# Willapa Bay Salmon Management Policy (C-3622)
(Briefing/Public Comment)

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Summary Sheet</th>
<th>1 of 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Fish and Wildlife Commission Guidance for Willapa Bay Fishery Planning April 6, 2019</td>
<td>3 of 13</td>
</tr>
<tr>
<td>Policy C-3622</td>
<td>5 of 13</td>
</tr>
</tbody>
</table>
Meeting dates: January 18, 2020

Agenda item: Willapa Bay Salmon Management Policy (C-3622) Comprehensive Review

Presenter(s): Chad Herring, South Coast Fishery Policy Analyst
Kirt Hughes, Statewide Salmon and Steelhead Fishery Manager

Background summary:
In the fall of 2014, the Washington Fish and Wildlife Commission (FWC), supported by Department staff, initiated a process in order to develop a salmon management policy for Willapa Bay. The intent of the policy is to provide Department staff with general guidance and management objectives for salmon management in Willapa Bay.

To inform the development of this policy, a Willapa Bay Advisory Group was formed. The group consisted of stakeholders representing recreational and commercial fishers. Public engagement in the development of Policy C-3622 included four meetings with the group, four public workshops, and one workshop with the Pacific County Commissioners. These meetings took place in fall 2014 through spring 2015.

In June 2015, the policy was adopted by the FWC as the Willapa Bay Salmon Management Policy – C-3622. The objectives of the policy “is to achieve the conservation and restoration of wild salmon in Willapa Bay and avoid ESA designation of any salmon species. Where consistent with this conservation objective, the policy also seeks to maintain or enhance the economic well-being and stability of the commercial and recreational fishing industry in the state, provide the public with outdoor recreational experiences, and an appropriate distribution of fishing opportunities throughout the Willapa Bay Basin. Enhanced transparency, information sharing, and improved technical rigor of fishery management are needed to restore and maintain public trust and support for management of Willapa Bay salmon fisheries.” The policy recognizes uncertainty in implementation, so depends on continued economic and biological analysis, and relies on an adaptive management approach.

The implementing structure of the policy consisted of two phases; phase-one covered years 1 through 4 post adoption (covering the 2015 through 2018 fisheries) and phase-two, years 5 through 21 (July 2019 through June 2035). In 2019, the FWC provided staff with additional guidance for management of salmon fisheries prosecuted in Willapa Bay applicable to the 2019 season only. In the adaptive management section of Policy C-3622, the Commission requested a comprehensive and thorough review of the implementation and performance of the Policy upon completion of phase-one as well as annual briefings on the performance and implementation of the policy guidance.

This briefing is intended to satisfy the Commission request to annually review the implementation and performance of interim and policy guidance for Willapa Bay fisheries in 2019. Department staff will provide a review of fishery management objectives utilized during the 2019 North of Falcon process. Fishery management objectives for 2019 fisheries in Willapa Bay were based upon guidance contained in Willapa Bay Salmon Management Policy (C-3622) along with interim Commission guidance specific to 2019 Willapa Bay fisheries season. Staff will also provide preliminary harvest estimates from the 2019 fishery season in relation to pre-season predicted estimates of harvest and discuss fishery management guidance for the 2020 fishery season.
Staff recommendation:
Review only, no staff recommendation

Policy issue(s) and expected outcome:
The Commission will need to review the results and determine what if any steps are next.

Fiscal impacts of agency implementation:
Not applicable.

Public involvement process used and what you learned:
Public involvement in the review is included throughout the review process. To date department staff have sought public input through public meetings as well as at the conclusion of each meeting of the Willapa Bay Salmon Advisory Group leading up to the January meeting of the Fish and Wildlife Commission. Additional meetings of the Willapa Bay Salmon Advisory Group have been conducted through September of 2019; these too offered an opportunity for public input.

It is anticipated that this review process will conclude in the form of a final presentation to the FWC summarizing information from a detailed report intending to provide answers to specific questions regarding the implementation and performance of Policy C-3622. Questions which are to be developed with commissioner, advisory, and public involvement.

Action requested and/or proposed next steps:
To be determined.

Draft motion language:
Not applicable.

Post decision communications plan:
If the Commission requests additional analysis or development of potential adaptive management steps, those requests should be communicated to stakeholders via the Advisory Group.
2019 Fish and Wildlife Commission Guidance for Willapa Bay Fishery Planning
April 6, 2019

With reference to the presentation on April 6, 2019 titled “Willapa Bay Salmon Management Policy C-3622”, a motion was made. There were two amendments to the motions and there was considerable clarifying dialogue between Commissioners and staff, and an amended motion passed as follows:

1. Motion was made to adopt Option C that was presented by staff, which continues the guidance from 2018;
   a. At the time of the motion, slide 14 of the staff presentation was on the screen, showing detailed components of Option C.
      i. There was discussion about whether there was to be exact adherence to the values on the screen, such as 18.3% impact for Willapa River Chinook and 19.3% for Naselle River, in comparison to the aggregate natural origin impact rate of 20% in 2018 guidance.
   b. There was reference to slide 13 of the staff presentation, which also described Option C, showing the following in a column with a header of “Natural Chinook HR Cap”:
      i. Actively manage to not exceed a 20% total impacts for Chinook on Willapa River
      ii. Actively manage to not exceed a 20% total impacts for Chinook on Naselle River
      iii. Actively manage to not exceed a 10% total impacts for Chum
   c. There was clarifying discussion that the aggregate natural-origin impact rate cap of 20% was intended to replace the 14% aggregate rate cap in the Policy and that the intent was to provide the staff flexibility in adoption management measures so long as the 20% impact rate cap was not exceeded.

2. 1st amendment to the original motion was to suspend the Fishery Management #6 in the Willapa Bay Policy;

Item #6 of the Fall Chinook Salmon Species-specific guidance section on page 6 reads: Fishery Management After 2018. Fisheries in the Willapa Bay Basin will be managed with the goal of:
   a. Limiting the fishery impact rate on Willapa and Naselle river natural-origin fall Chinook salmon to no more than 14%.
   b. No commercial fisheries shall occur within areas 2T and 2U prior to September 16.
   c. No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P and 2R until after September 7.

There was clarifying justification discussion that the additional reductions in northern ocean interceptions from the new Pacific Salmon Treaty in 2019 together with a 20% in-bay impact rate would achieve near conservation neutrality with the 2015 Policy intent of
a 14% in-bay impact rate cap and higher historic northern interceptions, and that the removal of area and time restrictions would provide the staff the flexibility to manage the fishery in-season to achieve the 20% impact rate cap.

The amendment passed unanimously.

3. 2nd amendment to the original motion was to allow the staff the flexibility to determine the bag limits for Chinook and Coho in the recreational fishery;
   a. There was clarifying discussion about while Option C had a firm bag limit of three adult Chinook, that a two fish bag limit might be more appropriate for a year like 2019; however the discussion concluded with providing the staff flexibility to establish a bag limit that is appropriate within the cap of 20% and the input during the North of Falcon process.
   b. The amendment passed unanimously.

4. The amended motions passed unanimously.
Purpose
The objective of this policy is to achieve the conservation and restoration of wild salmon in Willapa Bay and avoid ESA designation of any salmon species. Where consistent with this conservation objective, the policy also seeks to maintain or enhance the economic well-being and stability of the commercial and recreational fishing industry in the state, provide the public with outdoor recreational experiences, and an appropriate distribution of fishing opportunities throughout the Willapa Bay Basin. Enhanced transparency, information sharing, and improved technical rigor of fishery management are needed to restore and maintain public trust and support for management of Willapa Bay salmon fisheries.

Definition and Goal
This policy sets a general management direction and provides guidance for Washington Department of Fish and Wildlife (Department) management of all Pacific salmon returning to the Willapa Bay Basin. The Willapa Bay Basin is defined as Willapa Bay and its freshwater tributaries.

General Policy Statement
This policy provides a cohesive set of principles and guidance to promote the conservation of wild salmon and steelhead and improve the Department’s management of salmon in the Willapa Bay Basin. The Washington Fish and Wildlife Commission (Commission) recognizes that management decisions must be informed by fishery monitoring (biological and economic), and that innovation and adaptive management will be necessary to achieve the stated purpose of this policy. By improving communication, information sharing, and transparency, the Department shall promote improved public support for management of Willapa Bay salmon fisheries.

State commercial and recreational fisheries will need to increasingly focus on the harvest of abundant hatchery fish. Mark-selective fisheries are a tool that permits the harvest of abundant hatchery fish while reducing impacts on wild stocks needing protection. As a general policy, the Department shall implement mark-selective salmon fisheries, unless the
wild populations substantially affected by the fishery are meeting spawner (e.g., escapement goal) and broodstock management objectives. In addition, the Department may consider avoidance, alternative gears, or other selective fishing concepts along with other management approaches provided they are as or more effective than a mark-selective fishery in achieving spawner and broodstock management objectives.

Fishery and hatchery management measures should be implemented as part of an “all-H” strategy that integrates hatchery, harvest, and habitat systems. Although the policy focuses on fishery management, this policy in no way diminishes the significance of habitat protection and restoration.

**Guiding Principles**
The Department shall apply the following principles in the management of salmon in the Willapa Bay Basin:

1) Prioritize the restoration and conservation of wild salmon through a comprehensive, cohesive, and progressive series of fishery, hatchery, and habitat actions.

2) Work with our partners (including Regional Fishery Enhancement Groups, nonprofit organizations, the public and Lead Entities) to protect and restore habitat productivity.

3) Implement improved broodstock management (including selective removal of hatchery fish) to reduce the genetic and ecological impacts of hatchery fish and improve the fitness and viability of salmon produced from Willapa Bay rivers (see Hatchery and Fishery Reform Policy C-3619). Achieve Hatchery Scientific Review Group (HSRG) broodstock management standards for Coho and Chum salmon by 2015, and work toward a goal of achieving standards for Chinook salmon by 2020.

4) Investigate and promote the development and implementation of alternative selective gear. The development of alternative selective gear may provide an opportunity to target fishery harvests on abundant hatchery fish stocks, reduce the number of hatchery-origin fish in natural spawning areas, limit mortalities on non-target species and stocks, and provide commercial fishing opportunities.

5) Work through the Pacific Salmon Commission to promote the conservation of Willapa Bay salmon and, in a manner consistent with the provisions of the Pacific Salmon Treaty, pursue the implementation of fishery management actions necessary to achieve agreed conservation objectives.

6) Within the Pacific Fishery Management Council (Council) process, support management measures that promote the attainment of Willapa Bay conservation objectives consistent with the Council's Salmon Fishery Management Plan.

7) Monitoring, sampling, and enforcement programs will adequately account for species and population impacts (landed catch and incidental fishing mortality) of all recreational
and commercial fisheries and ensure compliance with state regulations. Develop and implement enhanced enforcement strategies to improve compliance with fishing regulations and ensure orderly fisheries.

8) If it becomes apparent that a scheduled fishery will exceed the aggregated pre-season natural-origin Chinook mortality (impact) expectation, the Department shall implement in-season management actions in an effort to avoid cumulative mortalities of natural-origin Chinook in excess of the aggregated pre-season projection.

9) Salmon management and catch accounting will be timely, well documented, transparent, well-communicated, and accountable. The Department shall strive to make ongoing improvements in the transparency of fishery management and for effective public involvement in planning Willapa Bay salmon fisheries, including rule-making processes. These shall include: a) clearly describing management objectives in a document available to the public prior to the initiation of the preseason planning process; b) enhancing opportunities for public engagement during the preseason fishery planning process; c) communicating in-season information and management actions to advisors and the public; and d) striving to improve communication with the public regarding co-management issues that are under discussion.

10) Seek to improve fishery management and technical tools through improved fishery monitoring, the development of new tools, and rigorous assessment of fishery models and parameters.

11) When a mark-selective fishery occurs, the mark-selective fishery shall be implemented, monitored, and enforced in a manner designed to achieve the anticipated conservation benefits.

Fishery and Species-Specific Guidance
Subject to the provisions of the Adaptive Management section, the following fishery-and species-specific sections describe the presumptive path for achieving conservation objectives and an appropriate distribution of fishing opportunities.

Fall Chinook Salmon
Subject to the adaptive management provisions of this policy, the Department will manage fall Chinook salmon fisheries and hatchery programs consistent with the Guiding Principles and the following additional guidance:

1) The Department shall initiate a two-phase rebuilding program to conserve and restore wild Chinook salmon in Willapa Bay. The progressive series of actions is intended to result in achieving broodstock management standards by 2020 and spawner goals by years 16-21. Within the conservation constraints of the rebuilding program, Chinook salmon will be managed to provide for a full recreational fishing season with increased
participation and/or catch anticipated in future years.

2) Rebuilding Program - Phase 1 (Years 1-4). The objectives of Phase 1 shall be to increase the number of natural-origin spawners and implement hatchery program modifications designed to meet broodstock management standards in the subsequent cycle.

   a. Implement hatchery broodstock management actions to promote re-adaptation to the natural environment and enhance productivity of natural-origin Chinook salmon in the North/Smith, Willapa, and Naselle rivers:

      • North/Smith – Manage as Wild Salmon Management Zone with no hatchery releases of Chinook salmon.

      • Willapa – Implement an integrated program with hatchery broodstock management strategies designed to achieve broodstock management standards consistent with a Primary designation in the subsequent cycle.

      • Naselle – Implement hatchery broodstock strategies designed to achieve broodstock management standards consistent with a Contributing designation in the subsequent cycle.

   b. Pursue implementation of additional mark-selective commercial fishing gear to enhance conservation and provide harvest opportunities. The Department shall provide to the Commission by January 2017 a status report and by January 2018 an assessment of options to implement additional mark-selective commercial fishing gear in Willapa Bay. The assessment shall identify the likely release mortality rates for each gear type, the benefits to rebuilding naturally spawning populations, and the benefits and impacts to the commercial fishery.

3) Rebuilding Program - Phase 2 (Years 5 – 21). The combination of fishery and harvest management actions is projected to result on average in the achievement of spawner goals for the North, Naselle, and Willapa populations in the years 16-21. Additional fishery and hatchery management actions will be considered during this time period if the progress toward the spawner objectives is inconsistent with expectations.

4) Fishery Management Objectives. The fishery management objectives for fall Chinook salmon, in priority order, are to:

   a. Achieve spawner goals for the North, Naselle, and Willapa stocks of natural-origin Chinook and hatchery reform broodstock objectives through the two phase rebuilding program described above.

   b. Provide for an enhanced recreational fishing season. The impact rate of the recreational fishery is anticipated to be ~3.2% during the initial years of the
policy, but may increase in subsequent years to provide for an enhanced recreational season as described below:

- Manage Chinook salmon for an enhanced recreational fishing season to increase participation and/or catch including consideration of increased daily limits, earlier openings, multiple rods, and other measures.

- Conservation actions, as necessary, shall be shared equally between marine and freshwater fisheries.

c. Provide opportunities for commercial fisheries within the remaining available fishery impacts.

5) Fishery Management in 2015-2018. To facilitate a transition to the Willapa River as the primary Chinook salmon population, fisheries during the transition period will be managed with the following goal:

a. The impact rate on Willapa and Naselle river natural-origin fall Chinook in Willapa Bay fisheries shall not exceed 20%. Within this impact rate cap, the priority shall be to maintain a full season of recreational fisheries for Chinook salmon in the Willapa Bay Basin.

b. To promote the catch of hatchery-origin Chinook salmon and increase the number of natural-origin spawners, within the 20% impact rate cap the following impact rates shall be set-aside for mark-selective commercial fishing gear types with an anticipated release mortality rate of less than 35%:

<table>
<thead>
<tr>
<th>Fishing Year</th>
<th>Mark-Selective Commercial Fishing Gear Set-Aside</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1%</td>
</tr>
<tr>
<td>2016</td>
<td>2%</td>
</tr>
<tr>
<td>2017</td>
<td>6%</td>
</tr>
<tr>
<td>2018</td>
<td>6%</td>
</tr>
</tbody>
</table>

The Commission may consider adjustments to the set-asides for 2017 and 2018 based upon the Department’s reports to the Commission on commercial mark-selective fishing gear (paragraph 2(b)) or other adaptive management considerations.

c. No commercial Chinook fisheries shall occur in areas 2T and 2U prior to September 16.

d. No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P and 2R until after Labor Day.
6) **Fishery Management After 2018.** Fisheries in the Willapa Bay Basin will be managed with the goal of:

   a. Limiting the fishery impact rate on Willapa and Naselle river natural-origin fall Chinook salmon to no more than 14%.

   b. No commercial fisheries shall occur within areas 2T and 2U prior to September 16.

   c. No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P and 2R until after September 7.

7) **Maintaining Rebuilding Trajectory.** If the postseason estimate (as presented at the annual Commission review) of aggregated natural-origin Chinook salmon mortality (impacts) exceeds the preseason projection, the Department staff shall make a recommendation to the Commission regarding an adjustment to the allowable impacts for the subsequent year. The recommendation shall be based upon the percentage by which the postseason estimate of impacts exceeded the preseason projection, but may consider other factors such as the predicted abundance or other relevant factors.

8) **Hatchery Production.** Within budgetary constraints, and at the earliest feasible date, the Department shall seek to implement the following hatchery production of fall Chinook salmon:

   - 0.80 million at Naselle Hatchery
   - 3.30 million at Nemah Hatchery
   - 0.35 million at Forks Creek Hatchery

**Coho Salmon**
Subject to the adaptive management provisions of this policy, the Department will manage Coho salmon fisheries and hatchery programs consistent with the Guiding Principles and the following objectives:

1) **Broodstock Management Strategies.** Manage Coho salmon with the following designations and broodstock management strategies:

<table>
<thead>
<tr>
<th>Designation</th>
<th>North/Smith</th>
<th>Willapa</th>
<th>Naselle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broodstock Strategy</td>
<td>No Hatchery Program</td>
<td>Integrated</td>
<td>Integrated</td>
</tr>
</tbody>
</table>

Coho salmon returning to all other watersheds will be managed consistent with a Contributing designation.
2) **Fishery Management Objectives.** The fishery management objectives for Coho salmon, in priority order, are to:

   a. Manage fisheries with the goal of achieving the aggregate spawner goal for Willapa Bay natural-origin Coho salmon. When the pre-season forecast of natural-origin adult Coho is less than the aggregate goal, or less than 10% higher than the aggregate goal, fisheries in the Willapa Bay Basin will be scheduled to result in an impact of no more than 10% of the adult return;

   b. Prioritize commercial fishing opportunities during the Coho fishery management period (September 16 through October 14); and

   c. Provide recreational fishing opportunities.

**Chum Salmon**
Subject to the adaptive management provisions of this policy, the Department will manage Chum salmon fisheries and hatchery programs consistent with the Guiding Principles and the following objectives:

1) **Broodstock Management Strategies.** Manage Chum salmon with the following designations and broodstock management strategies:

<table>
<thead>
<tr>
<th>Designation</th>
<th>North/Smith</th>
<th>Palix</th>
<th>Bear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broodstock Strategy</td>
<td>No Hatchery Program</td>
<td>No Hatchery Program</td>
<td>No Hatchery Program</td>
</tr>
</tbody>
</table>

Chum salmon returning to all other watersheds will be managed consistent with a Contributing designation.

2) **Fishery Management Objectives.** The fishery management objectives for Chum salmon, in priority order, are to:

   a. Achieve the aggregate goal for naturally spawning Chum salmon and meet hatchery reform broodstock objectives (see bullet 3);

   b. Provide commercial fishing opportunities during the Chum salmon fishery management period (October 15 through October 31); and

   c. Provide recreational fishing opportunities. Recreational fisheries will be allowed to retain Chum salmon.

3) Fisheries will be managed with the goal of achieving the aggregate goal for Willapa Bay
naturally spawning Chum salmon. Until the spawner goal is achieved 2 consecutive years, the maximum fishery impact shall not exceed a 10% impact rate and no commercial fisheries will occur in the period from October 15-31. If the number of natural-origin spawners was less than the goal in 3 out of the last 5 years, the Department shall implement the following measures:

a. The predicted fishery impact for Chum in Willapa Bay Basin will be scheduled to result in an impact of no more than 10% of the adult return.

b. When the Chum pre-season forecast is 85% or less of the escapement goal, the predicted fishery impact for Chum in Willapa Bay Basin will be scheduled to result in an impact of no more than 5% of the adult return.

4) The Department shall evaluate opportunities to increase hatchery production of Chum salmon. If Chum salmon hatchery production is enhanced, beginning as early as 2018, fisheries in the Willapa Bay Basin may be implemented with a fishery impact limit of no more than 33% of the natural-origin Chum salmon return.

**Adaptive Management**

The Commission recognizes that adaptive management will be essential to achieve the purpose of this policy. Department staff may implement actions to manage adaptively to achieve the objectives of this policy and will coordinate with the Commission, as needed, in order to implement corrective actions.

The Commission will also track implementation and results of the fishery management actions and artificial production programs in the transition period, with annual reviews beginning in 2016 and a comprehensive review at the end of the transition period (e.g., 2019). Fisheries pursuant to this Policy will be adaptive and adjustments may be made. Department staff may implement actions necessary to manage adaptively to achieve the objectives of this policy and shall coordinate with the Commission, as needed, in order to implement corrective actions.

Components of the adaptive management will be shared with the public through the agency web site and will include the following elements:

1) **Conduct Annual Fishery Management Review.** The Department shall annually evaluate fishery management tools and parameters, and identify improvements as necessary to accurately predict fishery performance and escapement.

2) **Improve In-season Management.** The Department shall develop, evaluate, and implement fishery management models, procedures, and management measures that are projected to enhance the effectiveness of fishery management relative to management based on preseason predictions.
3) **Review Spawner Goals.** The Department shall review spawner goals to ensure that they reflect the current productivity of salmon within the following timelines:
   a. Chum: September 1, 2016
   b. Coho: January 1, 2016
   c. Chinook: January 1, 2020

4) **Comprehensive Hatchery Assessment.** The Department shall complete a comprehensive review of the hatchery programs in the Willapa Bay region by June 2016. The review shall identify the capital funding necessary to maintain or enhance current hatchery programs, identify changes in release locations or species that would enhance recreational and commercial fishing opportunities, identify improvements or new weirs to increase compliance with broodstock management, and the use of re-use water systems, water temperature manipulation to increase production hatchery capacity.

5) **Ocean Ranching Opportunities.** The Department shall complete by January 2016 a comprehensive review of opportunities and constraints to implement ocean ranching of salmon in Willapa Bay.

**Delegation of Authority**
The Commission delegates the authority to the Director, through the North of Falcon stakeholder consultation process, to set seasons for recreational and commercial fisheries in the Willapa Bay Basin, and to adopt permanent and emergency regulations to implement these fisheries.

This guidance establishes a number of important conservation and allocation principles for the Director and agency staff to apply when managing the fishery resources of Willapa Bay. While this policy establishes a clear presumptive path forward with regard to many of the identified objectives, those principles and concrete objectives are intended to guide decision-making and are not intended to foreclose adaptive management based upon new information. Nor does this guidance preclude the need to gather and consider additional information during the annual process of developing fishery plans and the associated rule-making processes that open fisheries in Willapa Bay. The Commission fully expects that the Director and agency staff will continue to communicate with the public, and the Commission, to consider new information, evaluate alternate means for carrying out policy objectives, and consider instances in which it may make sense to deviate from the presumptive path forward. That is the nature of both adaptive management, and policy implementation, when faced with a dynamic natural environment.
Willapa Bay Salmon Management Policy
2019 Season Review

Chad Herring – Fish Program
Washington Fish and Wildlife Commission Meeting
January 18, 2020

Presentation Outline

- Overview of Fishery Guidance in Policy C-3622, adopted in 2015
- Review of 2019 Fishery Planning Interim Guidance
- Review of 2019 Planning
- Report on 2019 Preliminary Performance
  - Harvest
  - Stock Assessment
- 2020 Fishery Planning Guidance
Overview of Policy C-3622 - Fishery Guidance

**Chinook**
- Achieve spawner goals through two phase rebuilding program
  - 14% impact rate cap for UM Chinook
- Provide for full recreational fishing season
- Commercial fisheries
  - After Sept. 7 in south bay
  - After Sept. 16 in north bay

Coho
- Achieve aggregate spawner goal
- Prioritize commercial fisheries
  - Sept. 16 through Oct. 14
- Provide recreational fishing

Chum
- Achieve aggregate spawner goal
  - 10% impact rate cap
- Prioritize commercial fisheries
  - No fishery between Oct. 15 through Oct. 31
- Provide recreational fishing
FWC Interim Fishery Guidance for 2019

- FWC meeting on April 6, 2019
  - Guidance for 2019 only
    - Actively manage for 20% impact rate cap on natural Chinook
    - Suspend area and time restrictions for commercial fisheries
    - Allow staff flexibility in determining bag limits for recreational fisheries

2019 Fishery Planning

Forecasts

<table>
<thead>
<tr>
<th>Species</th>
<th>Natural</th>
<th>% of 10yr Avg.</th>
<th>Hatchery</th>
<th>% of 10yr Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>4.3K</td>
<td>107%</td>
<td>23.8K</td>
<td>71%</td>
</tr>
<tr>
<td>Coho</td>
<td>56.4K</td>
<td>128%</td>
<td>82.8K</td>
<td>166%</td>
</tr>
<tr>
<td>Chum</td>
<td>51.4K</td>
<td>134%</td>
<td>~800</td>
<td>225%</td>
</tr>
</tbody>
</table>

- Hatchery production for Chinook and chum
- Ocean conditions for juvenile salmon
- 2018 NOAA nearshore trawl – second largest number of juvenile coho
2019 Fishery Planning

- Fisheries were crafted to comply with policy and interim guidance

<table>
<thead>
<tr>
<th>Species</th>
<th>Objective</th>
<th>2019 Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>20% impact rate</td>
<td>15.4% impact rate</td>
</tr>
<tr>
<td>Coho</td>
<td>13.6K spawners</td>
<td>40.1K spawners</td>
</tr>
<tr>
<td>Chum</td>
<td>10%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Commercial Fishery

- Sept 3 – south; Sept 16 – north
- Release UM Chinook – all season; chum in Nov
- Closed Oct 12 – Nov 3

Recreational Fishery

- Marine Area 2-1
  - June 22 opener; concurrent with Marine Area 2
  - 2 fish bag limit, only one Chinook, release wild coho
- Marine Area 2-1 and freshwater
  - Aug. 1 switch to Marine Area 2-1 specific rules
    - Willapa Bay Control Zone open
    - Freshwater openings in rivers with hatcheries
    - Marine and FW rules; 6 fish daily limit, 2 adult bag, release UM Chinook
2019 Preliminary Performance

2019 Environmental Conditions

– Marine environment
  • Warmer than normal sea surface temperatures
  • Unusual encounters in ocean fisheries
    – Blue-fin Tuna, White Croaker, Mako sharks, mahi-mahi, etc.
  • Harvest in Marine Areas 1-4
    – Chinook – below expectation; coho – well below expectation

– Freshwater environment
  • Water temps well above average
  • Little to no fall rain – driest November in 40 years
  • Summer and fall stream flows near or at historic low flows

WA Dept. of Fish and Wildlife, Information subject to changes and amendments over time
Commission Presentation
January 18, 2020

2019 Preliminary Performance

Commercial Fishery

<table>
<thead>
<tr>
<th>Species</th>
<th>Origin</th>
<th>Predicted</th>
<th>Preliminary</th>
<th>% Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>Natural</td>
<td>431</td>
<td>260*</td>
<td>-60%</td>
</tr>
<tr>
<td></td>
<td>Hatchery</td>
<td>2,976</td>
<td>1,546</td>
<td>-55%</td>
</tr>
<tr>
<td>Coho</td>
<td>Natural</td>
<td>9,869</td>
<td>2,886</td>
<td>-28%</td>
</tr>
<tr>
<td></td>
<td>Hatchery</td>
<td>18,995</td>
<td>5,314</td>
<td>-28%</td>
</tr>
<tr>
<td>Chum</td>
<td>N/A</td>
<td>4,792</td>
<td>208*</td>
<td>-5%</td>
</tr>
</tbody>
</table>

* Includes impacts for release
– Catch expressed as Willapa origin fish
– Persistent drop in effort
– November closure
  – % of impacts predicted in November
    – 5% of hatchery coho
    – 19% of natural coho
    – 45% of chum

WA Dept. of Fish and Wildlife, Information subject to changes and amendments over time
Commission Presentation
January 18, 2020
2019 Preliminary Performance
Recreational Marine Area 2-1 Fishery

<table>
<thead>
<tr>
<th>Species</th>
<th>Origin</th>
<th>Predicted</th>
<th>Actual</th>
<th>% Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>Natural</td>
<td>170</td>
<td>82*</td>
<td>-48%</td>
</tr>
<tr>
<td></td>
<td>Hatchery</td>
<td>1,474</td>
<td>841</td>
<td>-57%</td>
</tr>
<tr>
<td>Coho</td>
<td>Natural</td>
<td>2,718</td>
<td>404</td>
<td>-15%</td>
</tr>
<tr>
<td></td>
<td>Hatchery</td>
<td>4,740</td>
<td>946</td>
<td>-20%</td>
</tr>
<tr>
<td>Chum</td>
<td>N/A</td>
<td>171</td>
<td>N/A</td>
<td>-%</td>
</tr>
</tbody>
</table>

* Includes impacts for release
- Catch expressed as Willapa origin fish
- 2nd year of Murthy Method
  - June 22nd to Sept. 30
  - Tokeland and South Bend boat launches
  - 4,273 anglers interviewed, estimated 8,646 total anglers
- Freshwater data unavailable at this time

2019 Preliminary Performance
Chinook Spawning Escapement

- 2019
  - 880 redds in indexes; 2015-18 avg. = 697

<table>
<thead>
<tr>
<th>Year</th>
<th>North R.</th>
<th>Willapa R.</th>
<th>Naselle R.</th>
<th>Willapa Bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>173</td>
<td>1,064</td>
<td>483</td>
<td>2,043</td>
</tr>
<tr>
<td>2016</td>
<td>194</td>
<td>575</td>
<td>597</td>
<td>1,580</td>
</tr>
<tr>
<td>2017</td>
<td>206</td>
<td>1,219</td>
<td>1,172</td>
<td>3,008</td>
</tr>
<tr>
<td>2018</td>
<td>366</td>
<td>1,623</td>
<td>679</td>
<td>2,821</td>
</tr>
<tr>
<td>2019*</td>
<td>~360-490</td>
<td>~1,300-2,000</td>
<td>~1,300-1,600</td>
<td>~3,200-4,400</td>
</tr>
<tr>
<td>Wild Esc. Goal</td>
<td>991</td>
<td>1,181</td>
<td>1,547</td>
<td>4,353</td>
</tr>
</tbody>
</table>

* preliminary
2019 Preliminary Performance

**Chum**

- 2019 preliminary estimate 40,893; Esc. Goal 35,400
- Made goal 4 out of 5 and 2 years in a row

**Coho**

- Fishery performance well below prediction
- Coho in-season runsize update model
  - Based on commercial CPUE by statistical week
  - Predicts total terminal runsize
  - Origin composition breakout based on sampling data
  - 60% reduction in runsize
  - Advisory group convened to collect input
- Early November E-reg closing recreational and commercial fisheries

<table>
<thead>
<tr>
<th>Natural Coho</th>
<th>Forecast</th>
<th>ISU</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Runsize</td>
<td>56.4K</td>
<td>22.4K</td>
</tr>
</tbody>
</table>
2020 Fishery Planning

NOAA “Stop-light” Chart of Ocean Indicators

- 22 year data set
- Metrics ranked from 1 to 22
- Binned into 3 categories; Green = good, Yellow = neutral, Red = bad
  - Sea surface temperatures
  - 21 out of 22
  - Recruitment of Ichthyoplankton (2 metrics)
  - 19 out of 22
  - 20 out of 22
  - PDO
  - 19 out of 22
  - Overall
  - 16 out of 22

2020 Fishery Planning

2020 Hatchery Returns

- Forks Creek Chinook production
  - Reduced from 3.2M to 400K in 2015 brood year
- Naselle Chinook production
  - Increased from 800K to 2.5M in 2016 brood year
- Nemah Chinook production
  - 3.3M
- Willapa Bay chum production
  - Overall increase from 900K to 1.5M in 2016 brood year
### 2020 Fishery Planning

#### 2020 Considerations

- Predicted continuation of poor marine and freshwater environmental conditions
- **Chinook**
  - Hatchery production shift, North to South
  - Difficulty achieving hatchery broodstock
- **Coho**
  - 2015 through 2018, only 2016 made escapement
  - 2019 is still too early to report
- **Chum**
  - 2017 only year since policy not meeting escapement goals

WA Dept. of Fish and Wildlife, Information subject to changes and amendments over time
Commission Presentation
January 18, 2020

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#### 2020 Fishery Planning

#### 2020 Guidance Options

<table>
<thead>
<tr>
<th>Species</th>
<th>Management Objectives</th>
<th>Policy C-3622</th>
<th>2019 FWC Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>Harvest control rule</td>
<td>14% impact rate cap on UM Chinook</td>
<td>20% impact rate cap on UM Chinook</td>
</tr>
<tr>
<td></td>
<td>Recreational Fisheries</td>
<td>Prioritize and enhance Chinook harvest</td>
<td>Staff flexibility in determining bag limits</td>
</tr>
<tr>
<td></td>
<td>Commercial Fisheries</td>
<td>No fishery before Sept. 7 in south and Sept. 16 in north</td>
<td>No restrictions on time and area</td>
</tr>
<tr>
<td>Coho</td>
<td>Harvest control rule</td>
<td>Meet aggregate escapement goals</td>
<td>Meet aggregate escapement goals</td>
</tr>
<tr>
<td>Chum</td>
<td>Harvest control rule</td>
<td>Meet aggregate escapement goals</td>
<td>10% impact rate</td>
</tr>
<tr>
<td></td>
<td>Commercial Fisheries</td>
<td>No restrictions</td>
<td>No commercial fisheries between Oct 15-31</td>
</tr>
<tr>
<td></td>
<td>Recreational Fisheries</td>
<td>Allow retention</td>
<td>Allow retention</td>
</tr>
</tbody>
</table>

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2020 Fishery Planning

• Staff seeking guidance for 2020 fishery management objectives for Willapa Bay
  – Policy C-3622
    • Likely reduction in bag limits and possibly shortened seasons for recreational fisheries from 2018
    • Further reduction in commercial opportunity in September
  – 2019 Interim Guidance
    • Seasons similar to 2018
  – Other Commission guidance?

Questions?

Photo by Barbara McClellan of the Palix River