FISH AND WILDLIFE COMMISSION
POLICY DECISION

POLICY TITLE: 2019-2023 North of Falcon **POLICY NUMBER: C-3608**

Supersedes: C-3608, 2017-2018

Effective Date: January 11, 2019
Termination Date: December 31, 2023

See Also: C-3001 C-3622
C-3620
C-3621

Approved by: _____ Chair
Washington Fish and Wildlife Commission, January 11, 2019

North of Falcon Policy

This Policy will guide Department staff in considering conservation, allocation, in-season management, and monitoring issues associated with the annual salmon fishery planning process known as "North of Falcon." When considering management issues, Department staff will ensure that decisions are made consistent with: the Department's statutory authority; *U.S. v. Washington; U.S. v. Oregon;* the Endangered Species Act; the Puget Sound Chinook Harvest Management Plan; the Pacific Salmon Treaty; the Pacific Fishery Management Council's Framework Salmon Management Plan; pertinent state/tribal agreements; and the applicable Fish and Wildlife Commission policies.

The Department will implement this Policy consistent with the purposes and intended outcomes described in the 21st Century Salmon and Steelhead Planning Project including:

- Salmon and steelhead will be managed to recovery and to assure sustainability in a way that is science-based, well-documented, transparent, well-communicated, and accountable.

- Fisheries will be managed to meet or exceed ESA, recovery, and conservation goals; and harvest management measures will protect and promote the long-term well-being of the commercial and recreational fisheries.

Fishery Management

General

- On a statewide basis, fishing opportunities will be provided when they can be directed at healthy wild and hatchery stocks.
- Selective fishing methods and gears that maximize fishing opportunity and minimize impacts on depressed stocks will be utilized to the fullest extent possible taking into consideration legal constraints on implementation and budgetary limits associated with required sampling, monitoring and enforcement programs.
- When assessed from a statewide perspective, fishing directed at chinook, coho, pink, sockeye, or chum salmon will not be exclusively reserved for either sport or commercial users.
- When managing sport fisheries, meaningful recreational fishing opportunities will be distributed equitably across fishing areas and reflect the diverse interests of fishers, including retention and catch and release fisheries.
- 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.

Puget Sound

- The Puget Sound harvest management objectives for chinook and coho stocks, in priority order, are to: (1) provide meaningful recreational fishing opportunities; and (2) identify and provide opportunities for commercial harvest. When managing sport fisheries in this region, recreational opportunities will be distributed equitably across fishing areas, considering factors such as: the uniqueness of each area; the availability of opportunities for various species in each area throughout the season; the desire to provide high levels of total recreational opportunity; and the biological impacts.
- Puget Sound-origin sockeye will be prioritized for recreational fishing opportunity
- For fisheries directed at Fraser River-origin chum, pink, and sockeye stocks, the majority of harvest will be provided to the commercial fisheries.
- For fisheries directed at harvestable Puget Sound-origin chum stocks, the majority of harvest will be provided to the commercial fisheries.
- For fisheries directed at harvestable Puget Sound-origin pink salmon, seasons will be established that provide meaningful opportunities for both recreational and commercial fisheries while minimizing gear and other fishery conflicts.

Grays Harbor

- Grays Harbor will be managed consistent with the Commission's Grays Harbor Policy (POL C-3621), including any modifications made to the policy, and any guidance or clarifications adopted by the Commission following notice and opportunity for review and comment.

Willapa Bay

- Willapa Bay will be managed consistent with the Commission's Willapa Bay Salmon Management Policy (POL C-3622), including any modifications made to the policy, and any guidance or clarifications adopted by the Commission following notice and opportunity for review and comment.

Columbia River

- The Fish and Wildlife Commission's policy on Columbia River Salmon Management (POL C-3620), including any modifications made to the policy, and any guidance or clarifications adopted by the Commission following notice and opportunity for review and comment, shall guide pre-season and in-season planning of Columbia River salmon fisheries. Columbia River harvest management regimes shall be developed in cooperation with Oregon Department of Fish and Wildlife representatives.

Pacific Ocean

- Pacific Ocean harvest shall be managed consistent with the Pacific Fishery Management Council's Framework Salmon Management Plan and the National Standards that provide for fair and equitable allocation of fishing privileges among various fishers.

In-Season Management

- When in-season management actions are taken, they will be implemented in a manner that is consistent with pre-season conservation and harvest management objectives, and the fishery intent developed through the North of Falcon process.
- Prior to use, in-season updates of stock abundance affecting Puget Sound fisheries will be evaluated for technical merit and potential to improve achievement of conservation and allocation objectives.
    - When possible, in-season updates should be documented within the co-manager's annual List of Agreed Fisheries or as part of regional comanager memoranda of understanding.
    - Descriptions of potential modifications to fisheries that are contingent on in-season updates should be included in the List of Agreed Fisheries.

Monitoring and Sampling

- Monitoring, sampling and enforcement programs will be provided to account for species and population impacts of all fisheries.
- Fishery participants will be required to comply with fishery monitoring and evaluation programs designed to account for species and population impacts.

Enforcement and Compliance

- Enforcement strategies will be developed and staffing will be provided to promote compliance with state regulations.
- WDFW Enforcement will seek to establish and maintain effective coordination with Tribal enforcement to enhance the sharing of information.

Gear and Fishery Conflicts

- Recreational and commercial fisheries shall be structured to minimize gear and other fishery conflicts. Unanticipated fishery interaction issues identified in-season, including conflicts with fisheries directed at other species, shall be resolved by involving the appropriate sport and commercial representatives in a dispute resolution process managed by Department staff.

Incidental Mortalities

- The Department will manage fisheries to minimize mortalities on non-target species (e.g. rockfish, sea birds, etc.). Management regimes will include strategies to limit seabird mortalities consistent with the federal Migratory Bird Treaty Act.

Communications

- The Department shall strive to make ongoing improvements for effective public involvement during the North of Falcon planning process and annual salmon fishery implementation, incorporating the following intents:

    - North of Falcon participants will be included as observers during appropriate state/tribal discussions of fishery issues.
    - All decisions made during the North of Falcon process will be recorded in writing.
    - A variety of tools will be used to effectively communicate with the public, to receive input on pre-season planning or in-season fishery issues, and to make available the record of decisions. Such tools will include: recreational and commercial advisory groups; public workshops to address key issues; the WDFW North of Falcon Web site; and in-season tele-conferences.
    - The Department will increase transparency by consulting with stakeholders throughout the pre-season planning process and prior to making major decisions with the co-managers.

Other Species

- The Department will continue to consider effects of salmon fisheries on Southern Resident Killer Whales (SRKW) when setting fishing seasons. The Department will work with the National Marine Fisheries Service to refine tools to assess the effects of fisheries on available prey for SRKW, and will plan fisheries to ensure that they provide proper protection to SRKW from reduction to prey availability or from fishery vessel traffic, consistent with the Endangered Species Act.
- The Fish and Wildlife Commission's policy on Lower Columbia Sturgeon Management (POL-C3001) shall guide pre-season and in-season planning of Columbia River and coastal sturgeon fisheries and related incidental impacts.

Delegation of Authority

The Fish and Wildlife Commission delegates the authority to the Director to make harvest agreements with Northwest treaty tribes and other governmental agencies, and adopt permanent and emergency regulations resulting from the agreements made during the annual North of Falcon process. Further, the Department has the authority to adopt regulations for the protection, preservation and management of species other than salmon that are promulgated through the North of Falcon process, to the extent that such regulations are necessary to implement court orders, comanager agreements or Columbia River Compact agreements, to achieve Washington management objectives, or to comply with Endangered Species Act requirements.

2019 Salmon Season Setting
NORTH of FALCON

Washington Department of FISH and WILDLIFE

What is North of Falcon?

- Each year (February-April) state, federal, and tribal fishery managers plan recreational and commercial salmon fisheries for the state and tribes.
- Pacific Fishery Management Council (PFMC) establishes ocean salmon seasons from three to 200 miles off the Pacific Coast.
- "North of Falcon" (NOF) process involves a series of public and state/tribal meetings to come to an agreement for the upcoming year's salmon fisheries.
- The name refers to Cape Falcon in northern Oregon, which marks the southern border of active management for Washington salmon stocks, which include Columbia River, Puget Sound, and Washington coastal stocks.

What Governmental Policies affect the NOF process?

- The Boldt Decision (1974): upheld by the Supreme Court and based upon treaties with the Puget Sound Treaty tribes to allow the state and tribes to manage their own fisheries (co-managers) and share half of the harvestable salmon.
- Endangered Species Act (ESA): NOAA Fisheries ensures the planned fisheries not pose jeopardy to ESA-listed species such as Puget Sound Chinook (1999) or Southern resident orcas (2005).
- Pacific Salmon Treaty (U.S./Canada): helps ensure enough fish destined for the southern U.S. are allowed to pass through Canadian waters to allow fishing opportunity and enough fish to reach the spawning grounds (and vice versa for fish returning to Canada).
- Conservation objectives are agreed to by the co-managers to ensure enough fish get past fisheries and reach rivers to spawn and recover the population.
- Commission policy: The Washington Fish and Wildlife Commission sets policy for WDFW. In 2019, the commission updated its NOF policy, directing fishery managers to consider the dietary needs of Southern resident orcas when proposing fisheries.

What are the steps?

- Estimate the forecasted returns of individual hatchery and wild stocks of salmon , then determine if enough fish are returning to allow for harvest.
- Predict harvest for tribal and state recreational and commercial fisheries for Oregon and Washington; include the northern fisheries (Alaska and Canada) too.
- Analyze forecast and harvest scenarios using the Fisheries Regulations Assessment Model (FRAM) to determine whether proposed fishing plans meet management objectives (e.g., ESA impact limits).
- Negotiate with the recreational anglers, commercial fishers, and tribes to allow a fair sharing of catch and ensure conservation objectives are met.
- Combine all Puget Sound and ocean fisheries into the "Agreed-to Fisheries Document" that the recreational (sport) fishing rules pamphlet is based upon.

Southern Resident Killer Whales

There is significant concern regarding the endangered Southern Resident Killer Whale (SRKW) population. While there are several threats affecting their recovery, the decline of Chinook is a major contributing factor.

In recent evaluations of proposed fisheries in Puget Sound, the National Marine Fisheries Service (NMFS) noted that there are significantly more Chinook available in Puget Sound than what is needed to sustain the SRKW population now. NMFS also indicated that eliminating Puget Sound fisheries would likely result in a less than one percent increase in Chinook abundance that would benefit SRKWs. Other analyses have shown that ocean salmon and Columbia River fisheries have similar non-significant impacts on SRKW prey abundance.

In 2019, the Washington Department of Fish and Wildlife (WDFW) and NMFS will identify conditions when increased prey is essential for SRKWs, and will help guide fishery actions that will increase available Chinook in critical times and areas to contribute to orca recovery.

Options for public testimony

- The public is welcome to attend several planning meetings throughout the NOF process. These are opportunities for department staff to engage with constituents on their ideas for salmon fishing seasons and explain our conservation challenges.

  The most current Public Meeting Schedule can be found at: https://wdfw.wa.gov/fishing/northfalcon/.

- As the public engagement meetings get underway, there will also be an online comment option available to the public at: https://wdfw.wa.gov/fishing/northfalcon/

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Glossary

AEQ: Adult equivalents (number of wild salmon that would have returned to the river if not killed in fisheries)

CERC: Critical exploitation rate ceiling (maximum fishery impacts allowed when a stock is in critically low abundance, see Escapement LAT)

Constraining stock: Wild fish for a particular river that is estimated to be the most over-impacted that will limit (or reduce) fishing opportunities

CWT: Coded-wire tag (placed in nose of juvenile salmon and recovered from adults that return to estimate where the fish is from)

Encounters: Number of fish harvested plus released fish

ESA: Endangered Species Act

ERC: Exploitation rate ceiling (maximum allowable rate of returning wild salmon that can be killed in fisheries without compromising stock recovery)

Escapement LAT: Escapement Low Abundance Threshold (minimum number of naturally spawning salmon needed to recover that stock; if below then stock is in critical status)

Exploitation Rate (ER): Percent of total mortality (i.e., in fisheries and on spawning grounds) that occurs in fisheries, including landed and non-landed fishery mortality components

Forecast: Estimated number of adult salmon that will return

FRAM: Fisheries Regulation Assessment Model (used to combine forecasts and harvest of fisheries to estimate number of wild fish that will return to the rivers to spawn)

LCN: Lower Columbia Natural Tule Chinook (sometimes called LCR, Lower Columbia River, tule)

Release Mortality Rate: Percent of fish released that die due to the encounter with handling

MSF: Mark-selective fisheries (hatchery targeted fishery where wild fish are released)

Escapement: Number of wild salmon returning to the spawning grounds for a particular stock

NOF: North of Falcon (process to establish salmon seasons for state and tribal fisheries)

NT: Non-treaty fisheries (sport and commercial including net and troll)

SUS: Southern United States (WA, OR, CA)

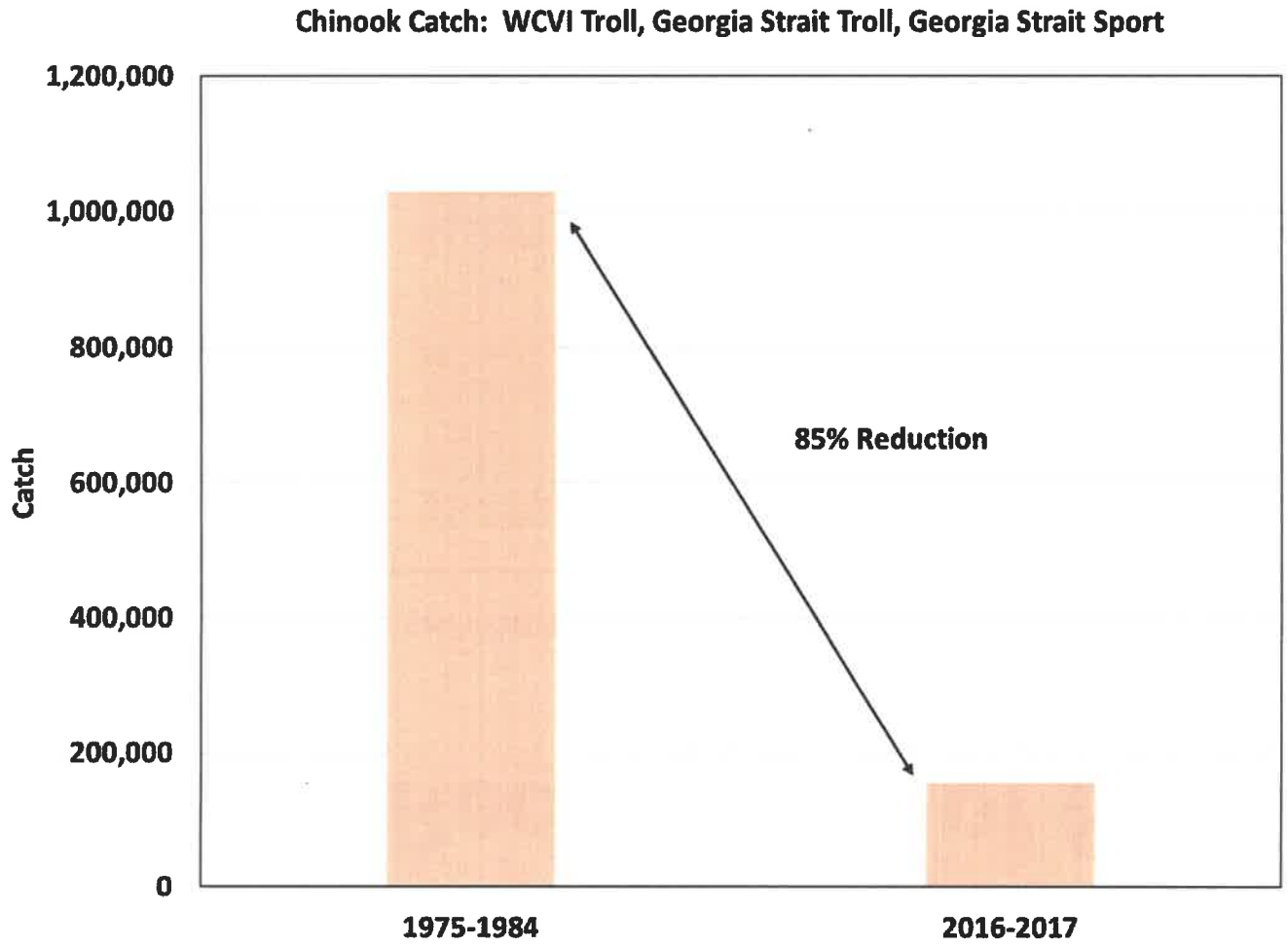
SUS PT ER: Southern U.S. (WA, OR, CA) pre-terminal exploitation rate (caught in marine waters within the southern U.S.)

T: Treaty fisheries (tribal ceremonial/subsistence and commercial: net, freshwater net, troll (tr))

Total ER: Total exploitation rate for Alaska, Canada, and southern U.S.

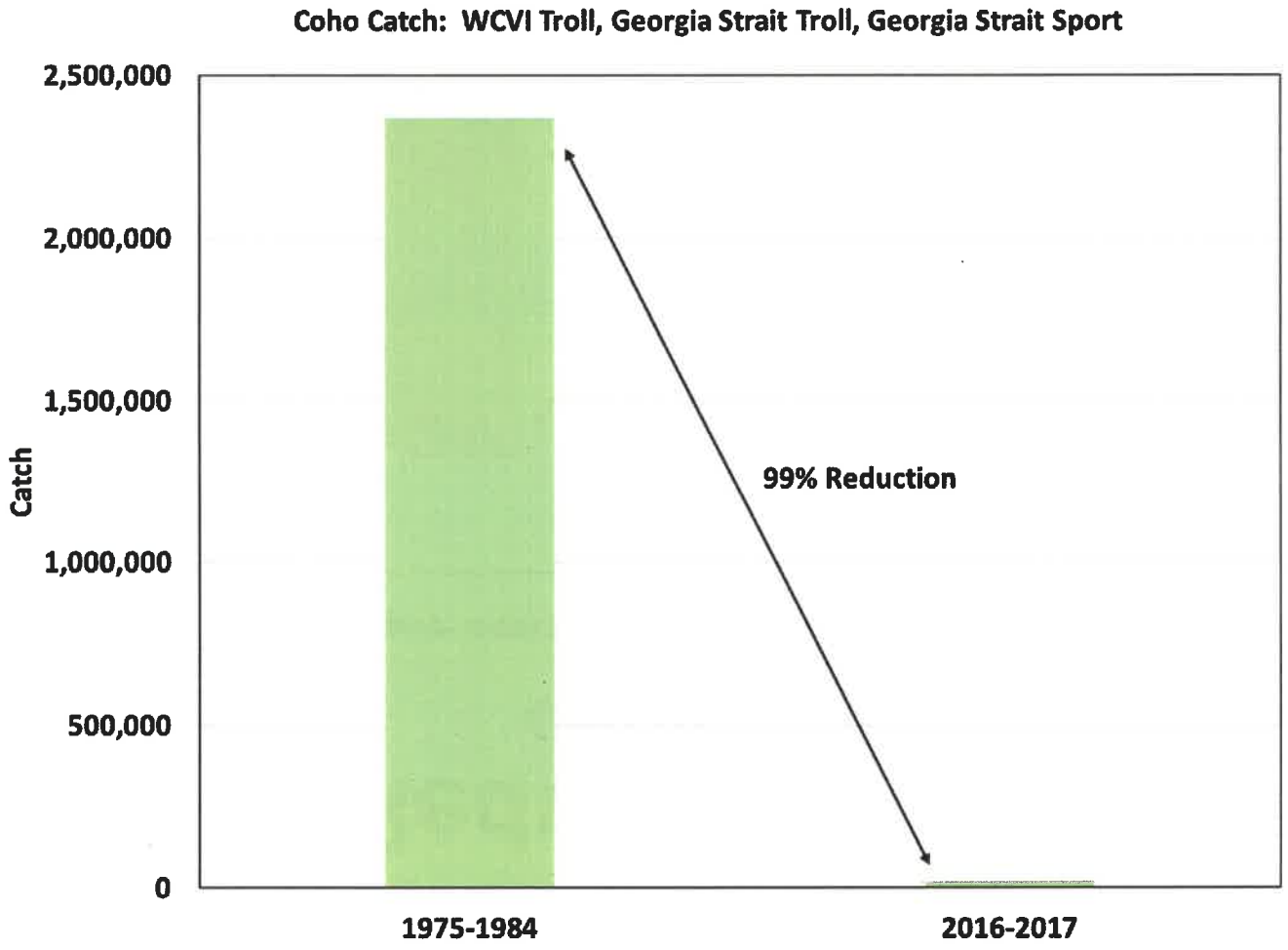
Canadian Reductions of 85% - 99%

Chinook



Canadian Reductions of 85% - 99%

Coho



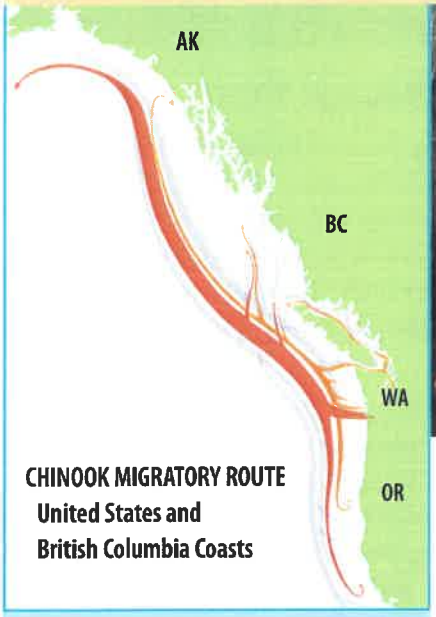
What did we achieve?

Reductions in SEAK and Canadian Fisheries

- SEAK: 7.5% reduction from 2009 level for most likely abundance levels.
- Canada
  - WCVI: 12.5% reduction from 2009 level for most likely abundance levels.
  - ISBM (Georgia Strait sport): 12.5% reduction from 2009-2015 for U.S. stocks not meeting management objectives

Pacific Salmon Treaty 2019 - 2028

A shared commitment to a better future for salmon



CHINOOK MIGRATORY ROUTE
United States and
British Columbia Coasts

Revamped treaty provides hope for salmon, but successful launch requires one-time funding of $57.1 million

- **Restore Puget Sound habitat**
- **Maintain & improve hatchery production of Southeast Alaska Chinook**
- **Mark 100% of hatchery production of Southeast Alaska Chinook**
- **Establish funding to support mark-selective fisheries**

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Photo: John R. McMillan

Background on Pacific Salmon Treaty

The Pacific Salmon Treaty is critical to meeting the provisions of the federal Endangered Species Act (ESA), addressing tribal fishing rights, and maintaining sustainable U.S. fisheries that provide 26,700 full time equivalent jobs and $3.4 billion in economic value annually.

The treaty, signed by United States and Canada in 1985, provides a framework for the two countries to cooperate on the management of Pacific salmon. The treaty is revisited roughly every 10 years to reflect current conditions and address new challenges.

Pacific salmon are highly-migratory, often spending years at sea and travelling thousands of miles before returning to their native rivers to spawn.

A high degree of cooperation is required between the nations to prevent overfishing, provide optimum production and ensure that each country receives benefits that are equivalent to the production of salmon in its waters.

Revamped Treaty for a Dynamic New Decade

Representatives from the United States and Canada agreed in September 2018 to recommend their governments approve new coast-wide fishing agreements under the Pacific Salmon Treaty.

During talks to revise the treaty, commissioners were confronted with dynamic environmental conditions such as wide swings in salmon survival rates, changes in salmon migration patterns, and continued declines in the productivity of wild Chinook salmon in the Salish Sea. The plight of southern resident killer whales, which depend on Chinook salmon for prey, has provided an eye-opening example of the challenges.

Commissioners are recommending fishery reductions for both nations, new conservation objectives for several salmon populations, enhanced stock assessments to inform decision-makers in both countries, and the resources to ensure the effective implementation of fisheries that target marked hatchery-origin salmon.

Investing in the Future

Securing the benefits from our international commitment to a better future for salmon and southern resident killer whales requires investing in the revamped Treaty – an initial one-time investment to ensure a successful start, and an ongoing investment to fund the complex implementation of an international treaty.

The updated treaty addresses conservation needs of the stocks and the PST's objectives to prevent overfishing, provide for optimum production, and for each party to receive benefits equal to the production of salmon originating in their waters.

Initial funding

The request of $57.1 million in short-term funding (fiscal years 2020-2021) is similar to the amount sought for the 2009 update to the treaty and about 40 percent of the funding provided for the 1999 update. The funding will provide:

- $31.2 million for habitat restoration projects for at-risk Puget Sound Chinook salmon stocks. These habitat improvements are designed to help increase the number of salmon returning to Puget Sound and are essential in offsetting impacts to Chinook through fisheries. Although a number of projects have been identified, such as providing fish passage on the Middle Fork Nooksack River in the north Sound, the specific projects will vary based on when federal funding is available.
- $22.4 million for both marking and production of Southeast Alaska hatchery-origin Chinook.
- $3.5 million for equipment and short-term studies to ensure effective implementation of mark-selective fisheries.

Photo by Ken Rea

Fiscal Years 2020 through 2029

The 30-year history of the Pacific Salmon Treaty is impressive. Both nations have worked hard to put the "fish wars," including blockage of marine traffic, in the past. But for most of the last decade, the level of annual federal funding to implement the treaty has not kept up with inflation or rising costs. Recent year funding has been slightly higher.

Commissioners are requesting an increase in annual funding to total $52.4 million to fulfill the obligations of the revised treaty and associated ESA-consultation. A portion of the request will go toward filling existing gaps in fishery sampling and monitoring, estimating spawners, assessing fishery exploitation rates, and other activities essential to effectively implementing the treaty:

+ $14.3 million for states
+ $900,000 for tribes
+ $150,000 for the Pacific States Marine Fisheries Commission
+ $500,000 for U.S. share of increased costs of the Pacific Salmon Commission

Additionally, beyond the FY18 base funding, new funding is needed to implement these complementary actions:

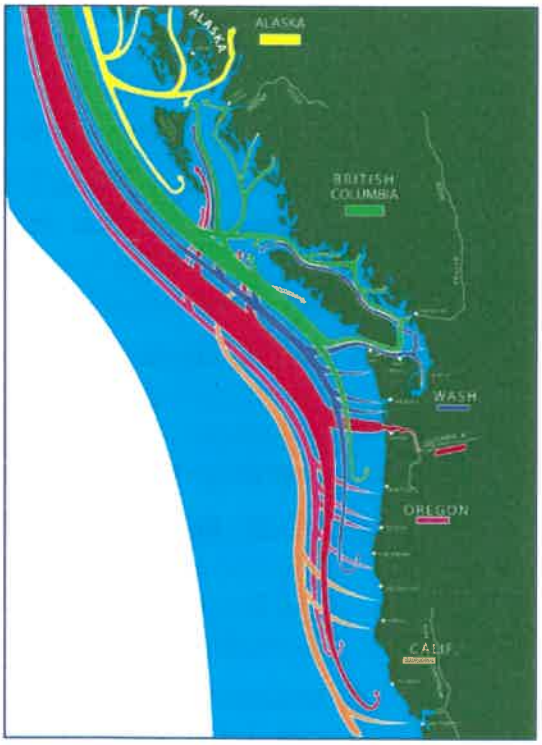
+ $1.49 million to preserve at-risk Puget Sound Chinook salmon stocks through hatchery conservation programs. The programs target stocks that are at high risk of going extinct, such as South Fork Nooksack River, South Fork Stillaguamish, Mid-Hood Canal, and Dungeness populations.
+ $2.33 million to aid local efforts to protect habitat and promote public support for salmon and killer whale-friendly environmental conditions.
+ $5.6 million to increase hatchery production to provide increased prey for southern resident killer whales. The state of Washington will also seek state funding for increases in hatchery production for this purpose.
+ $5.44 million to provide a sound scientific basis for management through improved estimates of Chinook salmon catch, spawners, and fishery exploitation rates.

Pacific Salmon Treaty 2019 – 2028

September 26, 2018

Summary

Chinook Salmon Migration



1) **Problem of Interceptions**. The majority of salmon originating in Washington rivers and streams migrate north and are vulnerable to fisheries north of our border.

2) **Last in Line Bears Conservation Burden**. Absent an agreement with Canada and Alaska that limits the interceptions of Washington-origin fish, the entire conservation burden falls on Washington. Conversely, stocks originating in Canada can be vulnerable to Washington and Alaska fisheries.

3) **Management Failure**. Uncontrolled interceptions will result in conservation and allocation concerns and the collapse of our management structure. That is where we found ourselves in the early 1980's.

4) **1985 Pacific Salmon Treaty** (PST) provides a coordinated management framework based on two underlying principles:

   - "prevent overfishing and provide for optimum production"; and
   - "provide for each Party to receive benefits equivalent to the production of salmon originating in its waters".

   Specific management obligations are identified in seven species-fishery chapters that are regularly updated (often at 10-year intervals).

5) **All species-fishery chapters (except Fraser sockeye and pink salmon) are expiring** at the end of 2018. Successful negotiation of chapters essential to:

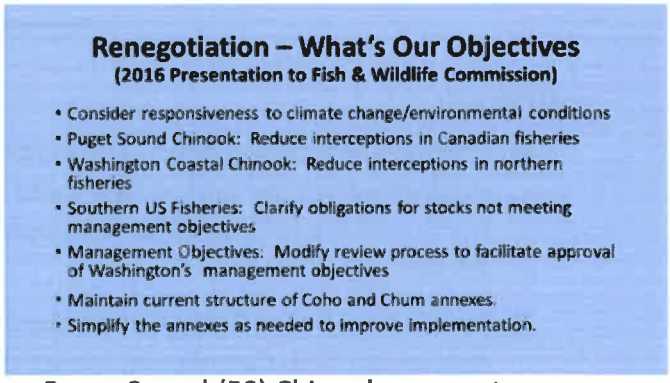
   - Limit interceptions in southeast Alaskan (SEAK) and Canadian fisheries;
   - Provide certainty regarding fishery levels;
   - Maintain North-South sharing agreement stipulated in Yakima v. Baldrige; and
   - Allow disbursement of funds from the PST Northern and Southern endowment funds.

6) **The Pacific Salmon Commission completed negotiations** in early July, and the proposed chapter updates have been transmitted to the U.S. and Canadian governments.

7) **Substantial work remains** to secure approval by the U.S., Canadian, and tribal governments, complete the biological opinion, and obtain implementation funding.

8) **Next 10-years Critical for Puget Sound Chinook**. Habitat protection, substantive habitat restoration, and reduced pinniped predation are essential to complement the fishery actions, stop the decline in spawners, and promote rebuilding.

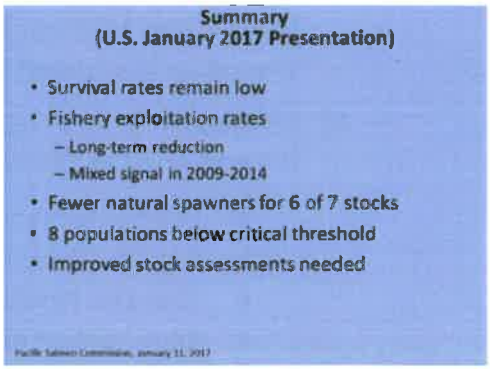
What did we achieve?



1) **Responsive to Climate Change: Yes.** Chinook provisions require annual Pacific Salmon Commission (Commission) engagement to adaptively manage Treaty implementation. Coho provisions take into account data uncertainty and changing environmental conditions.
2) **Reduce Puget Sound Chinook Interceptions: Yes.** Approximately a 12.5% reduction is required in fisheries where Puget Sound (PS) Chinook are most heavily impacted (southern Canadian fisheries).
3) **Reduce Coastal/Columbia R. Chinook Interceptions: Yes**. In addition to the 12.5% reduction in southern Canadian fisheries, the updated chapter requires up to a 7.5% reduction in SEAK fisheries, further reducing fishery exploitation rates on far north migrating Washington coastal and Columbia River stocks.
4) **Modify Review Process for Management Objectives: Yes**. Chapter 3 now identifies the abundance triggers for fishery actions in southern U.S. (SUS) fisheries for Skagit Spring and Skagit Summer/Fall Chinook salmon. A new protocol for the Chinook Technical Committee (CTC) facilitates Commission consideration of triggers for other stocks.
5) **Maintain Limits on Canadian Coho Fisheries: Yes.** Fishery provisions were maintained with substantive process improvements.
6) **Simplify: Yes.** Chinook and coho chapters were significantly simplified and clarified.

Chinook Salmon (Chapter 3)

1) **Puget Sound Chinook Focus of Negotiations.** NOAA Fisheries set a sideboard for the U.S. position by stating "a simple roll over of the current agreement would be problematic" due to the declining status of PS Chinook salmon. Presentations by the Parties in January 2017 highlighted concerns regarding the status of Salish Sea stocks south and north of the U.S.-Canada border as well as the West Coast of Vancouver Island (WCVI) stock.
2) **U.S. Objective – PS Rebuilding Exploitation Rates.** A Rebuilding Exploitation Rate (RER) is a population-specific exploitation rate metric used by NOAA Fisheries as a guidepost to evaluate proposed management regimes. Not all RERs need to be achieved for a fishery regime to be consistent with ESA requirements. A U.S. objective was to reduce exploitation rates so that RERs were achieved, on average, for PS populations.



3) **2019 – 2028 Canadian Fishery Obligations.** Fishery impacts to PS stocks occur primarily in southern British Columbia fisheries (WCVI troll and sport, Georgia Strait and Juan de Fuca sport). Washington coastal and Columbia River stocks are also exploited in the WCVI sport and troll fisheries.

The WCVI troll and outside sport fishery is managed based on the aggregate abundance of stocks, referred to as Aggregate Abundance Based Management (AABM). The negotiated agreement requires a 12.5% reduction in the allowable catch relative to the current agreement at the abundance levels that have generally occurred in recent years. Reductions of 2.4% - 4.8% are required at higher abundance levels:

Abundance Index (AI)	Reduction in Allowable Catch From Current Chapter
AI < 0.93	12.5%
0.93 < AI ≤ 1.12	4.8%
1.12 < AI	2.4%

The remainder of southern British Columbia fisheries have PST exploitation rate limits on individual stocks (Individual Stock Based Management or ISBM). For U.S. stocks not meeting agreed management objectives, the allowable exploitation rate is 87.5% of the 2009-2015 average (12.5% reduction from recent levels).

4) **2019 – 2028 SEAK Fishery Obligations.** The SEAK fishery is managed as an AABM fishery and impacts far north migrating Washington Coastal and Columbia stocks. The negotiated reductions in the allowable catch relative to the current agreement range from 7.5% at low to moderate abundance to 1.5% at high abundance:

Abundance Index (AI)	Reduction in Allowable Catch From Current Chapter
AI < 1.805	7.5%
1.805 < AI ≤ 2.2	3.25%
2.2 < AI	1.5%

5) **2019 - 2028 Southern U.S. Fishery Obligations.** The PST identifies stock-specific fishery exploitation rate limits in SUS ISBM fishery for stocks not meeting agreed management objectives. In general, the limits are the 2009-2015 average rate with reductions from that level for some stocks to account for fisheries that occurred during that period. Several examples are provided below:

Stock	US ISBM Limit Relative to 2009-2015 Exploitation Rates	Management Objective
Nooksack Spring	100% 2009-15 Average	To be Determined
Skagit Spring	95% 2009-15 Average	690
Skagit Summer/Fall	95% 2009-15 Average	9,202
Stillaguamish	100% 2009-15 Average	To be Determined
Snohomish	100% 2009-15 Average	To be Determined
Grays Harbor	85% 2009-15 Average	13,326
Queets Fall	85% 2009-15 Average	2,500

Quillayute Fall	85% 2009-15 Average	3,000
Hoh Fall	85% 2009-15 Average	1,200
Upriver Brights	85% 2009-15 Average	40,000
Coweeman	100% 2009-15 Average	To be Determined
Mid-Columbia Summers	85% 2009-15 Average	12,143
Cowichan (Canada)	95% of 2009-15 Average	6,500
Nicola (Canada)	95% of 2009-15 Average	To be Determined
Harrison (Canada)	95% of 2009-15 Average	75,100

6) **Benefits to PS Stocks**. Preliminary analysis indicates that the negotiated agreement will significantly reduce fishery exploitation rates on PS Chinook relative to the 2009 agreement. The analysis projects that RERs will be achieved for 67% of the PS populations, versus 17% for the 2009 agreement as negotiated, and 42% as implemented (the Parties did not always fish up to the fishery limits).

			Projected Exploitation Rate		
Stock Group	Population	RER	2009 As Negotiated	2009 As Implemented	2019 Negotiated
NPS Natural Spr	Suiattle R.	0.53	0.42	0.38	0.34
NPS Natural Spr	Upper Cascade R.	0.49	0.42	0.38	0.34
PS Natural S/F	Skykomish R.	0.31	0.76	0.25	0.21
NPS Natural Spr	Upper Sauk R.	0.39	0.42	0.38	0.35
PS Natural S/F	Upper Skagit R.	0.47	0.57	0.46	0.42
PS Natural S/F	Lower Sauk R.	0.44	0.57	0.46	0.42
PS Natural S/F	NF Stillaguamish R.	0.39	0.90	0.44	0.38
PS Natural S/F	Snoqualmie R.	0.22	0.76	0.25	0.21
PS Natural S/F	SF Stillaguamish R.	0.28	0.90	0.44	0.38
PS Natural S/F	Lower Skagit R.	0.27	0.57	0.46	0.42
NPS Natural Spr	NF Nooksack R.	0.05	0.59	0.50	0.43
NPS Natural Spr	SF Nooksack R.	0.05	0.59	0.50	0.43

7) **ISBM Accountability Provisions.** The performance of ISBM fisheries will receive more scrutiny in 2019-2028 than under the current agreement. If the running three-year average exceeds the limit by more than 10%, the management entity is required to provide the Commission with the actions that will be taken to minimize the deviations in subsequent years. To assist in those discussions, the PSC Chinook Technical Committee (CTC) will recommend improvements to pre-season, in-season, and other management tools.

8) **AABM Accountability Provisions.** The performance of AABM fisheries will also be monitored by the Commission. Accountability measures include:

- If the actual catch exceeds the pre-season catch limit, the overage shall be paid back in the subsequent fishing year.
- If in two consecutive years, the North British Columbia (NBC) or WCVI AABM fishery catches exceed the post-season limit by more than 10%, or in the SEAK AABM fishery the pre-season tier and catches exceed the post-season tier, the

management entity is required to provide the Commission with the actions that will be taken to minimize the deviations in subsequent years. To assist in those discussions, the CTC will recommend improvements to pre-season, in-season, and other management tools.

9) **SEAK Abundance Index.** The abundance index for the SEAK fishery will be predicted based upon catch-per-unit-effort in the winter troll fishery. The expectation is that this will be more effective in predicting the significant variation in survival rates that has been occurring. The performance of this method will be monitored and in 2022 (and 2025) the Commission will determine if the CPUE-based method should be maintained, use of the PSC Chinook Model resumed, or if an alternative method should be implemented.

10) **Incidental Mortality Limits.** For the first time, the Chinook Chapter places limits on the incidental mortality in AABM fisheries. The limit is 59,400 Chinook salmon in the SEAK AABM fishery and 38,600 for the combined aggregate of the WCVI and NBC AABM fisheries.

Coho Salmon (Chapter 5)

Summary – the Coho Chapter has been simplified and clarified, but the fishery provisions remain similar.

1) **Interior Fraser Coho.** The Interior Fraser Coho Management Unit (IFMU) will remain in *low status* (with existing exploitation rate (ER) caps) until such a time as Canada develops and adopts scientifically-reviewed status determination methods for the IFMU. Additionally:

    - There will be opportunities for U.S. technical and policy review regarding Canada's status determination methods, through meetings of the bilateral Coho Technical Committee and Coho Working Group.
    - Until such a time as status determination methodologies have been developed for other Canadian management units (MUs), Chapter 5 provisions will be implemented based on the status of IFMU and US MUs.
    - Management to MUs, other than IFMU and existing US MUs, requires bilateral discussion, and will occur consistent with the provisions of Chapter 5. Further, timing of bringing on other Canadian MUs for management purposes in the Southern Coho Agreement will be included in the bilateral discussions.

2) **Reduce Number of Canadian MUs**. The four Canadian MUs in the previous Coho Chapter (Lower Fraser, Interior Fraser, Strait of Georgia Mainland, and Strait of Georgia Vancouver Island) will be reduced to three MUs. The two Strait of Georgia (SoG) MUs (SoG Mainland and SoG Vancouver Island) have been combined into one Strait of Georgia MU.

3) **Reliable Preseason Information.** To provide a reliable basis for fishery planning, in any given year, the Parties shall not change the status or associated ER caps for an MU after March 31st (typically two weeks following the mid-March manager-to-manager pre-

season information exchange). The other elements of the mid-March information exchange currently described in Paragraph 8(g) within Chapter 5 will be carried forward.

- When methodologies to establish status benchmarks and associated ER caps have been established for other Canadian MUs (other than IFMU), the US shall provide estimates of its impacts on these MUs by April 30th in addition to the IFMU.
- By June 30th of each year, Canada shall provide the US with projected exploitation rates for its fisheries on US MUs specified in Paragraph 8(a) for the coming season. Likewise, by April 30th of each year, the US will provide Canada with projected exploitation rates for its fisheries on IFMU for the coming season.

4) **Exploitation Rate Trends**. If a producing country identifies concerns about increasing trends in ERs on the producing country's MU by the intercepting country over two or more years, bilateral discussions of the appropriate response will be initiated for implementation in the following year.

5) **Limited flexibility:** The US and Canada agreed to include chapter language committing the parties to work together in developing bilateral guidance on the approach to implementing paragraphs 11(b) and 11(c) of the current chapter – requesting decreases or increases in allowable ERs, respectively.

Chum Salmon (Chapter 6)

Summary – the updated chapter adds a second fishing tier that allows a catch of up to 160,000 chum salmon (increase of 30,000) in commercial fisheries in the San Juans. However, in the lower tier, the allowable catch was reduced to 125,000 (decrease of 5,000), and the abundance breakpoint was increased from 900,000 to 1,050,000 Fraser chum salmon.

Table 1. Summary of U.S.-Canada bilaterally agreed breakpoints and allocations for U.S. Area 7/7A Chum Fisheries (in numbers of Chum) within the newly negotiated Chapter 6 of the PST (Chum Chapter; years 2019-2028) and compared to the current Chum Chapter (years 2009-2018).

Item	Current Chum Chapter		NEW Chum Chapter [1/]	
	Breakpoints and Allocations	Payback Trigger [2/]	Breakpoints and Allocations	Payback Trigger [2/]
1st Fraser Chum run size breakpoint	900,000		1,050,000	
Resulting US 7/7A Allocation (ceiling)	130,000	+5,000	125,000	+10,000
2nd Fraser Chum run size breakpoint	n/a		1,600,000	
Resulting US 7/7A Allocation (ceiling)	n/a		160,000	+10,000

[1/] Bilateral Southern Panel final agreement, January 11, 2018.

[2/] Number of fish over catch ceiling triggering payback calculation

1) **Two Tiered Management**. A second management tier was added to allow a higher level of harvest in the U.S. Area 7/7A Chum Fishery in years of relatively higher Fraser Chum

abundance. Lower harvest levels are expected in years of lower Fraser chum run size. Table 1 provides a summary of this two-tiered management approach.

- For aggregate chum run sizes (through Johnstone Strait) above the *Inside Southern Chum Critical Threshold* of 1.0 million, the catch ceiling for the U.S. chum salmon fishery in Areas 7 and 7A will be 125,000 chum salmon. This ceiling of 125,000 could be subsequently revised based on Fraser Chum terminal run size updates as specified below. U.S. chum fisheries in Areas 7 and 7A may not occur prior to October 10th in any given year.
- For Fraser Chum terminal run sizes above 1.05 million, the catch ceiling for the U.S. chum salmon fishery in Areas 7 and 7A will remain at 125,000 chum salmon. The current agreement allows a catch of 130,000 when the Fraser Chum run size exceeds 900,000.
- For Fraser Chum terminal run sizes above 1.6 million, the catch ceiling for the Areas 7 and 7A fishery will be 160,000 chum salmon. The current agreement does not provide for an increase in allowable catch at higher Fraser Chum run sizes.

Next Steps

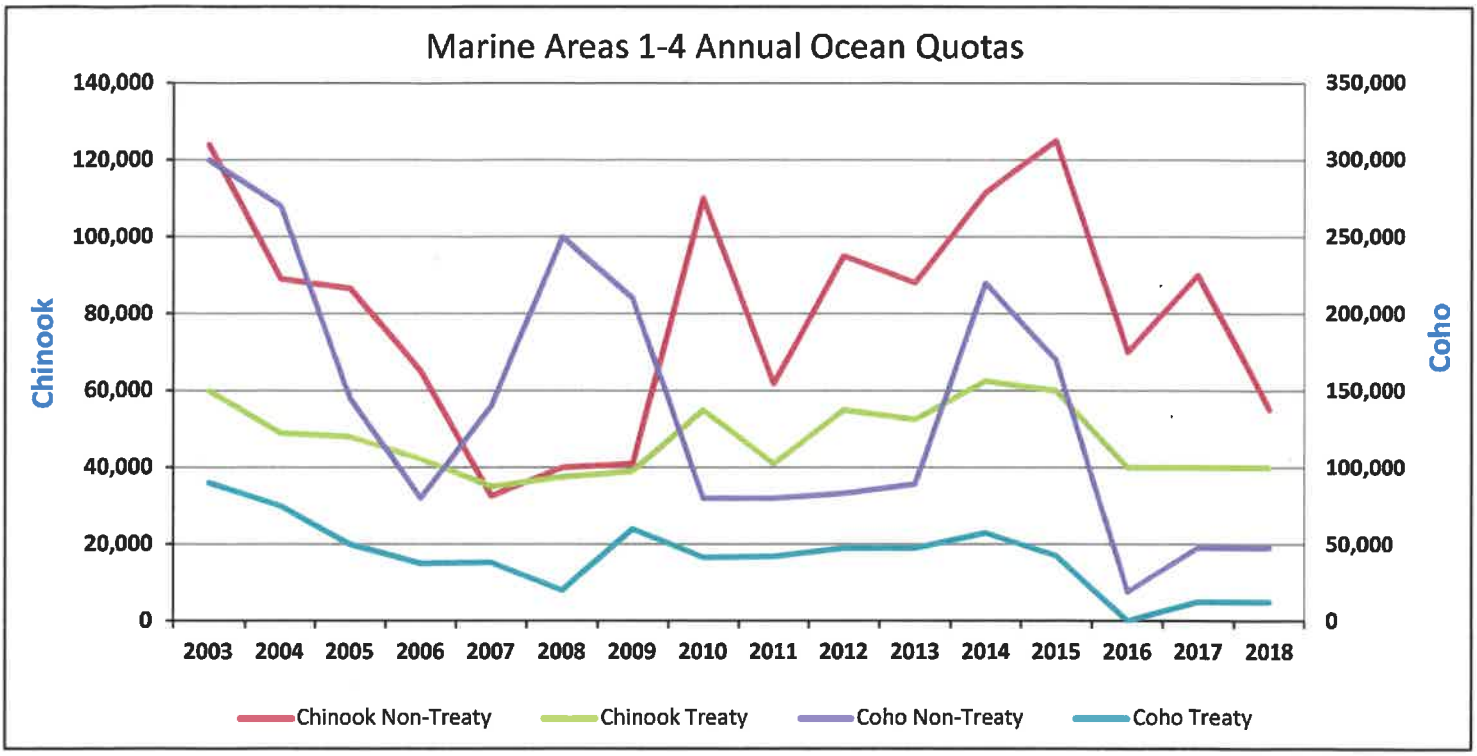
1) **NOAA Fisheries Section 7 Consultation.** NOAA Fisheries must complete a biological opinion to assess the consistency of updated chapters with ESA requirements for listed salmon, Southern Resident Killer Whales (SRKW), and other ESA-listed species.
2) **Approval by U.S. and Canada.** Approval by the U.S. and Canada of the updates proposed by the Pacific Salmon Commission will occur through a series of internal processes and the exchange of diplomatic notes. The Canadian process includes a period of Parliamentary consideration which may be challenging to complete by January 2019. In the U.S., since we are only amending an annex to the Treaty, as envisioned in the Treaty itself, the amendments do not require advice and consent from the Senate and will instead be concluded as an executive agreement. In the event that all of these steps cannot be completed by January 2019, the Parties have agreed to abide by the updated chapters until the approval process has been completed.
3) **Implementation Funding.** Substantial new funding is needed to implement the PST and ensure consistency with ESA requirements. Securing this funding will require broad stakeholder support and substantial work with the Congressional delegations of Alaska, Washington, and Oregon. Package elements under consideration include:
    - Puget Sound Critical Stock Program. Funding will be requested for habitat restoration, habitat protection, and hatchery conservation programs for the South Fork Nooksack, South Fork Stillaguamish, Dungeness, and Mid-Hood Canal populations.
    - SRKW Prey. Funding will be requested to increase hatchery production of Chinook salmon to increase the prey base for SRKW.
    - Improve Access to Southeast Alaska Hatchery Production. Funding will be requested to mark all Chinook salmon released from hatcheries in southeast

Alaska, pay for ongoing hatchery programs, and maintain production at the Little Port Walter Hatchery.

- Improved Stock Assessment. Funding will be requested to improve the scientific basis of fishery management.
- Mass Marking and Selective Fisheries. Funding will be requested to support bilateral investments in mass marking and improved assessment of mark-selective fisheries.
- Agency Implementation Funding. Funding will be requested to facilitate implementation of the PST by each of the management entities, including a $7.3 million increase in federal funding to WDFW.

4) **Fishery Implementation**. At WDFW, it will be important to update and document the preseason fishery planning process (North of Falcon) to address the new ISBM obligations for SUS fisheries. SUS fisheries will be scrutinized more intensely than under the current PST.

North of Falcon Ocean Quotas

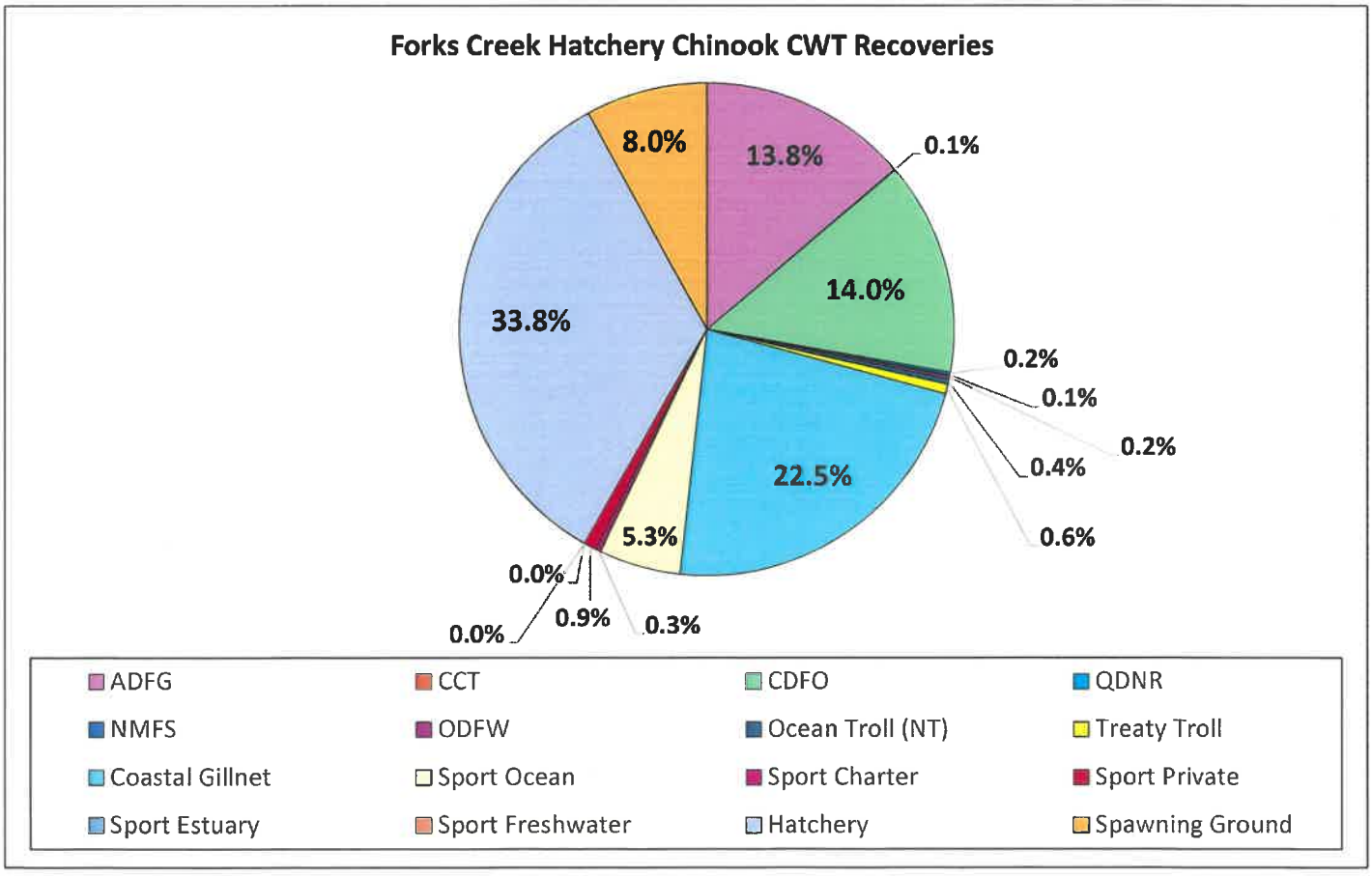


Annual Ocean Quotas					
Year	Chinook		Coho		
	Non-Treaty	Treaty	Non-Treaty	Treaty	
2003	124,000	60,000	300,000	90,000	
2004	89,000	49,000	270,000	75,000	
2005	86,500	48,000	145,000	50,000	
2006	65,000	42,200	80,000	37,500	
2007	32,500	35,000	140,000	38,000	
2008	40,000	37,500	250,000	20,000	
2009	41,000	39,000	210,000	60,000	
2010	110,000	55,000	80,000	41,500	
2011	61,800	41,000	80,000	42,000	
2012	95,000	55,000	83,000	47,500	
2013	88,000	52,500	89,000	47,500	
2014	111,500	62,500	220,000	57,500	
2015	125,000	60,000	170,000	42,500	
2016	70,000	40,000	18,900	0	
2017	90,000	40,000	47,600	12,500	
2018	55,000	40,000	47,600	12,500	

Willapa Bay Chinook SAR (Smolt to Adult Return) CWT Recovery Data

Forks Creek Hatchery

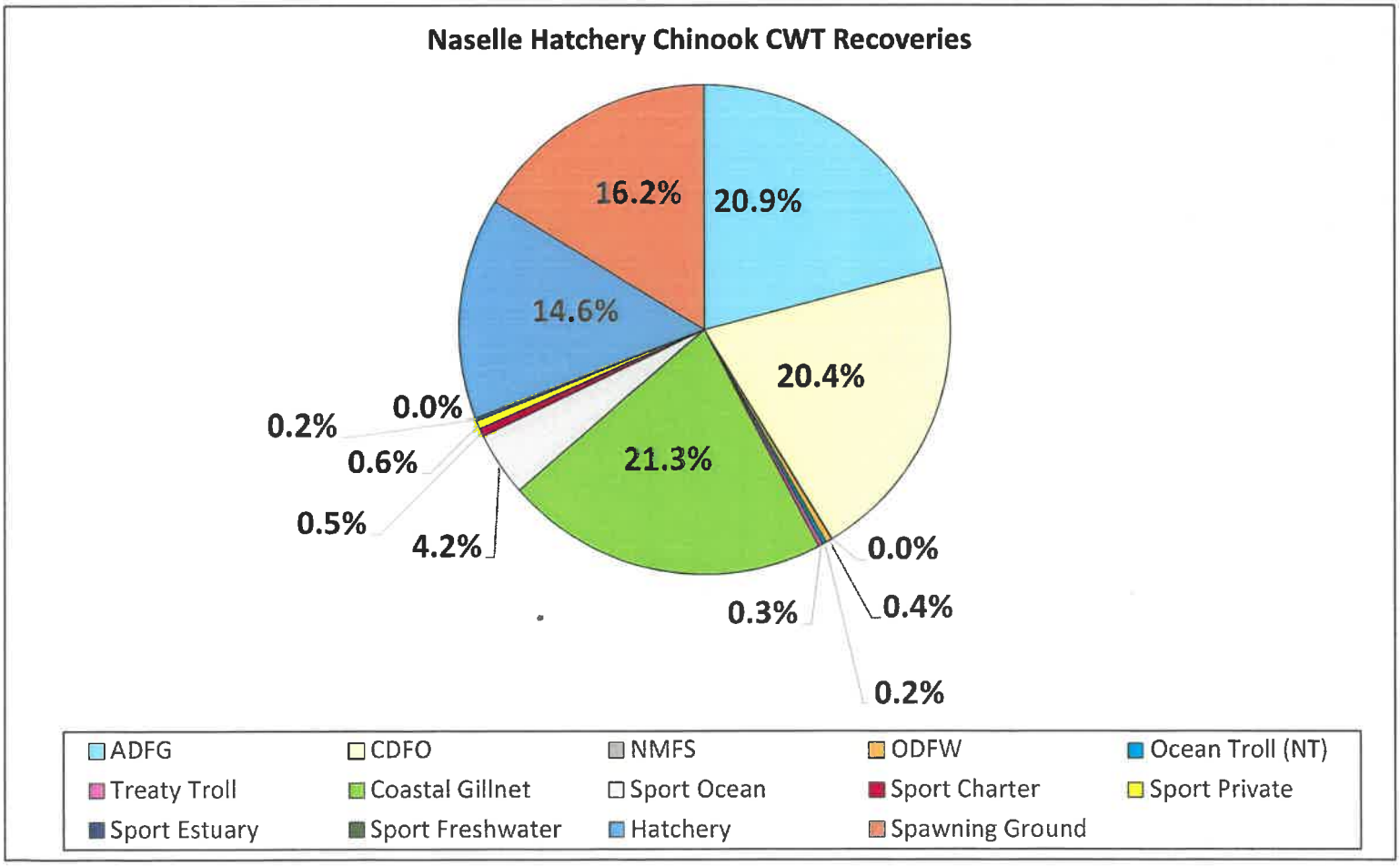
Brood Years			2005-2011	
CWTs Released			1,397,505	
CWTs Reovered (Adults)			6,372	
SAR			0.456	
Agency	Fishery Code	Fishery	# Tags	%
Alaska Dept of Fish and Game	ALL	ADFG	876.2	13.8%
Confederated Colville Tribe	ALL	CCT	3.3	0.1%
Canada Dept of Fisheries and Oceans	ALL	CDFO	891.7	14.0%
Quinault Dept of Natural Resources	ALL	QDNR	11.1	0.2%
National Marine Fisheries Service	ALL	NMFS	4.1	0.1%
Oregon Dept of Fish and Wildlife	ALL	ODFW	13.0	0.2%
WDFW	10	Ocean Troll (NT)	22.8	0.4%
WDFW	15	Treaty Troll	39.9	0.6%
WDFW	22	Coastal Gillnet	1,434.7	22.5%
WDFW	40	Sport Ocean	340.8	5.3%
WDFW	41	Sport Charter	19.7	0.3%
WDFW	42	Sport Private	55.6	0.9%
WDFW	45	Sport Estuary	0.0	0.0%
WDFW	46	Sport Freshwater	0.0	0.0%
WDFW	50	Hatchery	2,152.0	33.8%
WDFW	54	Spawning Ground	507.1	8.0%
		Total	6,372	



Willapa Bay Chinook SAR (Smolt to Adult Return) CWT Recovery Data

Naselle Hatchery

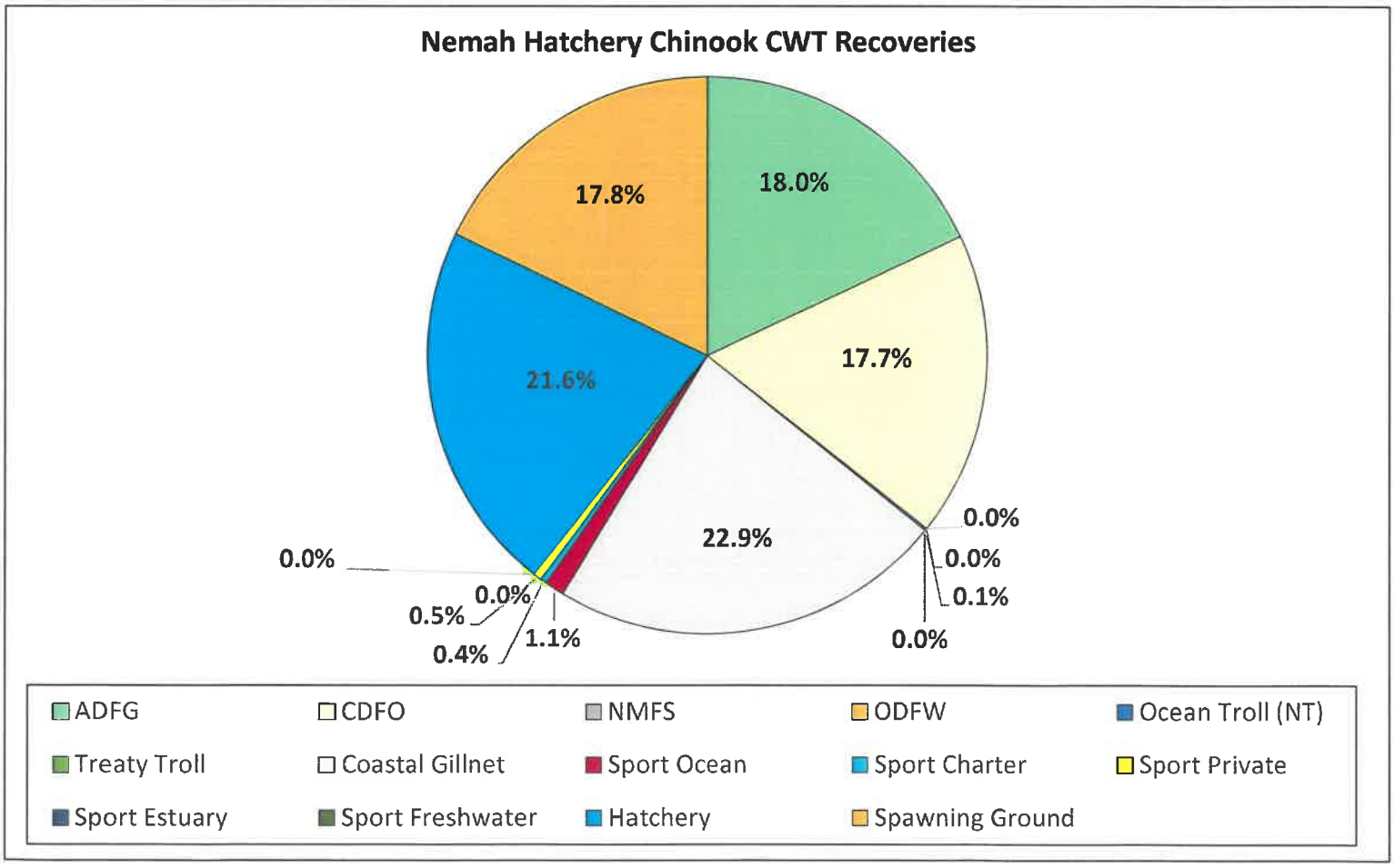
Brood Years			2005-06, 2009-11	
CWTs Released			709,703	
CWTs Reovered (Adults)			3,688	
SAR			0.520	
Agency	Fishery Code	Fishery	# Tags	%
Alaska Dept of Fish and Game	ALL	ADFG	771.7	20.9%
Canada Dept of Fisheries and Oceans	ALL	CDFO	752.7	20.4%
National Marine Fisheries Service	ALL	NMFS	1.00	0.0%
Oregon Dept of Fish and Wildlife	ALL	ODFW	15.3	0.4%
WDFW	10	Ocean Troll (NT)	9.1	0.2%
WDFW	15	Treaty Troll	11.1	0.3%
WDFW	22	Coastal Gillnet	786.3	21.3%
WDFW	40	Sport Ocean	156.2	4.2%
WDFW	41	Sport Charter	18.3	0.5%
WDFW	42	Sport Private	20.9	0.6%
WDFW	45	Sport Estuary	7.5	0.2%
WDFW	46	Sport Freshwater	0.0	0.0%
WDFW	50	Hatchery	539.7	14.6%
WDFW	54	Spawning Ground	598.6	16.2%
		Total	3,688	



Willapa Bay Chinook SAR (Smolt to Adult Return) CWT Recovery Data

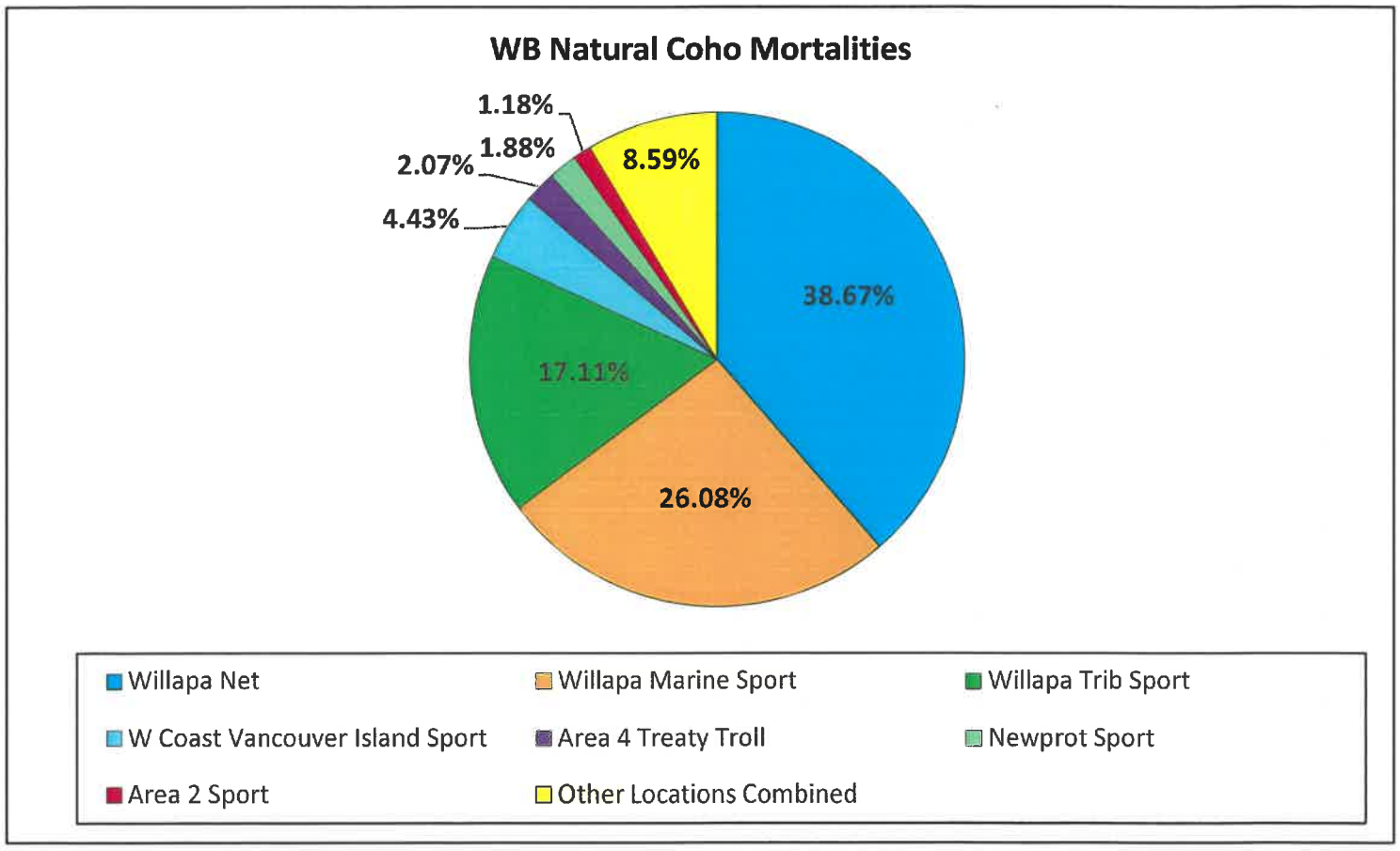
Nemah Hatchery

Brood Years			2005-2006	
CWTs Released			484,350	
CWTs Reovered (Adults)			1,750	
SAR			0.361	
Agency	Fishery Code	Fishery	# Tags	%
Alaska Dept of Fish and Game	ALL	ADFG	314.4	18.0%
Canada Dept of Fisheries and Oceans	ALL	CDFO	309.6	17.7%
National Marine Fisheries Service	ALL	NMFS	0.0	0.0%
Oregon Dept of Fish and Wildlife	ALL	ODFW	0.0	0.0%
WDFW	10	Ocean Troll (NT)	2.4	0.1%
WDFW	15	Treaty Troll	0.0	0.0%
WDFW	22	Coastal Gillnet	399.9	22.9%
WDFW	40	Sport Ocean	19.5	1.1%
WDFW	41	Sport Charter	6.3	0.4%
WDFW	42	Sport Private	8.0	0.5%
WDFW	45	Sport Estuary	0.0	0.0%
WDFW	46	Sport Freshwater	0.0	0.0%
WDFW	50	Hatchery	378.0	21.6%
WDFW	54	Spawning Ground	311.4	17.8%
		Total	1,750	



Willapa Bay Natural Coho Mortalities

Willapa Net	38.67%
Willapa Marine Sport	26.08%
Willapa Trib Sport	17.11%
W Coast Vancouver Island Sport	4.43%
Area 4 Treaty Troll	2.07%
Newprot Sport	1.88%
Area 2 Sport	1.18%
Other Locations Combined	8.59%



TOTAL MORTALITY ON WILLAPA BAY NATURAL COHO (MARKED + UNMARKED) BY FRAM FISHERY BY TIME STEP

COHO STOCK Total Mortality Report {bc-Coho1900} 2/21/2019
STOCKS=Willapa Bay Natural UnMarked,Willapa Bay Natural Marked

FisheryName	Jan-June	July	August	September	Oct-Dec	Total	
WlpaBT Net	0	0	0	2425	3752	6177	38.67%
Willpa Spt	0	0	0	0	4166	4166	26.08%
Wlp Tb Spt	0	0	0	0	2733	2733	17.11%
WC VI Spt	0	433	193	82	0	708	4.43%
A4/4BTrlTR	5	39	199	87	0	330	2.07%
Newprt Spt	4	78	119	100	0	301	1.88%
Area 2 Spt	0	61	120	7	0	188	1.18%
Area3TrlTR	1	48	82	8	0	139	0.87%
A1-Ast Spt	3	18	105	3	0	128	0.80%
Tillmk Spt	4	72	50	0	0	127	0.79%
No BC Trl	0	71	45	3	0	118	0.74%
Buoy10 Spt	0	0	0	111	0	111	0.69%
A1-Ast Trl	41	10	12	19	0	82	0.51%
Area2TrlNT	12	15	21	33	0	81	0.51%
Cen BC Spt	0	4	76	0	0	80	0.50%
Area 4 Spt	2	24	32	2	0	59	0.37%
Area 5 Spt	0	8	45	1	0	54	0.34%
SW AK Trl	0	3	47	0	0	50	0.31%
Newprt Trl	24	11	8	3	0	45	0.28%
Area3TrlNT	18	8	14	2	0	42	0.26%
Coos B Spt	3	28	8	0	0	39	0.24%
NW VI Trl	1	13	15	3	0	31	0.19%
NoC BC Trl	0	0	27	0	0	27	0.17%
SW VI Trl	0	1	15	11	0	27	0.17%
Alaska Net	0	21	0	0	0	21	0.13%
Tillmk Trl	10	3	1	2	0	16	0.10%
Area2TrlTR	0	3	8	6	0	16	0.10%
Coos B Trl	9	3	2	0	0	14	0.09%
GryHbr Net	0	0	0	0	10	10	0.06%
A4/4BTrlNT	3	0	1	1	0	6	0.04%
A6-7ANetTR	0	0	6	0	0	6	0.04%
BC JDF Spt	0	0	4	2	0	6	0.04%
NW AK Trl	0	4	2	0	0	6	0.04%
Queets Net	0	0	0	5	0	5	0.03%
A4B6CNetTR	0	1	1	0	3	5	0.03%
Ca KMZ Trl	2	0	0	0	0	3	0.02%
NE AK Trl	0	0	2	0	0	3	0.02%
Area 3 Spt	0	2	1	0	0	2	0.01%
A6-7ANetNT	0	0	2	0	0	2	0.01%
No BC Net	0	1	1	0	0	2	0.01%
JStrBC Spt	0	0	2	0	0	2	0.01%
Ft Brg Spt	0	1	0	0	0	1	0.01%
Ca KMZ Spt	0	0	0	0	0	1	0.01%

Brkngs Spt	0	0	0	0	0	1	0.01%
A 5-6C Trl	0	0	1	0	0	1	0.01%
Area 6 Spt	0	0	0	0	0	1	0.01%
NGaStr Spt	0	1	1	0	0	1	0.01%
SE AK Trl	0	1	0	0	0	1	0.01%

FISH AND WILDLIFE COMMISSION
POLICY DECISION

POLICY TITLE: Willapa Bay Salmon Management **POLICY NUMBER: C-3622**

Cancels or
Supersedes: NA

Effective Date: June 13, 2015
Termination Date: December 31, 2023

See Also: Policies C-3608, C-3619

Approved June 13, 2015 by:

Chair
Washington Fish and Wildlife Commission

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

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

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

State commercial and recreational fisheries will need to increasingly focus on the harvest of abundant hatchery fish. Mark-selective fisheries are a tool that permits the harvest of abundant hatchery fish while reducing impacts on wild stocks needing protection. As a general policy, the Department shall implement mark-selective salmon fisheries, unless the

wild populations substantially affected by the fishery are meeting spawner (e.g., escapement goal) and broodstock management objectives. In addition, the Department may consider avoidance, alternative gears, or other selective fishing concepts along with other management approaches provided they are as or more effective than a mark-selective fishery in achieving spawner and broodstock management objectives.

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

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

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

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

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

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

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

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

7) Monitoring, sampling, and enforcement programs will adequately account for species and population impacts (landed catch and incidental fishing mortality) of all recreational

and commercial fisheries and ensure compliance with state regulations. Develop and implement enhanced enforcement strategies to improve compliance with fishing regulations and ensure orderly fisheries.

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

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

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

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

Fishery and Species-Specific Guidance

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

Fall Chinook Salmon

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

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

participation and/or catch anticipated in future years.

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

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

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

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

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

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

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

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

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

    b. Provide for an enhanced recreational fishing season. The impact rate of the recreational fishery is anticipated to be ~3.2% during the initial years of the

policy, but may increase in subsequent years to provide for an enhanced recreational season as described below:

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

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

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

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

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

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

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

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

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

d. No commercial Chinook fisheries shall occur in areas 2M, 2N, 2P and 2R until after Labor Day.

6) Fishery Management After 2018. Fisheries in the Willapa Bay Basin will be managed with the goal of:

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

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

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

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

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

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

Coho Salmon

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

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

	North/Smith	Willapa	Naselle
Designation	Primary	Primary	Stabilizing
Broodstock Strategy	No Hatchery Program	Integrated	Integrated

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

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

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

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

   c. Provide recreational fishing opportunities.

Chum Salmon

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

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

	North/Smith	Palix	Bear
Designation	Primary	Contributing	Primary
Broodstock Strategy	No Hatchery Program	No Hatchery Program	No Hatchery Program

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

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

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

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

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

3) Fisheries will be managed with the goal of achieving the aggregate goal for Willapa Bay

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

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

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

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

Adaptive Management

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

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

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

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

2) Improve In-season Management. The Department shall develop, evaluate, and implement fishery management models, procedures, and management measures that are projected to enhance the effectiveness of fishery management relative to management based on preseason predictions.

3) Review Spawner Goals. The Department shall review spawner goals to ensure that they reflect the current productivity of salmon within the following timelines:

   a. Chum: September 1, 2016
   b. Coho: January 1, 2016
   c. Chinook: January 1, 2020

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

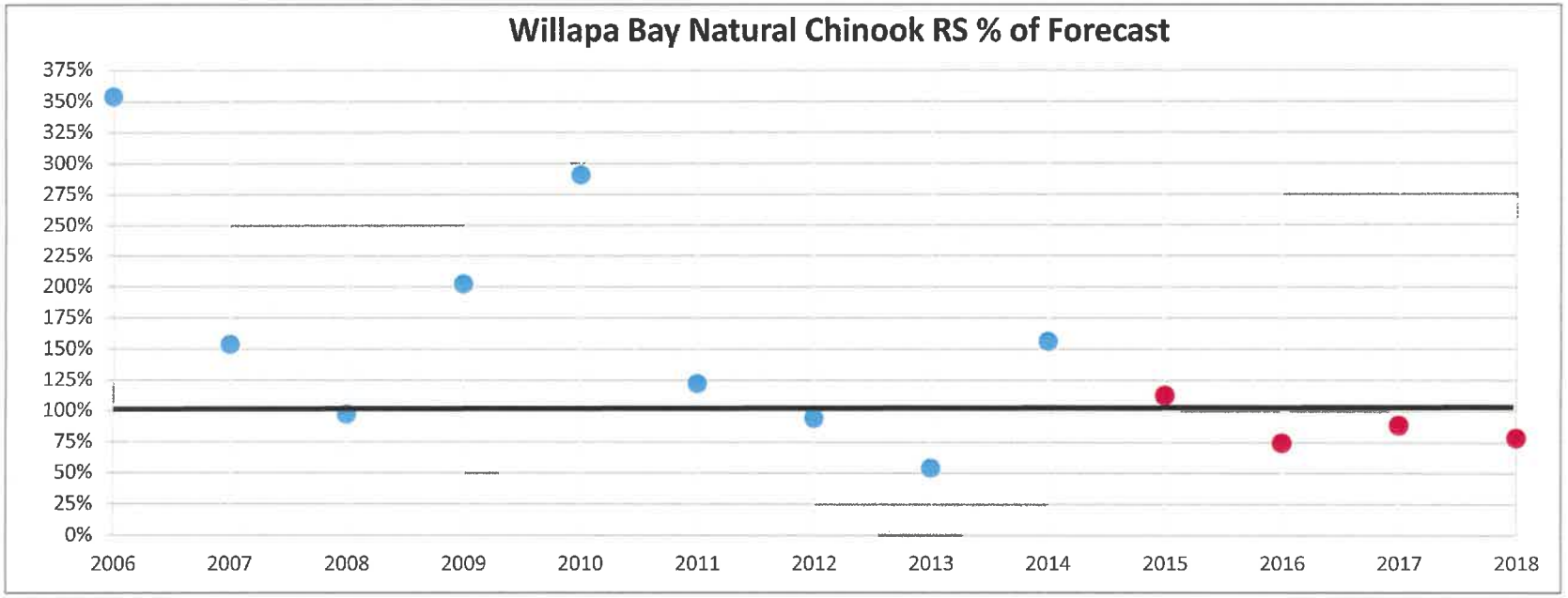
5) Ocean Ranching Opportunities. The Department shall complete by January 2016 a comprehensive review of opportunities and constraints to implement ocean ranching of salmon in Willapa Bay.

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

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

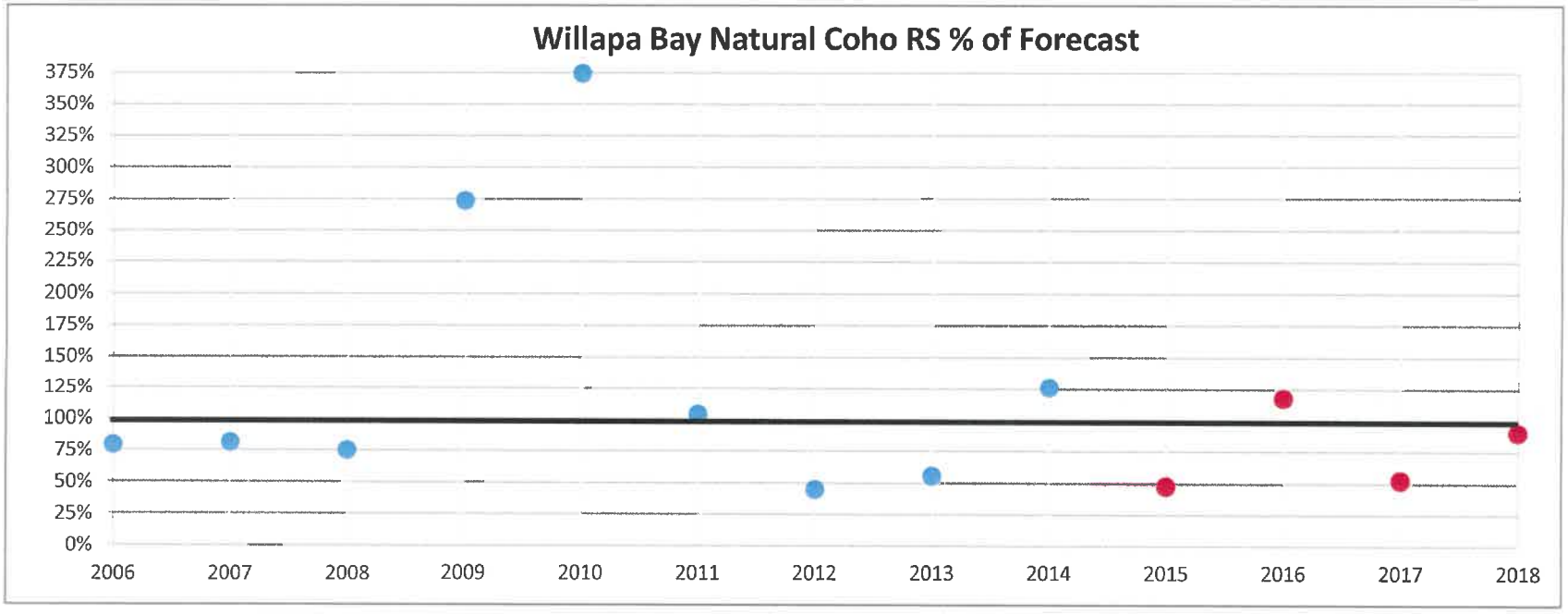
WILLPA BAY NATURAL CHINOOK RUNSIZE

	Pre-Season	Actual Post-Season	Difference Black = under forecasted Red=over forecasted	% of Forecast	
2006	1,880	6,651	4,771	354%	
2007	2,014	3,091	1,077	153%	
2008	2,516	2,436	(80)	97%	
2009	1,951	3,944	1,993	202%	
2010	2,023	5,874	3,851	290%	
2011	4,341	5,288	947	122%	
2012	4,831	4,541	(290)	94%	
2013	4,918	2,646	(2,272)	54%	
2014	3,112	4,849	1,737	156%	
2015	3,835	4,329	494	113%	Policy Implementation
2016	3,258	2,434	(824)	75%	
2017	4,131	3,684	(447)	89%	
2018	3,840	3,026	(814)	79%	
2019	4,309				
Total Avg	3,281	4,061		144%	
Avg since Policy	3,766	3,368		89%	



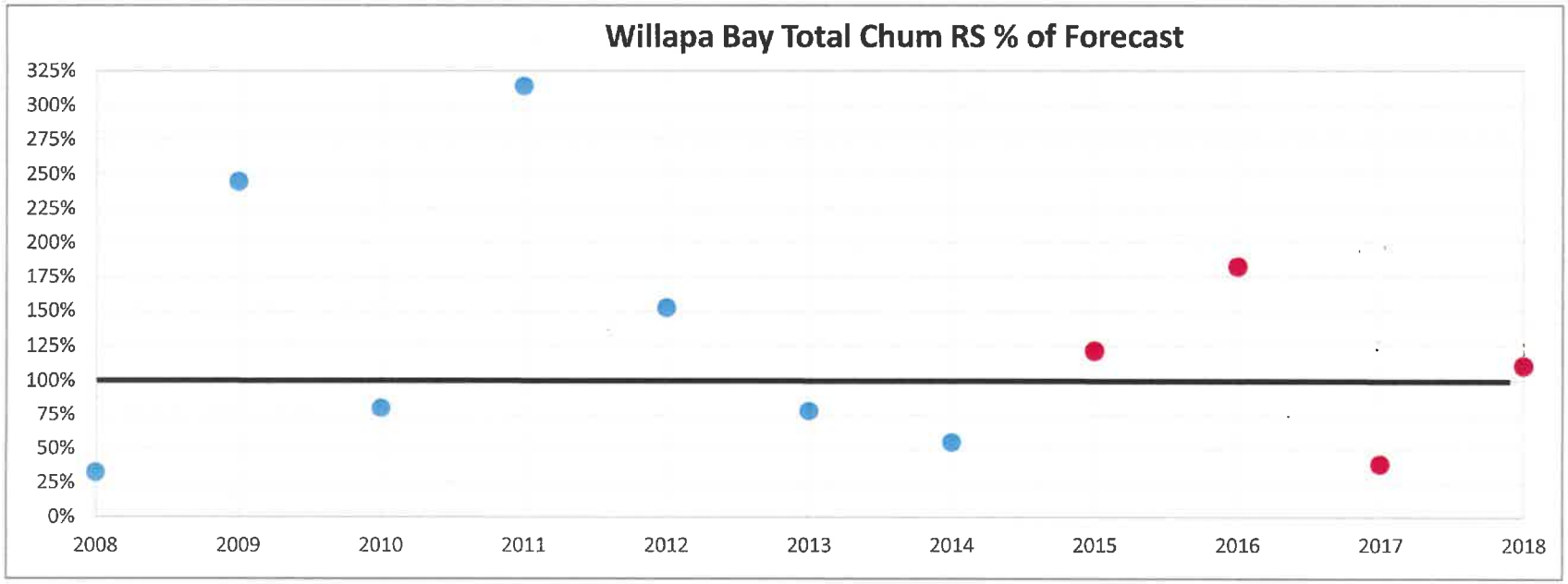
WILLPA BAY NATURAL TERMINAL COHO RUNSIZE

	Pre-Season	Actual Post-Season	Difference Black = under forecasted Red=over forecasted	% of Forecast	
2006	29,887	23,637	(6,250)	79%	
2007	23,794	19,247	(4,547)	81%	
2008	34,187	25,592	(8,595)	75%	
2009	32,706	89,413	56,707	273%	
2010	20,400	76,321	55,921	374%	
2011	46,593	48,355	1,762	104%	
2012	77,917	34,686	(43,231)	45%	
2013	57,821	32,023	(25,798)	55%	
2014	57,252	71,939	14,687	126%	
2015	30,362	14,481	(15,881)	48%	Policy Implementation
2016	27,977	32,951	4,974	118%	
2017	25,998	13,616	(12,382)	52%	
2018	18,499	16,703	(1,796)	90%	
2019	60,699				
Total Avg	37,184	38,382		117%	
Avg since Policy	25,709	19,438		77%	



WILLPA BAY CHUM (TOTAL) RUNSIZE

	Pre-Season	Actual Post-Season	Difference Black = under forecasted Red=over forecasted	% of Forecast	
2008	40,022	12,989	(27,033)	32%	
2009	7,139	17,444	10,305	244%	
2010	33,442	26,701	(6,741)	80%	
2011	22,254	69,802	47,548	314%	
2012	28,273	43,069	14,796	152%	
2013	35,584	27,642	(7,942)	78%	
2014	55,378	30,276	(25,102)	55%	
2015	39,994	48,616	8,622	122%	Policy Implementation
2016	47,555	86,673	39,118	182%	
2017	57,726	22,609	(35,117)	39%	
2018	39,932	44,196	4,264	111%	
2019	52,203				
Total Avg	37,027	39,092		128%	
Avg since Policy	46,302	50,524		113%	



2019 WILLAPA BAY PRE-SEASON FORECAST SUMMARY

updated 02.19.19

CHINOOK	NATURAL ORIGIN	HATCHERY	TOTAL
FORECAST	**4,309**	**23,807**	**28,116**
Goals	*4,350*	*3,525*	
Willapa/ North River	2,940	4,758	7,698
Nemah/Palix	357	12,257	12,614
Naselle/Bear	1,012	6,792	7,804

COHO Ocean Age 3 Estimates	NATURAL ORIGIN	HATCHERY	TOTAL
FORECAST	**63,448**	**94,019**	**157,467**
Goals	*13,600*	*6,100*	
Willapa/ North River	36,802	15,609	52,411
Nemah/Palix	9,387	0	9,387
Naselle/Bear	17,259	78,410	95,669

CHUM	NATURAL ORIGIN	HATCHERY	TOTAL
FORECAST	**51,383**	**822**	**52,205**
Goal			*35,400*

2019 Willapa Bay Salmon Fisheries Management Objectives

Fall Chinook

Total Natural-Origin Escapement (NOR)

Year	North	Naselle	Willapa
	Goal=991	**Goal=1,547**	**Goal=1,181**
2012	168	581	1,191
2013	113	767	481
2014	99	975	784
2015	173	483	1,064
2016	194	597	575
2017	206	1,172	1,219
2018*	419	536	1,517

- 14% Harvest Rate on Willapa and Naselle rivers natural-origin stocks
  - Enhanced recreational fishing season
    - Conservation actions shall be shared equally between marine and freshwater fisheries
  - Provide opportunities for commercial fisheries within remaining available impacts
- No commercial fisheries prior to Sept. 16th in areas 2T and 2U
- No commercial fisheries prior to Sept 2nd in areas 2M, 2N, 2P and 2R

Coho

- Achieve the aggregate natural-origin spawner goal for Willapa Bay

Total Natural-Origin Escapement (NOR)

Goal	2012	2013	2014	2015	2016	2017	2018*
13,600	18,880	22,834	47,154	10,790	25,290	9,091	11,143

- Prioritize commercial fishing opportunities during the Coho fishery management period
  - Sept. 16th – October 14th
- Provide recreational fishing opportunities

Chum

- Achieve the aggregate naturally spawning goal for Willapa Bay

Total Natural-Origin Escapement (NOR)

Goal	2012	2013	2014	2015	2016	2017	2018*
35,400	26,343	24,516	26,382	44,960	80,284	21,749	40,844

- Provide commercial fishing opportunities
- Provide recreational fishing opportunities
- Goal was not achieved in two consecutive years but goal was met 3 of 5 years
  - 10% impact rate cap
  - Commercial fisheries cannot be scheduled between Oct 15th – 31st

**Data is preliminary and subject to change*
Blue = goal not met