

2016 Willapa Bay Commercial Salmon Regulations

Concise Explanatory Statement



July 11, 2016

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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) 220-40-027. The CES contains four principle sections. Section I describes the rule being adopted, the process used in adopting the rule, and the resource management objectives advanced by adoption of the rule. Section II describes the adopted rule. Section III discusses comments received during rulemaking and the agency's analysis and resolution of those comments. Section IV is the conclusion.

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

Overview of the Rules Adopted

The rules being adopted provide a schedule to open the 2016 fall commercial gillnet salmon fisheries (Chinook and Coho) in Willapa Bay. Without the proposed rules, fall commercial fishing for salmon would be the same as in 2015 (See WAC 220-40-027).

Brief Summary of the Adopted Rules:

The rules being adopted amend existing permanent rules that opened the commercial salmon fisheries in Willapa Bay, as defined in WAC 220-22-020 and WAC 220-40-027, for the 2016 season ending November 25, 2016.

WAC 220-40-027 specifies the permissible commercial gear and methods of harvest that must be utilized, the locations, and the duration of the fall commercial salmon season, for fisheries occurring between August 16 and December 31 annually. Approximately 49 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 retention of chum salmon that are caught incidental to the targeted harvest of Chinook and Coho salmon.

Fishery mandates and Commission Policy

The rules are being adopted 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 are broad state-wide objectives and 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 ultimately applied on a state-wide basis, the agency considers regional interests, individual fishing sectors, and the interests of varying gear-type groups when undertaking its efforts to promote state-wide management interests.

The rules being adopted are 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; 2015-17 North of Falcon Policy – C-3608; Willapa Bay Salmon Management – C-3622).

The adopted rules also incorporate the 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 2015-2017 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 the State of Oregon, tribal co-managers, federal fishery managers and stakeholder groups to plan for, and execute, fisheries of interest to state, tribal and federal entities. Through that process, the management entities identify the predicted abundance of fish, desired escapement objectives, the harvestable surplus, shares available to state and tribal harvesters, and sets the stage for subsequent development of Washington State’s commercial and recreational fishing seasons, including time, manner and method regulations that will be used to implement those seasons.

Overview of WDFW’s Consideration of Management Objectives

The management of salmon resources in Willapa Bay and its tributaries has changed dramatically over the last decade. Historical harvest rates on Willapa Bay Chinook salmon exceeded 90%. Hatchery-origin fish likely 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 on attaining 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 that hatchery fish and natural-origin fish needed to be managed with greater care to ensure a healthy wild population of salmon. In 2003, a conservation objective to protect natural-origin Chinook was put into practice. However, at that time, hatchery fish were not being marked making it difficult to distinguish between natural- and hatchery-origin fish. Accordingly, the Department was limited to the identification of a harvest rate for all Chinook in the aggregate. On that basis, the conservation objective limited the overall harvest rate to no more than 30% by all fishery participants

In 2009, the WDFW Commission adopted the Hatchery and Fishery Reform policy (C-3619). That policy directs the Department to implement the principles created by the HSRG. The Hatchery and Fishery Reform policy brought about further refinement of salmon management in

Willapa Bay. Working with the Willapa Bay Salmon Advisory Group, WDFW developed a draft Willapa Bay Management Plan (2010 Willapa Plan) in January of 2010.

The draft 2010 Willapa Plan provided a framework for a transition in hatchery and fishery management strategies for salmon fisheries in Willapa Bay. Where the primary objective had been the harvest of hatchery-origin Chinook salmon, the Plan described an enhanced focus on conservation consistent with the guidance of the Hatchery and Fishery Reform policy. Achieving the conservation goals of the plan was anticipated to promote sustainable fisheries and reduce the likelihood of the listing of Washington coastal Chinook under the Endangered Species Act. Key components of the plan included: Establishing the Naselle River as the Primary Chinook population requiring the highest level of protection for natural origin fish; limiting the mortality rate on Naselle River natural-origin Chinook to 30%; and reducing production of hatchery Chinook in the Naselle River yet maintaining total production of hatchery Chinook by increased production in Nemah and Willapa rivers

Prior to the 2014 season, WDFW reviewed the performance of the fishery under the draft Willapa Plan to assess whether progress was being made towards achieving its objectives. The Department's review of the performance of the Willapa Plan over the preceding four years (2010-2013), and the 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. The primary action to address lagging natural-origin Chinook escapement was a reduction in the allowable mortality rate. 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 2012 spawner level (> 1,050 fish). Historically the commercial fishery has comprised the vast 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%. That is, the recreational fishery comprised only a 1.5% impact. This means that the entire recreational fishery could be closed and the reduction from a 30% mortality rate to 20% would not be achieved. Because the recreational fishery has such a low impact, the commercial fishery had to absorb the majority of the reduction in mortality rate. Despite the good intentions and the reduction in the pre-season targeted mortality rate, preliminary estimates suggest the actual mortality rate on Naselle River natural-origin 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. Where consistent with that objective, the policy also considered the need to maintain or enhance the economic well-being and stability of the fishing industry in the state, provide the public with outdoor recreational experiences and a fair distribution of fishing opportunities throughout the Willapa Bay Basin, and improve the technical rigor of fishery management. This policy (Willapa Bay Salmon Management Policy, C-3622) was approved and made 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 include:

1. Establishing Willapa River as the “primary” Chinook stock instead of the Naselle River. Willapa River was chosen for two reasons. First, 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 to hatchery fish returning to Nemah Hatchery while minimizing impacts on the primary stock. Second, the collection of hatchery broodstock is more difficult in the Willapa River than in the Naselle River, and therefore 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) meaning that the fish have substantially more habitat to spawn in before reaching the hatchery. Also, the Naselle River has a weir at the hatchery that is used to remove many of the hatchery fish, whereas there is not a weir on the Willapa River to remove Forks Creek Hatchery fish. Instead the weir is on Forks Creek itself and does not prevent fish from migrating past the hatchery in the mainstem Willapa River. Under the 2010 draft Willapa Plan, there was only one “contributing” stock, North River. In the new policy, the Naselle River was also designated a “contributing” stock as an increased conservation measure for natural-origin Chinook.
2. Initiating a rebuilding program for Chinook salmon intended to result in meeting spawner goals in 16-21 years. The policy recognized that 3 brood cycles would be needed to rebuild natural-origin stocks without imposing extremely severe limitations on fisheries.
3. Limiting 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.
4. Reducing hatchery Chinook production at Forks Creek hatchery because of the difficulty of preventing hatchery Chinook from spawning in the wild as discussed in 1 above.
5. Enhancing the recreational fishery for Chinook;
6. Reducing conflict between commercial and recreational fisheries to simplify annual regulation setting process and promote orderly fisheries.
7. Prioritizing Coho salmon for the commercial sector to help offset reductions in Chinook harvest.
8. Maintaining or enhancing the economic well-being and stability of the commercial and recreational fishing industry in the state.

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 that management decisions must be informed by fishery monitoring (biological and economic), and that innovation and adaptive management will be necessary to achieve the stated purpose of this policy.

Rule Development Process

The CR-101 notice of intended rule-making was filed on January 6, 2016 (WSR 16-02-117) while development of the Willapa Bay Salmon Management Policy was underway. 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 for formal public review and comment.

State, federal and tribal fishery managers gather each year to plan the Northwest's recreational and commercial salmon fisheries. This pre-season planning process is generally known as the "North of Falcon" (NOF) process, and includes a series of public meetings with federal, state, and tribal fishery managers, together with citizens that have an interest in these fisheries, both recreational and commercial. The NOF planning process coincides with the March and April meetings of the PMFC, the federal authority responsible for setting ocean salmon seasons 3 to 200 miles off the Pacific coast. In addition to the two PMFC meetings, the states of Washington and 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 whose representatives represent a diverse range of user group interests. For this rule making process, the Willapa Bay Advisory Group was consulted.

The Willapa Bay and Grays Harbor NOF process for 2016 began with a public meeting on February 24, 2015 at Montesano City Hall in Montesano, WA. During this meeting WDFW provided the public with information on the 2016 season planning process, discussed 2016 forecasts and resource utilization implications, engaged the public in dialog regarding fisheries, collected input on fishing season structures for the commercial and recreational fisheries, possible rule changes, and provided the public with information on the status of the 2016 planning process.

The statewide 2016 NOF process began with a public meeting on March 1, 2016 at the Natural Resources Building in Olympia, WA. WDFW presented the 2016 run forecasts for Puget Sound, Columbia River, and the Washington coastal system of rivers, bays and offshore waters. Run forecasts, together with historical data, were presented for each area and salmon species. Resource utilization implications of the 2016 forecasts were discussed broadly in a statewide context. This was followed by regional break-out sessions where WDFW staff further discussed 2016 forecasts and resource utilization implications in greater detail and solicited fishery suggestions for those in attendance.

A Willapa Bay Advisory Group meeting was held March 8, 2016, at the Raymond High School Library in Raymond, WA. The purpose of this meeting was to review the 2016 forecasts, the implications and utilization of those forecasts, and to receive input in the form of fishery proposals from the Willapa Bay Advisory Board. There was also an update on the progress of the Willapa Bay Terminal Area Management Model (Willapa Bay TAMM).

WDFW held a Willapa Bay regionally focused public meeting on March 22, 2016 at the Raymond Elks Lodge in Raymond, WA. The purpose of this meeting was to provide the public with information on the 2016 NOF process, review input from the Willapa Bay Advisory

meetings, review initial Willapa Bay TAMM runs, provided the public with information on resource utilization implications, engaged the public in dialog regarding fisheries, and collect input on fishing season structures for the commercial and recreational fisheries.

Based upon all of the information and outreach generated through these forums, a draft rule was developed for consideration in the public rule-making process that follows the filing of a proposed rule. Accordingly, the CR-102, filed on May 18, 2016 and published in WSR 16-11-100, provided WDFW's initial rule-making proposals for 2016 Willapa Bay commercial salmon fisheries.

According to the Willapa Bay Salmon Management Policy (C-3622) there would 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" as fishers harvest some Columbia River bound salmon that dip into Willapa Bay during their migration) in order to preserve Chinook mortalities for use during Coho directed fisheries and to reduce conflict between the recreational and commercial fisheries.

As proposed in CR-102 filed on May 18, 2016, WAC 220-40-027 would open the fall commercial salmon fishery for Chinook and Coho salmon in Willapa Bay. The rules, as proposed, were partially selective in that they required the release of natural-origin (unmarked) Chinook from September 6, 2016 through October 14, 2016 and chum from September 6, 2016 through October 1, 2016. Natural-origin Chinook and chum are not target species for commercial fisheries but are taken incidental to 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. Natural-origin Chinook are determined by the presence of an intact adipose fin (unmarked fish). Natural-origin Chinook can be conserved by either requiring the release of unmarked Chinook (taking into account release mortality) or by allowing retention of natural-origin Chinook that is incidentally harvested together with additional limits on the harvest of targeted hatchery fish so that harvest impact limits for natural-origin Chinook are met.

Fishing dates and locations were modeled to propose a meaningful commercial fishery that is consistent with conservation objectives considering that there will be non-directed harvest mortality arising from the incidental catch of non-target salmon. In addition, the season structure and areas open for fishing were shaped to reduce the interaction between sport and commercial fisheries. This furthers the objective of maintaining orderly fisheries. Sharing between commercial and recreational harvest groups was also considered to provide meaningful harvest opportunity 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 21, 2016. This hearing, in conjunction with the noticed comment period, represented the formal comment period of the rule-making process as required by the Administrative Procedures Act. They provided the public with additional opportunity to comment on the proposed rules published in WSR 16-11-100. The hearing was attended by approximately 8 individuals with 5 providing testimony. The public comment period was open

May 19, 2016 through July 21, 2016. WDFW received both verbal and written comment during this period. In addition to the formal rule making comments, comments received during the North of Falcon process that were substantive to the adopted rules were also considered.

WDFW carefully reviewed the information gathered during the rule development process together with all input (verbal and written) from fishing industry representatives, recreational anglers, the Willapa Bay Salmon Advisory Group, and the general public. This includes all information obtained during both the 2016 North of Falcon salmon season process and the state's formal rule making process. WDFW also considered and relied on technical and scientific expertise within the agency and as part of the PFMC planning process. This included data and information available to the state's fishery management experts, including pre-season forecast abundance of salmon stocks returning to Willapa Bay and historic harvest data from fisheries occurring in Willapa Bay and its tributaries. Important characteristics of the Willapa Bay commercial salmon fishery were considered, including:

- 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). Adoption of the policy followed an extensive public process with multiple public comment opportunities. The policy provides management guidance to WDFW in terms of sharing between the recreational and commercial sectors and achievement of conservation objectives. While the policy details specific objectives, it also recognizes the uncertainty inherent in fishery management and provides guidance on the utilization of adaptive management to provide appropriate flexibility in the implementation of the policy guidance.

Regulations for the 2016 Willapa Bay commercial fisheries were evaluated with respect to objectives in the policy. These objectives were shared with industry representatives, members of the Advisory Group, and the general 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; and
 - Provide meaningful opportunities for commercial fisheries within the remaining available fishery impacts.
5. For years 2015-2018, the maximum impact rate on Willapa and Naselle River natural-origin fall Chinook in Willapa Bay fisheries is 20%.
6. To promote the catch of hatchery-origin Chinook salmon and increase the number of natural-origin spawners, a portion of the 20% impact rate cap shall be set-aside for mark-selective commercial fishing gear types with an anticipated release mortality rate of less than 35%.
7. 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.
8. 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 2 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 5 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.

The rule, as originally noticed in the CR-102, was proposed based upon a conclusion that it would produce fisheries consistent with the overriding conservation objectives identified above. WDFW concludes that the final adopted 2016 Willapa Bay commercial fishing regulations are consistent with these management objectives based on the following rationale:

1. Fisheries will be managed with the intent of achieving escapement goals 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.

Fisheries modeled in Willapa Bay are expected to result in achievement of escapement goals for Willapa Bay Coho and Chum salmon (Table 1). Willapa, North and Naselle River natural-origin fall Chinook are forecast to return at a level that is below the escapement goal. The 2016 pre-season forecast for Willapa Bay natural-origin Chinook is 3,261 compared to a spawner goal of 4,350. The scheduled fisheries in the adopted rule are expected to result in 2,610 Willapa Bay natural-origin Chinook spawners. That is, the 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 adopted rule has a low impact on Willapa, North and Naselle rivers natural-origin fall Chinook and will meet the criteria in objective 5 below.

Table 1. Escapement goal and exploitation rate objectives for salmon fisheries in Willapa Bay in 2016.

Stock	Objective Type	Objective Criteria	Modeled Result
Willapa Bay Natural-origin Coho	Escapement Goal	13,600	26,012
Willapa Bay Naturally Spawning Chum	Escapement Goal	35,400	42,855
Willapa River Natural-origin Chinook	Exploitation Rate	≤ 20%	19.5%
North River Natural-origin Chinook	Exploitation Rate	≤ 20%	19.5%
Naselle River Natural-origin Chinook	Exploitation Rate	≤ 20%	19.4%

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.

Commercial fisheries in the adopted rule are scheduled to begin on September 16, 2016 in commercial catch areas 2T and 2U. Commercial fisheries in the adopted rule are scheduled to begin on September 6, 2016 in commercial catch areas 2M, 2N and 2R.

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 adopted 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). If commercial landings exceed expected catch and puts the attainment of conservation objectives at risk, in season management actions will be initiated.

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;

Results from the Willapa Bay All-H Analyzer (Willapa Bay AHA) model indicated that a transition period of four years with a higher 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 adopted rules do not exceed a 20% mortality rate for Willapa and Naselle rivers natural-origin Chinook and are expected to promote achievement of the goals in 16-21 years.

- Provide for an enhanced recreational fishing season;

Recreational fishing opportunity is provided in a set of companion regulations (WSR 16-11-103). The adopted rules provide for enhanced fishing seasons in both the marine and freshwater areas. This is accomplished by increased bag limits in marine and freshwater areas as well as opening of areas that have historically been closed to recreational fishing in freshwater areas. Recreational fishing seasons have also been extended in freshwater areas.

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

Commercial fisheries are expected to catch 7,019 hatchery Chinook in 2016. Predicted exploitation rates for commercial fisheries from the Willapa Bay TAMM are 11.8% for Willapa and North River and 17.3% for Naselle River natural-origin fall Chinook after accounting for recreational fishery seasons as discussed above. Thus commercial fisheries utilize 60.6 and 89.5% of the available Chinook mortalities for Willapa and Naselle Chinook, respectively. As noted above, the entire recreational fishery could be closed and the reduction from a 30% mortality rate to 20% would not be achieved. Because the recreational fishery has such a low impact, the commercial fishery had to absorb the reduction in mortality rate.

5. For years 2015-2018, the impact rate on Willapa and Naselle River natural-origin fall Chinook in Willapa Bay fisheries will not exceed 20%.

The predicted impact on Willapa River fall Chinook terminal fisheries is 19.5%. The predicted impact on Naselle River fall Chinook terminal fisheries is 19.4%

6. To promote the catch of hatchery-origin Chinook salmon and increase the number of natural-origin spawners, within the 20% impact rate cap the following impact rates shall be set-aside

for mark-selective commercial fishing gear types with an anticipated release mortality rate of less than 35%:

Fishing Year	Mark Selective Commercial Fishing Gear Set-Aside
2015	1%
2016	2%
2017	6%
2018	6%

The predicted impact rate for mark-selective commercial fishing gear with an anticipated release mortality rate of less than 35% is 6.8% and 11.0% for Willapa and Naselle River fall Chinook, respectively.

7. 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.

The 2016 pre-season forecast for Willapa Bay Coho is 39,506 compared to a spawner goal of 13,600. The scheduled fisheries in the adopted rule are expected to result in 26,012 Willapa Bay Coho spawners.

8. For Willapa Bay Basin naturally spawning Chum, the predicted fishery impact will not exceed 10% of the adult return to Willapa Bay because the number of natural spawners was less than goal in 4 out of the last 5 years.

The predicted impact on Willapa Bay naturally spawning Chum is 9.9%.

WDFW has considered all the facts and circumstances surrounding the 2016 Willapa Bay commercial salmon season schedule. The adopted regulations meet the primary conservation constraints (20% mortality rate on natural-origin Chinook, 10% mortality rate on natural-origin Chum, and the Coho spawner goal is exceeded). While acknowledging that commercial catch of Chinook is more efficient in August rather than September, the adopted rules maximize the harvest of Coho and minimize the surplus of hatchery Coho by judicially using 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 also meets the allowable conservation constraint for natural-origin Chinook. The adopted rules reduce conflict between the recreational and commercial sectors as well. Finally, the adopted rules are expected to result in over \$400,000 of ex-vessel value for the commercial sector, which is within the range of ex-vessel values seen from 2000-2013 (approximately \$250,000 to \$1,330,000). 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 2016 Willapa Bay commercial salmon fishing regulations comply with its statutory mandate and are consistent with WDFW's management objectives for these fisheries.

II. Adopted Commercial Gillnet Rules

The following table outlines the fishing times and locations in the original rule as noticed in the CR-102 (Table 2). No changes were made between the proposed CR-102 and the adopted CR-103.

Table 2. Adopted Willapa Bay Commercial Gillnet Season.

Area	Time	Date(s)	Maximum Mesh Size
2M, 2N, 2R	7:00 a.m. through 7:00 p.m.	9/6, 9/7	4.25"
2M, 2R	7:00 a.m. through 7:00 p.m.	9/8	4.25"
2T	6:00 a.m. through 6:00 p.m.	9/16, 9/17	6.5"
2M, 2R	6:00 a.m. through 6:00 p.m.	9/11, 9/12, 9/13, 9/14, 9/16, 9/17	6.5"
2N	6:00 a.m. through 6:00 p.m.	9/11, 9/12, 9/13, 9/16, 9/17	6.5"
2U	6:00 a.m. through 6:00 p.m.	9/16	4.25"
2M, 2R	6:00 a.m. through 6:00 p.m.	9/18, 9/19, 9/20, 9/21, 9/22, 9/23	6.5"
2N	6:00 a.m. through 6:00 p.m.	9/20, 9/21, 9/22, 9/23, 9/24	6.5"
2T	6:00 a.m. through 6:00 p.m.	9/19, 9/20, 9/21, 9/22	6.5"
2U	6:00 a.m. through 6:00 p.m.	9/19, 9/20, 9/21, 9/22, 9/23	4.25"
2M, 2N, 2R	7:00 a.m. through 7:00 p.m.	9/27, 9/28, 9/29, 9/30, 10/1	6.5"
2T	7:00 a.m. through 7:00 p.m.	9/27, 9/28, 9/29, 9/30	6.5"
2U	7:00 a.m. through 7:00 p.m.	9/27, 9/28, 9/29, 9/30	4.25"
2T	7:00 a.m. through 7:00 p.m.	10/1	6.5"
2M, 2N, 2R	7:00 a.m. through 7:00 p.m.	10/3, 10/4, 10/5, 10/6	6.5"
2U	7:00 a.m. through 7:00 p.m.	10/3, 10/4, 10/5, 10/6	4.25"
2U	7:00 a.m. through 7:00 p.m.	10/9, 10/10, 10/11, 10/12, 10/13, 10/14	4.25"
2M, 2N, 2R, 2T, 2U	12:01 a.m through 11:59 p.m.	11/1 through 11/4	6.5"
2M, 2N, 2R, 2T, 2U	12:01 a.m through 11:59 p.m.	11/7 through 11/11	6.5"
2M, 2N, 2R, 2T, 2U	12:01 a.m through 11:59 p.m.	11/14 through 11/18	6.5"
2M, 2N, 2R, 2T, 2U	12:01 a.m through 11:59 p.m.	11/21 through 11/25	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 through September 30, 2016.

III. Summary of Public Comments and WDFW's Response

A formal rule making public hearing was held on June 21, 2016. This hearing provided the public with an opportunity to comment on the proposed rules published in WSR 16-11-100. The hearing was attended by 8 individuals and 5 provided testimony. Public comment period for this proposed rule was open from May 19, 2016 through July 21, 2016. All testimony and comment 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: WAC 220-40-027 is insufficient to prevent gillnetters from deploying full sized drift nets as shallow water set nets anchored by the lead line.

As mentioned in Section I, WAC 220-040-027 defines the rules and regulation for the Willapa Bay fall fishery. Section 2(A) (i) of this WAC states "Drift gillnet gear only. It is unlawful to use set net gear", this statement sets the type of gear to be used in this fishery. The definition of drift gillnet gear is set forth in WAC 220-16-040. This WAC 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". The Department implemented changes similar to the commenter's request in Grays Harbor in 2014 between the filing of the CR-102 and adoption of the final rule in the CR-103. Commercial fishers expressed concern about a lack of opportunity to provide feedback regarding the adopted changes. Therefore, the Department prefers to introduce the proposed changes and have a thorough vetting during the 2017 North of Falcon process, rather than adopting them herein for 2016.

Comment #2A: Commenter is concerned that the release mortality rates associated with tangle net gear are not well validated and should be resolved.

Comment #2B: The commenter states that if the Department cannot have the amount of observers required to meet 90% compliance then the mortality rate used to model this year's fishery needs to be adjusted.

Response to 2A and 2B:

Adaptive management is a critical tool in attaining conservation objectives described in the Willapa Bay Salmon Management Policy (C-3622) for fall Chinook in the Willapa Bay Basin. The Department acknowledges that monitoring of both recreational and commercial fisheries is important to measuring the achievement of conservation objectives. The Department also agrees that there is a relationship between the fishery practices and the mortality rates associated with selective fishing. The IFSP was convened to address this issue and provided a matrix of mortality rates for selective fishing based upon varying rates of compliance. The IFSP estimated a 90% compliance rate, and associated mortality rate, considering "actual fishing" practices in Willapa Bay. The Department recognizes that this work contains some uncertainty because there are no in-basin studies that directly show this relationship or these rates. Furthermore, as various commenters noted, there is limited data available to provide a clear identification of actual compliance being attained and substantial disagreement on that subject between commercial harvesters and other commenters. Nevertheless, the IFSP work is persuasive and a useful tool.

The Department evaluated these comments by reviewing the conclusions and supporting analyses of the IFSP. The IFSP considered multiple factors when developing their recommendation for the release mortality rates in the Willapa Bay commercial fishery (page 5 of the report), including: a) commercial fisher and public testimony on compliance with fishing rules; b) enforcement issuance of citations for non-compliance; c) observer information on soak times (i.e., the length of time that a net is in the water) and use of recovery boxes; d) the effects of catch rates, soak time, and the use of recovery tanks on release mortality. The IFSP concluded that the release mortality rate was likely to be higher in the commercial fishery than in a research study, and that the actual practices in the commercial fishery would result in a 56% and 31% release mortality rate for gillnet fisheries in Willapa Bay using gillnets with mesh size less than 6.5", what they defined as small mesh, and 4.25" tangle net, respectively. The IFSP indicated (IFSP 2014; Table 2) that this release mortality rate was associated with a compliance rate of 90%, and that lower compliance rates would result in higher mortality rates.

The Department then reconsidered the primary fishery practices and fish handling techniques that would affect release mortality and attempted to locate additional information on each factor. The single most important factor in a mark-selective fishery is that the fishers must release any unmarked (e.g., natural-origin) Chinook encountered. We calculated a rate of compliance with the requirement to release unmarked Chinook or coho salmon by dividing the number of illegally retained fish by the number of fish unmarked fish encountered. Compliance in Willapa Bay was calculated to be 99.8% in 2010 and 99.8% in 2011, 100% in 2012, 99.2% in 2013, and 97.5% in 2014. The Department then made significant progress improving monitoring of commercial fisheries in 2014 and 2015 with an objective of a 15% monitoring rate. The Department was able to attain a 12.6% and 28.8% monitoring rate for the commercial fishery in 2014 and 2015 respectively, a significant increase over the less than 1% monitoring rate in 2010 - 2013. Based on those efforts, the commercial fisheries achieved an observed 97.6% in 2015 compliance rate with regulations identified as critical to achievement of conservation goals in the selective commercial fisheries (Table 6).

In 2016, the Department has earmarked additional funds for hiring samplers to augment regional staff efforts to sample the commercial fisheries. The Department again intends to utilize an on-board observer program with the intent of achieving a 15% monitoring rate. Commercial fisheries 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 mortalities versus what was projected in the Willapa Bay TAMM. If commercial mortalities exceed expected catch and puts the attainment of conservation objectives at risk, in season management actions will be initiated.

Table 6. Compliance with commercial regulations affecting release mortality in 2015.

Compliance Factor	No. of Observations	No. Non-Compliance	Percent Compliance	Data Derived
Soak Time	446	20	90.3%	On-board and on-water observers
Mesh Size	87	0	100.0%	On-board observers
Illegal Fish	1120	0	100.0%	Sampling at buyer
Live Box	88	2	97.7%	On-board observers
Closed Times	29	0	100.0%	On-board observers

Comment #3: The commenter believes the commercial fishery should be fishing earlier in the season in August to avoid unmarked Chinook impacts.

The Willapa Bay Salmon Management Policy (C-3622) states under the species specific guidance for Chinook:

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

- a. The impact rate on Willapa and Naselle river natural-origin fall Chinook in Willapa Bay fisheries shall not exceed 20%. Within this impact rate cap, the priority shall be to maintain a full season of recreational fisheries for Chinook salmon in the Willapa Bay Basin.
- b. To promote the catch of hatchery-origin Chinook salmon and increase the number of natural-origin spawners, within the 20% impact rate cap the following impact rates shall be set-aside for mark-selective commercial fishing gear types with an anticipated release mortality rate of less than 35%.
- c. No commercial Chinook fisheries shall occur in areas 2T and 2U prior to September 16.
- d. No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P and 2R until after Labor Day.

While the adopted rule does not provide a significant directed Chinook salmon commercial fishing opportunity, the rule does provide three days of directed Chinook fishing during September 6, 7, and 8 in the south end of the bay in Areas 2M, 2N and 2R. These three days of fishing in the south end of the bay also use tangle net gear for additional conservation. In addition, during Coho directed fishing, the commercial fishery is expected to harvest 7,019 hatchery Chinook and kill an additional 493 natural-origin Chinook through release mortality. The adopted rules maximize the harvest of Coho and minimize the surplus of hatchery Coho by judiciously using 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 also meets the allowable conservation constraint for natural-origin Chinook. The adopted rules also reduce conflict between the recreational and commercial sectors.

Comment #4: The commenter is concerned that the commercial fishery scheduled in November presents significant steelhead issues and has an impact on the steelhead run in Willapa Bay.

The adopted rules have accounted for all salmon mortalities and the predicted escapement of Coho salmon greatly exceeds the management objective (Table 1). The Department acknowledges that there are potential impacts to steelhead in late season fisheries. The Department utilized both on-board observations and voluntary fishing logs from commercial fishers to monitor steelhead encounters in 2014. No steelhead were reported encountered during the late season fisheries in 2014. Commercial fisheries scheduled during November in 2015 were closed due to a conservation concern for natural origin coho.

The Department will continue with low level on-board monitoring and voluntary fishing logs to monitor steelhead encounters in 2016. Finally, the run timing of wild steelhead through Willapa Bay rivers is approximately January through June, whereas the run timing for hatchery steelhead is approximately late November through January. This run timing distribution suggests that of the handful of steelhead that may be encountered in late season fisheries, the vast majority will be of hatchery origin. Currently, there is neither a conservation nor egg take concern for either of the two hatchery steelhead programs in Willapa Bay.

Comment #5: The commenter states that WDFW needs to ensure that in-season management continues regarding the runsizes for Chinook and coho.

The new Commission policy does require the Department to take action if it becomes apparent that 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). Creel survey data, in-season spawning ground counts, on-board observation data, and Quick Reporting data will be analyzed to determine if any in-season actions would be necessary for either the commercial or recreational fisheries to meet conservation objectives. 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 #6: The commenter states that the Small Business Economic Impact Statement filed in the CR-102 (WSR 16-11-100 filed May 18, 2016) is inaccurate.

The Small Business Economic Impact Statement provided in the filing documents associated with the 2016 Willapa Bay commercial fishery utilize ex-vessel value in the economic analysis in order to gauge the effects of these regulations on small businesses. Ex-vessel value is the standard metric used state wide in these types of economic analyses. Ex-vessel value is defined

as the value of salmon sold by each Willapa Bay salmon commercial license holder. This ex-vessel value is used as a surrogate for sales in this analysis, but it is an underestimate of total sales, since the majority of the businesses affected have additional revenue from other fisheries and related ventures. Ex-vessel values are determined by using landed catch, landed pounds of catch, average price paid per pound, adjusted Gross Domestic Product (GDP), and GDP inflator. Wholesale buyers in Washington State are required by state law (WAC 220-69-240) to report each ticket of a commercial landing by using the Quick Reporting system. Each ticket must include name of buyer, buyer license number, buying location, purchase date, reported date, ticket number, boat name/fisher name, gear type, catch area, number of days fished, number per species, pounds per species, and fish that were taken home by fisher (species and number of each).

In addition, this analysis assumes that all license holders will be required to purchase equipment described above in Table 2, Adopted Willapa Bay Commercial Gillnet Season. However, some license holders already own gear that meets the requirements, and will not be required to purchase new gear.

Using available information, the Department continues to gauge likely economic values when developing new fishing seasons with a view to helping meet the objective of maintaining the economic well-being and stability of the entire fishing industry in this state. The adopted rules and regulations for the 2016 Willapa Bay commercial fishery are designed to structure a season that contributes to this state-wide goal, provided that the fishery is undertaken in a manner consistent with the overriding conservation objectives. This management objective is challenging to address, given the conservation issue previously identified for natural-origin Chinook. In addition, the economic health and stability of these fisheries depends on many factors beyond WDFW's control, including the prices paid for salmon, the abundance of salmon, the relative size of the salmon, the proportion of vessels choosing to participate in a fishery, the catch rates of vessels that do participate, and other related factors.

The direction from RCW Title 77 is "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".

WDFW admits there are limitations in the use of ex-vessel value in evaluating the economics of a commercial fishery. These include:

- 1) The price can be up or down across years depending on market conditions. The time-to-market is important for determining commercial price.
- 2) Salmon ex-vessel value in one fishery is not comparable with salmon in another fishery. Salmon is delivered dressed in ocean fisheries and may be delivered round in river fisheries. River fisheries can have tenderer costs while ocean fishery deliveries are harvester direct. There can be egg take revenue in river fisheries, but not in ocean fisheries.

- 3) The costs for fishing depend on the effort to catch fish. It can cost a lot more or a lot less to catch different species in different areas. Ex-vessel value may not reflect the costs.

The Department partially addressed these limitations by using a long-term, GDP adjusted average for the ex-vessel value of Chinook salmon, Coho salmon, and Chum salmon caught in Willapa Bay. We recognize that prices may be higher or lower in any year, and that our adaptive management in future years will need to consider changes in market conditions. We also recognize that there may be different costs associated with commercial fishing in different areas or times in Willapa Bay. However, the Department has been unable to find reliable information on these costs. And commercial harvesters have not provided additional economic information or analysis for the Department to consider. For these reasons, the Department will continue to use ex-vessel value until a better economic metric is available for the commercial fishery.

IV. Conclusion

WDFW has considered all the facts and circumstances surrounding the 2016 commercial salmon season schedule for Willapa Bay. The agency carefully reviewed all input from the public during North of Falcon public meetings and the state's rule making process. The agency's 2016 commercial salmon fishing regulations comply with its statutory mandate and are consistent with WDFW's management objectives for this fishery.