

2019 Willapa Bay Commercial Salmon Regulations
Concise Explanatory Statement



July 12, 2019

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Introduction

This Concise Explanatory Statement (CES) relates to rules being adopted by the Washington Department of Fish and Wildlife (WDFW or Department) to amend Washington Administrative Code (WAC) 220-354-250. The CES contains four principle sections. Section I describes the adopted rules process and the resource management objectives. Section II describes the rules to be adopted. Section III discusses comments received during rulemaking and the agency's analysis and resolution of those comments. Section IV is the conclusion.

I. The Proposed Rules, Rule-making Process and WDFW's Resource Management Objectives

Overview of the Proposed Rules

The proposed rules provide a schedule to open the 2019 fall commercial gillnet salmon fisheries (Chinook, coho, and chum) in Willapa Bay. Without the proposed rules, 2018 rules and regulations for salmon in Willapa Bay would remain in effect, parts of which would be unenforceable given that important gear restrictions being carried forward in the new rules package are date specific. Overall, the intention is for the 2019 Willapa Bay commercial rules package, once adopted, to replace and supersede the commercial fishing season established in 2018. Thus, the suite of rules encompassed in amended WAC 220-354-250 are a complete rules package for the 2019 fishing season consisting of those portions carried forward from 2018, together with revisions needed to update the fishing season to meet conservation and harvest objectives for 2019 based upon current forecasts of salmon abundance.

Brief Summary of the Proposed Rules:

The proposed rules amend existing permanent rules that open the commercial salmon fisheries in Willapa Bay, as defined in WAC 220-354-250.

WAC 220-354-250 specifies the permissible commercial gear and methods of harvest that must be utilized, specifically the locations and the duration of the fall commercial salmon season for fisheries occurring between August 16 and December 31 annually. In 2019, approximately 45 days of commercial harvest is authorized for Chinook and coho salmon during the fall period using a combination of selective (i.e., only hatchery-origin Chinook salmon with a clipped adipose fin can be retained) and non-selective fishing gear and techniques. The rule also addresses release of chum salmon beginning November 4, 2019 that are incidentally encountered during the targeted harvest of coho salmon.

Fishery mandates and Commission Policy

The proposed rules were developed pursuant to the authorities found in RCW Title 77, including those provisions in RCW 77.04.012 that establish conservation as the paramount objective - “*to conserve the wildlife and food fish, game fish, and shellfish resources in a manner that does not impair the resource.*” Where consistent with that conservation objective, the Department must also “*seek to maintain the economic well-being and stability of the fishing industry in the state*”; “*promote orderly fisheries*”; and “*enhance and improve recreational and commercial fishing in this state.*” These broad statewide objectives do not necessarily focus on one region, one fish species or one segment of harvesters. The term “fishing industry of the state” includes both commercial and recreational interests. While these objectives are applied on a statewide basis, the agency considers regional interests, individual fishing sectors, and the interests of varying gear-type groups when undertaking its efforts to promote statewide management interests.

The proposed rules were also developed based upon policies of the Fish and Wildlife Commission aimed at promoting the conservation and recovery of wild salmon and sustainable fisheries (Hatchery and Fishery Reform – C-3619; 2019-2023 North of Falcon Policy – C-3608; Willapa Bay Salmon Management – C-3622). The proposed rules also incorporate recommendations from the North of Falcon (NOF)/Pacific Fishery Management Council (PFMC) process that included significant public input. WDFW’s objectives for those processes are outlined in the 2019-2023 North of Falcon (NOF) policy and the Policy Guidelines for PFMC Representation adopted by the Fish and Wildlife Commission (C-3603).

The NOF/PFMC process is the forum in which Washington works with other states, tribal co-managers, federal fishery managers, and stakeholder groups in order to ensure conservation and management objectives are reached or exceeded for salmon stocks throughout the North Pacific. Through that process, the management entities identify the predicted abundance of fish, desired escapement objectives, harvestable surplus, and shares available to state and tribal harvesters. Washington State’s commercial and recreational fishing seasons are ultimately reflected in annual time, place, and manner regulations that implement the 2019 seasons developed in the NOF and associated rule making processes described below.

Overview of WDFW’s Consideration of Management Objective

Hatchery and fisheries management practices in Willapa Bay have developed through a complex history over the last decade during which the management of salmon resources experienced dramatic changes. Historically, harvest rates on Willapa Bay Chinook salmon exceeded 90% and hatchery-origin fish comprised most of the spawners in the Willapa and Naselle rivers. For many decades prior to 2000, salmon were managed with hatchery supplementation of natural-origin fish. The focus was to attain an aggregate escapement of fish for spawning purposes without any

differentiation between hatchery and natural-origin fish. In the early 2000's, the Hatchery Scientific Review Group (HSRG) reviewed all of the state's hatchery programs and practices to assure our State's salmonid resources were managed for long-term health and sustainable harvest. Increasingly, there was concern hatchery and natural-origin fish needed to be managed with greater care to ensure a healthy wild population of salmon. In 2003, an increased focus on the conservation of natural-origin Chinook was initiated. However, at that time, hatchery fish were not marked (adipose fin clipped); thus making it difficult to distinguish between hatchery and natural-origin fish. Accordingly, the Department was limited to the identification of an aggregate harvest rate for all Chinook.

In 2009, the WDFW Commission adopted the Hatchery and Fishery Reform policy (C-3619). This policy directs the Department to implement the principles created by the Hatchery Scientific Review Group (HSRG). For example, the recommendations outline the criteria for population designations, defines metrics used for hatchery broodstock practices, and sets levels of natural-origin integration into hatchery broodstock.

The continued downward trend of natural-origin Chinook combined, and expected return of mass marked (adipose fin clipped) hatchery-origin Chinook in Willapa Bay, led WDFW to initiate a process focused on rebuilding and enhancing conservation of natural-origin Chinook stocks. WDFW worked with the Willapa Bay Salmon Advisory Group to develop a draft Willapa Bay Management Plan (2010 Willapa Plan) in January of 2010. The Plan provided a framework for a transition in hatchery and fishery management strategies for salmon fisheries. Prior to 2010, the primary objective had been the harvest of hatchery-origin Chinook salmon. In contrast, the new 2010 Plan described an enhanced focus on conservation to promote sustainable fisheries while reducing the likelihood Washington coastal Chinook may be listed under the Endangered Species Act. Key components of the Plan were:

- Establish the Naselle River as the Primary Chinook population requiring the highest level of protection for natural-origin fish;
- Limit the mortality rate on Naselle River natural-origin Chinook to 30%;
- Reduce production of hatchery Chinook in the Naselle River;
- Maintaining total production of hatchery Chinook by increased production in Nemah and Willapa rivers; and
- Institute mark selective fisheries bay-wide.

In a 2014 review of the performance of the 2010 Plan, WDFW found insufficient progress was being made towards achieving its natural-origin Chinook spawner escapement objectives, this reality, coupled with the 2014 forecast for natural-origin Chinook returns, indicated that additional conservation actions should be implemented in 2014. These actions were directed at enhancing conservation actions for the Primary (Naselle River) and Contributing (North River and Smith Creek) populations. Therefore, WDFW proposed additional, more conservative, fishery and

hatchery management actions in 2014. Specifically, to address the declining trend in natural-origin spawners for the Naselle River Chinook population, a mortality rate of no more than 20% on the Naselle River population was employed with the intent to exceed the average of 2006 – 2012 natural-origin spawner escapement (1,059 fish).

Because the recreational fishery generally has a low impact (*ie.* mortalities associated with mark selective fisheries), the commercial fishery absorbed the majority of the reduction in mortality rate. Historically, the commercial fishery comprised the majority of the mortalities on natural-origin Chinook. For example, pre-season planning in 2013 predicted the commercial fleet would kill 28.3% of the Naselle River natural-origin Chinook out of the combined predicted impact of 29.8%. The recreational fishery comprised only 1.5% of the total natural-origin Chinook impact. The entire recreational fishery could be closed and the reduction from a 30% mortality rate to 20% would not be achieved. With the reduction in the pre-season targeted mortality rate, preliminary estimates suggest the actual mortality rate on Naselle River natural-origin Chinook was 38% in 2014.

Development and Implementation of the Willapa Bay Salmon Management Policy (C-3622)

In the fall of 2014, the Department initiated the development of a policy to advance the conservation and restoration of wild salmon; the policy also considered the need to maintain or enhance the economic well-being and stability of the fishing industry in the state. In addition, the policy directs WDFW to provide the public with outdoor recreational experiences, fair distribution of fishing opportunities throughout the Willapa Bay Basin, and improvement of technical rigor in fishery management. The Willapa Bay Salmon Management Policy, C-3622, was approved by the Fish and Wildlife Commission, effective June 13, 2015. The adopted policy includes substantial changes in fishery management and hatchery production that are intended to restore natural-origin Chinook and chum salmon, while ensuring the continued health of coho salmon.

Key components of the new policy included:

1. Willapa River was established as the “primary” Chinook stock instead of the Naselle River. Willapa River was chosen for these reasons:
 - Chinook returning to Forks Creek Hatchery on the Willapa River have a more direct and shorter route to escape fisheries in the bay. This provides greater flexibility to conduct fisheries in the middle portion of the bay focusing harvest on hatchery fish returning to Nemah and Naselle hatcheries while minimizing impacts on the primary stock;
 - The collection of hatchery broodstock is more difficult in the Willapa River due to the lack of infrastructure on the mainstem. Due to the location of the hatchery and weir on Forks Creek (tributary of the Willapa River), the weir does not prevent fish from migrating upstream on the mainstem Willapa River. On the other hand, the

weir at Naselle River Hatchery is used to collect broodstock and remove excess hatchery fish before reaching the spawning grounds; and

- The potential for hatchery fish spawning in the wild is higher. Forks Creek Hatchery (~River Mile 30) is further upstream than the Naselle Hatchery (~River Mile 16) consequently fish have substantially more suitable spawning habitat before reaching the hatchery.
2. Under the 2010 draft Willapa Plan, there was only one “contributing” stock, North River. In the new policy, the Naselle River was designated a “contributing” stock as an increased conservation measure for natural-origin Chinook.
 3. Initiate a rebuilding program for Chinook salmon intended to result in meeting spawner goals in 16-21 years. The policy recognized three brood cycles were needed to rebuild natural-origin stocks without imposing extremely severe limitations on fisheries.
 4. Limit mortality on Willapa River and Naselle River natural origin Chinook to 14% with an additional 6% allowed for 2015-2019 with specific criteria on the use of selective commercial fishing gear with low release mortality rates. The policy promotes increased use of selective commercial fishing gear with low release mortality rates to help transition the commercial fisheries from 2015 through 2019. Increased use of this fishing gear is expected to increase the commercial catch of hatchery Chinook and reduce surpluses at the hatcheries.
 5. Reduce hatchery Chinook production at Forks Creek Hatchery.
 6. Enhance the recreational fishery for Chinook.
 7. Reduce conflict between commercial and recreational fisheries to simplify annual regulation setting process and promote orderly fisheries.
 8. Prioritize coho salmon for the commercial sector to offset reductions in Chinook harvest.
 9. Maintain or enhance the economic well-being and stability of the commercial and recreational fishing industry in the state.

Taken together 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 Commission recognized management decisions must be informed by fishery monitoring (biological and economic) and adaptive management will be necessary to achieve the stated purpose of this policy.

2019 Rule Development Process

The CR-101 notice of intended rule-making was filed on January 04, 2019 (WSR 19-03-028). Through this filing, the Department identified the various forums that would be used to gather information and interact with regional fishery managers and constituent groups to develop a draft rule. That filing also identified regional staff who could be contacted by interested constituents seeking information and input on the rule making process and proposed rules that would ultimately

be presented in the CR-102 filing for formal public review and comment prior to adoption. That process is described in more detail as follows:

Federal, state, and tribal fishery managers gather each year to plan the Northwest's recreational and commercial salmon fisheries. This pre-season planning process is known as the "North of Falcon" (NOF) process. This process includes a series of public meetings with federal, state, and tribal, and public entities that have an interest in these fisheries, both recreational and commercial. The NOF planning process coincides with the March and April meetings of the Pacific Fishery Management Council (PFMC) - the federal authority responsible for setting ocean salmon seasons within the exclusive economic zone (3-200 miles off the Pacific coast). In addition to the two PFMC meetings, Washington, Oregon, and Treaty Tribes sponsor additional meetings to discuss alternative fishing seasons that meet conservation and sharing objectives. In addition to public meetings, WDFW also solicits input from advisory groups who represent a diverse range of user group interests. For this rule making process, the Willapa Bay Advisory Group was consulted during the rule making process as various fishing season proposals were developed and considered during the NOF process.

The 2019 NOF process began with a public meeting for both Grays Harbor and Willapa Bay on February 26, 2019 at the Montesano City Hall in Montesano, WA. This meeting was designed to present regional forecast returns for local salmon stocks with historical data for each area and salmon species. WDFW then presented the statewide 2019 run forecasts for stocks originating from rivers of Puget Sound, coastal Washington, and the Columbia River on February 27, 2019 at the Lacey Community Center in Lacey, WA. This meeting was followed by regional breakout sessions where WDFW staff further discussed 2019 forecasts and resource utilization implications in detail. During these breakout sessions, WDFW solicited fishery suggestions from those in attendance.

A Willapa Bay Advisory Group meeting was then held March 4, 2019, at the Raymond Elks Lodge in Raymond, WA. The purpose of this meeting was to review the 2019 forecasts, the implications and utilization of those forecasts, and receive input in the form of fishery proposals from the Willapa Bay Advisory Group. There was also an update on the progress of the Willapa Bay Terminal Area Management Model (Willapa Bay TAMM).

WDFW held a regionally focused Willapa Bay public meeting on March 27, 2019 at the Raymond Elks Lodge in Raymond, WA. The purpose of this meeting was to provide the public with information on the 2019 NOF process, review input from the Willapa Bay Advisory meetings, review initial Willapa Bay TAMM runs, engage the public in dialog regarding fisheries, and collect input on fishing season structures for the commercial and recreational fisheries.

WDFW held another Willapa Bay Advisory Group meeting on April 9, 2019, at the Raymond Elks Lodge in Raymond, WA. The purpose of this meeting was to review the FWC interim guidance for 2019 management objectives, provide an update on the progress of NOF and PFMC meetings, review fishery proposals evaluated using the Willapa Bay Terminal Area Management Model (Willapa Bay TAMM), and receive input on fishery proposals received to-date or provide new proposals.

Based upon information and outreach generated through these public meeting forums, a draft rule was developed for consideration in the public rule-making process that follows the filing of a proposed rule. Accordingly, the CR-102, filed on May 16, 2019 and published in WSR 19-11-075, provided WDFW's initial rule-making proposals for the 2019 Willapa Bay commercial salmon fisheries.

As proposed in the CR-102 filed on May 16, 2019, WAC 220-354-250 would open the fall commercial salmon fishery for Chinook, coho, and chum salmon in Willapa Bay. The rules, as proposed, were partially selective in that they required the release of natural-origin (unmarked) Chinook from September 3, 2019 through November 29, 2019. It would be lawful to retain chum from September 3, 2019 through October 11, 2019. However, it would be unlawful to retain chum from November 4, 2019 through November 29, 2019. Natural-origin Chinook and chum are not target species for commercial fisheries but are incidentally encountered during the harvest of hatchery Chinook and coho. The forecast of natural-origin Chinook returning to Willapa Bay indicates there will be insufficient numbers of these fish to allow directed fisheries on natural-origin Chinook, which are identified by the presence of an intact adipose fin (unmarked fish).

Based on the Willapa Bay Salmon Management Policy (C-3622), there will be no early August commercial salmon fishery for Chinook in Willapa Bay that is directed at harvesting Columbia River and Willapa Bay Chinook salmon (referred to as the "Dip-in Fishery"). The purpose of this is to preserve Chinook mortalities for use during coho directed fisheries and reduce conflict between the recreational and commercial fisheries.

Fishing dates and locations were modeled to account for incidental encounters of non-target salmon in order to provide meaningful commercial fishery consistent with conservation objectives. In addition, the season time, place, and manner open for fishing were shaped to reduce the interaction between sport and commercial fisheries, which furthers the objective of maintaining orderly fisheries. Sharing between commercial and recreational harvest groups was considered to provide meaningful harvest opportunities for both groups within the context of historic sharing patterns in this area of the Washington Coast.

Following publication of the CR-102 and proposed rules, a formal rule making public hearing was held on June 25, 2019. The public comment period was open May 16, 2019 to June 25, 2019, as

required by the Administrative Procedures Act. WDFW received two written comments during this period. The public hearing and public comment period provided the public with additional opportunity to comment on the proposed rules published in WSR 19-11-075. Three individuals attended the public hearing but only two individuals provided testimony. WDFW also received seven written comments during this period via the Rules Coordinator and one written testimony was provided at the public hearing. In addition, WDFW considered substantive comments received during the NOF process.

WDFW carefully reviewed the information gathered during the rule development process following issuance of the CR 101, together with all input (verbal and written) from fishing industry representatives, recreational anglers, the Willapa Bay Salmon Advisory Group, and the general public. WDFW relied upon technical and scientific expertise within the agency for NOF and PFMC planning processes. WDFW fishery management experts evaluated pre-season forecast abundance of salmon stocks returning to Willapa Bay in combination with historic harvest data from fisheries occurring in the Willapa Bay watershed. Important characteristics of the Willapa Bay commercial salmon fishery were considered:

- Total number of licensed vessels potentially participating in each fishery;
- Number of vessels that have actually participated in each fishery in recent years;
- Outcomes in terms of target and non-target species catch in recent years;
- Potential for transfer of effort from other fisheries in other areas, e.g. Columbia River, Grays Harbor;
- Catch likely to result from the proposed rules and associated conservation impacts;
- Economic value of these commercial fisheries; and
- The relationship between commercial and recreational fisheries.

The Department also considered fishing preferences of the sport fishery in terms of time, area, tidal cycles, and potential for gear or fishing sector conflict.

Overview of WDFW's Consideration of Management Objectives

As noted above, the Washington Fish and Wildlife Commission adopted a new Willapa Bay Salmon Management Policy (C-3622) in June of 2015 (effective starting June 13, 2015). The policy delegates the Commission's rule making function to the Director. This reflects the Commission's practice of providing policy guidance to the Director and his staff as they work to develop fishing seasons and rules governing those seasons each year. In that regard, the Willapa Bay Salmon Management Policy reflects the Commission's principal expression of policy guidance for achieving conservation objectives, and harvest allocation objectives between the recreational and commercial sectors. The adoption of the policy followed an extensive public process with multiple public comment opportunities. While the policy details specific objectives, it also recognizes the uncertainty associated with fishery management and provides guidance on

the utilization of adaptive management to provide appropriate flexibility in the implementation of the policy guidance.

On April 6, 2019, during one of its regularly scheduled open public meetings, the Fish and Wildlife Commission (FWC) provided the Department with additional guidance on the implementation of policy C-3622 for the 2019 season. The general guidance provided by FWC directed 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 added guidance applies only to 2019. All other items in the Willapa Bay Salmon Management Policy, C-3622, will remain in effect for 2019, together with the various other policy guidance positions adopted by the Commission that inform and are considered by the Director when developing and adopting annual fishing seasons/regulations.

Regulations for the 2019 Willapa Bay commercial fisheries were evaluated with respect to objectives in the policy and the additional guidance provided by the FWC for 2019 only. These objectives were shared with industry representatives, members of the Willapa Bay Salmon Advisory Group, and the public during the North of Falcon process. General or commercial specific pre-season planning objectives were:

1. Fisheries will be managed with the intent of achieving escapement goals in the North, Willapa and Naselle systems in 16-21 years for fall Chinook and for achieving aggregate escapement goals for coho and chum salmon.

2. Commercial fisheries will not occur in commercial catch areas 2T and 2U prior to September 16. Commercial fisheries will not occur in commercial catch areas 2M, 2N, 2P and 2R until after Labor Day.
3. 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.
4. The fishery management objectives for fall Chinook salmon, in priority order, are to:
 - Achieve spawner goals in North, Willapa and Naselle systems in 16-21 years
 - Provide for an enhanced recreational fishing season
 - Provide meaningful opportunities for commercial fisheries within the remaining available fishery impacts
5. Fishery Management After 2018: Fisheries in the Willapa Bay basin will be managed with the goal of:
 - Limiting the fishery impact rate of Willapa and Naselle river natural-origin fall Chinook salmon to no more than 14%;
 - No commercial fisheries shall occur with 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.
6. Manage fisheries with the goal of achieving aggregate spawner goal for Willapa Bay natural-origin coho salmon. When the pre-season forecast of natural-origin adult coho salmon is less than the aggregate goal, or less than 10% higher than the aggregate goal, fisheries in Willapa Bay Basin will be scheduled to result in an impact of no more than 10% of the adult return.
7. 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 for two consecutive years, the maximum fishery impact will 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 preceding five years, the Department will implement the following measures:
 - 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; and
 - 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.

Rationale of Management Objectives

The rules were proposed, as noticed in the CR-102, based upon a conclusion they would produce fisheries consistent with the conservation and allocation objectives identified above. WDFW staff concludes that final adoption of the 2019 Willapa Bay commercial fishing regulations will be consistent with these management objectives based on the following rationale:

1. Fisheries will be managed with the intent of achieving escapement goals in the North, Willapa and Naselle systems in 16-21 years for fall Chinook and for achieving aggregate escapement goals for coho and chum salmon.

Willapa, North and Naselle River natural-origin fall Chinook are forecast to return at a level below the escapement goal (2019 pre-season forecast natural-origin Chinook = 4,309, spawner goal = 4,350). The scheduled fisheries in the proposed rule are expected to result in 3,647 Willapa Bay natural-origin Chinook spawners. Natural-origin Chinook are not expected to meet the goal regardless of whether fisheries occur or not. In these circumstances, fishery openings directed at healthy stocks are evaluated to limit the mortality impact on the stock of fish that will not attain its escapement goal. The proposed rule has a low impact on Willapa, North and Naselle rivers natural-origin fall Chinook and will meet the criteria in objective #5 below.

Combined fisheries modeled in Willapa Bay are expected to result in achievement of escapement goals for both Willapa Bay coho and chum salmon (Table 1). 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. The predicted escapement 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 proposed fishery is 47,012, exceeding the goal of 35,400.

2. Commercial fisheries will not occur in commercial catch areas 2T and 2U prior to September 16. Commercial fisheries will not occur in commercial catch areas 2M, 2N, 2P and 2R until after September 7.

Fishery Management Guiding Principle #6 in the Willapa Bay Salmon Management Policy, C-3622, was suspended based on additional guidance provided by FWC for 2019. Therefore, the commercial fisheries in the proposed rule are scheduled to begin on September 3, 2019 in commercial catch area 2N and September 4, 2019 in commercial catch area 2M. Commercial fisheries in the proposed rule are scheduled to begin on September 16, 2019 in commercial catch areas 2T and 2U. Commercial catch area 2R will be closed for the majority of the season but will be open to fishing November 4, 2019 through November 29, 2019.

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

Commercial fisheries in the proposed rule will be monitored using a combination of on-board sampling, daily fish ticket evaluation, and sampling of the landed catch. These data will be used to evaluate actual catch versus what was projected in the Willapa Bay Terminal Area Management Model (TAMM). In-season management actions – typically implemented via emergency regulations given the pace at which information is developed and fisheries proceed - will be initiated if commercial landings exceed expected catch and/or impacts compared to projected preseason estimates in order to avoid the risk of not meeting conservation objectives.

4. The fishery management objectives for fall Chinook salmon, in priority order, are to:
 - a. Achieve spawner goals in North, Willapa and Naselle systems in 16-21 years;

Results from the Willapa Bay All-H Analyzer (Willapa Bay AHA) modeled with a four-year transition period along with a maximum mortality rate of 20% for Willapa River and Naselle River natural-origin Chinook would not preclude achieving the escapement goals in 16-21 years in these systems. The proposed rules do not exceed a 20% mortality rate for Willapa and Naselle rivers natural-origin Chinook and are expected to promote achievement of the objectives in 16-21 years.

- b. Provide for an enhanced recreational fishing season; and

Recreational fishing opportunity is provided in a companion regulation (WSR 19-11-130). Beginning in 2015, the recreational fishery was provided meaningful opportunity with increased bag limits, opened historically closed areas, and extended freshwater seasons. The proposed rules provides for enhanced fishing seasons for the recreational fishery.

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

Commercial fisheries are expected to catch 2,976 hatchery Chinook in 2019 while predicted exploitation rates for commercial fisheries from the Willapa Bay TAMM are 9.1% for Willapa and North River and 16.0% for Naselle River natural-origin fall Chinook after accounting for recreational fishery harvest and impacts. Thus commercial fisheries utilize 59.21% and 83.7 % of the available natural-origin Chinook mortalities for Willapa and Naselle rivers, respectively.

5. Fishery Management After 2018: Fisheries in the Willapa Bay basin will be managed with the goal of:
 - a. Limiting the fishery impact rate of Willapa and Naselle river natural-origin fall Chinook salmon to no more than 14%;
 - b. No commercial fisheries shall occur with areas 2T and 2U prior to September 16; and
 - c. No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P, and 2R until after September 7.

On April 6, 2019, the Fish and Wildlife commission (FWC) provided the Department with additional guidance on the implementation of policy C-3622 for the 2019 season. The general guidance provided by FWC directed the Department to:

- Actively manage to not exceed 20% total impacts for natural-origin Chinook on Willapa River; and
- Actively manage to not exceed 20% total impacts for natural-origin Chinook on Naselle River.

The predicted impact on Willapa River fall Chinook terminal fisheries is 15.4%. The predicted impact on Naselle River fall Chinook terminal fisheries is 19.1% (Table 1).

Table 1. Escapement goal and exploitation rate objectives for salmon fisheries in Willapa Bay in 2019.

Stock	Objective Type	Objective Criteria	Modeled Result
Willapa Bay Natural-origin coho	Escapement Goal	13,600	40,819
Willapa Bay Naturally Spawning chum	Escapement Goal	35,400	47,012
Willapa River Natural-origin Chinook	Exploitation Rate	≤ 20%	15.4%
North River Natural-origin Chinook	Exploitation Rate	≤ 20%	15.4%
Naselle River Natural-origin Chinook	Exploitation Rate	≤ 20%	19.1%

6. Manage fisheries with the goal of achieving aggregate spawner goal for Willapa Bay natural-origin coho salmon.

The 2019 pre-season forecast for Willapa Bay natural-origin coho is 63,448 (ocean age 3) compared to a spawner goal of 13,600. The scheduled fisheries in the proposed rule are expected to result in 40,819 Willapa Bay natural-origin coho spawners.

7. 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 two 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; and
 - b. When the chum preseason forecast is 85% or less of the escapement goal, the predicted fishery impact for chum in Willapa basin will be scheduled to result in an impact of no more than 5% of the adult return.

While Willapa Bay chum stocks have made the escapement objective three out of the last five years, this stock has failed to reach the objective for two consecutive years (Table 2). As described in the policy guidance above, the management objective for Willapa Bay chum is not to exceed an impact rate of 10% in Willapa Bay basin. The predicted impact in 2019 on Willapa Bay naturally spawning chum is 9.9%.

Table 2. Chum estimated escapements for 2014-2018. Escapement goal = 35,400. Where the estimated escapement value exceeds the escapement goal, values are bolded.

Year	Estimated Escapement
2014	25,612
2015	44,147
2016	78,725
2017	20,191
2018	38,414

WDFW staff have considered the available relevant data and public input surrounding the 2019 Willapa Bay commercial salmon season schedule. The proposed regulations meet the primary conservation constraints in the Willapa Bay Salmon Management Policy as well as the additional guidance provided by the FWC for 2019 (20% mortality rate on natural-origin Chinook for Willapa and Naselle rivers, 10% mortality rate on chum, and the natural-origin coho spawner goal is exceeded).

While acknowledging commercial catch of Chinook is more efficient in August compared to September, the proposed rules maximize the harvest of coho and minimize the surplus of hatchery

coho by allocating natural-origin Chinook mortalities in September rather than in August. This maximization of coho catch is consistent with the policy guidance of prioritizing coho for the commercial sector and meets the allowable conservation constraint for natural-origin Chinook. The proposed rules also reduce conflict between the recreational and commercial sectors. Finally, the proposed rules are expected to result in over \$558,000 of ex-vessel value for the commercial sector, which is within the range of ex-vessel values seen from 2000-2016 (approximately \$156,000 to \$1,250,000).

The agency carefully reviewed all input from industry representatives during the North of Falcon public meetings and the state’s rule making process. The agency’s 2019 Willapa Bay commercial salmon fishing regulations comply with its statutory mandate and are consistent with WDFW’s management objectives for these fisheries.

II. Proposed Commercial Gillnet Rules

The following table outlines the fishing times and locations in the final rule as noticed in the CR-103 (Table 3). No changes were made between the rule proposed in the CR-102 and the rule to be adopted in the CR-103.

Table 3. Willapa Bay Commercial Gillnet Season.

Area	Time	Date(s)	Maximum Mesh Size
2N	6:00 a.m. through 6:00 p.m.	9/3	4.25"
2M	6:00 a.m. through 6:00 p.m.	9/4	4.25"
2N	6:00 a.m. through 6:00 p.m.	9/6	4.25"
2N	6:00 a.m. through 6:00 p.m.	9/9, 9/11, 9/13	4.25"
2N, 2M, 2T, 2U	6:00 a.m. through 6:00 p.m.	9/16, 9/17, 9/18, 9/19, 9/20	6.5"
2N, 2M, 2T	6:00 a.m. through 6:00 p.m.	9/22, 9/23, 9/24, 9/25, 9/26, 9/27	6.5"
2U	6:00 a.m. through 6:00 p.m.	9/23, 9/24, 9/25, 9/26, 9/27	6.5"
2N, 2M, 2T, 2U	7:00 a.m. through 7:00 p.m.	9/30, 10/1, 10/2, 10/3, 10/4	6.5"
2N, 2M, 2T	7:00 a.m. through 7:00 p.m.	10/7, 10/8, 10/9, 10/10	6.5"
2U	7:00 a.m. through 7:00 p.m.	10/7, 10/8, 10/9, 10/10, 10/11	6.5"
2M, 2N, 2T, 2U	12:01 a.m. through 11:59 p.m.	11/4 through 11/6	6.5"
2M, 2N, 2R, 2T, 2U	12:01 a.m. through 11:59 p.m.	11/11 through 11/15	6.5"
2M, 2N, 2R, 2T, 2U	12:01 a.m. through 11:59 p.m.	11/18 through 11/22	6.5"
2M, 2N, 2R, 2T, 2U	12:01 a.m. through 11:59 p.m.	11/25 through 11/29	6.5"

Note: Those waters of 2T north of a line from Toke Point channel marker 3 easterly through Willapa Harbor channel marker 13 (green), then northeasterly to the power transmission pole located at 46°43.1907' N; 123°50.83134' W, are closed September 1, 2019 through September 30, 2019.

III. Summary of Public Comments and WDFW's Response

A formal rule making public hearing was held on June 25, 2019. This hearing provided the public with an opportunity to comment on the proposed rules published in WSR 19-11-075. Three individuals attended the public hearing but only two individuals provided testimony. The public comment period for this proposed rule was open from May 16, 2019 through June 25, 2019. Comments were also received via the Rules Coordinator (seven comments) and only one document was provided during the public hearing. No public comments were provided via the WDFW online portal. All testimony and comments received during the formal rule-making period following issuance of the proposed rule via the CR-102 has been categorized into the following points with WDFW's response(s) below.

Comment #1: Commenter objects to commercial fishers being allowed to retain three fish each per day while recreational fishers have reduced bag limits and increased fees.

Beginning in 2017, the Department began a separate rule making process to clarify the limits around retention of salmon for personal use during an open commercial salmon fishery. The CR-101 was filed on August 16, 2017 (WSR 17-17-083) notifying the public the Department planned to make a rule change. The Department later filed a proposed notice to amend WAC 220-352-030 to allow crewmembers to retain salmon during a commercial salmon fishery (CR-102 WSR 18-01-095 filed December 18, 2017). The public comment period was from December 18, 2017 through February 9-10, 2018, when a public hearing was held to take public comments regarding the notice and proposed rule change filed in WSR 18-01-095. During that time, any written comments could be provided to the Rule Coordinator. After considering comments provided via email or in-person at the public hearing, the CR-103P was filed on May 4, 2018 (WSR 18-11-022).

This rule change does not pertain to the proposed rules filed for 2019 in WSR 19-11-075 since it was conducted during a separate rule making process prior to the 2019 North of Falcon process.

Comment #2: Commenters oppose deviating from the Willapa Bay Salmon Management Policy's (C-3622) scheduled 14% harvest rate on natural-origin Chinook to 20% for 2019. Due to this change, commenters disagree with the proposed commercial fishery beginning prior to the date determined in the policy.

The decision to deviate from the harvest rate outlined in adopted policy C-3622 was a function of public and agency concerns pertaining to the economic impact of reducing the impact rate due to planned reduction in harvest by 6% (from 20% to 14%) in phase II coupled with concerns regarding the influence that shifting harvest rates would have on the pending policy C-3622 performance review. Furthermore, a reduction in harvest rates on northern fisheries outlined in the new Pacific Salmon Treaty will likely result in escaping additional fish to terminal areas whereby WDFW could maintain harvest rates while also achieving near conservation neutrality.

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.

The Willapa Bay Salmon Advisory Group was formed consisting of stakeholders representing recreational fishers, commercial fishers, and conservationists. Public engagement in the development of policy C-3622 included meetings during the fall of 2014 through spring 2015 with this advisory group, the public, and the Pacific County Commissioners.

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 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 2018, the FWC provided staff with additional guidance for management of salmon fisheries prosecuted in Willapa Bay applicable to the 2018 season only.

The Commission requested a comprehensive review of the implementation and performance of the policy in Phase-one (Adaptive Management section of policy C-3622). As part of the review process, the FWC requested that Department staff present fishery management options to be considered as guidance for the 2019 Willapa Bay fishery season at the April 6, 2019 FWC meeting. The fishery management options were as follows:

1. 2018 fishery schedule with 2019 forecasted abundances
2. Implementation of Phase Two of Policy C-3622
3. Continuation of policy guidance from 2018
4. Modification of harvest control rules as described in Policy C-3622

As a result of the FWC presentation of fishery management options to be considered for 2019 as well as public comments received, the Director and Department staff received interim guidance on management objectives for the 2019 salmon season from the FWC on April 6, 2019. The general guidance provided by FWC directed 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;
 - No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P, and 2R until after September 7; and
- 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.

Predicted reductions in northern ocean interceptions derived from the new Pacific Salmon Treaty allowed the Willapa Bay fishery to harvest at a 20% rate while simultaneously achieving the timeline and objectives of policy C-3622. The results of WDFW's All H-Analyzer (AHA) model focused on predicting the outcomes of escapement given patterns of harvest, hydrology, hatchery production, and changes in habitat. The removal of area and time restrictions also provided the staff the flexibility to manage the fishery in-season to achieve the 20% impact rate cap.

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

Comment #3: Commenter is concerned the agency is not dedicated to in-season management.

The Department 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 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 directs the Department to 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 #4: Commenters oppose the proposed rule as written because they feel it is insufficient to prevent commercial gillnetters from deploying full sized drift nets as shallow water set nets anchored by the lead line.

Two relevant Washington Administrative Codes (WAC) provide definitions for commercial gear for Willapa Bay. WAC 220-350-060 states, “Drift gillnet or drift net gear shall be defined as a gillnet of single web construction, not anchored, tied, staked, placed, or weighted in such a manner that it cannot drift”. Additionally, WAC 220-350-160 states, “Set net shall be defined as a gillnet which is anchored, tied, staked, laid in part on shore or whose lead line is so heavily weighted that it cannot drift”. These two WAC’s clearly state the definitions of drift net gear and set net gear and they are easy to understand, effective and enforceable; thus, a change in language is not warranted.

The WAC (220-354-250) filed in the proposed rules states, “Drift net gear only. It is unlawful to use set net gear”. The inclusion of additional language or definitions in WAC 220-354-250 would be redundant, unnecessary, and have the potential to result in unintended consequences. The proposed rule defines the season and configuration of legal gear for Willapa Bay commercial salmon fisheries.

The Department agrees that it is important the rules and regulations adopted and translated into WAC are easy to understand and are enforceable. After consultation with regional enforcement officers, the Department has determined the definition presented above is clear, easy to understand, and enforceable. The enforcement of current rules provides deterrence for commercial fishers deploying a net in a manner that prevents it from drifting. The Department’s enforcement officers and staff are committed to having orderly fisheries.

Comment #5: 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 commercial 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 interact with fisheries management when populations are exploited for harvest [1]. One heritable alternative life history strategy among Chinook salmon is described 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 sex benefit from such practices. The risk associated with the implementation of a targeted jack fishery is considered high in Willapa Bay. This is because both the Chinook fishery frequently escapes fewer fish than anticipated and because few studies have investigated the 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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IV. Conclusion

The department values public input and designs fisheries predicated on, in part, written or oral comments of constituents. The agency carefully reviewed input from all sectors during the North of Falcon public and advisory group meetings during the Department’s rule making process. The process included analysis of significant comments associated with commercial

fisheries planning such as shifts in hatchery Chinook production, a proposed change in drift net rule language, forecasting methodology, and the maintenance of harvest rates proposed in the adopted policy C3622. In addition, because the commercial and recreational fisheries interact, the recreational fishery planning was also considered including comments focusing on the effects of harvest outside of Willapa Bay, forecasting methodology, spatial and temporal distribution of fishing effort (*i.e.* control zone harvest rules), and the interplay between bag limit and season length.

A critical piece to the fisheries planning that influenced both commercial and recreational fisheries was the FWC interim guidance for 2019, which directed WDFW to manage the Willapa Bay fisheries to a 20% harvest rate, deviating from the adopted policy C-3622 rate of 14%. This shift in management strategy significantly increased the total number of natural-origin Chinook impacts available for the prosecution of both commercial and recreational fisheries.

The proposed rules are a result of integrating public, advisory, and North of Falcon comments, meeting the primary conservation objectives identified in policy C-3622, while also maximizing ex-vessel value. The agency's 2019 Willapa Bay commercial salmon fishing regulations comply with its statutory mandate and are consistent with WDFW's management objectives for these fisheries.