

Recreational Salmon Regulations for 2019

Concise Explanatory Statement



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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 2019-20 recreational salmon fishing rules and responds to public comments received on the proposed rules. The rules, once adopted, will be set forth in Washington Administrative Code (WAC) 220-312-020, 220-312-030, 220-312-040, 220-312-050, 220-312-060, 220-313-060 and 220-313-070. The management period for each fishing season typically ends in April and begins anew each May.

Rule making by the Department is guided by resource management policies adopted by the Fish and Wildlife Commission at its regularly or specially scheduled meetings that are open to the public. Those policies can be found at:

<https://wdfw.wa.gov/about/commission/policies>

In addition, the Department's Director and staff interact with the Commission by reporting on policy implementation, and the effect of rule development and implementation, as part of the Commission's public meetings. Commission meeting agendas, and staff reports to the Commission, are available at:

<https://wdfw.wa.gov/about/commission/meetings>

Due to the complexity of rule making for fishery seasons, the Commission typically delegates this function to the Director, as authorized by law, but provides policy guidance as described above. For example, the North of Falcon Policy (C-3608) contains policy objectives to guide fishery rule making, and provides an express delegation of rule making authority to the Director.

As discussed below, the Administrative Procedures Act envisions a rule making process in which input is solicited from the public to aid in development of proposed rules. This is followed by another public involvement process in which rules, once proposed, go through additional public review. The Director employs agency staff to assist in the rule making process, but retains the final delegated decision making authority on such rules. The Director signs the CR 103 rule making order adopting proposed rules.

This CES contains two principal sections. **Section I** describes the rules being adopted, the process used in adopting the rules, and the resource management objectives advanced by adoption of the rules, and discusses comments received during rulemaking and the agency's analysis and resolution of those comments. This includes both comments received during the Prenotice Inquiry phase (after filing of the CR 101, but prior to the CR 102 filing)

and those received after filing of the proposed rules in the CR 102 filing. **Section II** describes any changes from the proposed rules to the adopted rules.

I. Rule Development Process

The CR 101 notice of intended rulemaking was filed on January 22, 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 would be presented in the CR 102 filing on May 22, 2019 for formal public review and comment (WSR 19-11-130). These rule-making processes are described in more detail as follows:

North of Falcon/PFMC processes used to develop a proposed rule (the “Pre-notice Inquiry” stage of rule making)

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, Treaty fishing rights of Northwest Tribes, and resource management policies of the Fish and Wildlife Commission. 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 representatives, together with input from representatives and concerned citizens with an interest in recreational and commercial fishing activity.

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. Work with federal fishery managers and fishing interest in offshore waters is essential to ensure coordinated state and federal fisheries on salmon stocks that migrate freely between state and federal waters.

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, in coordination with PFMC participants, typically complete the forecasts each year by late-February. From the run size forecasts, fisheries managers determine the amount of fish 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 annual 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 breakout sessions for the Columbia River, Ocean, and Puget Sound during this meeting. Additional public meetings were scheduled 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 from stakeholders on the structuring of fishing seasons, reviewed 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 WDFW's website, for those individuals who could not attend, or call into the scheduled public meetings.

During the 2019 North of Falcon season planning process for Puget Sound, the tribal co-Managers and WDFW also conducted technical meetings and policy level discussions to agree upon 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 a product of both the government-to-government tribal-state negotiation component, and the open public process component of the annual North of Falcon process.

In the Columbia River, the fisheries are managed under the current ten-year *U.S. v Oregon* Management Agreement (2018-27) that was adopted as an order of the United States District Court for the District of Oregon. 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 public rule-making process undertaken by WDFW pursuant to the Administrative Procedures Act.

CR 102 rule proposal phase with comment period and formal rule making hearings.

Based upon all of the information and outreach generated through these forums, draft fishery rules were developed for consideration in the public rule-making process that follows the filing of a proposed rule. Accordingly, the CR-102 was filed on May 22, 2019 and published in WSR 19-11-130, as part of WDFW's initial rule-making proposals for

2019-20. The filing included changes to Code (WAC) 220-312-020, 220-312-030, 220-312-040, 220-312-050, 220-312-060, 220-313-060 and 220-313-070. The package of rules is expressed as a suite of amendments to the pre-existing Washington Administrative Code sections that are referenced. However, the rules packages reflect a unitary fishing season proposal. In essence, the amended rules reflect the 2019-20 proposed fishing season, expressed largely as time, place and manner regulations for fishing activity, given the most recent conservation and allocation objectives. Functionally, the amended rules package is a unitary seasonal fishing package and replaces the prior year (2018-19) suite of fishing season rules.

Information regarding the proposed rule changes were electronically sent 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 Administrative Procedures Act rule-making hearings/public meetings were held on June 25, 2019 (Puget Sound Marine and Freshwater in the Natural Resource Building) June 25, 2019 (Columbia River at the Region 5 office), June 26, 2019 (Coastal Marine at the Region 6 office) and on June 26, 2019 (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.

The first of these hearings/meetings was for Puget Sound marine and freshwater rules. A total of two individuals attended, and both gave testimony. There were not any members of the public at the Columbia River hearing/meeting. A total of three individuals attended the hearing/meeting for Coastal marine rulemaking, of which two provided verbal testimony. Eight individuals attended the hearing/meeting for coastal freshwater, four of which provided verbal testimony. 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.

On July 1, 2019, WDFW filed a CR 102C (WSR 19-14-096) to re-open the comment period until July 10, 2019. Following the original CR 102 filing, the Department clarified the basis for its exemption from the duty to prepare a Small Business Economic Impact Study (SBEIS) under the Regulatory Fairness Act. The recreational fishery rules open fisheries to individuals, and regulate how those individuals may participate in recreational fishing activity. The rules do not regulate small businesses and thus impose no direct regulatory compliance costs on small businesses. Accordingly, no SBEIS is required pursuant to RCW 19.85.025(4). The extended comment period provided an opportunity to comment about WDFW's reliance upon this exemption (or to express any other concern with the proposed rules). No additional comments were provided to DFW during this period.

Rationale for Adoption of the Proposed Rules

WDFW considered all the facts and circumstances surrounding the proposed 2019-20 recreational salmon season. The agency carefully reviewed all input from the general public regarding preferred fishing rules during North of Falcon public meetings (the APA Pre-notice Inquiry stage) and the rule-making process used to provide notice and comment on proposed rules (CR 102 filing of proposed rules, additional comment solicitation, and rule making hearings). 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 2019-20 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. WDFW shared these objectives 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 C3608 (2019-2020 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.

Region Specific Rationales

North Coast

Modifications to North Coastal sport fishing regulations for 2019-20 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 again be September 16 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 revert to normal seasons, open September 1 through November 30. Daily limits in all the North Coast rivers will still reflect a conservative approach for wild coho salmon, as detailed below.

- 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 limit will be 6 salmon, up to 3 may be adults, of which only 1 may be a Chinook or wild coho. Release all sockeye.

The daily limit in the Bogachiel, Calawah and Dickey rivers (tributaries of the Quillayute system), will be 3 salmon, up to 1 may be an adult.

- The daily limit in the Hoh River will remain 6 salmon, 2 adults, of which only 1 may be a Chinook.

- Clearwater River (tributary to the Queets River), will have a daily limit of 3 salmon, up to 1 may be an adult. Salmon River (tributary to the Queets River), will have a daily limit of 6 salmon, up to 2 may be adults, of which only 1 may be a Chinook. Release wild coho.

The wild coho stocks and the Hoh River spring/summer Chinook stock were the focus on the North Coast for the 2019-20 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 2019 return to the river is expected to be near this floor, with the run forecast at 1,023. 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 2019, 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 through 2018, 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 2019 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 and beyond the salmon fisheries.

Grays Harbor

The Washington Fish and Wildlife Commission adopted a new Grays Harbor Basin Salmon Management policy (C-3621) in February of 2014 (effective starting March 1, 2014). This action followed an extensive public process with multiple public comment opportunities. The policy provides management guidance to WDFW in terms of conservation objectives and sharing between the recreational and commercial sectors. While the policy details specific objectives, it also recognizes uncertainty inherent in fishery management, which provides guidance on the utilization of adaptive management to facilitate appropriate flexibility in the implementation of the policy guidance.

Regulations for the 2019 Grays Harbor freshwater and marine recreational salmon fisheries were evaluated with respect to objectives in the policy. These objectives were shared with industry representatives, members of the Grays Harbor Salmon 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. For Humptulips River natural-origin Chinook and Chehalis River natural-origin coho, fisheries will be managed with the intent of achieving the escapement goal.

7. Humptulips River natural-origin coho will be managed with the intent to limit incidental impacts from WDFW-managed fisheries targeting other stocks to five percent or less as provided in the Fishery and Species-specific Guidance in the Policy. Chehalis River natural-origin coho will be managed to achieve the escapement goal.

8. 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 were proposed, as noticed in the CR-102, based upon a conclusion that they would produce fisheries consistent with the overriding conservation objectives identified above. In addition, the Commission policy provided recommendations for “meaningful” opportunities for both recreational anglers and commercial harvesters.

WDFW concluded the final adopted 2019 Grays Harbor recreational freshwater and marine fishing regulations were 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) were expected to result in achievement of escapement goals for Chehalis River natural-origin Chinook and coho, and Grays Harbor chum (Table 1). Chehalis River spring Chinook were forecasted to return at 41% of the escapement goal. Therefore the proposed rule does not include a spring Chinook directed fishery. Chehalis River natural-origin Chinook have not achieved the escapement goal in three of the last five years. 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 would occur while targeting healthy stocks, but were less than the criteria in Objective 4. Humptulips River natural-origin coho were forecasted to return at a level below the escapement goal. That is, coho are not expected to meet the goal whether or not fisheries occurred. 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 is expected due to mark select fisheries.

Table 1: Grays Harbor Salmon Management Policy Objectives

Stock	Objective Type	Objective Criteria	Modeled Results
Chehalis Natural-origin fall Chinook	Harvest Impact Rate	< 5.0%	4.5%
Chehalis Natural-origin Spring Chinook	Escapement Goal*	1,400	581
Humptulips Natural-origin Chinook	Escapement Goal*	3,573	3,406
Chehalis Natural-origin Coho	Escapement Goal*	28,506	38,189
Humptulips Natural-origin Coho	Harvest Impact Rate	< 5%	4.44%
Grays Harbor Chum	Escapement Goal*	21,000	33,367

*-Expected escapement after all Grays Harbor WDFW managed recreational and commercial fisheries plus treaty fisheries.

2. For spring Chinook, the adopted rule does not include a directed freshwater recreational fishery due to low forecasted abundance and no hatchery production.

3. The fishery management objectives for fall Chinook salmon, in priority order, are to:

- Achieve spawner goals.

The adopted rules were developed based upon the available harvestable surpluses of the forecasted runsize for the Humptulips and Chehalis river stocks.

- Provide meaningful recreational fishing opportunities.

Within the constraints of the policy, recreational fishing opportunities have been provided for Humptulips River Chinook in both the marine area and the Humptulips River.

4. For Chehalis River basin natural-origin fall Chinook, the predicted fishery impact in WDFW managed fisheries will not exceed 5% of the forecasted adult return because the number of natural-origin spawners was less than the goal in three out of the last five years.

The predicted impact on Chehalis River natural-origin fall Chinook during the scheduled fisheries in the adopted rule is 3.3%. Including all WDFW managed non-treaty fishery (commercial and recreational marine and freshwater) results in a predicted impact of 4.5%.

5. For Humptulips River natural-origin fall Chinook, the WDFW managed fisheries will be managed with the intent of achieving escapement goal.

The forecasted terminal runsize of Humptulips natural-origin Chinook is 4,427. The predicted impact by the adopted rule on Humptulips natural-origin Chinook is 184 fish. The scheduled combined terminal fisheries in Grays Harbor basin (WDFW-managed recreational and commercial fisheries plus the treaty fisheries) are expected to result in 3,406 Humptulips River natural-origin spawners compared to a spawning goal of 3,573.

6. Humptulips River natural-origin coho will be managed with the intent to limit incidental impacts from WDFW-managed fisheries targeting other stocks to 5% or less as provided in the Fishery and Species-specific Guidance in the Policy. Chehalis River natural-origin coho will be managed to achieve the escapement goal.

The expected impact of the adopted rule on Humptulips natural-origin coho will be 3%

The expected escapement of Chehalis natural-origin coho after all 2019 terminal fisheries (WDFW managed recreational and commercial plus treaty fisheries) is 38,189.

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 1,683 Grays Harbor chum. The forecasted return of Grays Harbor chum is 71,959 and predicted escapement after all Grays Harbor fisheries, treaty and non-treaty, is 33,367 compared to the goal of 21,000.

Scheduled fisheries in the adopted rule achieves the policy objective guideline via reaching or exceeding 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. Therefore, coho impacts are expected to remain, allowing for directed chum fisheries to occur.

Comments Received During the Rule Making Process

Petition for Humptulips Steelhead Regulation Change

The proposed rule includes Selective Gear Rules for the month of March in the sections on the Humptulips River from the Hwy 101 Bridge upstream to the East and West Forks and from the mouth of the West Fork upstream to the confluence with Donkey Creek. The implementation of Selective Gear Rules in a fishery prohibits the use of bait. The majority of the comments received during the public comment period and during the April 23rd public meeting were supportive for changing the rule to include bait restrictions.

The Fish and Wildlife Commission received a petition in December 2018 requesting amendments to sport fishing rules for steelhead on a section of the Humptulips River. The Petition requested the WDFW: *“Change Humptulips River Fishing regulations above 101 bridge back to no bait restrictions from March 1-March 31 or end of season each year as it was prior to general rule change and simplification process.”*

The petition stated this change was needed because: *“Protection of wild steelhead stocks during spawning times. This is a shared perspective of the steelheading community, a very diverse group of anglers, who are sometimes at odds, to take a more conservative approach to protect Humptulips Wild Steelhead.”*

The petition was denied based on the lack of a conservation need as described in the petition. However, the Commission directed WDFW to include the petitioner's recommendation in the NOF public process to be considered for social needs and delegated the rule making authority to the Director. WDFW collected public input on this issue through a public comment period and public meetings. The public comment period provided the opportunity to send in comments and recommendations. A public meeting was held on April 23, 2019 to assess the public's perspective for the rule change. Based upon all of this input, the proposed rules include the adoption of selective gear rules for the mentioned sections of rivers.

Commenters would like to allow barbed hooks in the Humptulips River freshwater area during the month of September.

The intent of prohibiting the use of barbed hooks in combination with a mark selective fishery is to minimize handling mortality associated with caught and released fish (*i.e.* natural origin Chinook) as a conservation measure. The Department has employed selective fishing as a fishery management strategy since 2010. In such mark selective fisheries, anglers are generally allowed to retain adipose fin clipped (marked) hatchery fish and are required to release unharmed any unclipped (unmarked, predominately wild) salmon encountered. The objective of mark selective fisheries is to provide fishers with opportunities to capture Chinook salmon reared in hatcheries while also reducing mortality on natural-origin animals.

Research has shown the type of fishing gear used while angling can significantly influence the probability that a captured fish will survive the stress of fighting, landing and handling [1-3]. Studies have shown post release mortality can range from 3% to >60% for salmonids [4]. Hooking mortality, among fish that experience fishing pressure, may be overlooked as a significant source of mortality in part, because anglers and managers often do not observe the fate of the organism (in this case, a Chinook salmon).

Hook design, especially whether the hook is equipped with a barb, is debated as an additional source of mortality in fisheries. On the one hand, many studies have shown that hooks with barbs can influence the probability that an animal survives the capture event through increased handling time [1], more severe injuries [5], and anatomical location of the hook [4]. On the other hand, a critique leveled against barbless hooks supposes fish interact with anglers more often because successfully capturing and landing any fish is reduced due to the lack of a securing barb [6]. The lack of a barb then leads to an increase in incomplete captures (*i.e.* fish that are hooked and "drop-off" of the line), which may potentially outweigh the benefits of reduced damage and handling time. While the argument has merit, to date, rigorous studies have yet to uncover the tradeoff between incomplete captures and mortality.

Policy C-3621 directs fisheries management to plan and implement mark selective fisheries when there is a conservation concern for natural-origin fish; therefore, it is critical that natural-origin fish are released with few deleterious impacts to the health of the fish [7, 8]. WDFW will continue to use the best available science to make determinations about gear allowance while also focusing on those factors that improve conservation. WDFW will continue the use of barbless hooks as an enhanced conservation tool in the adopted rules or until compelling data are acquired and indicate that barbed hooks achieve similar conservation benefits compared to the barbless alternatives.

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During the rule making process, advisors and the public contributed significant input, offering numerous fishery suggestions. All suggestions were considered, evaluated, and discussed. Notable un-adopted suggestions are discussed below.

1 A fishery proposal to allow a three fish daily limit in area 2-2 from Sept. 16th to Nov. 30th was discussed at several meetings. This proposal was modeled and evaluated

during the rule making process. It was determined the impacts on Chehalis natural-origin Chinook would require a reduction in season length and changes to other recreational fisheries to meet conservation objectives. There was not public or advisory consensus to pursue the three fish daily limit at the expense of a shorter season.

2 A fishery proposal suggested allowing a two fish daily limit for the North Bay Area 2-2 fishery. The suggestion was not adopted due to impact limitations to both Humptulips natural-origin Chinook and coho. Modeling evaluations indicated in order to provide a two fish daily limit; season length would be shortened to achieve conservation objectives. The consensus of the public and advisors were in favor of a longer season.

3 A fishery suggestion stated the East Bay Area 2-2 fishery should open in August if the south channel region of Area 2-2 were closed. There are no data available to evaluate whether closing the south channel would reduce impacts to natural-origin Chinook or coho and offset impacts occurred by opening East Bay Area 2-2 in August. In addition, there was little support for closing the south channel region.

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.

On April 6, 2019, during a regularly scheduled open public meeting, the Fish and Wildlife commission (FWC) provided the Department with additional guidance on the implementation of policy C-3622 for the 2019-20 season. The general guidance provided by FWC counseled the Department to:

- Actively manage to not exceed 20% total impacts for natural-origin Chinook on Willapa River;
- Actively manage to not exceed 20% total impacts for natural-origin Chinook on Naselle River;
- Actively manage to not exceed 10% total impacts for chum;
- Suspend the Fishery Management #6 of the Fall Chinook Salmon species-specific guidance in the Willapa Bay Policy that states:
 - Limit the fishery impact rate on Willapa and Naselle river natural-origin fall Chinook salmon to no more than 14%;

- No commercial fisheries shall occur within areas 2T and 2U prior to September 16; and
- No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P, and 2R until after September 7.
- Allow the Department staff the flexibility to determine the bag limits for Chinook and coho in the recreational fishery that is appropriate within the 20% harvest rate.

This guidance applies only to 2019-20. All other items in the Willapa Bay Salmon Management Policy, C-3622, will remain in effect for 2019-20.

Regulations for the 2019-20 Willapa Bay recreational salmon fisheries were evaluated with respect to the objectives in the policy and the additional guidance provided by the FWC for 2019-20 only. 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 2019, in priority order, are to:
 - Not exceed a 20% impact rate during Willapa Bay fisheries on Willapa and Naselle rivers 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; and
 - Provide enhanced recreational fishing opportunities.
 - Increase participation and/or catch including earlier openings, open areas previously closed, and the expansion of areas with use of multiple rods (two-pole endorsement);
 - Conservation actions, as necessary, shall be shared equally between marine and freshwater fisheries.
2. The recreational fishery management objectives for coho and chum salmon, in priority order, are to:
 - Achieve spawner goals; and
 - Provide recreational fishing opportunities.

Regulation changes in the adopted rules will continue to increase participation and/or catch during the 2019-20 season, which includes earlier areas open, more areas open, and the expansion of areas for two-pole endorsements. The adult salmon bag limit for the 2019-20 recreational salmon marine and freshwater fisheries throughout Willapa Bay is two adult salmon.

Willapa Bay needs additional conservation for unmarked Chinook. To address this concern, all recreational fisheries, both marine and freshwater, are mark selective and

require the release of unmarked Chinook. Marine Area 2.1 regulations are similar to 2018 with a start date of August 1, 2019. Prior to August 1, 2019, Willapa Bay will follow the rules for Ocean Area 2, which began June 22, 2019.

Beginning August 1, 2019, the Willapa Bay Control Zone area at the mouth of Marine Area 2.1 will be open 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.

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 40,819 natural-origin Coho and 54,835 hatchery-origin coho. This predicted escapement also exceeds 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 adopted fishery is 47,012, exceeding the goal of 35,400.

Modifications proposed for 2019-20 Willapa Bay marine and freshwater recreational fisheries through this rule-making process include:

- Retention of two hatchery or natural coho is permitted in Marine Area 2.1 and all freshwater systems due to abundant hatchery and natural coho returns predicted for 2019;
- The Willapa Bay control zone will be open to salmon fishing beginning August 1, 2019; and
- Reduced the recreational, adult bag limit to two fish in Marine Area 2.1 and all freshwater systems.

The rules, as originally noticed in the CR-102, WSR 19-11-130, were proposed based upon a conclusion they would produce fisheries consistent with conservation objectives, the Willapa Bay Salmon Management Policy C-3622, and the 2019 FWC guidance on the implementation of the Willapa Bay policy, C-3622, for the 2019 season.

WDFW concludes that adoption of the 2019-20 Willapa Bay recreational fishing regulations will be consistent with the management objectives previously listed.

Comment #1: Commenters are concerned that maintaining the closure on the Willapa Bay control zone will reduce angler effort and diminish the quality of the fishing experience.

The Willapa Bay Control Zone will be open to salmon fishing during the 2019-20 season. The Willapa Bay Control Zone was created to limit impacts to non-local Chinook stocks as a result of the 2018 NOF process. The stock composition of the marine area fisheries encountered in Willapa Bay was historically comprised of non-local and local Chinook stocks encountered in August and September. These non-local stocks are predominately Columbia River Chinook, some of which are listed under the Endangered Species Act (ESA).

Management objectives, expressed as estimated total allowable exploitation rates for ESA-listed or stocks of concern, are set during the PFMC process on an annual basis. Evaluation of modeled outcomes for all fisheries (SE Alaska to California) predicted the exploitation rate was within acceptable limits.

Comment #2: Commenters would like to have the barbless hook rule as optional or allow barbed hooks in terminal, freshwater areas.

The intent of prohibiting the use of barbed hooks in combination with a mark-selective fishery is to minimize mortality of released fish (*i.e.* natural-origin Chinook) as a conservation measure. The Department has employed a fishery management strategy utilizing a mark-selective fishing since 2010. Mark-selective fisheries operate on the principal that marked fish originating at a hatchery are distinct from natural-origin fish and are identified as such upon capture via the presence of an intact adipose fin. The objective of mark selective fisheries is to provide fishers with opportunities to capture Chinook salmon reared in hatcheries while also reducing mortality on natural-origin animals.

Research has shown the type of fishing gear used while angling can significantly influence the probability that a captured fish survives the stress of fighting, landing and handling [1-3] where studies have shown post release mortality can range from 3% to >60% for salmonids [4]. Hooking mortality, among fish that experience fishing pressure, could be overlooked as a significant source of mortality in part, because anglers and managers often do not observe the fate of the organism (in this case represented by a Chinook fish).

Hook design, especially whether the hook is equipped with a barb, is debated as an additional source of mortality in fisheries. On the one hand, many studies have shown that hooks with barbs can influence the probability that an animal survives the capture event through increased handling time [1], more severe injuries [5], and anatomical location of the hook [4]. On the other hand, a critique leveled against barbless hooks supposes fish interact with anglers more often because successfully capturing and landing any fish is reduced due to the lack of a securing barb [6]. The lack of a barb then leads to an increase in incomplete captures (*i.e.* fish that are hooked and “drop-off” of the line), which may potentially outweigh the benefits of reduced damage and handling time. While the

argument has merit, to date, rigorous studies have yet to uncover the tradeoff between incomplete captures and mortality.

Policy C-3622 directs fisheries management to plan and implement mark-selective fisheries when there is a conservation concern for natural-origin fish; therefore, it is critical natural-origin fish are released with few deleterious impacts to the health of the fish [7, 8]. WDFW will continue to use the best available science to make determinations about gear allowance while also focusing on those factors that improve conservation. WDFW will continue the use of barbless hooks as an enhanced conservation tool in the adopted rules or until compelling data are acquired and indicate that barbed hooks achieve similar conservation benefits compared to the barbless alternatives.

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Comment #3: Commenter disagrees with bag limits established in the adopted rules.

Harvest control rules such as daily limits (bag limits) are commonly used as a tool to manage fisheries especially when population health and abundance is sensitive to harvest

practices [1]. WDFW has managed to a four fish adult limit for Chinook salmon in systems where there were high abundances of hatchery fish (surplus) beginning in 2015. Chinook populations in Willapa Bay have struggled to meet conservation and broodstock management goals (Figure 1). Therefore, WDFW has planned a conservative harvest strategy consistent with fishery and hatchery broodstock management objectives.

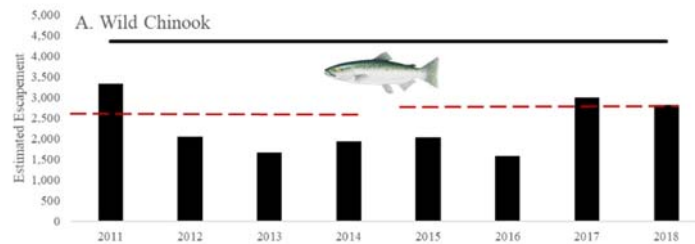


Figure 1. Wild Chinook escapement estimates as a function of run year in Willapa Bay Washington. The solid black line indicates the calculated escapement goal based upon available habitat. The red dotted lines illustrates the average escapement from the four years prior to the conservation and recovery focused policy C-3622 (2011-2014) as well as a separate mean escapement calculated for the years after the policy was implemented (2014-2018).

In summary, WDFW has shifted harvest control rules to a two fish limit reflecting current conservation and broodstock management concerns.

References

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Comment #4: Commenter is concerned the agency is not dedicated to in-season management.

WDFW is dedicated to in-season management of all salmon fisheries within Willapa Bay. The Department will actively monitor the commercial and recreational fisheries for 2019-20 using creel survey data, in-season spawning ground counts, on-board observation data, Quick Reporting data, and hatchery rack reports. All available data will be analyzed to determine if any in-season actions would be necessary for either the commercial or the recreational fisheries to meet conservation objectives.

C-3622 specifies that the Department will take action if it becomes apparent a scheduled fishery will exceed its preseason catch expectation, and the overage will put at risk the attainment of conservation objectives. WDFW will use the best available data to make in-

season adjustments to both the recreational and commercial fisheries as mandated by the Willapa Bay Salmon Management Policy (C-3622 Guiding Principle #8). The Department will continue to develop methods for assessing both the commercial and recreational fisheries for future fisheries, especially those with Chinook retention. Commercial fisheries are monitored in-season with catch estimates available within a few days of the fishery. Ultimately, in-season management will be used consistent with the Commission policy in appropriate circumstances based upon information and analysis obtained during the fishing season.

Comment #5: Commenter would like to eliminate the bobber in Naselle River.

The purpose of the bobber rule in the Naselle River is to limit the practice of snagging and increase the enforceability of the anti-snagging rule. Historically, this section in the Naselle River below the hatchery weir has been characterized as a disorderly fishery largely due an elevated rate of illegal fishing activity, specifically snagging. The bait or lure suspended below a float (bobber) may reduce the likelihood of snagging while increasing the enforceability of the anti-snagging rule.

Comment #6: Commenter would like all Chinook under 24 inches be retained.

WDFW will continue the mandatory release of natural-origin, early sexually maturing, male Chinook “jacks” in the recreational fishery for the 2019 fishing season because the putative effects on conservation and fisheries management are largely unknown.

Many organisms including salmon exhibit alternative life history mating strategies, which can affect fisheries management considerations when populations are exploited for harvest [1]. For example, one inheritable alternative life history strategy among Chinook salmon is exhibited by by early returning sexually mature jacks [2, 3]. Among Chinook salmon, most males compete aggressively on the spawning grounds for mating opportunities [4]. Jacks, on the other hand, are substantially smaller and exhibit weaker secondary sexually selected characteristics than their older and larger counterparts and as such, rarely acquire mates through aggressive behavior or female courtship [5]. Instead, jacks achieve mating success through inherited specialized behavior and morphology by “sneaking” where they exhibit higher gonadosomatic index, enhanced sperm performance and a muted coloration relative to adult males [2, 6].

The Chinook fishery in Willapa Bay is sensitive to harvest strategies and a fishery explicitly targeting Chinook jacks may negatively influence conservation objectives. While there is significant evidence suggesting fisheries, that harvest fish evenly across all ages, sizes, and sexes benefit from such practices; the risk associated with the implementation of a targeted

jack fishery is considered high in Willapa Bay. This is because the Chinook fishery frequently escapes fewer fish than anticipated and because few studies have investigated influence of a targeted jack fishery on common metrics of fish population health such as escapement, shifts in sex ratios, predator-prey dynamics, and food web dynamics.

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Columbia River

The Upriver Bright Fall Chinook forecast was 158,400 and is a surrogate for the Snake River Wild Fall Chinook ESA limits for non-treaty fisheries. The exploitation rate limit is 8.25% for returns less than 200,000. Due to recent poor ocean conditions, increased harvest efficiency and the majority of impacts occurring below Bonneville Dam prior to the run update, fishery managers allocated about 80% of available impacts as a precautionary move. A run update likely will occur about the week September 9-14 and may allow additional opportunities to harvest Chinook

Harvest allocations by recreational and commercial sectors were adopted based upon concurrence between Washington and Oregon Columbia River policies. Due to efforts with rule simplification and public input led fishery managers to provide concurrent regulations between the two states.

Columbia River mouth to Chief Joseph Dam and tributaries downstream of McNary Dam:

Barbless hooks are no longer required when fishing for salmon and steelhead per Washington Fish and Wildlife Commission guidance provided to the Director during the Commissions' regularly scheduled open public meeting on March 2, 2019. The proposed rule change on barbless hooks also provides concurrency with Oregon's fishing rules in Oregon-Washington jointly managed waters pursuant to the Columbia River Compact process.

Buoy 10 to Bonneville Dam mainstem:

1. All modifications below from the mouth to the Oregon-Washington state line upstream of McNary Dam are occurring, in addition to the reasoning provided, to reach concurrency on annual regulations and policy guidance.
2. Due to low summer Chinook forecasts from the Astoria-Megler Bridge upstream to Bonneville Dam, June 16 through July 31 Chinook retention is prohibited.
3. Sockeye retention is prohibited due to low forecasts and are not expected to meet escapement goals for the Wenatchee stock in particular.
4. Due to low steelhead forecasts of stocks destined to areas above Bonneville Dam, conservation measures including reduced daily 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 that reaches concurrent regulations for Oregon waters.
 - 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.
 - From September 1 through December 31, the steelhead daily limit is 1.
5. The Buoy 10 recreational fishery will begin on August 1 with a 2 salmon, no more than 1 Chinook daily limit through August 20. From August 21 through December 31, Chinook retention will be prohibited, but the daily limit is 2 adult hatchery salmonids.
6. 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 2 hatchery salmonids. From the west

end of Puget Island upstream to the Lewis River/Warrior Rock line, Chinook retention is allowed August 1 through August 27 with a daily limit of 1 salmon. Beginning August 28, Chinook retention closes, but the daily adult limit will increase to 2 hatchery salmonids through December 31. From the Lewis River/Warrior Rock line upstream to Bonneville Dam, Chinook retention is allowed August 1 through September 8. The daily limit will be 1 salmonid. Beginning September 9, Chinook retention closes but the daily adult limit will increase to 2 hatchery salmonids through December 31.

Bonneville Dam to Hwy. 395 Bridge at Pasco mainstem:

1. All modifications below from the mouth to the Oregon-Washington state line upstream of McNary Dam are occurring, in addition to the reasoning provided, to reach concurrency on annual regulations and policy guidance.
2. Due to low summer Chinook forecasts, from Bonneville Dam upstream to Hwy. 395 Bridge at Pasco, June 16 through July 31, Chinook retention is prohibited.
3. Sockeye retention is prohibited due to low forecasts and is not expected to meet escapement goals for the Wenatchee stock in particular.
4. Due to low steelhead forecasts of stocks destined to areas above Bonneville Dam, conservation measures including reduced daily limits and rolling closures will be in effect for 2019.
 - 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 that reaches concurrent regulations for Oregon waters.
 - The daily limit is 1 hatchery steelhead from July 1 through December 31 with the following closure exceptions:
 - Bonneville Dam upstream to John Day Dam August 1-31.
 - The Dalles Dam upstream to McNary Dam September 1-30.
 - John Day Dam upstream to Hwy. 395 Bridge at Pasco October 1-31.
 - McNary Dam upstream to Hwy. 395 Bridge at Pasco November 1-30.
5. Chinook retention opens August 1 with a 1 salmonid daily adult limit. The fishery will be managed in-season based on actual catches and the URB run size.

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. October 1-31, the daily limit is 2 Ringold Springs Hatchery-origin steelhead. 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.
4. From November 1 through March 31, the daily limit is 2 hatchery steelhead. The majority of UCR steelhead have migrated upstream of Priest Rapids Dam allowing the harvest of any hatchery steelhead after November 1. The same steelhead rule rationale applies in the Ringold Area Bank Fishery that is open April 1-15.

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.
2. The fall Chinook salmon fishery will be open August 16 through October 15. This area of the Columbia River is the primary spawning grounds for Hanford Reach Up-River Bright fall 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 2019 North of Falcon process for recreational fisheries occurring in Columbia River tributaries:

1. Modified the adult coho salmon daily limits in some sections of the Cowlitz, Lewis, Toutle, North Fork Toutle, Green, Grays, Elochoman, and Washougal rivers based on preseason forecasts and hatchery broodstock needs.
2. Close retention of fall chinook on the Cowlitz, Tilton, Toutle, Green, and Washougal rivers to help ensure hatchery broodstock collection goals are achieved.
3. Increase the adult salmon daily limit on the Lewis River between October 1 and December 31 based on preseason forecast.
4. Open hatchery steelhead retention on the Elochoman River during September and October from 200 feet above the temporary weir upstream to the Elochoman Hatchery bridge to provide additional opportunity for anglers.
5. Increase the adult coho daily limit on the Kalama River, so that a total of 3 adults (chinook and/or coho) may be retained based on preseason forecast.
6. Reduce the adult salmon daily limit in Drano Lake to help ensure hatchery broodstock collection goals are achieved.

7. Modify gear restrictions to make the use of barbless hooks voluntary in salmon and steelhead directed fisheries in Columbia River tributaries to implement direction from the Washington Fish and Wildlife Commission.
8. Implement a suite of regulations in the lowest reaches of some Columbia River tributaries (Cowlitz, Kalama, Lewis, Wind, White Salmon, and Klickitat Rivers and Drano Lake) to reduce impacts on summer steelhead stocks forecast to return to the Columbia and Snake basins in low abundance during 2019. Rule proposals include: reductions in daily harvest limits, steelhead retention closures in summer/early fall, and night closures.

2019-20 Constraining Stock Table.

Stock	Objective Type	Objective Criteria	Modeled Result
Wenatchee sockeye	Escapement	23,000	<18,300
Upper Columbia summer Chinook	Harvest Rate	50% of surplus above 29,000	50% of surplus above 29,000
Tule Fall Chinook	ESA impact rate	<38% total	35.9%
Snake River Wild Fall Chinook	In-river ESA impact rate	<8.25%	8.24%
Lower Columbia Natural Coho	ESA impact rate	<u><23.0%</u>	18.3%

Puget Sound Marine and Freshwater

State and tribal salmon fishery 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 2019-20 include Nooksack spring natural Chinook, Mid-Hood Canal natural Chinook, Stillaguamish natural Chinook, Snohomish natural coho, and Strait of Juan de Fuca natural coho. For example, the management objective for Stillaguamish natural Chinook is a Southern U.S. exploitation rate ceiling of 8% based on the returning forecasted abundances in 2019. The basis for the coho management objective is the Comprehensive Coho Management Plan (1998), sections of the Pacific Salmon Treaty, and co-manager agreement.

2019 Constraining Stock Table.

Stock	Objective Type	Objective Criteria	Modeled Result
Stillaguamish natural Chinook	Southern U.S. Exploitation Rate	8.0%	8.0%
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%	11.8%
Snohomish natural coho	Southern U.S. Exploitation Rate	≤ 40%	≤ 18%
	Escapement Goal	50,000	50,564
Strait of Juan de Fuca natural coho	Southern U.S. Exploitation Rate	≤ 10.0%	7.1%
Stillaguamish natural coho	Southern U.S. Exploitation Rate	≤ 50%	21%

The proposed fishing regulations for Puget Sound marine and freshwater salmon fisheries in 2019 are more restrictive compared to the 2018 regulation package and were crafted to reduce mortality on constraining stocks. For example, fisheries were reduced in Marine Areas 5, 6, 7, 8-1, 8-2, 9, and 11 to help meet Chinook management objectives for Stillaguamish natural Chinook, Nooksack spring Chinook and Mid-Hood Canal natural Chinook. Fisheries were reduced in Marine Area 8-2 for coho salmon to protect Snohomish natural coho. The forecast of Lake Washington sockeye salmon was well below the escapement goal objective. The 2019 sockeye recreational fishery in Lake Washington will not open unless sufficient sockeye pass through the Ballard Locks, as was the case in 2018. 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. There will be no bonus limits of pink salmon in any Marine Area due to low forecasted returns to most Puget Sound river systems.

Changes to some fisheries are to reduce conflict with tribal fisheries and/or to ensure orderly fisheries (Objective 3). The Puget Sound regulation changes are based on North of Falcon discussions with stakeholders and tribal co-managers. The intent of these changes is to maximize recreational opportunities while meeting conservation objectives.

Modifications proposed for 2019-20 Puget Sound Marine Area recreational fisheries through this rule-making process include:

- Retention of hatchery coho is permitted in most marine areas when open for other species (e.g., Chinook) due to an improved hatchery coho forecast for most systems.
- Areas 5 and 6 winter Chinook seasons are reduced to protect Stillaguamish and Nooksack spring natural Chinook.
- Area 7 summer and winter Chinook seasons are closed in August and January respectively to protect Stillaguamish natural Chinook. The Eastern Rosario Strait is closed from July through September to protect a number of natural Puget Sound Chinook.
- Area 8-2 summer season directed at coho is reduced in time, area available to fish, and under mark-selective regulations to meet Snohomish natural coho management objectives.
- Areas 8-1 and 8-2 winter seasons reduced by two months to meet Mid-Hood Canal and Stillaguamish natural Chinook management objectives.
- Area 9 summer Chinook season starts later in the month of July than in previous years, and the winter Chinook season closed in January to meet Stillaguamish and Mid-Hood Canal natural Chinook management objectives.
- Area 10 summer Chinook season starts later in the month of July to align with opening dates in the Area 9 fishery and maximize a reduced quota when fish are present in the area.
- Opening of Elliott Bay to Chinook retention the first weekend in August due to the improved forecast of Chinook to the Green River.
- Area 11 summer and winter Chinook seasons are closed in June and October through December respectively to meet Mid-Hood Canal natural Chinook management objectives.
- Area 12 north of Ayock Point coho fishery opens in August to harvest surplus hatchery coho while protecting wild Chinook.

Comments on Marine Seasons Received During the Rule Making Process

WDFW received public comments regarding salmon fishing seasons in Puget Sound prior to May 22, 2019 were received in various scheduled meetings, through an on-line commenting porthole on WDFW's website, and through communications received by individual staff within the agency. The comments received prior to May 22 generally fell into the following categories:

- Reduced Chinook size limit
- Closing or reducing fishing to provide additional prey for Sothern Resident Killer Whales (SRKW)

- Expanded opportunity for salmon fishing
- Maintaining fishing opportunity in Marine Area 7

Reduced Chinook Size Limit- Numerous comments were received advocating for a reduced size limit on hatchery Chinook salmon. The comments suggested implementing a reduced size limit in Marine Areas 10, 11, and 13 in summer fisheries and numerous other Marine Areas for winter fisheries.

Reducing the minimum size for Chinook in certain time-periods and Marine Areas can have benefits for recreational anglers. A reduced minimum size limit allows anglers to access more hatchery fish that they fund through license fees while simultaneously reducing the number of hatchery strays and immature Chinook (jacks) on the spawning grounds and in the hatcheries. A lower minimum size also has the potential to increase harvest levels of hatchery Chinook for recreational anglers without increasing impacts (dead fish) on ESA-listed stocks of concern. WDFW gained agreement with tribal co-managers to reduce the minimum size for Chinook in Marine Area 13 for the July-September time-period and has proposed this rule change for 2019-20.

Closing or reducing fishing for Southern Resident Killer Whales (SRKW)-Numerous comments were received regarding reducing or eliminating salmon fisheries in order to provide additional prey to be available for SRKW.

In recent years, the three populations of SRKW have dropped to critically low levels. In recognition of the collective need to address the issue, NOAA fisheries, the State of Washington and the Washington Fish and Wildlife Commission all provided WDFW guidance on considering the dietary needs of the SRKWs when crafting salmon seasons in 2019-20.

WDFW followed the SRKW guidance provided for planning the 2019 salmon seasons for Puget Sound. Significant reductions in angler opportunity and total harvest were made with the intent of meeting ESA management objectives. While none of the proposed fishery reductions were made with the explicit intent of benefitting Southern Resident Killer Whales (SRKW), significant reductions to Chinook directed fisheries for Puget Sound will likely increase abundance of prey available for SRKW.

Expanded opportunity for salmon fishing- A majority of the comments received focus on the constituents' desire for increased opportunity to fish for salmon. The suggestions focused on Chinook, Coho, and Pink salmon. Increased opportunity for most commenters included more fishing days, increased quotas, or opening areas that are/were previously closed for salmon fishing. Others suggested regulation changes such as offering a 2-pole

endorsement in more Marine Areas and a lower daily limit to help quotas/seasons last longer.

WDFW has a limited ability to expand recreational salmon fishing opportunity from year to year. All salmon fishing opportunities are first limited by the abundances that are forecasted to return in any given year and how many fish are needed to meet the hatchery and natural escapement goals for any given stock and system. The number of impacts (dead fish) that are predicted to occur on ESA listed Chinook and Summer Chum stocks also limits most salmon fisheries in Puget Sound. Salmon fisheries are further constrained by international treaty obligations with Canada under the Pacific Salmon Treaty (PST). Finally, fisheries are constrained by what sharing agreement can be negotiated with tribal co-managers on a final fishing package.

A number of natural Chinook stocks are forecasted to return in low numbers in the 2019-20 fishing season as shown in the constraining stock table. Hatchery Chinook salmon fishing opportunity had to be reduced in Marine Areas 5, 6, 7, 9, and 11 compared to the 2018-19 fishing package in order to meet management objectives. Increasing opportunity was only considered in areas that did not have a large impact on any of the constraining stocks, such as Elliott Bay, which was closed in 2018-19, but has 3 days of fishing scheduled in 2019-20. Other regulation changes to expand opportunity such as adding a 2-pole endorsement in Area 11 or additional time in other Marine Areas were not considered because such changes would add additional impacts on wild Chinook stocks that we were trying to reduce. Changes to the management regime for winter fisheries was considered as a way to provide additional certainty and stability to winter seasons, but was not formalized or agreed to for the 2019-20 fishing year.

Natural and hatchery Coho salmon returning to Puget Sound are forecasted to be at moderate levels for the 2019-20 fishing season. Similar to 2018-19, Snohomish and Strait of Juan de Fuca natural Coho were afforded additional consideration when constructing coho fisheries. Due to the poor returns of these natural coho stocks in 2015, 2017, and 2018, these stocks fell into an “overfishing” classification by NOAA fisheries through the Pacific Fishery Management Council. The co-managers and federal managers met over 2018 and 2019 to create rebuilding plans for both of these Puget Sound populations. The proposed coho season for Marine Area 8-2 in 2019-20 was reduced to one month, and will be opened under mark-selective regulations in a smaller area than in 2018-19 to maximize the amount of natural coho returning to the Snohomish system. A majority of the Strait of Juan de Fuca natural coho are caught outside of Washington waters, so constraining co-manager fisheries would do little to help rebuild this stock. The coho season in Marine Area 8-1 was expanded by one month over the previous three seasons. Expanding other coho

fisheries was not considered as there were not additional Chinook salmon incidental impacts available to prosecute coho-directed fisheries.

Puget Sound Pink salmon are expected to return in low numbers in 2019, much like 2017. The actual 2017 Pink return was less than half of what had been predicted to return. Further, freshwater survival and outmigration were poor in 2017-18 leading to a poor 2019 forecast. Pink salmon opportunity in the marine areas will be limited to any harvest that occurs as part of the daily limit.

Maintaining fishing opportunity in Marine Area 7- A number of comments were received that implored the Department to reconsider the proposed rule's closure of salmon fishing in Marine Area 7. Ultimately, in order to meet the management objectives on several natural Puget Sound Chinook stocks, salmon fisheries in Marine Area 7 were reduced by one month in August and one month in January.

WDFW considered all of the implications of closing a popular salmon fishery in Marine Area 7 in August. The critical stocks that are in need of protection for 2019-20 are found in much higher proportions in Marine Area 7 when compared to other Marine Areas in Puget Sound. Several other Marine Areas would have had to close to salmon fishing for the entire summer time period in order to have similar impact savings as closing the month of August. WDFW did consider leaving Area 7 open to fishing for Pink and Coho salmon, but chose not to do so for two reasons. First, the run-sizes of Pink salmon returning to both Puget Sound and the Fraser River in Canada are expected to be relatively low with the Fraser Pink salmon run forecasted below the escapement goal. Second, there are relatively few coho encountered and caught in the month of August.

Modifications proposed for 2019-20 Puget Sound Freshwater recreational fisheries through this rule-making process include:

- Numerous river sections were consolidated and regulations were standardized were feasible to simplify regulations.
- Skagit River was open in May from the Memorial Highway Bridge to Gilligan Creek for marked spring Chinook with a 2 fish daily limit.
- Nooksack, Samish, and Skagit rivers closed to pink retention due to low expected returns.
- Samish River closed on September 22 due to weak expected returns and the need to meet broodstock goals for Chinook and to protect the weak coho and chum expected returns.
- Skagit River coho increased to a daily limit of 3 fish.

- Dakota and Whatcom creeks opened for wild coho retention with a daily limit of 2 fish.
- Baker Lake sockeye fishery season has expanded slightly to July 6 through September 15.
- Skagit River sockeye fishery closed dates adjusted to reflect co-manager agreement and avoid use conflicts.
- Snohomish, Skykomish, and Snoqualmie, rivers have a reduced season of September 1 through September 30, and the Wallace River from September 16 through September 30, with a reduced daily limit of 1 coho only, to reduce impacts on wild coho. Continuation of the fishery past September 30 is dependent on an in-season update to forecast coho run size. Pink closures in place due to low expected returns.
- Skykomish River Chinook mark selective fishery open the Saturday before Memorial Day to coincide with the gamefish opening.
- Stillaguamish River coho fishery open September 16 through November 15 with a 2 coho limit, due to increased coho returns expected. Stillaguamish and associated tributary gamefish closures to protect wild Chinook salmon due to low returns expected. Pink closure in place due to low expected returns.
- Pass Lake (Skagit County) will allow the statewide minimum length/daily limit retention of gamefish except all trout must be released.
- Puyallup and Carbon rivers opened with adjusted day closures to reflect tribal fisheries and maximize harvest of surplus hatchery Chinook and coho.
- Puyallup and Carbon rivers closed to the retention of chum to meet escapement goals.
- Nisqually River closes to salmon fishing after November 15th to protect winter chum.
- Nisqually and Puyallup rivers are non-selective for coho salmon.
- Minter Creek bag limit increases to a 4 fish limit for Chum similar to years past to maximize harvestable surplus at the hatchery.
- 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 minimizing of summer chum while allowing harvest on surplus of hatchery coho. Game fish season under selective gear rules will end August 15, and not run concurrently with coho season since selective gear rules and the anti-snagging rule are inconsistent with one another.

Comments on Freshwater Seasons Received During the Rule Making Process

WDFW received comments regarding salmon fishing seasons in Puget Sound prior to May 22, 2019 via various scheduled meetings, through an on-line commenting porthole on WDFW's website, and through communications received by individual staff within the agency.

Comments received regarding freshwater salmon seasons for Puget Sound rivers were primarily regarding increased opportunity in rivers or river sections that were previously closed or providing additional opportunity by reducing Marine Area fisheries. Freshwater fisheries are limited by the same factors that limit Marine Area fisheries including, returning abundance, escapement goals, impacts on stocks of concern, and negotiated sharing with co-managers. Anglers were not in favor of reducing gamefish seasons to protect salmon (such as the Stillaguamish River) but in some cases were in favor of reducing salmon seasons to protect gamefish (Skykomish River).

A significant amount of public comment was received regarding re-opening salmon fishing on the Skokomish River. WDFW and the Skokomish tribe have been in on-going discussions for over 3 years regarding a boundary dispute that is currently preventing non-tribal fishing on the river. WDFW is continuing its efforts to return salmon fishing to the Skokomish River.

The illegal introduction of warmwater species (Yellow Perch) into Pass Lake (Skagit County) is having a detrimental effect on a popular fly-fishing only trout fishery. Allowing retention of these warmwater fishes would help control the populations, which compete with trout for food and space. Pass Lake (Skagit County) is managed for the trout fishery by planting small young fish that over winter in the lake and grow to be fished on the next year.

Oral testimony and written comments provided at 6/25 Puget Sound hearing

Sandy Atkinson: Concerned with gamefish closures on the Stillaguamish, and believe that closure does not protect salmon, and could lead to unintended Chinook mortality due to increased poaching. According to the commenter, the poaching activity would arise due to the absence of law-abiding fishermen. The commenter also believes that fly-fishing for steelhead has negligible impact on Chinook, and he described the historical significance and heritage of steelhead fishing on the Stillaguamish.

Stillaguamish Chinook was one of the most constraining salmon stocks for planning 2019 fisheries. The final fishery model run reflecting state and tribal fishing plans for the year is projected to use all of the allowable exploitation rate limit for wild Stillaguamish Chinook, and substantial reductions to fisheries in marine and freshwater areas were made so that fisheries will meet that exploitation rate limit. While WDFW agrees that bycatch and

mortality of Chinook during certain gamefish fisheries is likely minimal, data on which to base those projections is extremely limited. Current methods for projecting impacts during gamefish fisheries are the best we have, and are based on the joint work of state and tribal technical staff, as we must reach agreement with tribal co-managers on methods for the projections for our preseason modeling. Conducting field surveys to obtain better estimates of bycatch and mortality during gamefish seasons would be extremely expensive. WDFW was faced with making further reductions to planned non-treaty fisheries during the final days of the North of Falcon process to meet conservation objectives and reach agreement with tribal co-managers on fishery plans. Closure of gamefish fisheries in the Stillaguamish River during times and places of potential overlap with Chinook salmon was one of the changes made to proposed fisheries to meet conservation limits and to provide meaningful fisheries in other regions. WDFW's presentation at the rule-making hearing outlined the significant angler days that would be lost in other fishing areas to provide even a minimal fishing opportunity on the Stillaguamish River. On balance, the Department could not justify an opening on the Stillaguamish this year.

Patrick Pattillo: Testified that information critical to decisions for Puget Sound sport fisheries was inadequate, unavailable, or not provided in a timely enough manner to effectively involve the public, particularly for changes made to Marine Area 7 seasons.

At public meetings throughout the 2019 North of Falcon process, WDFW staff communicated early and often that 2019 forecasts of wild Puget Sound Chinook abundance continued to be low and that significant fishery reductions would likely be necessary to meet management objectives for ESA-listed Puget Sound Chinook --particularly for the most constraining stocks such as Stillaguamish Chinook, Mid-Hood Canal Chinook, and Nooksack Spring Chinook. Starting at the February 27 Forecast meeting, staff presented what the lower forecasts, particularly for natural Stillaguamish Chinook, would likely mean for salmon fishing opportunity. This information sharing continued via correspondence and public meetings held through mid-April. While WDFW did not have a complete set of information available for public consumption prior to the final PFMC meeting, enough information was available and presented that allowed for informed decision making regarding what fishery changes would likely have to happen to meet objectives, including a new modeling tool shared via a presentation at the NOF #2 public meeting in Lynnwood. In addition, WDFW communicated with constituents during the PFMC meetings on fishery development held in Rohnert Park, CA as models runs became available. WDFW held meetings with constituents, including on a phone call-in basis, to de-brief and obtain input on fishery proposals as they were developed.

WDFW thoroughly considered leaving Area 7 open to fishing for Pink and Coho salmon, but chose not to for two reasons. First, the run sizes of Pink salmon returning to both Puget Sound and the Fraser River in Canada are expected to be very low in 2019 compared to

previous years, with the Fraser Pink salmon run forecasted below the escapement goal. Second, estimates of catch and effort from recent past years in Area 7 indicate that there are relatively few coho encountered and caught during the month of August. Thus, the entirety of information available indicated that it was important to incur incidental impact savings on Chinook during what would have been a pink and coho fishery in August.

The 2019-20 proposed regulation package for recreational salmon fisheries occurring in Puget Sound was a result of a thorough examination of all of the available stock status information, the management objectives that need to be met under the ESA and PST, Fish and Wildlife Commission policy guidance on North of Falcon fisheries, and constituent input.

II. Corrections to original rules as noticed in the CR 102 filed at WSR 19-11-130

(WAC) 220-312-030: “barbed hook allowed” language correction to sections of the Grays River, Toutle River (North Fork), Green River, Swift Reservoir, and Wind River. Kalama River – Steelhead Rule Correction, Correction, Washougal River - Steelhead Date Correction Clarification, Cowlitz River – Correction to County

(WAC) 220-312-040: Carbon River – Correction to retention species, Nooksack River – pink salmon rule correction

(WAC) 220-312-040: Minter Creek – Correction to daily limit

(WAC) 220-312-060: General Rules – Removal of Barbless Hook Requirement, 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 red navigation marker 2 at Tongue Point on the Oregon Bank – Daily limit Correction, From a line 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 – Season/Limit Corrections, From the I-5 Bridge to Bonneville Dam - Season Correction, From the Dalles Dam to John Day Dam - Retention Clarification and Season Correction, From John Day Dam to McNary Dam – Retention Clarification, From McNary Dam to Highway 395 Bridge at Pasco - Retention Clarification and Season Corrections

(WAC) 220-313-060: Catch Record Card Area 10- Area Clarification and Date Correction

Conclusion

WDFW has considered all the facts and circumstances surrounding the 2019-20 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 2019-20 recreational salmon fishing regulations comply with its statutory mandate and are consistent with WDFW’s management objectives for these fisheries.