

## **Concise Explanatory Statement**

### **Puget Sound Commercial Salmon Regulations for 2015**

This Concise Explanatory Statement (CES) describes the Washington Department of Fish and Wildlife's (WDFW) reasons for adopting the 2015 Puget Sound commercial salmon fishing rules and responds to public comments received on the proposed rules. The adopted rules are set forth in Washington Administrative Code (WAC) 220-47-307, -311, -401, -411, and -428.

#### **Rule Development Process**

The 2015 annual public process for defining salmon fishery rules, known as North of Falcon began on December 18, 2014 with a meeting with Puget Sound commercial industry to review the 2014 Puget Sound commercial salmon fisheries. This meeting was held at the Mill Creek WDFW offices to accommodate commercial industry representatives from various areas of Puget Sound. WDFW presented a review of the 2014 Puget Sound commercial salmon fisheries, discussed outcomes of the 2014 season, and began discussions on the upcoming 2015 season.

The next North of Falcon meeting, presenting the 2015 run forecasts, was held in the Natural Resources Building in Olympia on March 2, 2015. At this meeting WDFW presented and discussed the 2015 preseason forecasts of salmon abundance with interested stakeholders. Implications of the forecasts and 2015 season planning specific to Puget Sound commercial salmon fisheries were discussed in greater detail in a Puget Sound commercial break-out session. Additional public meetings were held March 18<sup>th</sup>, March 26<sup>th</sup>, and April 1<sup>st</sup>. During these meetings WDFW gathered input on structuring fishing seasons, possible rule changes and provided the public with information on the status of the 2015 planning process. Formal rule-making hearings were held on April 7, 2015 and June 23, 2015 to provide an opportunity for comments on the proposed rules as published in the Washington State Register. In addition to input during the public meetings, WDFW received comments by letter and electronic mail during the North of Falcon process.

WDFW published the proposed 2015 commercial salmon season regulations as Washington State Register (WSR) 15-06-068 on March 18, 2015. This filing included changes to WAC 220-47-307, -311, -401, -411 and -428. Modifications to the proposed rules were made as a result of the public process and negotiations with the Northwest Treaty Tribes (co-managers). A supplemental filing, WSR 15-11-101, was published in the WSR on June 3, 2015, to cover the modifications made to the rules after the original filing. The supplemental filing included changes to WAC 220-47-307, -311, -401, -411, and -428. An attachment explaining the changes made from WSR 15-06-068 was included in the supplemental filing of the proposed rule changes. Information regarding both filings of the proposed rule changes was mailed out to Puget Sound commercial salmon license holders, available at meetings, and posted on WDFW's website.

During the 2015 North of Falcon season planning process, the tribal co-managers and WDFW conducted technical meetings and policy level discussions to develop agreement on conservation objectives, run-size forecasts, and estimates of the allowable tribal and non-tribal catch shares for the various salmon runs considered in defining fishing levels. WDFW and the tribes also reached agreement on coordinated fishing schedules for tribal- and state-managed Puget Sound salmon fisheries. These schedules provide days of the week that are exclusively reserved for treaty fishing in areas where non-treaty fishing is also conducted. The Puget Sound commercial salmon fishing seasons proposed for adoption by WDFW in 2015 are products of both the government-to-government, tribal-state negotiation component and the open public process component of the annual North of Falcon process.

Written and oral comments received during this process were considered in the development of the final rule, as explained in the “Rationale for Adoption of Rules” section. Additional written comments were submitted to the WDFW rules coordinator in response to the CR-102 filings published on March 18 and June 3, 2015, respectively. Responses to those comments are summarized in the “Response to Comments Received” section of this document.

### **Rationale for Adoption of Rules**

Regulations for the 2015 Puget Sound commercial salmon fisheries were considered with respect to the following management objectives, listed in order of priority. These objectives were shared with industry representatives during the North of Falcon public process and have remained consistent over recent years:

- 1) Conserve the wildlife and food fish, game fish, and shellfish resources in a manner that does not impair the resource (RCW 77.04.012) by achieving conservation objectives for all species and stocks.
  - a) Ensure primary stocks meet escapement goals and/or management objectives
  - b) Manage fisheries to minimize mortalities on non-target species and stocks (including salmonids, non-salmonids, birds and marine mammals) consistent with Fish and Wildlife Commission Policy POL-C3608. This includes using management strategies to limit seabird mortalities consistent with the federal Migratory Bird Treaty Act
  - c) Monitor fisheries to ensure a & b are met
- 2) Harvest the non-treaty share of salmon
- 3) Maintain the economic well-being and stability of the fishing industry (RCW 77.04.012); allow a sustainable level of harvest sufficient to provide opportunity for each gear type (RCW 77.50.120)

While taking these objectives into account, WDFW considered all the facts and circumstances surrounding setting the 2015 commercial salmon season in Puget Sound. The agency carefully reviewed all input from industry representatives and the general public regarding preferred fishing rules during North of Falcon public meetings and the state's rule-making process. WDFW considered and relied upon the best technical and scientific information available to tribal and state fishery management experts, including pre-season forecasts of the abundance of salmon stocks and data that will be used during the season to update forecasts. Important characteristics of the Puget Sound commercial salmon fishery were considered, including the total number of licensed vessels potentially participating in each fishery; the number of vessels that have actually participated in each fishery in recent years; the outcomes in terms of target and non-target species catch in recent years; the catch likely to result from the proposed rules; and the economic value of these commercial fisheries. The department also considered fishing schedules of tribal fisheries that must be coordinated with the state's commercial fishing schedules as part of the co-management process developed under sub-proceedings of *United States v. Washington*.

WDFW concludes that the adopted 2015 Puget Sound commercial fishing regulations are consistent with these management objectives based on the following rationale:

Objective 1a: Ensure primary stocks meet escapement goals and/or management objectives

The adopted rules and regulations for Puget Sound commercial salmon fisheries are constructed to ensure achievement of conservation objectives defined for each target species, stock, or management unit. The adopted rules define schedules with open fishing periods only for those fisheries that are directed at salmon stocks with harvestable abundance; all fisheries are monitored to ensure that catches do not exceed the number allowed for each species, stock, or management unit at which the fishery is directed. WDFW relied on pre-season forecasts of abundance to construct the fishing schedules. The agency will use in-season information, where available, to update preseason forecasts of stock abundance and to revise estimates of the allowable catches for each fishery.

Objective 1b: Manage fisheries to minimize mortalities on non-target species and stocks

Fish and Wildlife Commission Policy number C-3608, titled *2015-2016 North of Falcon*, instructs the department to manage fisheries to minimize mortalities on non-target species and stocks. In structuring rules for the 2015 commercial salmon seasons, WDFW considered impacts of fisheries on non-target species; including Endangered Species Act (ESA) listed Puget Sound Chinook salmon, Hood Canal summer chum salmon, steelhead, and rockfish, as well as other fish and wildlife species of concern. The adopted regulations are structured to ensure that incidental mortalities on non-target species are minimized by focusing fisheries at times and in areas of peak abundance for target salmon stocks, while avoiding times and areas with higher incidence of non-target species. When applying a regulation or rule to minimize bycatch,

WDFW has considered the best available scientific information concerning the potential impact of these fishing seasons on non-target species, often relying on joint recommendations of tribal and state technical staff.

Since bycatch mortalities vary by fishing method, the objective of minimizing bycatch requires WDFW to apply different rules to the different gear types. For example, salmon bycatch mortality associated with operation of reef net gear (used only in the Salmon Management and Catch Reporting Area 7/7A fisheries) is assumed by state and tribal fishery managers to be zero, because minimal contact with non-target salmon occurs with this gear during fishing operations and all prohibited bycatch is quickly released. For purse seine gear, state and tribal managers reviewed results of scientific studies on salmon bycatch mortality and concluded that the majority of coho and Chinook salmon encountered by this gear will survive being sorted and returned to the water. Based on this scientific data, bycatch mortality of Chinook and coho salmon in Puget Sound commercial purse seine fisheries targeting other salmon species can be minimized by requiring that these non-target species be released.

Fewer scientific studies have been conducted on mortality rates for coho and Chinook salmon encountered by gillnet gear. In accordance with the best available science, WDFW addresses the bycatch minimization objective for gillnet gear differently than the approach used for purse seine gear. Relying on recommendations of the Joint Chinook Technical Committee of the Pacific Salmon Commission (Report TCCHINOOK (97)-1. PSC, 1997) that “CNR (Chinook non-retention) gill net fisheries are unlikely to be implemented due to the high expected mortality rate of the fish released,” WDFW concludes that requiring release of Chinook and coho salmon in Puget Sound gillnet fisheries generally will not result in the minimization of bycatch mortality. In the majority of Puget Sound gillnet fisheries WDFW does not require release of Chinook or coho. Fishers are prohibited from discarding salmon that may be legally retained, except for fish that are made unmarketable due to marine mammal depredation. Because all retained salmon are required to be reported on commercial fish tickets, WDFW may assume that bycatch of these species can be estimated using fish tickets. In recent years, WDFW has increased on-board monitoring of gillnet vessels, with the objective of comparing levels of bycatch estimated from direct observation of gillnet bycatch of Chinook and coho to levels estimated by commercial fish tickets.

There are some unique circumstances where WDFW has concluded that the bycatch minimization objective will be achieved by requiring release from gillnets. Such circumstances include when regulations restrict the number of licenses participating such that all participants can be monitored, when regulations limit the size of fishing gear and length of net soak times (e.g., in the extreme terminal Area 12A coho fishery with skiff gillnets), and when regulations require the use of recovery boxes.

The mortality rates applied to Chinook salmon encountered and released in Puget Sound purse seine fisheries, and the drop-out rates applied to gillnet fisheries, based on joint-tribal-state technical recommendations, are documented in the *2010 Comprehensive Management Plan for Puget Sound Chinook: Harvest Management Component*. This plan was approved by the National Marine Fisheries Service (NMFS), providing ESA coverage for Puget Sound Fisheries under Limit 6 of the ESA 4(d) rule.

Additionally, the department's regulations for Puget Sound commercial salmon fisheries incorporate gear, time, and area restrictions to minimize bycatch encounters with summer chum originating from Hood Canal and the Eastern Strait of Juan de Fuca. In March of 1999, NMFS determined that the summer chum originating from Hood Canal and the Strait of Juan de Fuca represented an Evolutionarily Significant Unit (ESU), and formally listed these fish under the Endangered Species Act (ESA) as a threatened species. In April 2000 the state and tribal co-managers published a summer chum management plan, approved by NMFS (*Summer Chum Salmon Conservation Initiative - An Implementation Plan to Recover Summer Chum in the Hood Canal and Strait of Juan de Fuca Region*), which contains base conservation regimes (BCR) for fisheries with specific guidelines by area, timing gear type, and summer chum forecasts combined with in-season escapement numbers. For example in Area 12A, under the BCR guidelines, beach seine fisheries cannot begin prior to August 21, while gillnet fisheries cannot begin prior to September 1. Also the BCR guidelines stipulate that these fisheries cannot open until at least 1,500 chum have been counted in the river, and can open one day per week if fewer than 2,500 chum have been counted in river. Further, non-treaty gillnets can only open if tribal fisheries are open, and gillnets must release chum by cutting the mesh ensnaring the fish.

Conservation concerns over the non-salmon species encountered during Puget Sound commercial salmon fisheries are increasing. Fish species of concern in Puget Sound include ESA-listed Chinook salmon, summer chum salmon, and steelhead, as well as ESA-listed canary, bocaccio, and yelloweye rockfish. Other wildlife species of concern in Puget Sound include federal ESA-listed killer whales and marbled murrelets, along with common murre, a state Species of Concern candidate species. For these species, data collected from purse seine observations indicates a low encounter rate, but (as discussed below) there is minimal gillnet monitoring data from recent seasons. Extrapolation of purse seine data to the gillnet fishery in general may not be valid given known differences between the gear types and their impacts on various species.

Seabird bycatch mortalities in gillnet fisheries are a special concern; out of all the types of nets used in Puget Sound commercial salmon fisheries, gillnets are believed to pose the greatest risk of entangling and drowning seabirds (*USFWS Opinion on the effects of the proposed action on the threatened marbled murrelet*, 1994). A later United States Fish and Wildlife Service (USFWS) document concluded that mortality caused by the fisheries appeared to be having a "relatively insignificant adverse effect" on the marbled murrelet population, but went on to say

that chronic mortality from gillnet fisheries would have an increasingly significant effect if the murrelet population continues to decline (*USFWS Biological Opinion on proposed all-citizen Puget Sound Area commercial and recreational salmon fisheries*, 2001). This analysis was based on gillnet effort during the years 1996-2000.

Since then, gillnet effort has increased dramatically in the Area 10/11 and 12/12B/12C chum fisheries, and decreased in Area 7/7A fisheries. The decrease in gillnet landings in Area 7/7A is in part due to the low abundances of Fraser River sockeye available for harvest in recent years, excluding the large returns in 2010 and 2014. Without the decrease in effort in Area 7/7A gillnet fisheries, the estimated increase of incidental take of marbled murrelets from the chum fisheries might have exceeded the limits set forth in the current Biological Opinion, which was given a one year extension for 2015. Should sockeye abundances and gillnet effort in Area 7/7A increase, and effort in chum fisheries in Areas 10/11 and 12/12B remain high, Puget Sound commercial fisheries could exceed the limits specified in the Biological Opinion.

The adopted regulations for the 2015 Puget Sound commercial salmon seasons include restrictions specific to purse seine and gillnet gears that are expected to reduce seabird mortalities. These restrictions are identical to those implemented since the mid-1990s on the basis of recommendations of scientists conducting seabird bycatch studies as well as input from both gillnet and purse seine fishers.

Marine mammal injuries and mortalities in Puget Sound net fisheries are another concern. The federal Marine Mammal Protection Act (MMPA) requires the National Oceanic and Atmospheric Administration (NOAA Fisheries) to address the impacts of all fisheries on individual marine mammal stocks and to classify fisheries into one of three categories based on their risk of “incidental take” of marine mammals. All fisheries are required to report marine mammal injuries or mortalities to the NOAA Fisheries within 48 hours of the event. Puget Sound purse seine fisheries are designated as a Category III fishery “with a remote likelihood or no known serious injuries or mortalities” to marine mammals and have no requirements beyond reporting any injuries or mortalities. Puget Sound gillnet fisheries are designated as a Category II fishery “with occasional serious injuries or mortalities” to marine mammals. Category II fisheries require fishers to obtain an annual Marine Mammal Take Authorization from NOAA and carry it on board the vessel during any commercial fishing operations. Currently NOAA cites incidental takes of harbor porpoises in this fishery as being the driver for the Category II designation of the gillnet fishery.

An additional concern with net fishing is lost or derelict gear, which can remain in the environment and entangle animals until it is located and removed. Efforts to locate and remove derelict gear have increased in recent years as have concerns over their impacts on ESA-listed rockfish species in Puget Sound. The Northwest Straits Foundation (NWSF) reported removing 5,635 derelict fishing nets, of which a large majority were gillnets, from Puget Sound, the San

Juan Islands, and the Strait of Juan de Fuca between 2002 and May of 2015. The length of time the nets have been in the water is estimated based on biological growth on the net as well as the amount of sediment on the net. The number of nets NWSF has removed from Puget Sound includes both “newly lost” and “legacy nets”, which are defined as nets estimated to have been in the water three years or less or for four or more years respectively. The majority of the nets identified and removed were gillnets, and based on interviews with fishers, data from enforcement agencies and recent fishing effort, NWSF estimates that between 5 and 13 additional nets or portions of nets are lost each year by non-treaty net fishermen in Puget Sound. In 2012 the state legislature passed a law (RCW 77.12.870) requiring commercial fishermen to report any gear they abandon to WFDW within 24 hours, so that efforts can be made to locate and remove it as soon as possible. While removal projects have decreased the amount of derelict gear in Puget Sound, newly lost gear remains a concern, and it is too early to tell the extent that recent legislation regarding reporting requirements will help lessen that concern.

In summary, WDFW concludes that the adopted rules and regulations for the 2015 Puget Sound commercial salmon seasons are reasonably constructed to meet the objective to minimize bycatch overall. However, with respect to non-target salmon species and stocks, seabirds, and other non-salmon species, continued and in certain cases increased monitoring is needed to verify that bycatch is indeed minimized. As new scientifically reliable information becomes available in the future, WDFW will adjust the fisheries as necessary to continue to protect non-target species.

#### Objective 1c: Monitor fisheries to ensure a & b are met

Assessing non-target salmon bycatch is a matter of estimating both the number of fish encountered by the gear and the proportion of the fish released that will survive. WDFW relies on scientific studies to determine the release survival rate. The most accurate estimates of numbers of fish or other species incidentally encountered in purse seine and gillnet fisheries come from direct, on-board sampling by trained technical staff. The data collection is focused on non-target salmon species, although data on ESA-listed species and other species of concern are collected when possible. However, this on-board sampling does not provide estimates for additional sources of fishing related-mortality, such as net dropout (fish that fall out of the net while it is being retrieved) or predation by marine mammals on fish captured in the net.

Prior to 2011, sampling and monitoring programs implemented by WDFW have been focused on purse seine fisheries to obtain mortality estimates on non-target salmonids. In-season monitoring data are needed from purse seine vessels to estimate the number of Chinook and coho salmon they encounter in a fishery when they are not allowed to retain those species. For gillnet fisheries WDFW relies on fish tickets for non-target salmon catch numbers because the budget for sampling these fisheries is inadequate to support a program capable of collecting sufficient samples to generate statistically reliable estimates of Chinook and coho salmon or any other non-

salmon species encountered in the gillnet fisheries. From 2011-2014, WDFW focused a portion of its commercial sampling efforts on gillnet vessels in an attempt collect data on bycatch of non-target salmon, non-salable fish, and other species. With the limited resources available for commercial monitoring, the department had to reduce the sampling on purse seine vessels and rely on bycatch data and rates from past years with more robust sampling for projecting bycatch impacts for purse seines. Examination of gillnet observer data collected since 2011 has raised some questions about whether fish tickets can be used to accurately evaluate bycatch of non-target salmon species. For both Areas 10/11 and 12/12B, gillnet observer data show a higher rate of Chinook encounters than were reported on fish tickets for gillnet landings. WDFW currently does not have the resources to increase observer coverage in the gillnet fishery to determine the cause of discrepancies between fish tickets and observer data.

A number of species and stocks of conservation concern are encountered incidental to Puget Sound commercial salmon fisheries, including ESA-listed Chinook salmon, Puget Sound steelhead, and species of Puget Sound rockfish. Commercial fishers are prohibited from landing some of these species in any fishery (e.g. steelhead) and therefore, these fish are not reported on fish tickets. Consequently, WDFW has been unable to estimate bycatch in gillnets for some species. Unfortunately the sampling program is limited by its budget, meaning that comprehensive sampling of all fisheries to address bycatch concerns is not possible every year. WDFW will utilize limited sampling information in a precautionary manner and may adjust fishing schedules if data indicate that non-target species bycatch levels for either gear type are greater than levels assumed in pre-season planning models and analyses.

#### Objective 2: Harvest the non-treaty share of salmon

The adopted rules and regulations of these commercial fisheries are designed to ensure that the total allowable catches defined for each fishery are fully utilized. Season structures considered for 2015 reflect expected abundance of target salmon species and stocks, based on pre-season forecasts. Abundances for some salmon stocks will be updated as the season progresses, based on scientific information collected from the fisheries and agreements reached by the state and tribal co-managers. The non-Indian total allowable catch will be adjusted accordingly and may result in increasing non-Indian fishing opportunity. However, given the uncertainty associated with estimates of fishing effort, harvest rates, and the abundance of the target species or incidentally caught species, in-season adjustments to the fisheries may be necessary to meet conservation objectives. These adjustments could result in the harvest of less than the full non-Indian allowable catch. WDFW will attempt to provide advanced notice to the commercial fishing fleet of any changes to schedules.

If tribal harvest allocations are not fully utilized, then WDFW may seek to maximize the state's commercial-fishing harvest opportunity by adjusting the non-Indian total allowable catch consistent with the Washington Fish and Wildlife North of Falcon policy (C-3608). This policy

states: “The Department will seek non-treaty fishing access to unutilized portions of treaty harvest allocations through the implementation of pre-season agreements, taking into consideration changes in abundance, fishery conflicts, and factors that may influence attainment of spawning escapement objectives.”

Objective 3: Maintain the economic well-being and stability of the fishing industry (RCW 77.04.012); allow a sustainable level of harvest sufficient to provide opportunity for each gear type (RCW 77.50.120)

The adopted rules and regulations for these commercial fisheries are designed to maintain the economic well-being and stability of the fishing industry, and to provide a sustainable level of harvest sufficient to provide opportunity for each gear type. This management objective is challenging to address, given the diversity of the Puget Sound commercial salmon fishing fleet in terms of gear types, and the number of discretely managed fisheries opened each year. 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.

Prices paid for salmon caught in these fisheries are influenced by international market conditions, which WDFW cannot control. Factors that affect the prices paid for salmon include the abundance of salmon in the fishery, the amount of salmon available from fisheries in other areas such as Alaska, the amount of product stored from previous years, competition between buyers, quality of the fish, prices of farmed salmon and many other factors outside WDFW’s control. WDFW also cannot control the effort of fishers who hold limited entry Puget Sound commercial salmon permits (195 gillnet and 75 purse seine). While WDFW can open areas to harvest of salmon for commercial license holders, the department cannot control the number of vessels that choose to participate in full-fleet openings. Participation levels in a given opening are driven by many factors including the price of salmon, cost of fuel, weather and tidal conditions, and harvest opportunities on other species and/or in other areas. Catch rates for a given gear type will vary between years and within a single year over individual openings due to changes in salmon abundance, salmon size, migration behavior, and many other operational decisions made by vessels participating in the fishery that are not listed here. WDFW cannot control any of these factors.

Finally, WDFW must negotiate non-treaty commercial salmon fishing openings with the Puget Sound Treaty tribes, consistent with the process developed under sub-proceedings of *United States v. Washington*. These negotiations are complex and have many different components that reach far beyond the scope of Puget Sound commercial salmon fisheries. This means that there may be instances where WDFW would prefer to maintain or increase fishing opportunity for

non-treaty fishers, but the ability to do so is affected by the outcome of negotiations with the tribes.

Given the many factors beyond WDFW's control, the department concludes that the most effective means of positively affecting the well-being and stability of the industry is by providing a predictable season structure designed to access the full allowable harvest. Significant changes to fishery schedules can be disruptive to individual fishers, gear groups, and the industry as a whole. Changes to a schedule in one fishery can have an effect on outcomes in other fisheries, as the changes may cause license holders to shift participation between fisheries. Schedules may occasionally be adjusted to address apparent instability of the industry. However, WDFW believes it is prudent to avoid annual or short-term adjustments to season schedules because there is significant inter-annual variation in fishery performance, and the outcome of a single year may not indicate that an adjustment is appropriate or necessary to achieve this management objective. In situations where the non-treaty share is not being fully utilized, increased opportunity can promote the well-being of the industry, if that opportunity can be provided while meeting conservation objectives for target and non-target species and stocks. This management approach gives fishing businesses the ability to plan for upcoming opportunities and to make business-based decisions about when and where to fish.

The rationale for how the 2015 rules will promote the well-being and stability of the industry and allow a sustainable level of harvest is detailed by area and fishery below. Due to the potential de-stabilizing effect of changes, focus is placed on modifications to schedules from past years and ways the modifications will affect achievement of Objective 3. The rationale for incorporating or not incorporating industry input received during the North of Falcon process is also included here.

*Area 6D (pink)* – WDFW has implemented a new beach seine fishery in Area 6D to target the large number of pinks forecasted to return to the Dungeness River. Concerns over Chinook impacts caused WDFW to be conservative in planning this fishery, which will be limited to two beach seines and will close if 4 Chinook mortalities are reached. Fishers are required to have department observers present at all times while they are fishing. The fishing schedule is also constrained by requirements for Hood Canal in the Summer Chum Salmon Conservation Initiative (SCSCI) and will be open Monday through Friday, July 19<sup>th</sup> through July 31<sup>st</sup>.

*Area 6D (coho)* – The 2015 schedule is similar to recent years, and per the SCSCI, the fishery will open on September 21. The fishery will be open from Monday through Friday and close on weekends.

*Area 7/7A (chum)* – 2014 was the first time in recent years that the U.S. share of Area 7/7A chum was fully harvested. In order to provide opportunity for the non-treaty fleet to harvest its share, an agreement similar to 2014 was negotiated with the tribes to provide

additional non-treaty fishing opportunity early in the season, if only a small portion of the non-treaty share has been harvested after the first three days of non-treaty fishing. The schedule may be adjusted in-season depending on the non-treaty catch in those first three days. The 2015 schedule provides the maximum amount of fishing time for all gear types, within the constraints of the Pacific Salmon Treaty and negotiated co-management agreements for the treaty and non-treaty fleets.

*Area 7B/7C (Chinook/coho/chum)* – The fishing schedule for Areas 7B and 7C is similar to 2014, with the only adjustments being for calendar dates and management periods. There were several requests from industry for changes to gillnet mesh size requirements during specific weeks and for additional fishing opportunities during Chinook and coho fisheries. Due to the potential effects on Upper Fraser River coho stocks of concern, which comprise a portion of the coho harvested in Area 7B, these changes were not made. Similar to recent years, the portion of Area 7B known as Hale Pass will be closed from September 1 to 21 to reduce impacts on Upper Fraser River coho while allowing fishing in the remainder of Area 7B.

*Area 8 and 8A (pink)* – In response to lower forecasts on the Stillaguamish and Skagit systems (in comparison to 2013), the department reduced the number of openings from what was initially proposed to one day per week. At the request of the industry, WDFW adjusted for open weeks to be weeks 35-37 in Area 8 and 34-38 in Area 8A.

*Area 8A (coho)* – The 2015 Area 8A coho schedule is similar to the 2014 schedule, with two weeks with limited opportunity openings for purse seine, one week with a limited opportunity opening for gillnets, and one week with two full-fleet gillnet openings.

*Area 9A (coho)* – The fishery is structured identical to recent years, with adjustments made for calendar dates, and will be open weekly Sunday through Saturday. The opening date of this fishery mirrors the Area 9A tribal fishery.

*Area 10 (pink)* – The limited participation Area 10 pink fishery is structured similar to recent pink years with five boats of each gear type, required use of recovery boxes, mandatory department observers on vessels, and limited soak times (90 minutes) for gillnets. The fishery will close when an estimated 200 Chinook mortalities are reached. As in 2013, based on input from the industry, the eastern shoreline north of the Shilshole Bay closure area will be closed to purse seines with the intent of reducing the number of Chinook encountered in the fishery.

*Area 12A (coho)* – The fishery is structured similar to 2014, with beach seines opening on Friday, August 21, the earliest date permitted under the SCSCI. Skiff gillnet openings may be scheduled later in the season pending summer chum escapement numbers and discussions with co-managers.

*Areas 10/11 and 12/12B/12C (chum)* – The fishing schedules for chum fisheries in Area 10/11 and 12/12B must be considered together, as the timing of openings in one area affects participation levels and catch and economic outcomes in the other area. To assess the short- and long-term stability and well-being of the industry as reflected in these two closely-linked fisheries, WDFW assembled and analyzed catch data, economic information (ex-vessel landing value), and the number of licensed vessels, by gear type, for the chum salmon fisheries operating in these two areas combined, for the period from 1973 through 2014. Ex-vessel landing value data were adjusted according to the Consumer Price Index (CPI) to account for inflation and allow for comparability of the economic data between years. These data and summary statistics are presented in Table 1, including average values by each gear for the period 1973-2002 (the historical time period with consistent yearly fishing schedules providing equal fishing time to gillnet and purse seine gear), the period 2003-2014 (the time period when extra fishing time was provided for gillnet gear) and also for the period 2008-2014 (the most recent time period with consistent yearly fishing schedules providing additional fishing time for gillnet gear).

For the period 1973-2002, gillnets landed an average of 32% of total catch in these two fisheries, while purse seines landed 68%. During that period, gillnets on average accounted for 78% of licenses eligible to participate in these fisheries, while purse seines accounted for 22%. The total number of participating licenses and the composition of the fleet by gear type have changed dramatically over time, due to changes in the salmon industry (such as a government-sponsored license buy-back program). Across the most recent time period, 2008-2014, the gillnet proportion of the fleet has been 72%, a 6% drop from historic levels, while the purse seine proportion increased from 22% to 28%. In order to calculate what the expected percentages of total catch would be given the change in fleet composition, WDFW calculated the mean percentage of total catch per mean percentage of licenses during the historic time period (1973-2002). These percentages were multiplied by the current percentages of licenses for each gear, and then scaled to 100% to give the expected percentages of catch under the current fleet composition. Given the changes in fleet composition, the average catch share for gillnet would be expected to drop from a historical share of 32% to 26% and the average catch share for purse seine would be expected to proportionally increase from the historical share of 68% to 74%.

In 2003 the Hood Canal and South Sound chum fishery schedules were significantly altered in response to multi-year signs of instability including low prices per pound for chum salmon and low participation and catches in these fisheries by the gillnet industry. Prior to 2003, WDFW managed these fisheries by providing equal fishing opportunity for the gill net and purse seine fleets, in terms of days open. Beginning in 2003, WDFW provided significant additional fishing time for gillnets, to promote the well-being of that

sector of the industry. As the health of the gillnet industry has improved over time, as reflected by increased catch and ex-vessel values of catch in these fisheries, WDFW has adjusted fishing schedules to reduce the amount of extra time allocated to the gillnet fleet. Beginning in 2008, the annual fishing schedules included ‘market’ openings for gillnet vessels in South Sound to enhance the ability of fishermen to direct retail market their catch. These are 8-hour openings late in the week that are intended to promote efforts of gillnet fishers to supply fish to niche markets for the weekend, presumably with a larger economic benefit to the fisher than fish landed during normal openings early in the week. From 2008 to 2013, the fishing schedules for chum fishing in South Puget Sound and Hood Canal provided consistent ratios of gillnet to purse fishing time, with small changes made annually to provide variation in first fishing opportunities within areas and weeks for each fishing group. In 2014, WDFW adjusted the fishing schedules relative to schedules from 2008-2013.

In 2013, both gear groups caught significantly larger numbers of fish and had higher ex-vessel values than projected pre-season (primarily due to a higher than predicted return of chum salmon in Hood Canal), and the proportions of catch were markedly different than projected, with 13% of the catch by gillnets and 87% by purse seines. WDFW questioned industry extensively for plausible explanations for the deviation in catch proportions in the sixth year of implementation of a consistent fishing schedule. The only explanation that was offered, and is supported by available data, is that gillnet effort decreased in 2013, in spite of consistent fishing opportunity. Although the decreased gillnet participation seen in 2013 was caused by factors beyond WDFW’s control, such as market conditions, the deviation from expectation and from historic ratios seen in 2013 was large enough to cause concerns with stability, similar to the concerns that originally led the department to provide additional gillnet opportunity in 2003. In response, WDFW made changes to the 2014 schedule that included expanding “market nights” in Areas 10 and 11 to full nights. The department projected that this fishing schedule would result in gillnets catching 25% and purse seines catching 75% during the 2014 season. Analysis of actual catch data in 2014 showed that catch proportions were very close to the predicted outcome, with 24% of the total catch by gillnets and 76% by purse seines.

For the 2015 season, WDFW initially proposed a schedule similar to the 2008-2013 schedule, with the exception of keeping the change of “market nights” to full nights in South Sound as implemented during 2014. Tribes with fishing rights in Hood Canal and South Sound requested in negotiations that WDFW limit purse seining in both areas to one day during week 44 of the season. In previous years, the schedule had provided two days for non-treaty purse seines and two days for non-treaty gillnets in both areas. The tribes expressed the need for additional week days during this peak week of the run for treaty fishers to participate unimpeded by non-treaty effort, and believed that removal of one day of non-treaty purse seine fishing provided the best opportunity. The tribes made

additional requests, such as limiting effort and net size in the fishery, and continuing the two-mile area closure south of the Hood Canal Bridge. While WDFW did not concur with the tribes that two days of purse seine fishing in week 44 impedes their fishery, in order to reach agreement with the Hood Canal tribes, WDFW agreed to eliminate one day of purse seining in week 44 in both areas in exchange for adding one day of purse seining and two days of gillnetting in both areas in week 42. In addition, WDFW agreed to a two-mile closure south of the Hood Canal Bridge for purse seines in week 44 and 45. As part of the overall state-tribal negotiation of Hood Canal fisheries, the tribes also agreed to the opening of recreational fisheries for pink and coho salmon during July and August north of Ayock Point in Hood Canal.

Because 2014 is the only recent year that non-treaty fisheries have occurred prior to week 43, there is little data available to use in projecting catches for the openings in week 42, or the effect of catches occurring in week 42 on subsequent catches in week 43. As seen in 2014, chum abundances and catches are expected to be lower in both areas during week 42 compared to week 43. Effects of the changes to area closures on catch are equally difficult to project, as catch data are collected on a broader Catch Area scale.

For the 2014 season, WDFW used estimates of chum catch per hour by gear type to predict catch proportions of 25% for gillnets and 75% for purse seines. Resulting actual catch proportions in 2014 were very similar to projections, at 24% for gillnets and 76% for purse seines. Thus, for the 2015 schedule WDFW applied the same approach to estimate catch proportions as used in 2014. The 2015 schedule provides virtually the same number of hours per gear group as in 2014, with an expected fishing time for gillnets of 221 hours in South Sound and 170 hours in Hood Canal, and an expected fishing time for purse seines of 83 hours in South Sound and 83 hours Hood Canal (Table 2). These predicted total hours for 2015 are identical to the 2014 scheduled total hours with the exception of two less hours for gillnets in Hood Canal during the last week of the fishery in 2015 (attributed to slight changes in scheduled hours based on daily sunrise and sunset times in relation to daylight hours available for fishing) (Table 2). In summary, WDFW expects the 2015 schedule to result in a similar outcome as the 2014 actual results, with catch proportions at 24% for gillnets and 76% for purse seines. Based on 2015 chum run-size forecasts for South Sound and Hood Canal, and preliminary calculations of expected harvestable numbers at those run-sizes, the total non-treaty share of chum for those areas is estimated at 309,710, or 2.69 million pounds (based on an average weight of 8.7 pounds per fish for 2008-2014). In 2014 gillnet fishers were paid an average of \$0.80 per pound for chum and purse seine fishers were paid \$0.84, with an average price of \$0.83 per pound for all chum harvested by the non-treaty fleets in South Sound and Hood Canal. If the entire non-treaty share, as projected pre-season, is harvested, using the 2014 average price per pound results in an estimated ex-vessel value of \$2.25 million for 2015. It is reasonable to expect that catch and ex-vessel value totals

will be split between gears by proportions similar to those seen in 2008-2013 with the exception of the additional gillnet fishing time with the change of market to full nights and week 42 fishing that were added in 2014 and will continue in 2015. With continuing the additional time scheduled in South Sound for gillnets, WDFW anticipates the 2015 catch proportions of total chum for gillnets and purse seines will be similar to 2014, at 24% and 76%, respectively. This anticipated outcome is very close to the 2008-2013 average (prior to additional gillnet time) of 23% for gillnets and 77% for purse seines and very close to the historic averages of 26% and 74%, respectively (Table 1).

Anticipating a similar catch to 2014 to account for the additional time scheduled for gillnets in South Sound, a catch of 74,330 is expected for gillnets and a catch of 235,380 is expected for purse seines in 2015. Using the 2008-2014 average landed chum weight of 8.7 pounds, these catch estimates equate to an ex-vessel value of \$539,542 or \$2,767 per gillnet license, and an ex-vessel value of \$1,708,551 or \$22,781 per purse seine license (Figure 1 and Figure 2). These values compare to a CPI-adjusted average of \$1,028 per gillnet license and \$6,604 per purse seine license for the period 1973-2002. These value-per-license calculations assume that all license holders participate in these fisheries. If not all license holders participate, the average amount per participant would be higher than these estimates at identical total ex-vessel values. The estimated 2015 ex-vessel values are within the range seen from 2008-2014 and thus the anticipated outcome is similar to recent years.

To conclude, season structures defined by the 2015 Puget Sound commercial salmon rules and regulations will promote the economic well-being and stability of the commercial fishing industry while meeting the constraints imposed by conservation objectives. While catch and ex-vessel value outcomes have not been projected for all species in all fishery management areas, WDFW has estimated likely outcomes for the South Sound and Hood Canal chum salmon fisheries, the two largest Puget Sound commercial salmon fisheries that have generated a great deal of industry attention in recent years. WDFW has routinely stated that consistent annual fishing schedules contribute to industry stability, and that there are factors beyond WDFW's control contributing to instability. Changes to South Sound and Hood Canal chum schedules were implemented in 2014 and again in 2015, in response to negotiations with tribal co-managers and signals of instability during the 2013 season. For 2015 WDFW anticipates catch proportions of total chum for gillnets and purse seines will be similar to 2014, at 24% and 76%, respectively. This expected outcome is slightly above the 2008-2013 average and very close to the historic averages of 26% and 74% for gillnets and purse seines. WDFW concludes that the projected result of the 2015 season is consistent with promoting both short- and long-term stability of the fishing industry (as reflected by comparison to the historical record), is consistent with maintaining the economic well-

being of the industry, and provides sustainable harvest levels by offering opportunity for each gear type within the constraints of run-sizes forecast for 2015.

### **Response to Comments Received During Comment Period for WSR 15-06-068**

*Comments by David Harsila on behalf of Puget Sound Harvesters Association (PSHA) Board of Directors: Purse seine fisheries should be restricted to one day per week in all Puget Sound pink and chum fisheries to maintain sustainable harvest levels.*

The first management priority of the Puget Sound commercial salmon fishery is to manage the fishery in a way that does not impair the resource by achieving conservation objectives for all species and stocks (see objective 1 above and RCW 77.04.012). Another key objective is to manage the fishery to achieve the non-treaty share. The department has not seen indications that efficiency in the purse seine fleet is increasing nor has it seen indications that fishing multiple times in one week negatively impacts the resource. WDFW manages the fishery to meet conservation objectives, and these objectives have been met with purse seines fishing multiple days in one week as they historically have.

*Comment by Bob Kehoe on behalf of Purse Seine Vessel Owners Association (PSVOA): Requests that the department explore a commercial fishery targeting the Dungeness pink run that is forecast to be over one million.*

During the North of Falcon process the department explored the possibility of a proposed commercial fishery for purse seines targeting pink salmon in the waters of Area 6, 6B and 6D, considering the high abundance of pink salmon expected to pass through these waters during their return to the Dungeness River. However several issues impeded such a proposal from moving forward. Specifically, Area 6D is too shallow for purse seine fishing to be implemented efficiently and safely. Additionally, such a fishery could not be implemented in Area 6 because that area is under Fraser Panel Control. Further, WDFW representatives determined that implementing the fishery in Area 6B was not possible because of co-manager concerns (e.g., NOAA, tribal, and state representatives) regarding bycatch encounters with Dungeness Chinook. Concerns regarding encounters with Dungeness Chinook led to the ongoing recreational salmon fishery closures in Area 6B. Thus, based on several factors, WDFW could not support the proposed purse seine commercial pink salmon fishery.

*Comment by Terry Stebens: The department should pursue a commercial beach seine fishery for the large forecast of Dungeness pinks in Area 6D.*

In response to the large forecast of pinks on the Dungeness River, WDFW implemented a beach seine fishery Monday through Friday from July 20 through July 31.

*Comment by Bob Kehoe on behalf of PSVOA: Requests that the department plan for fisheries to harvest the full non-treaty share of Fraser sockeye and pink fisheries by planning for Chinook and coho impacts similar to recent years.*

During the North of Falcon pre-season fishery planning process, WDFW models the Fraser sockeye and pink fisheries in Area 7/7A with the goal of providing the non-treaty commercial fleet with the opportunity to harvest its full share while staying within modeled limits of total allowable coho and Chinook impacts. WDFW incorporates pre-season salmon forecasts in fishery planning models to estimate expected catch of Fraser sockeye and pink salmon as well as estimated impacts to coho and Chinook. The Chinook and coho impacts modeled for the Fraser sockeye and pink fisheries are based on the expected fishing time and effort for the sockeye and pink forecasts.

*Comment by Bob Kehoe on behalf of PSVOA: Requests Area 8A be open to purse seines for pink salmon on August 17, 19, 21, 25 and 27 from 7 a.m. to 7 p.m. daily. Requests Area 8 be open to purse seines on August 18, 20, 25, 27, and 31. PSVOA proposed a similar schedule in 2013 but the tribes requested back to back fishing days instead of spreading the days throughout the week. Heard complaints in-season from tribal fishers that the large number of pinks on the market made it difficult to sell their pinks after the seine fishery. PSVOA requests that purse seine openings are not scheduled back-to-back so they are unlikely to put tribal fishermen at a disadvantage in terms of access to local markets.*

WDFW agrees that we should not schedule back-to-back fishing days for the non-treaty purse seine fleet in areas 8 and 8A based on concerns expressed from tribal fishers. The 2015 Stillaguamish River pink salmon forecast is down compared to that in 2013, and at the 2015 pre-season forecast, WDFW would not expect to have as many days open as in 2013. Thus the fishery will be open one day per week during the same time period to spread catch out throughout the run and provide opportunity to the fleet.

*Comment by Shannon Moore: Requests that the Area 8 fishery begin a week later in week 35 to target the peak of the pink salmon fishery and also to reduce impacts on Chinook.*

In response to comments received from industry on timing of the Area 8 pink fishery, the department structured the fishery to open in week 35 as suggested.

*Comments by Shannon Moore and David Harsila: Areas 8 and 8A pink fisheries should close at 12 midnight.*

The Areas 8 and 8A pink commercial fisheries are intended to be daytime fisheries to lower the risk of encountering marbled murrelets, as the entanglement risk for murrelets has been found to be greater at night. In 2011, additional hours were added to this fishery, per input from industry, to include both changes of light and to extend openings to start one hour before sunrise all day and then close two hours after sunset. The change of light is what the industry said was most

important. The 2015 schedule allows fishing during the two changes of light without substantially increasing fishing in the nighttime hours when the risk of bird entanglements is considered higher.

*Comment by David Harsila on behalf of Puget Sound Harvesters Association (PSHA) Board of Directors: Gillnet pink fisheries in Areas 8, 8A and 10 should be limited to 60 mesh depth to reduce impacts on ESA-listed Chinook.*

During gillnet pink fisheries in Areas 8, 8A, and 10, the department has implemented mesh sizes that reduce the incidence of Chinook catch by not allowing mesh sizes larger than 5 ½ inches to be used. In addition, the requirement to limit gillnet mesh depth to 60 meshes is already in place in Area 8 due to conservation concerns over Skagit Chinook. WDFW appreciates the industry's intention to help with conservation concerns regarding Chinook. If the industry would like to look at as an option to reduce Chinook bycatch in Areas 8A and 10, in the future the department can consider this proposal and have additional discussions with the industry.

*Comment by Bob Kehoe on Behalf of PSVOA: Requests that the department provide a summary of data collected by observers during the Area 10 pink fishery regarding Chinook handling and alternatives to the brailing requirements (currently in place for Area 7 and 7A fisheries).*

The purse seine industry has requested many times that the department initiate a study to evaluate alternatives to the brailing requirement during the Area 10 pink fishery, ever since the brailing requirements were implemented in Area 7/7A. WDFW is willing to work with industry on such a study, but in the past the agency has not been able to gather the data needed due to lack of participation by purse seiners during commercial openings. For example, the agency would need some of the purse seiners in Area 10 to agree to voluntarily brail their catch regardless of the size of the set to compare the condition of Chinook using brailing versus different handling methods. In the past most purse seiners have opted to use a rolling wedge when the fishing is good and did not want to take the time to brail during a commercial opening if the regulations did not require brailing.

*Comment by Bob Kehoe on behalf of PSVOA and Nick Zuanich: Concerned about process for selecting fishers in the Area 10 limited participation pink fishery. Many permit owners who enter into the lottery are not available to fish because they are engaged in fisheries outside Washington. Contacting permit holders who are unavailable is time consuming and makes it difficult for those who are available when they are not notified until the last minute. Would like to discuss ideas on how to streamline and improve the process.*

WDFW is willing to discuss with industry any proposed ideas to streamline and improve the process of selecting fishers for the Area 10 limited participation pink fishery. At the same time the department needs to ensure the process is fair to all license holders.

*Comment by Bob Kehoe on behalf of PSVOA: Would like to expand the number of vessels allowed to fish in the Area 10 pink fishery to more than the 5 allowed in 2013.*

During the 2015 North of Falcon process WDFW considered expanding the number of vessels allowed to fish in the Area 10 pink salmon fishery but ultimately could not do so due to conservation concerns over bycatch impacts to Lake Washington Chinook, the most limiting driver stock during fishery modeling and planning. The summer recreational fishery targeting hatchery-produced marked Chinook in Area 10 was not scheduled in 2015 (first time total closure of this area Chinook since 2006) due to low forecasts and exploitation rate constraints of Lake Washington Chinook as defined in the NOAA-approved Puget Sound Chinook Harvest Management Plan. Given the severe constraints or closures of mid-Puget Sound fisheries in 2015 due to potential impacts on Lake Washington Chinook, the non-treaty commercial fleet is considered fortunate to be allowed 5 purse seines and 5 gillnets to participate in the Area 10 pink fishery.

*Comment by Shannon Moore: Requests that the department continue alternating first starts between gear groups. This concept was designed as a fair management tool to reduce conflict between gear groups and to give both gears a chance at the limited resource.*

WDFW agrees that alternating first starts between the gear groups is a fair management tool that helps reduce conflict between the gear groups. The department would like to continue alternating first starts between gear groups, as both gears are in agreement over this scheduling strategy. In 2015, however, negotiations and agreements with the tribes prevent the department from giving purse seines the first start in week 42. See further explanation under *Response to Comments Received During Comment Period for WSR 15-11-101*.

*Comment by Bob Kehoe on behalf of PSVOA: The non-treaty chum schedule was modified significantly in 2014 in response to objections raised by the Hood Canal tribes. PSVOA's comments on the 2014 supplemental CR-102 for Puget Sound commercial salmon fisheries raised concerns about the significant changes to the schedule and requested WDFW evaluate the outcome of these changes prior to any agreement for 2015. The department should evaluate tribal use and participation in the closure area within two miles of the Hood Canal Bridge and the closure day in week 44 through monitoring and in-season reports from the tribes. If the closure negatively impacts the seine fishery or if the tribes are not taking advantage of the area (in terms of effort or improved catch rates), the department should not agree to a similar Hood Canal schedule in 2015.*

Changes to the non-treaty commercial chum schedule that were initiated in 2014 have already been assessed, as reported above in this document, based on actual performance during the 2014 season. For the 2014 season, WDFW used estimates of chum catch per hour by gear type to predict catch proportions of 25% for gillnets and 75% for purse seines. Resulting actual catch proportions in 2014 were very similar to projections, at 24% for gillnets and 76% for purse seines (Table 1). The 2015 schedule provides virtually the same number of hours per gear group

as in 2014, with an expected fishing time for purse seines of 83 hours in South Sound and 83 hours Hood Canal (Table 2). Thus WDFW expects the 2015 schedule to result in a similar outcome as the 2014 actual results, with catch proportions at 24% for gillnets and 76% for purse seines. As discussed above, a catch of 74,330 is expected for gillnets and a catch of 235,380 is expected for purse seines in 2015. Using the 2008-2014 average landed chum weight of 8.7 pounds, these catch estimates equate to an estimated ex-vessel value of \$539,542 or \$2,767 per gillnet license, and an ex-vessel value of \$1,708,551 or \$22,781 per purse seine license (Figure 1 and Figure 2). These values compare to a CPI-adjusted average of \$1,028 per gillnet license and \$6,604 per purse seine license for the period 1973-2002. Thus, CPI-adjusted ex-vessel value per purse seine license in 2015 is expected to be more than three-fold higher than the 1973-2002 average.

The department is willing to evaluate tribal use and participation in the closure area within two miles of the Hood Canal Bridge and the closure day in week 44 through monitoring and in-season reports from the tribes, for the 2014 season (based on available data from last season) as well as the 2015 season. The department has not yet completed this evaluation but is willing to do so.

*Comment by David Harsila on behalf of Puget Sound Harvesters Association (PSHA) Board of Directors: Gillnet fishing times for chum in Areas 10/11 should be from 5:00 p.m.-9:00 a.m. prior to November 1 and from 4:00 p.m.-8:00 a.m. beginning November 1.*

WDFW has received many comments from the gillnet industry requesting schedule adjustments in the Area 10/11 chum fishery to include two changes of light, including ideas such as this comment proposes for gillnets to be open from 5:00 p.m. to 9:00 a.m. starting in week 42, and then switch to 4:00 p.m. to 8:00 a.m. starting on November 1 (week 45) when Daylight Savings Time ends. The department has implemented this schedule with the exception of one day in week 42 and one day in week 46 when gillnets close at 7:00 a.m., the time that the purse seine fishery opens. To maintain stability in the schedule the department will maintain similar hours as the 2014 schedule. Changes to the fishing schedule, which were implemented in 2014 and will continue in 2015, converted market nights to full nights of fishing, providing 33 hours of additional gillnet fishing opportunity compared to previous years. In addition, two nights of gillnet fishing are provided in week 42, adding 29 more hours over that provided in 2013 and prior recent years. Adjustments to the schedule in 2014 (which will continue in 2015) increased the gillnet proportion of the catch in South Sound and Hood Canal combined to 24% in 2014, compared to 13% in 2013.

*Comment by Kevin Marilley: Requests that the department close all Area 10 gillnet chum fisheries at 9:00 a.m.*

See response in the “Response to Comments Received During Comment Period for WSR 15-11-101” section below.

*Comment by Shannon Moore: Would welcome the department pursuing commercial coho directed fisheries in Hood Canal.*

WDFW discussed the possibility of directed coho fishing in Hood Canal with the tribes to allow the non-treaty fleet to harvest their full share of coho in Hood Canal. Co-managers had raised concerns regarding wild coho stocks in Hood Canal not meeting escapement goals and planned to reduce their fisheries. WDFW decided not to pursue this proposal in 2015 in response to conservation concerns over Hood Canal wild coho.

*Comment by Shannon Moore: Gillnet fishing with 7-inch Chinook mesh should be allowed in September in Hale's pass, when the area is currently scheduled to be closed due to Upper Fraser coho conservation constraints.*

The Hale Pass area has been closed to gillnet fishing for a portion of September in recent years to limit the U.S. impact on Upper Fraser River coho to levels specified in the Pacific Salmon Treaty. If Hale Pass remained open for gillnets in September, coho impacts likely would be reduced by a regulation requiring fishers in the area to use a larger minimum mesh size. However, WDFW does not have data or other technical basis for modeling the effect of such a regulation on mortality of coho. The Hale Pass closure for gillnets will remain in effect from September 1-21.

### **Response to Comments Received During Comment Period for WSR 15-11-101**

*Comment by Shannon Moore: During gillnet fisheries in Area 7B, a minimum 5" mesh should be allowed in week 36, similar to recent years.*

The 2015 commercial fishing regulations for gillnets allow a 5" minimum mesh size during week 36, as in recent years.

*Comment by Bob Kehoe on behalf of PSVOA: Requests that the 8A purse seine pink opening in week 34 be moved from Tuesday to Thursday to be closer to the peak of the pink run.*

Timing of pink runs can be highly variable inter-annually and over a two- to three-week period within a given year. Data do not exist indicating when the peak of the 2015 pink run is expected within such a short time period (i.e., within 2 days). The existing scheduled day of Tuesday in week 34 was negotiated with the tribes during North of Falcon and is expected to provide opportunity throughout the run when we do not know the exact run timing.

*Comment by Shannon Moore: Appreciates that the proposed rules moved the pink fishery back one week in Area 8 to start in week 35. Has heard from other fishers that they would like to start*

*in Area 8A a week later as well because this is better timing for pink salmon and better for passing Chinook through the fishery.*

Timing of pink runs over a small time period is highly variable and historically this fishery has been moved forward or back a week depending on the outcome of recent seasons. With this variability, WDFW opted to spread the fishery over the peak weeks of the run to provide the best opportunity to fish on the peak of the run. The existing schedule of fishing one day per week during weeks 34-36 in Area 8A was negotiated with the tribes during the North of Falcon process. Another concern is the forecast for the Stillaguamish pinks is very low while the forecast for Snohomish pinks is relatively high which limits the amount of days WDFW can plan for this fishery. The department also appreciates the concern for Chinook stocks and takes these concern into account when planning every fishery.

*Comment by Craig Kovacevich: Every license holder should have the opportunity to participate in the Area 10 pink fishery and the lottery system is unfair. The industry has cut back 75% of the effort in numbers of boats and has done more than anyone else to conserve this resource. Requiring individual fishermen to pay the cost of observers is unfair. The department already has years of data on this fishery and doesn't need more. The commercial fishers already pay the state in license fees, fish taxes and business taxes and should not have to pay an additional \$250 per day to participate in the fishery.*

In 2015 the limited participation Area 10 pink fishery will be structured similar to recent pink years, with five boats of each gear type, required use of recovery boxes, mandatory department observers on vessels, and limited soak times (90 minutes) for gillnets. Per state-tribal agreements made during the North of Falcon process, WDFW must manage the Area 10 commercial pink fishery using a limited participation management approach to reduce fishing effort compared to full-fleet fishing and to know exactly how many boats will be on the water, thereby lowering the risk of impacting ESA-listed Puget Sound Chinook as bycatch. Per state-tribal agreements, the fishery must close if 200 Chinook mortalities are reached prior to scheduled completion of the fishery.

Additionally, vessels fishing in the Area 10 commercial pink fishery are required to have an observer on board from the department, as stipulated in state-tribal agreements to establish this fishery during the North of Falcon process. The on-board observer will collect Chinook bycatch data and immediately transfer these data to managers on a real-time basis, allowing accurate in-season management of the fishery relative to the 200 Chinook bycatch ceiling. Alternative methods of estimating Chinook bycatch, such as projections based on modeling, would not be workable because such methods would lead to increased uncertainty and necessitate a more conservative fishery management approach. Due to increasingly limited budgets over the years, the department does not have the funds to pay for observers. Starting in 2009, industry offered to pay for on-board observers during this limited participation Area 10 pink fishery. The only

way the Area 10 commercial pink fishery can be implemented is if industry pays for the observers.

*Comment by Dave Erickson: Requests that the Area 9A gillnet coho fishery mirror the tribal fishery similar to recent years as last year WDFW opened this fishery late.*

WDFW plans to mirror the tribal fishery opening date in Area 9A.

*Comment by Shannon Moore: In Area 7/7A chum, there are good tides for fishing on October 10<sup>th</sup> and the non-treaty fishery should not be delayed.*

During 2015 North of Falcon negotiations with the Area 7/7A tribes, WDFW's initial proposals included a non-treaty opening on Saturday October 10 due to the favorable tides and so the non-treaty fleet could start fishing on the first possible day of the Area 7/7A chum fishery. After final discussions with the co-managers, the best outcome that could be negotiated was to open non-treaty purse seine and gillnet fisheries on Monday October 12, Tuesday October 13, and Thursday October 15. After these initial three days of non-treaty fishing, as described in the pre-season Area 7/7A chum management plan, the co-managers will meet by conference call on Friday, October 16 to exchange and discuss catches through that date. The non-treaty catch will be compared to defined catch thresholds in the plan, with decisions on dates for re-opening purse seine and gillnet fisheries based on those comparisons.

*Comments by Bob Kehoe on behalf of PSVOA, Shannon Moore, Randy Babich, Gregg Lovrovich and Ed Manning: Requests to continue 'Alternating first start' schedule implemented in recent years, which alternates which gear type has the first South Sound and Hood Canal chum opening within each week throughout the season. In 2015 purse seines should have the 'first start'. This has been the policy in recent years and should remain. Neither gear group should have back to back first starts in the schedule. Additional comment by Shannon Moore: If purse seines cannot have first starts in 2015, they should have first starts in 2016 to be fair. Also purse seines typically fish two days per week in week 44 on odd years.*

WDFW agrees that alternating first starts between the gear groups is a fair management tool that helps reduce conflict between the gear groups. The department intends to continue alternating first starts between gear groups each year, as both gears are in agreement over this scheduling strategy. In 2015, however, negotiations and agreements with the tribes prevent the department from giving purse seines the first start in week 42. WDFW has modified the schedule as published in WSR 15-11-101 to give purse seines the first fishing opportunity each week in weeks 43 and 44 and then continue alternating between the gear types for the remainder of the season.

The fishing schedule for South Puget Sound and Hood Canal in recent years has been complex, resulting from a set of compromises developed over several years. Negotiations with the co-managers resulted in the movement of one day of seine fishing from week 44 to the Thursday of

week 42 and complicated the development of a schedule that retained that structure. WDFW published a schedule that was consistent with the outcome of negotiations with the co-managers in WSR 15-11-101, with the understanding that there would be additional industry comment in response to the changes made at the end of North of Falcon.

*Comments by:*

*Kevin Marilley and Kathy Marilley: Gillnet fisheries in Areas 10/11 chum should close at 9:00 a.m. all season, open at 5:00 p.m. in October, and open at 4:00 p.m. in November. To harvest their fair share of chum, gillnets should have two changes of light and need these hours to achieve this.*

*David Harsila on behalf of PSHA and Evan Brady: Oppose gillnet opening time of 5:00 p.m. during Areas 10/11 chum fisheries in November. Requests that WDFW return to the schedule as proposed in the initial CR-102 and open the fishery at 4:00 p.m. in November. 5:00 p.m. is after sunset during this time period and this is the most important time of day for the gillnet fleet.*

*Shannon Moore: Areas 10/11 gillnet chum fisheries should close at 9:00 a.m. unless followed by a purse seine opening (see additional comments regarding closing times when purse seines fish below).*

WDFW has received many comments from the gillnet industry requesting two changes of light during the Area 10/11 chum fishery. The department has structured the fishing schedule as a nighttime gillnet fishery based on sunset and sunrise times, already allowing gillnet fishing to be open during at least one hour of light before the scheduled time the fishery closes. The only exception is one day in week 42 and one day in week 46 when gillnets close at 7:00 a.m., the time that the purse seine fishery opens. To maintain stability in the schedule the department will maintain similar hours as the 2014 schedule. Changes to the fishing schedule, which were implemented in 2014 and will continue in 2015, converted market nights to full nights of fishing, providing 33 hours of additional gillnet fishing opportunity compared to previous years. In addition, two nights of gillnet fishing are provided in week 42, adding 29 more hours over that provided in 2013 and prior recent years. Adjustments to the schedule in 2014 (which will continue in 2015) increased the gillnet proportion of the catch in South Sound and Hood Canal combined to 24% in 2014, compared to 13% in 2013.

*Comments by Kevin Marilley, Kathy Marilley, and Shannon Moore: Requests to extend gillnet fishing hours in South Sound to 8:00 a.m. on mornings when purse seine fishing begins at 7:00 a.m..*

Several individuals requested that gillnet fishing hours last until 8:00 a.m. on mornings when purse seine fishing opens at 7:00 a.m., and pointed to agreements in recent years that allowed one hour of overlap with fisheries for both gear types open. Gillnet representatives claimed that closing at 7:00 a.m. is unprecedented, and will greatly reduce their catch. Prior to 2009, gillnet fisheries closed at 7:00 a.m.. In 2009, industry representatives agreed to a schedule with this one

hour overlap, along with alternating first starts, and scheduling of one gillnet full night and one 'market' night in weeks when there was only one purse seine opening. Purse seine representatives opposed continued allowance of this overlap, given increases in gillnet opportunity from previous years' agreements.

Gillnet openings will end at 7:00 a.m. on the two mornings of the season when their opening immediately precedes a purse seine opening, one in week 42 and one in week 46. Changes to the fishing schedule that were implemented in 2014 and continued in 2015 converted market nights to full nights of fishing, providing 33 hours of additional gillnet fishing opportunity compared to previous years. In addition, two nights of gillnet fishing are provided in week 42, adding 29 more hours over that provided in recent years. WDFW does not conclude that closing the gillnet fishery at 7:00 a.m. on two mornings of the season will unfairly handicap the gillnet fleet, given the fleet will have over a 60-hour increase in opportunity through new openings and extension of market night openings.

*Comment by Pete Knutson on behalf of PSHA requesting the department use the same data sheets for gillnets and purse seines or else the gillnet fleet will not be willing to take observers onboard their vessels.*

While WDFW appreciates the comments regarding the observer data forms, WDFW's use of a particular data form is not relevant to the rules regarding the Puget Sound commercial salmon seasons. It is not practical to use the same forms for both gill nets and purse seines. The agency's data forms are designed to ensure that the necessary information from each gear is collected. While there are several similar data fields between the gillnet and purse seine forms (e.g., banner information such as date, launch and return time, area, weather, observer name, vessel name, as well as time of net deployment, number of retained catch by species, number of by-catch by species, notes/comments section, etc.), some variations in the structure of the two forms are necessary due to inherent differences in how the gears fish. Gillnets are a passive gear, and the intent is to set a net that is invisible to the fish in the water and wait for fish to become entangled in the net. Whereas, purse seines are an active gear, meaning that the purse seine operator sets their visible net in the water, and with a skiff at one end and the main vessel at the other, maneuvers the net to encircle the fish. These key differences in gear functionality correspond to regulations unique to each gear type and necessitate some differences between the two forms. For example, samplers collect mesh size information while aboard gillnet vessels because gillnets have a minimum mesh size requirement that changes throughout the season, depending on the permissible target species per management week. In contrast, the minimum mesh size of purse seines remains constant throughout the season, regardless of target species, and therefore the mesh size field is not included on the purse seine data form. As another example, purse seine nets remain open for an average of 20-30 minutes per set, and once the net closes, even though the net may still be in the water, the purse seine is no longer able to catch fish. Thus the time fished per set can be relatively fixed for purse seines. In contrast, gillnets

catch salmon during any time a portion of the net is in the water, which can range from 45 minutes to over 3 hours, depending on the fishery. Therefore, to obtain best estimates of fishing effort from gillnet vessels, observers need to record the start and end time that the gillnet soaks in the water.

Regarding the recording of bycatch on the purse seine and gillnet data forms, WDFW samplers are trained to record any and all bycatch observed (by species, number, and condition), regardless of which form they are using. Observers are provided space on both the purse seine and gillnet forms to record bycatch information for fish species as well as non-fish species such as birds and marine mammals. The purse seine form does not have a dedicated space to record condition of fish caught, unlike the gillnet forms. Nevertheless, when using the purse seine form observers are trained to record the number and condition of bycatch in the labeled spaces for fish species such as Coho, Chinook adults, Chinook sub-adults ( $\leq 22$  inches), Steelhead, and Dogfish, and there is an additional larger space titled “Other Bycatch” in which samplers must record the number and condition of all other bycatch species, including seabirds and marine mammals. Furthermore, if the observer needs more space to record additional bycatch or other information, they will start another data sheet or write on the back of their existing form. We do not have enough space on each data form to include all possible species that may be encountered, as this would be impractical (considering that many species are very rarely encountered). Thus we rely on trained scientific observers to record the species and condition of bycatch observed in the space provided.

It is WDFW’s responsibility as manager of the fish resources of Washington State to monitor commercial salmon fisheries in Puget Sound, and we are legally required to do so via our onboard observer sampling program (RCW 77.12.071, Sampling of fish, wildlife, or shellfish by department employees). WDFW would rather work with industry to increase familiarity and comfort with our data collection protocols, and we welcome your suggestions and input. As you know, in the past we have worked with the gillnet industry to collect data through our onboard observer program, with the most robust sampling occurring during the early 1990s in concurrence with the ESA-listing of marbled murrelets. During that time WDFW worked productively with industry to design onboard observer sampling methods that would enable accurate data collection. These observer data were incorporated in the USFWS Biological Opinion (*USFWS Biological Opinion on proposed all-citizen Puget Sound Area commercial and recreational salmon fisheries*, 2001), which concluded that mortality caused by gillnet fisheries appeared to be having a “relatively insignificant adverse effect” on the marbled murrelet population. In the interest of continuing this cooperative working relationship with industry, and considering your suggestions about our observer forms, we plan to make some adjustments to the forms to make them more similar while also facilitating accurate and efficient data collection from both gear types. For example, we plan to add lines to the back of the purse seine form to record by-catch of fish, bird, and marine mammal species, similar to the gillnet form.

*Additional comment by Craig Kovacevich regarding Fraser River fisheries: In Area 7/7A during 2014, commercial fishermen did not get enough time late in the season when the fish were actually being caught. In years where there are plenty of fish but catch numbers are low, they need more time on the water to have a fair opportunity to catch those fish.*

This comment appears to be directed at management of the sockeye fishery managed by the Fraser River Panel of the Pacific Salmon Commission. Fishery openings in Areas 7/7A are set by the Fraser River Panel, which has regulatory control of these areas during sockeye and pink migrations. WDFW does not have the legal authority to open fisheries without agreement of the Fraser River Panel during this period. Fishery openings during the Panel's control of these areas are made legal by publication of openings in the Federal Register by the National Marine Fisheries Service, not by the rule-making process covered by this CES. While this comment is not relevant to the regulations being evaluated in this CES, WDFW representatives to the Fraser River Panel will continue to work to maximize fishing opportunity for non-treaty fishers during Panel-controlled fisheries, while working within the constraints of the Pacific Salmon Treaty and State-Tribal co-management.

## **Conclusion**

WDFW has considered all the facts and circumstances surrounding the 2015 Puget Sound Commercial salmon season schedule. 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 2015 Puget Sound commercial salmon fishing regulations comply with its statutory mandate and are consistent with WDFW's management objectives for these fisheries.

Table 1. Chum catch, licenses and economic values for gillnet and purse seine, in the combined South Sound and Hood Canal fisheries, 1973-2014.

Year	CPI	Combined Gears		Combined Gears Ex-vessel		GN		GN Ex-vessel		GN Ex-vessel		Purse Seine Licenses	PS		PS Ex-Vessel		PS Ex-vessel Value CPI Adjusted Per License
		Catch	Value	Catch	Value	Catch	Value	Value	Value	Value	Value		Value	Value	Value	Value	
1973	5.33	93,264	\$734,961	\$3,918,735	1,303	59,793	0.64	\$472,419	\$2,518,889	\$1,933	320	33,471	0.36	\$262,542	\$1,399,846	\$4,375	
1974	4.80	15,353	\$78,322	\$376,097	1,990	2,023	0.13	\$10,399	\$49,937	\$25	137	13,330	0.87	\$67,923	\$326,160	\$2,381	
1975	4.40	6,534	\$49,699	\$218,689	1,659	3,017	0.46	\$20,410	\$89,810	\$54	385	3,517	0.54	\$29,289	\$128,879	\$335	
1976	4.16	119,743	\$1,107,754	\$4,608,881	1,536	65,385	0.55	\$644,114	\$2,679,877	\$1,745	376	54,358	0.45	\$463,640	\$1,929,004	\$5,130	
1977	3.91	146,509	\$1,471,793	\$5,749,611	1,517	114,444	0.78	\$1,189,141	\$4,645,419	\$3,062	393	32,065	0.22	\$282,653	\$1,104,192	\$2,810	
1978	3.63	291,755	\$3,110,616	\$11,294,397	1,532	166,416	0.57	\$2,132,816	\$7,744,083	\$5,055	402	125,339	0.43	\$977,800	\$3,550,314	\$8,832	
1979	3.26	13,063	\$87,840	\$286,431	1,501	6,901	0.53	\$54,040	\$176,214	\$117	402	6,162	0.47	\$33,800	\$110,217	\$274	
1980	2.87	192,116	\$1,029,828	\$2,958,705	1,487	78,977	0.41	\$513,517	\$1,475,338	\$992	398	113,139	0.59	\$516,311	\$1,483,366	\$3,727	
1981	2.60	123,688	\$1,113,134	\$2,898,997	1,450	63,428	0.51	\$587,612	\$1,530,350	\$1,055.41	396	60,260	0.49	\$525,522	\$1,368,647	\$3,456	
1982	2.45	200,191	\$1,144,347	\$2,807,339	1,420	70,801	0.35	\$425,611	\$1,044,119	\$735	390	129,390	0.65	\$718,736	\$1,763,220	\$4,521	
1983	2.38	128,969	\$1,039,556	\$2,470,888	1,374	46,097	0.36	\$376,604	\$895,137	\$651	383	82,872	0.64	\$662,953	\$1,575,751	\$4,114	
1984	2.28	266,228	\$2,016,143	\$4,593,780	1,259	94,041	0.35	\$708,422	\$1,614,138	\$1,282	367	172,187	0.65	\$1,307,722	\$2,979,642	\$8,119	
1985	2.20	184,764	\$935,630	\$2,058,524	1,196	53,811	0.29	\$335,146	\$737,372	\$617	349	130,953	0.71	\$600,483	\$1,321,152	\$3,786	
1986	2.16	276,814	\$1,141,165	\$2,464,916	1,200	71,595	0.26	\$301,284	\$650,774	\$542	345	205,219	0.74	\$839,881	\$1,814,142	\$5,258	
1987	2.08	466,208	\$6,608,284	\$13,771,292	1,148	105,651	0.23	\$1,760,755	\$3,669,314	\$3,196	341	360,557	0.77	\$4,847,529	\$10,101,977	\$29,625	
1988	2.00	471,548	\$3,651,358	\$7,306,913	1,142	153,758	0.33	\$1,223,330	\$2,448,066	\$2,144	342	317,790	0.67	\$2,428,028	\$4,858,847	\$14,207	
1989	1.91	274,858	\$2,430,410	\$4,640,045	1,152	95,913	0.35	\$828,325	\$1,581,405	\$1,373	341	178,945	0.65	\$1,602,086	\$3,058,640	\$8,970	
1990	1.81	261,821	\$2,270,850	\$4,113,175	1,148	89,200	0.34	\$776,463	\$1,406,401	\$1,225	337	172,621	0.66	\$1,494,388	\$2,706,774	\$8,032	
1991	1.74	307,908	\$1,481,976	\$2,575,895	1,132	77,835	0.25	\$423,123	\$735,451	\$650	330	230,073	0.75	\$1,058,853	\$1,840,445	\$5,577	
1992	1.69	529,520	\$2,461,390	\$4,153,241	1,118	173,808	0.33	\$833,282	\$1,406,042	\$1,258	327	355,712	0.67	\$1,628,109	\$2,747,198	\$8,401	
1993	1.64	402,089	\$2,316,092	\$3,794,480	1,083	125,238	0.31	\$757,658	\$1,241,280	\$1,146	318	276,851	0.69	\$1,558,434	\$2,553,200	\$8,029	
1994	1.60	386,967	\$1,104,806	\$1,764,827	1,042	64,465	0.17	\$181,819	\$290,439	\$279	306	322,502	0.83	\$922,987	\$1,474,388	\$4,818	
1995	1.55	288,538	\$809,434	\$1,257,363	966	55,178	0.19	\$150,667	\$234,044	\$242	297	233,360	0.81	\$658,767	\$1,023,319	\$3,446	
1996	1.51	490,370	\$786,358	\$1,186,484	887	74,319	0.15	\$114,229	\$172,353	\$194	292	416,051	0.85	\$672,129	\$1,014,130	\$3,473	
1997	1.47	209,837	\$856,313	\$1,263,053	872	19,488	0.09	\$74,057	\$109,234	\$125	290	190,349	0.91	\$782,255	\$1,153,820	\$3,979	
1998	1.45	414,133	\$682,627	\$991,425	820	52,035	0.13	\$86,581	\$125,748	\$153	276	362,098	0.87	\$596,046	\$865,678	\$3,137	
1999	1.42	90,471	\$317,261	\$450,824	682	18,782	0.21	\$63,843	\$90,720	\$133	262	71,689	0.79	\$253,418	\$360,103	\$1,374	
2000	1.37	123,932	\$627,545	\$862,732	679	19,329	0.16	\$92,279	\$126,863	\$187	262	104,603	0.84	\$535,266	\$735,869	\$2,809	
2001	1.34	679,244	\$1,490,595	\$1,992,533	359	48,505	0.07	\$100,715	\$134,630	\$375	122	630,739	0.93	\$1,389,880	\$1,857,903	\$15,229	
2002	1.32	788,468	\$1,317,428	\$1,733,644	215	29,534	0.04	\$48,076	\$63,265	\$294	84	758,934	0.96	\$1,269,351	\$1,670,379	\$19,885	
2003	1.29	713,597	\$1,339,056	\$1,722,840	208	59,043	0.08	\$104,987	\$135,078	\$649	83	654,554	0.92	\$1,234,068	\$1,587,763	\$19,130	
2004	1.25	1,047,080	\$2,718,389	\$3,406,779	204	113,781	0.11	\$324,818	\$407,073	\$1,995	81	933,299	0.89	\$2,393,572	\$2,999,707	\$37,033	
2005	1.21	318,802	\$1,327,792	\$1,609,505	202	94,944	0.30	\$386,887	\$468,972	\$2,322	81	223,858	0.70	\$940,905	\$1,140,533	\$14,081	
2006	1.17	695,849	\$3,748,099	\$4,401,339	198	116,160	0.17	\$590,702	\$693,653	\$3,503	75	579,689	0.83	\$3,157,397	\$3,707,686	\$49,436	
2007	1.14	598,376	\$4,719,458	\$5,388,516	198	169,933	0.28	\$1,324,268	\$1,512,004	\$7,636	75	428,443	0.72	\$3,395,191	\$3,876,512	\$51,687	
2008	1.10	375,857	\$2,937,003	\$3,229,376	196	92,454	0.25	\$721,898	\$793,761	\$4,050	75	283,403	0.75	\$2,215,105	\$2,435,615	\$32,475	
2009	1.10	278,064	\$1,780,429	\$1,964,657	195	78,693	0.28	\$517,907	\$571,497	\$2,931	75	199,371	0.72	\$1,262,522	\$1,393,160	\$18,575	
2010	1.09	404,366	\$3,429,154	\$3,722,916	195	98,057	0.24	\$833,760	\$905,185	\$4,642	75	306,309	0.76	\$2,595,393	\$2,817,730	\$37,570	
2011	1.05	431,128	\$4,311,188	\$4,537,290	195	88,405	0.21	\$943,899	\$993,402	\$5,094	75	342,723	0.79	\$3,367,289	\$3,543,887.58	\$47,252	
2012	1.03	538,130	\$3,678,425	\$3,792,850	195	131,532	0.24	\$862,026	\$888,841	\$4,558	75	406,598	0.76	\$2,816,399	\$2,904,009	\$38,720	
2013	1.02	874,442	\$4,915,441	\$4,995,179	195	115,008	0.13	\$633,136	\$643,407	\$3,300	75	759,434	0.87	\$4,282,305	\$4,351,772	\$58,024	
2014	1.00	468,939	\$3,674,057	\$3,674,057	195	111,225	0.24	\$841,129	\$841,129	\$4,313	75	357,714	0.76	\$2,832,928	\$2,832,928	\$37,772	
1973-2002 Avg.		274,830	\$1,475,784	\$3,285,464	1,162	69,992	0.32	\$509,558	\$1,322,890	\$1,028	319	204,838	0.68	\$966,226	\$1,962,573	\$6,604	
2003-2014 Avg.		562,053	\$3,214,874	\$3,537,109	198	105,770	0.21	\$673,785	\$737,833	\$3,750	77	456,283	0.79	\$2,541,089	\$2,799,275	\$36,813	
2008-2013 avg.		483,665	\$3,508,607	\$3,707,044	195	100,692	0.23	\$752,104	\$799,349	\$4,096	75	382,973	0.77	\$2,756,502	\$2,907,696	\$38,769	

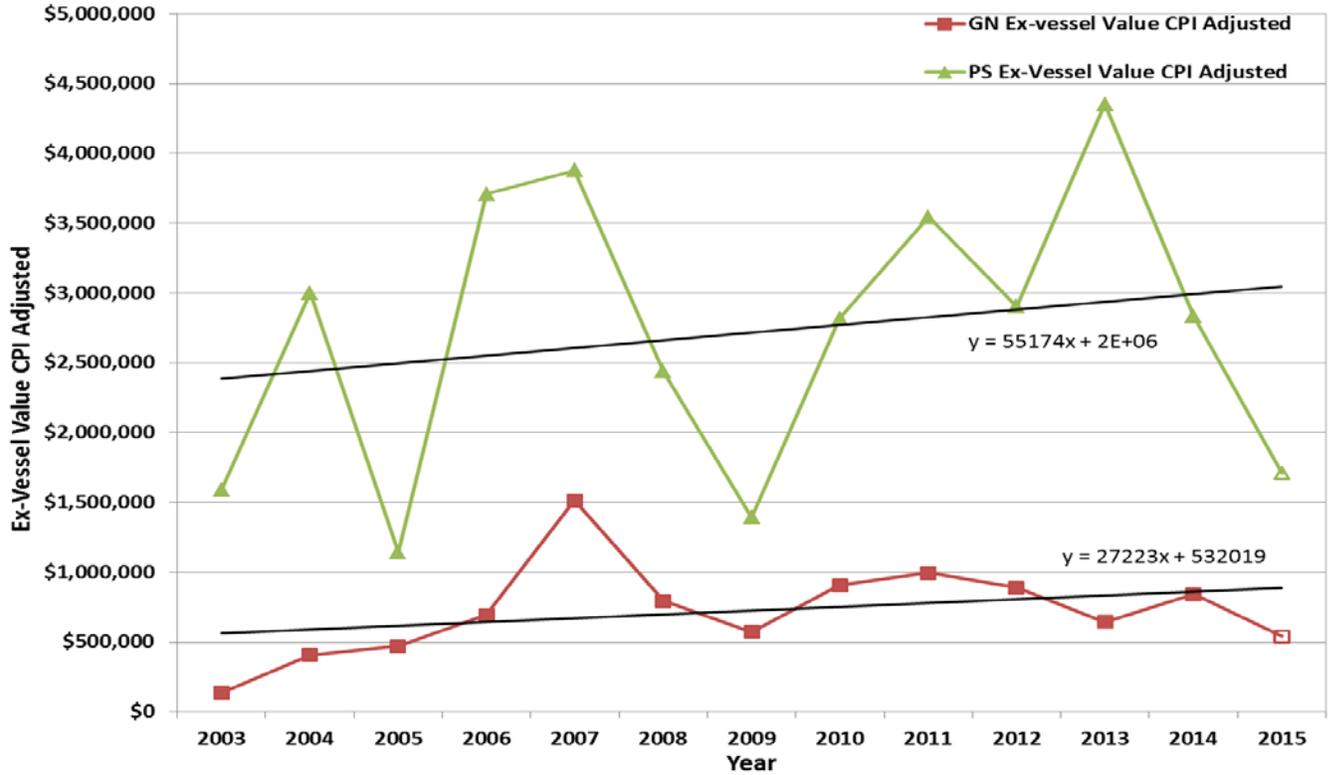


Figure 1. Trends in annual, CPI-adjusted ex-vessel value of gillnet and purse seine chum salmon landings for South Sound (Areas 10 and 11) and Hood Canal (Areas 12, 12B and 12C), 2003 – 2014, and projected value for 2015.

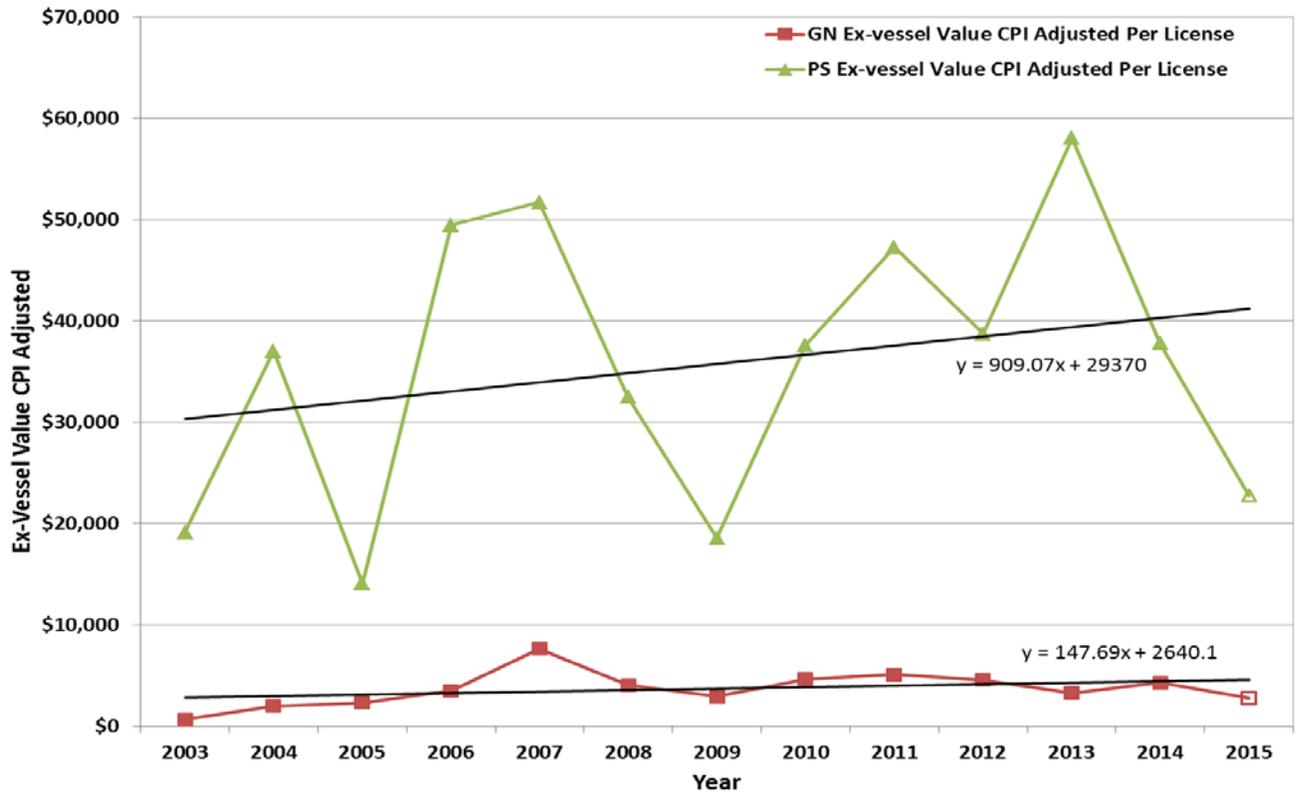


Figure 2. Trends in annual, CPI-adjusted ex-vessel value per license for gillnet and purse seine chum salmon landings for South Sound (Areas 10 and 11) and Hood Canal (Areas 12, 12B, and 12C), 2003– 2014, and projected value for 2015.

Table 2. Comparison of pre-season scheduled hours in 2014 and 2015 by gear type in Hood Canal and South Puget Sound chum fisheries.

Year	Gillnet		Purse Seine	
	South Sound	Hood Canal	South Sound	Hood Canal
2015	221	170	83	83
2014	221	172	83	83