monitoring of the bay fishery prior to September 30 and active management of the bay fishery if the total fishery impact ceiling of 20% on natural-origin fish is in reasonable jeopardy of being exceeded.

This guidance applies only to 2018. All other items in the Willapa Bay Salmon Management Policy C-3622 will remain in effect for 2018.

WDFW concludes that the final adopted 2018 Willapa Bay recreational fishing regulations are consistent with these management objectives based on the following rationale:

1. The recreational fishery management objectives for fall Chinook salmon in 2018, in priority order, are to:

- Not exceed a 20% impact rate during Willapa Bay fisheries on Willapa and Naselle river natural-origin fall Chinook. Within the impact rate cap, the priority shall be to maintain a full season of recreational fisheries for Chinook salmon in the Willapa Bay Basin.

The predicted impact rate for Willapa River and Naselle River natural-origin Chinook during salmon fisheries prosecuted within the Willapa Bay basin were 18.9% and 16.8%, respectively.

- Provide enhanced recreational fishing opportunities.
  - Increase participation and/or catch including consideration of increased daily limits, earlier openings, and use of multiple rods.

Regulation changes in the adopted regulation will continue to increase participation and/or catch during the 2018 season including increased bag limits, opening areas earlier, opening more areas, and the expansion of areas for two-pole endorsements. The adult salmon bag limit for the 2018 recreational salmon freshwater fisheries throughout Willapa Bay remains at four adult salmon for most systems. However, the retention of only one wild, adult Coho is allowed. All other freshwater regulations from 2017 will remain in effect for 2018.

Willapa Bay needs additional conservation for wild, unmarked Chinook. To address this concern, all recreational fisheries, both marine and freshwater, require the release of wild, unmarked Chinook. Marine Area 2.1 regulations are similar to 2017 with a start date of August 1, 2018. Beginning August 1, 2018, only one Coho is allowed to be retained in Marine Area 2.1. Prior to August 1, 2018, Willapa Bay will follow the rules for Ocean Area 2, which did not begin until July 1, 2018.

From August 1, 2018 through September 30, 2018, a new Willapa Bay Control Zone area at the mouth of Marine Area 2.1 will be closed to salmon fishing. The Willapa Bay Control Zone is defined as having a westerly boundary in the form of a line from Leadbetter Point (46° 39.20' N, 124° 3.516' W) due west to 46° 39.20' N, 124° 5.3' W then north to the westerly most landfall on Cape Shoalwater (46° 44.66' N, 124° 5.3' W) and from Leadbetter Point through green marker 11 to landfall.

2. The fishery management objectives for Coho and Chum salmon, in priority order, are to:

- Achieve spawner goals.

Combined fisheries modeled in Willapa Bay are expected to result in achievement of escapement goals for both Willapa Bay Coho and Chum stocks. The Willapa Bay escapement goal for natural-origin Coho is 13,600 fish. The modeled fisheries allow the escapement to spawning areas of 15,243 natural-origin Coho and 26,721 hatchery-origin Coho. This predicted escapement does exceed the 17,200 naturally spawning Coho goal established by the Pacific Fishery Management Council. The number of Willapa Bay Chum predicted to escape in the proposed fishery is 36,352 exceeding the goal of 35,400.

- Provide recreational fishing opportunities;
- Recreational fisheries will be allowed to retain Chum salmon.

### Columbia River

~~Forecasts for the Upriver Bright Fall Chinook forecast was 158,200,4100 and is a surrogate for the Snake River Wild Fall Chinook ESA limits in-river for non-treaty fisheries. Below a run size of 200,000 the exploitation rate limit is 8.25% for returns less than 200,000, and above a run size of 200,000 is 15%. Due to recent poor ocean conditions, forecast uncertainty, increased harvest efficiency and the majority of impacts occurring below Bonneville Dam prior to the run update, and the majority of the impacts occurring below Bonneville, fishery managers allocated about 80% of available impacts limited impacts to 8.25% as a precautionary move. A run update likely will occur about the week September 10-9-14 and may allow additional opportunities to harvest Chinook. Less constraining stock impacts (Tule) were reserved to provide necessary coverage if fishery restrictions were relaxed.~~

~~Harvest a~~ Allocations by recreational and commercial sectors were ~~adopted~~ followed based upon concurrence between Washington and Oregon Columbia River policies. Due to efforts with rule simplification ~~and low forecasts~~, public input led fishery managers to ~~share the~~

~~restrictions within fisheries and attempt to provide similar regulation~~  
~~provide concurrent regulations between the two states.~~

~~Columbia River mouth to the Washington/Oregon state line~~  
~~Chief Joseph Dam and tributaries downstream of McNary Dam~~

~~Beginning June 2019, concurrent Columbia River waters will be voluntary barbless hooks and will no longer require the use of barbless hooks. Barbless hooks are no longer required when fishing for salmon and steelhead per Washington Fish and Wildlife Commission guidance on March 2, 2019.~~

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Buoy 10 to Bonneville Dam mainstem

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- ~~1. Due to low summer Chinook forecasts, f~~From the Astoria-Megler Bridge upstream to Bonneville Dam, ~~June 16 through July 31, will be open~~ Chinook retention is ~~prohibited from June 22 through July 4 (13 days) for adult hatchery summer Chinook, with a two fish/two Chinook daily limit. The management guideline for this fishery is approximately 2,400 summer Chinook due to fewer fish available within this sector of the allocation.~~
- Sockeye retention is ~~also~~ prohibited due to low forecasts and ~~are~~ not expected to meet escapement goals for the Wenatchee stock in particular.
- ~~3. Due to low steelhead forecasts of stocks destined to areas above Bonneville Dam, conservation measures including reduced bag limits and closures will be in effect for 2019.~~
  - ~~• A night closure for salmon and steelhead fishing will be in effect from July 1 through December 31 from Buoy 10 to Bonneville Dam.~~
  - ~~• From June 16 through June 30, the steelhead daily limit is 2.~~
  - ~~• From July 1 through July 31, the steelhead daily limit is 1.~~
  - ~~• The month of August is closed to steelhead retention.~~
  - ~~3. • From September 1 through December 31, the steelhead daily limit is 1. Night closure is rescinded and a 2 fish limit is permitted starting June 16 as steelhead conservation concerns are not as limiting as they were in 2017.~~
- The Buoy 10 recreational fishery will begin on August 1 with a ~~2 salmon, no more than 1 Chinook daily limit through one adult salmonid daily limit through~~ August 204. From August 215 through December 31, Chinook retention will be ~~prohibited~~ closed, but the daily limit ~~is will increase to~~ two adult hatchery salmonids

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~~(Coho and steelhead only) through December 31 with the exception of no steelhead retention during the month of August.~~

- The mainstem recreational fishery from the Rocky Point/Tongue Point line upstream to Bonneville Dam will be open August 1 through December 31, but Chinook retention seasons vary by river section based on area-specific sub-allocations for URB Chinook. From the Rocky Point/Tongue Point line upstream to the west end of Puget Island (new boundary) will be open August 1 through August 20 with a 1 salmon daily limit. August 21 through December 31, Chinook retention is prohibited, but the daily adult limit will be two hatchery salmonids (Coho and steelhead only) with the exception of no steelhead retention during the month of August. From the west end of Puget Island upstream to the Lewis River/Warrior Rock line, Chinook retention ~~is will be~~ allowed August 1 through August 27 September 2 with a ~~The~~ daily adult limit ~~of is~~ one salmonid ~~through September 2~~. Beginning August 28 September 3, Chinook retention closes, but the daily adult limit will increase to two hatchery salmonids (~~hatchery Coho and hatchery steelhead only~~) through December 31 with the exception of no steelhead retention during the month of August. From the Lewis River/Warrior Rock line upstream to Bonneville Dam, ~~the fishery will be open for~~ Chinook retention is allowed August 1 through September ~~8~~14. ~~The with a daily limit will be one adult salmonid daily limit with the exception of no steelhead retention during the month of August.~~ Beginning September ~~9~~15, Chinook retention closes but the daily adult limit will increase to two hatchery salmonids (~~hatchery Coho and hatchery steelhead only~~) through December 31.
- ~~From August 1 through December 31, the daily limit may not include more than one steelhead due to angler concerns with steelhead impacts.~~

Commented [DQL(3)]: I didn't know if I should mention that here( and on down the page) since I already mentioned that steelhead retention is closed for the month August in (3.)

Commented [DQL(4)]: Same as comment above

Commented [DQL(5)]: Same comment as above

Commented [DQL(6)]: Same comment as above

#### Bonneville Dam to Hwy. 395 Bridge at Pasco mainstem

- Due to low summer Chinook forecasts, from Bonneville Dam upstream to Hwy. 395 Bridge at Pasco, Open from June 16 through July 31, Chinook retention is prohibited. 1 for hatchery summer Chinook, with a two fish/two Chinook daily limit. The management guideline for this fishery is 425 summer Chinook from Bonneville to Priest Rapids Dam.
- Sockeye retention is prohibited due to low forecasts and are not expected to meet escapement goals for the Wenatchee stock in particular.
- Due to low steelhead forecasts of stocks destined to areas above Bonneville Dam, conservation measures including reduced bag limits and rolling closures will be in effect for 2019.

Commented [DQL(7)]: Same comment as above for Wenatchee esc. goal

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- A night closure for salmon and steelhead fishing will be in effect July 1 through December 31 from Bonneville Dam upstream to the Hwy. 395 Bridge at Pasco.
  - Bonneville Dam upstream to the Hwy. 395 Bridge at Pasco, June 16 through June 30, the steelhead daily limit is 2 and July 1 through July 31, the steelhead daily limit is 1.
  - Bonneville Dam upstream to John Day Dam, August 1 through August 31 is closed to steelhead retention.
  - John Day Dam upstream to the Hwy. 395 Bridge at Pasco, August 1 through August 31, the daily limit is 1.
  - Bonneville Dam upstream to The Dalles Dam, September 1 through December 31, the daily limit is 1.
  - The Dalles Dam to McNary Dam is closed to steelhead retention for the month of September.
  - McNary Dam to the Hwy. 395 Bridge at Pasco, September 1 through September 30, the daily limit is 1.
  - The Dalles Dam to John Day Dam, October 1 through Decemebr 31, the daily limit is 1.
  - John Day Dam to the Hwy. 395 Bridge at Pasco, the month of October is closed to steelhead retention.
  - John Day Dam to McNary Dam, November 1 through December 31, the daily limit is 1.
  - McNary Dam to the Hwy. 395 Bridge at Pasco, October 1 through November 30 is closed to steelhead retention and during the month of December, the daily limit is 1.
3. Chinook retention opens August 1 with a ~~one~~ ~~two~~ salmonid, ~~one~~ Chinook daily adult limit. The fishery will be managed in-season based on actual catches and the URB run size. ~~The daily adult salmonid limit may not include more than one Chinook or one hatchery steelhead (August 1 through December 31).~~ Based on the preseason URB run-size, this fishery will be managed for 1,10,630 adult URB Chinook mortalities prior to a run-size update.
4. From August 1 through December 31, the daily limit may not include more than one steelhead due to angler concerns with steelhead impacts.

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Hwy. 395 Bridge to Old Hanford townsite wooden powerline towers - mainstem

1. Due to low forecasts of summer Chinook and sockeye, salmon retention is prohibited June 16 through August 15.
2. The fall salmon fishery will be open August 16 through October 31. This area of the Columbia River has limited spawning habitat and the extension of the fishery

~~through October 31 will provide additional angler opportunity without impacting spawn success of Hanford Reach up-river bright fall Chinook.~~

~~3.3. October 1-31, the~~ With the projected return of Upper Columbia A-run steelhead in 2018 to near normal numbers, WDFW returned to a standard daily limit ~~is to~~ two Ringold Springs Hatchery-origin steelhead ~~from October 1-31~~. Steelhead released from Ringold Springs Hatchery are adipose and right ventral fin clipped. Anglers are restricted to harvesting only Ringold Springs Hatchery steelhead to reduce impacts to Upper Columbia River (UCR) hatchery and wild steelhead migrating through the Hanford Reach.

~~2.4.~~ From November 1 through March 31, ~~the~~ daily limit is two hatchery steelhead, ~~for the same reasons as above~~. The majority of UCR steelhead have migrated upstream of Priest Rapids Dam allowing the harvest of any hatchery steelhead after November 1. ~~The s~~Same steelhead rule rationale applies in the Ringold Area Bank Fishery that is open April 1-15.

~~3. The fall salmon fishery will be open through October 31. Under the "Sportfishing Rule Simplification" opening and closing dates for salmon and steelhead fisheries will be standardize to occur on the first, middle, or last day of the month. This area of the Columbia River has limited spawning habitat and extension of the fishery through October 31 will provide additional angler opportunity without impacting spawn success of Hanford Reach up river bright fall chinook.~~

Old Hanford townsite wooden powerline towers to Priest Rapids Dam – mainstem

~~1. Due to low forecasts of summer Chinook and sockeye, salmon retention is prohibited June 16 through August 15.~~

~~1.2.~~ The fall ~~C~~chinook salmon fishery will be open ~~August 16~~ through October 15. ~~Under the "Sportfishing Rule Simplification" opening and closing dates for salmon and steelhead fisheries will be standardize to occur on the first, middle, or last day of the month.~~ This area of the Columbia River is the primary spawning grounds for Hanford Reach Up-River Bright fall ~~C~~chinook. Fall chinook begin spawning in this section of the Columbia River approximately the third week of October.

#### Columbia River tributaries

Proposals considered through the 2018 North of Falcon process for recreational fisheries occurring in Columbia River tributaries:

1. Remove language that “only fish hooked inside the mouth may be retained” from anti-snagging areas on Blue Creek, Cowlitz River, Drano Lake, Elochoman River, Grays River, Kalama River, Klickitat River, Lewis River, Mill Creek, North Fork

- Toutle River, West Fork Grays River, Tilton River, Washougal River, White Salmon River, and Wind River to simplify rules
2. Standardize Lewis River salmon seasons to specific calendar dates (i.e. September 30, as opposed to 4<sup>th</sup> Saturday in September) to simplify rules
  3. Consolidate stream sections on the White Salmon River to reduce sections and simplify rules
  4. Expand area where the two pole fishing endorsement applies on the Cowlitz and Lewis Rivers to simplify rules and provide additional opportunity
  5. Increase the hatchery coho daily limit to 3 adults on the lower Cowlitz River based on preseason forecasts
  6. Reduce hatchery Chinook daily limit to one adult on the Toutle River and close the Green River to Chinook retention to help ensure broodstock collection goals are met, based on pre-season forecast
  7. Increase the daily limit of hatchery Chinook to 3 adults on the Kalama River based on preseason forecast
  8. Reduce the fall Chinook daily limit to one fish on the Lewis River and prohibit fishing from a floating device between Johnson Creek and Colvin Creek from October 1 to November 30 to ensure escapement goals are met, based on pre-season forecasts
  9. Remove summer night closures from Drano Lake and the White Salmon River, which were added the previous year to protect the extremely low run of upper Columbia River summer steelhead in 2017. The 2018 summer steelhead forecast has improved enough to lift these regulations.
  10. Modify the hatchery steelhead daily limit in Drano Lake to 1 fish to match adjacent area of the Columbia River Aug. 1 – Dec. 31, based on pre-season forecast and to simplify rules.

**2019~~8~~ Constraining Stock Table.**

Stock	Objective Type	Objective Criteria	Modeled Result
Wenatchee sockeye	Escapement		
Upper Columbia summer Chinook	Harvest Rate	50% of 75% forecast plus 10,500	50% of 75% forecast plus 10,500
Tule Fall Chinook	ESA impact rate	<38% total	<del>357.97%</del>

Snake River Wild Fall Chinook	In-river ESA impact rate	< <del>8.2515</del> %	8.244%
Lower Columbia Natural Coho	ESA impact rate	< <del>23.018</del> %	185.03%

**Yakima River**

Mouth (Highway 240 Bridge) to 400' below Prosser Dam

The fall salmon fishery will be open through October 31. Under the "Sportfishing Rule Simplification", opening and closing dates for salmon and steelhead fisheries will occur on the first, middle, or last day of the month. This area of the Yakima River has limited spawning habitat and extension of the fishery through October 31 will provide additional angler opportunity without impacting spawn success of fall chinook and coho in this area of the Yakima River.

**Puget Sound**

State and tribal salmon seasons in Puget Sound are driven primarily by certain key constraining stocks (Objectives 1a, 1b, and 2). Key constraining stocks in state and tribal fisheries in these areas for 2018 include, Nooksack spring natural Chinook, Mid-Hood Canal natural Chinook, Snohomish natural coho, Strait of Juan DeFuca natural coho, and Queets natural coho. For example, the management objective for Nooksack spring natural Chinook is a Southern U.S. exploitation rate ceiling of 10.5% as defined in the ESA approved harvest management plan. The management objective for coho is based upon Comprehensive Coho Management Plan (1998) and sections of the Pacific Salmon Treaty.

**2018 Constraining Stock Table.**

Stock	Objective Type	Objective Criteria	Modeled Result
Nooksack spring natural Chinook	Southern U.S. Exploitation Rate	≤ 10.5%	10.5%
Mid-Hood Canal natural Chinook	Pre-terminal Southern U.S. Exploitation Rate	≤ 12.0%	12.0%
Snohomish natural coho	Southern U.S. Exploitation Rate	≤ 40%	≤ 33.5%
Strait of Juan de Fuca natural coho	Southern U.S. Exploitation Rate	≤ 10.0%	6.7%

Stillaguamish natural coho	Southern U.S. Exploitation Rate	≤ 35%	34.5%
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Certain other stocks continued to not meet management objectives, similar to 2017. Fishing regulations and restrictions in 2018 are similar as previous year’s regulations that were designed to reduce mortality on those stocks, i.e. no changes were proposed for 2018. For example, Lake Washington sockeye salmon were forecast to be below the escapement goal objective. The sockeye recreational fishery in Lake Washington in 2018 was not listed as open unless sufficient sockeye are counted at the Ballard Locks, as was the case in 2017. Because protective regulations were already in the permanent rules, we did not propose a change to the Lake Washington sockeye salmon regulations in this rule-making package.

Some fisheries were modified to reduce conflict with tribal fisheries and/or to ensure orderly fisheries (Objective 3). Puget Sound regulation changes were proposed based on North of Falcon discussions with stakeholders and tribal co-Managers. These changes maximize recreational opportunity while meeting conservation objections.

Modifications proposed for 2018 Puget Sound Marine Area recreational fisheries through this rule-making process include:

- Retention of both wild and hatchery coho is permitted in most marine areas when open for other species (i.e., Chinook, ) due to sufficient hatchery coho returns and slightly improved wild coho returns for most systems.
- Areas 5 and 6 winter Chinook season reduced to protect Nooksack spring natural Chinook.
- Area 7 winter Chinook season reduced, closure of Eastern/Rosario Strait during July to protect Nooksack spring natural Chinook.
- Area 6 delayed start of Chinook season until July 3<sup>rd</sup> to help meet mid-Hood Canal Chinook conservation objective.
- Area 7 September 4 closure of Chinook retention to help meet mid-Hood Canal Chinook conservation objective.
- Area 8-2 September 23 closure to meet both Snohomish and Stillaguamish natural coho management objectives.
- Areas 8-1 and 8-2 reduced season by one month to address sub-legal Chinook encounters.
- Area 9 reduced season by 1 month to address Nooksack Spring Chinook objective.
- Area 10 reduced winter season and shift season to later spring to address mid-Hood Canal Chinook and sub-legal Chinook encounters.

- Closure of Elliot Bay to Chinook retention to meet Mid Hood canal Chinook objective.
- Area 12 north of Ayock Point coho fishery opens in September to harvest surplus coho while protecting wild Chinook.

The proposed regulations were adopted with modifications as listed in 'II. Corrections to the WSR 18-12-120' section.

Modifications proposed for 2018 Puget Sound Freshwater recreational fisheries through this rule-making process include:

- Numerous river sections were consolidated and regulations were standardized where feasible to simplify regulations.
- Baker Lake sockeye daily limit decreased to three due to smaller run of sockeye expected.
- Skagit River sockeye fishery closed dates adjusted to reflect co-manager agreement and avoid use conflicts.
- Lake Washington, Lake Sammamish, Green, Puyallup, Carbon and Nisqually rivers open to fishing for coho and gamefish, and their associated tributaries open to fishing for gamefish due to increased coho returns expected.
- Snohomish, Skykomish, Snoqualmie, and Wallace rivers have a reduced coho season of September 16 through November 15th to reduce impacts on wild coho.
- Stillaguamish and associated tributary gamefish and salmon fishery closures to protect wild Chinook salmon due to low returns expected.
- Green River stretch changes include an expansion of the lower section for Chinook retention and a 100 foot closer around Soos Creek was added .
- Puyallup and Carbon rivers opened with adjusted day closures to reflect tribal fisheries simplify regulations and harvest surplus hatchery Chinook and coho.
- Nisqually River closed to salmon fishing after September 30 due to low forecasted returns of coho salmon, to protect winter chum, and to simplify regulations.
- Dewatto River closed to salmon fishing as part of an effort to improve summer chum egg survival. The coho fishery in the lower Dewatto has occurred in the same reaches where summer chum spawning is concentrated, and activity associated with salmon fishing may decrease survival of their eggs during incubation.
- Big Quilcene applies anti-snagging rule and allows coho hooked outside the mouth to be retained to encounters of summer chum while allowing harvest on surplus of hatchery coho.

The proposed regulations were adopted with minor modifications as listed in 'II. Corrections to the WSR 18-12-120' section.

## **II. Corrections to the WSR 18-12-120**

(WAC) 220-312-020: Clearwater River- Species Correction, Hoh River- Season Correction, Naselle River- Season Correction, Salmon River- Season Correction, Willapa River- Season Correction

(WAC) 220-312-030: Swift Reservoir – Steelhead Rule Correction, Tilton River- Season Correction, Washougal River- Season Clarification

(WAC) 220-312-040: Nooksack River – Retention Correction, Ross Lake Tributaries- Location Clarification

(WAC) 220-312-050: Chelan River- Species Correction, Entiat River- Species Correction, Jasmine Creek- Species Correction, Okanogan River- Species Correction, Salmon Creek- Species Correction, Similkameen River- Species Correction, Wenatchee Lake- Species Correction,

(WAC) 220-312-060: From Priest Rapids Dam to Rock Island Dam- Species Correction, From Rock Island Dam to Wells Dam- Species Correction, From Wells to Highway 173 Bridge at Brewster- Species Correction, From Highway 173 at Brewster to Chief Joseph Dam- Species Correction

(WAC) 220-313-060: Catch Record Card Area 10- Date Correction, Catch Record Card Area 12- Subarea Correction

(WAC) 220-313-070: Catch Record Card Area 1 – Date Correction, Willapa Bay- Area Clarification

### **III. Response to Comments Received During Comment Period for WSR 18-12-120**

No verbal and/or written comments were submitted during this comment period or at any of the public hearings.

#### **Conclusion**

WDFW has considered all the facts and circumstances surrounding the 2018 recreational salmon season schedule. The agency carefully reviewed all input from the public during the North of Falcon public meetings and the state's rule making process. The agency's 2018 recreational salmon fishing regulations comply with its statutory mandate and are consistent with WDFW's management objectives for these fisheries.