

II. PRELIMINARY 2018 CHINOOK AND COHO SALMON FISHERIES IN WASHINGTON AND OREGON

INTRODUCTION

This report describes the conduct of United States (U.S.) fisheries of interest to the Pacific Salmon Commission (PSC) that occurred during 2018 in the area north of Cape Falcon, Oregon and south of the U.S./Canada border. These fisheries were conducted under pre-season management plans that were consistent with Annex IV of the Pacific Salmon Treaty (PST 2008) including obligations defined within Chapter 3 for Chinook individual stock based management regimes (ISBM) and Chapter 5 for Southern Coho Management.

An overview of the Chinook (*Oncorhynchus tshawytscha*) and Coho (*Oncorhynchus kisutch*) salmon conservation challenges facing managers during the 2018 pre-season planning process in this region is provided in the following section. The conduct of major fisheries is described, and estimates of landed catch, where available, are compared to pre-season catch limits or expectations for Chinook (Table 15) and Coho (Table 16). For perspective, landed catches for those fisheries since 2013 are also presented. Where available, preliminary estimates of the number of Chinook or Coho salmon released by anglers in 2018 mark-selective fisheries are also presented (Table 17). All estimates for the 2018 fisheries are preliminary and subject to change. Estimates of spawning escapements and abundance of Coho and Chinook stocks are not available at this time.

PRE-SEASON PLANNING

Pre-season planning for southern U.S. fisheries of interest to the PSC is a coordinated activity involving Tribal, State and Federal management entities, with the involvement of conservation and fishing interests. The Pacific Fishery Management Council (PFMC) conducted a series of public meetings to consider options for ocean fishery season structures while the Tribes and States conducted government-to-government and public, open meetings throughout the region to develop and analyze alternative season structures for fisheries in the inside waters of the Columbia River, coastal Washington and Puget Sound. Participants in these various planning sessions evaluated the biological and socio-economic consequences of the alternative season structures for the outside (ocean) and inside (marine and freshwater) fisheries (Figure 38) including the anticipated impacts on U.S. southern origin stocks in fisheries conducted under the PST in Canada and Southeast Alaska. Agreement was reached on season structures expected to achieve conservation goals, domestic fishery objectives and legal obligations, including the PST, assuming fisheries are conducted as planned and pre-season abundance estimates are accurate.

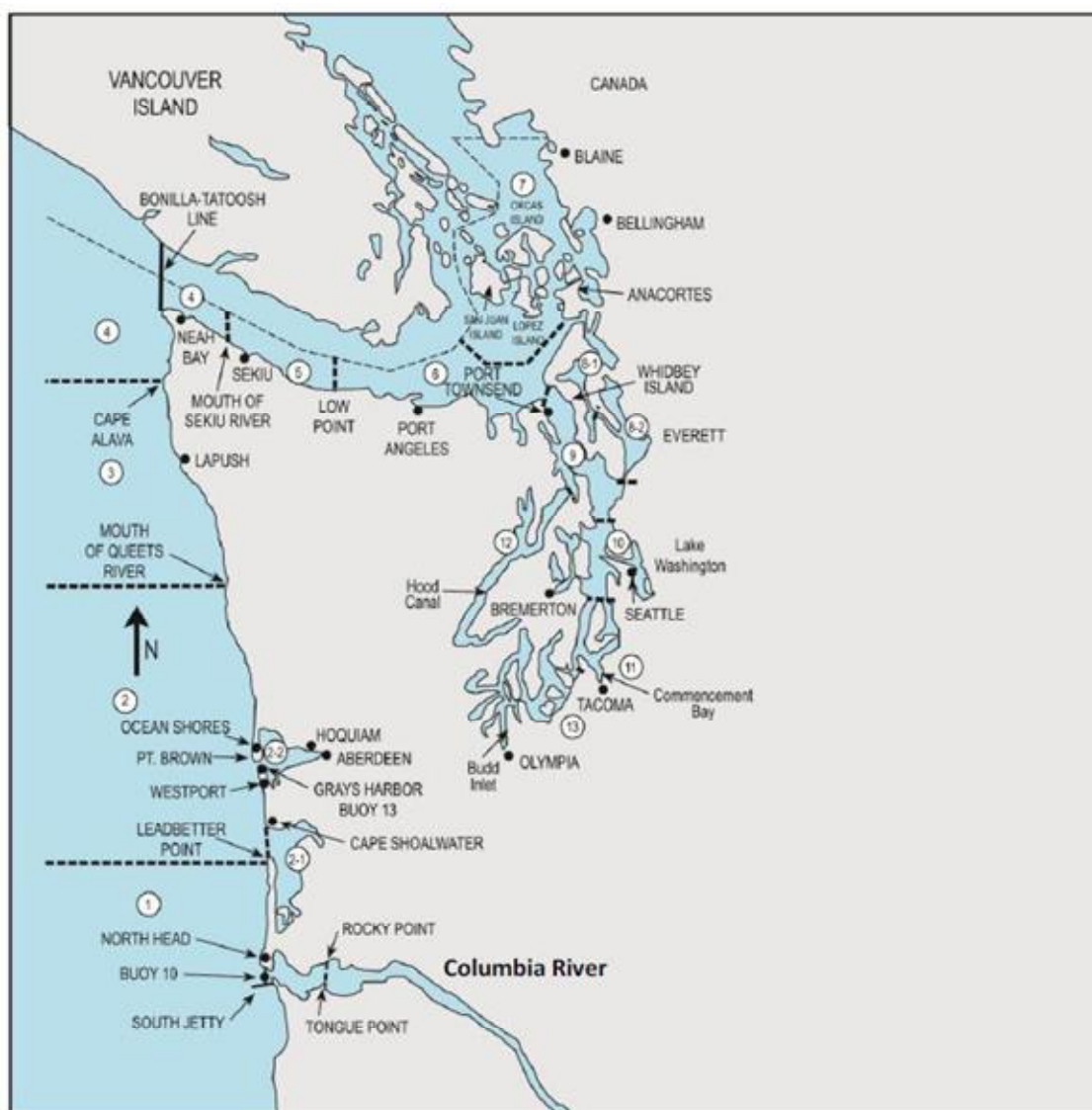


Figure 38. Map of Western Washington marine catch areas of the Washington coast (Areas 1 through 4) and Puget Sound (Areas 5 through 13) (WAC 220-22-030). Inside (Columbia River) fisheries reported in this document extend beyond the scope of this map.

Chinook Salmon Management

Under the 2008 Pacific Salmon Treaty Agreement, southern U.S. fisheries are subject to the Individual Stock Based Management provisions of Annex IV, Chapter 3. These provisions require the non-ceiling index for aggregated Southern U.S. fisheries on Chinook stocks not achieving their management objectives to be no greater than 60% of the levels estimated for the 1979 – 1982 base period.

Conservation obligations associated with the U.S. Endangered Species Act (ESA) for threatened and endangered Chinook salmon stocks originating from Puget Sound and the Columbia River have been more constraining to southern U.S. fisheries than PST obligations. Catch quotas for the 2018 U.S. ocean fisheries in the area north of Cape Falcon, Oregon, were defined by the impact limits on ESA-listed lower Columbia River natural tule fall Chinook stocks, ESA-listed Puget Sound Chinook stocks, and the abundance of other healthy, harvestable Chinook salmon

stocks contributing to fisheries in this area. Puget Sound fishing seasons were structured to provide fishing opportunity on healthy salmon species or stocks within the impact limits defined for ESA-listed Puget Sound Chinook.

Coho Salmon Management

During the pre-season fishery planning process of 2018, Canadian fishery managers informed the U.S. that the Interior Fraser management unit was again expected to be in the *low* categorical abundance status, and U.S. fisheries were constrained to ensure that the exploitation rate on this management unit did not exceed 10.0% as defined by the PST Southern Coho Management Plan. Of the U.S. natural spawning Coho management units (MUs) managed under the PST, the Strait of Juan de Fuca, Queets, and Grays Harbor Coho MUs were forecasted to be in *low* abundance status. The Skagit, Stillaguamish, and Snohomish Coho MUs were predicted to be in *moderate* status, while the Hood Canal, Quillayute, and Hoh MUs were forecasted to be in *abundant* status.

The impacts of planned Southern U.S. fisheries on natural Coho stocks, seasons, and catch limits were predicted using the Fisheries Regulation Assessment Model (FRAM). The total exploitation rate on the Interior Fraser Coho management unit was predicted to be 7.0% in Southern U.S. fisheries. Seasons and Coho quota levels for U.S. ocean fisheries were closed or severely constrained by the management objectives of Washington coastal and Puget Sound natural Coho and ESA-listed lower Columbia River natural Coho. Limits to fisheries in marine areas within northern Puget Sound and the Strait of Juan de Fuca were likewise constrained by management objectives reflecting very low forecasted returns for some Puget Sound natural Coho stocks.

NORTH OF CAPE FALCON OCEAN FISHERIES

Details regarding North of Cape Falcon ocean salmon fishing plans were reported in Preseason Report III, published by the Pacific Fishery Management Council in April 2018.

<https://www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/preseason-reports/>

Fisheries in this area are managed to meet conservation objectives for ESA-listed stocks, natural stocks and brood stock goals for hatchery stocks. Within these stock management objectives, ocean fishing seasons are defined that meet legal requirements of Tribal treaties and allocations between Non-Tribal troll and sport fisheries. Ocean fishery seasons are also constructed to ensure a balance of opportunity for harvest with the inside fisheries. Lower Columbia River hatchery Coho and Columbia River fall Chinook have historically been the major stocks contributing to catches of ocean fisheries in the North of Cape Falcon area.

Chinook and Coho salmon catch quotas were established for the 2018 ocean Tribal, Non-Tribal troll and sport fisheries. Ocean fishery quotas for Chinook salmon were defined by exploitation rate limits on several ESA-listed Puget Sound Chinook stocks as well as the total exploitation rate limit of 38% on ESA-listed lower Columbia River natural tule fall Chinook stocks in all fisheries.

Non-Tribal Troll Fishery

Pre-season quota levels for the non-Tribal troll fisheries were 27,500 Chinook and 5,600 Coho with a clipped adipose fin, hereinafter referred to as marked. The preliminary estimate of non-

Tribal harvest in the 2018 North of Falcon troll fishery is 24,000 Chinook (87% of the pre-season coast-wide quota; a transfer of 1,876 Chinook from the sport to the troll fishery occurred in-season, resulting in a final troll Chinook quota of 29,376) and 1,400 Coho (25% of the pre-season coast-wide non-Tribal troll quota; a transfer of 1,000 Coho from the troll to the sport fishery occurred in-season, resulting in a final troll Coho quota of 4,600). Trollers harvested 16,200 Chinook in the May 1 – June 30 fishery, and the remaining 7,800 Chinook were harvested in the summer all-species fishery between July 1 and September 19. All Coho were harvested during the summer all-species fishery.

Tribal Troll Fishery

The Tribal troll ocean fishery (also known as the Treaty troll fishery) quotas were defined by conservation concerns for ESA-listed Lower Columbia River natural tule fall Chinook and ESA-listed Puget Sound Chinook. The coho quota was based on concerns for Puget Sound coho, Thompson River coho, and ESA-listed lower Columbia River natural coho.

The Treaty troll fishery was implemented in Ocean Areas 2, 3, 4 and 4B. The 2018 quotas were set at 40,000 Chinook and 12,500 coho. The Chinook quota was split into two sub-quotas—a 16,000 sub-quota during May-June and a 24,000 sub-quota during July-September. The 12,500 coho quota could be harvested during the July-September all-species fishery.

The May-June Treaty troll Chinook-directed fishery harvested 81% of the 16,000 Chinook sub-quota. Chinook effort was highest in June, which accounted for 73% of the Chinook landings during this time period. There were 324 landings during May and June. The all-species portion of the fishery ran from July 1 until September 15. The fishery harvested 45% of the 24,000 Chinook sub-quota and 90% of the 12,500 coho quota. Coho landings were highest in August accounting for 46% of the overall catch, followed by September at 40%. Chinook effort was highest in July, which accounted for approximately 78% of the Chinook landings during this time period. There were 485 landings during the all-species portion of the fishery.

Overall the Treaty troll fishery harvested 59% of the 40,000 Chinook quota and 90% of the 12,500 coho quota. The total ocean salmon harvest for the 2018 Treaty troll fishery was 23,680 Chinook and 11,301 coho.

Ocean Sport Fisheries

Pre-season quotas for the Washington coastal sport fishery (Ocean Areas 1 through 4) were 27,500 Chinook and 42,000 marked Coho. Preliminary total catch estimates for the ocean sport fisheries north of Cape Falcon were 10,600 Chinook (39% of the pre-season coast-wide quota; a transfer of 1,876 Chinook from the sport to the troll fishery occurred in-season, resulting in a final sport Chinook quota of 25,624) and 41,800 Coho (100% of the pre-season coast-wide sport quota; a transfer of 1,000 Coho from the troll to the sport fishery occurred in-season, resulting in a final sport Coho quota of 43,000). A description of the season structure and catches by management area follows.

Columbia Ocean Area (including Oregon)

All-species salmon sport fishing opened in Ocean Area 1 (Columbia Ocean Area) on June 23 with a pre-season quota of 21,000 marked Coho and a guideline of 8,000 Chinook. The fishery closed upon projected attainment of the Coho quota on August 12, and reopened for two days on September 2 and 3. The catch estimates for Area 1 were 2,200 Chinook (28% of the guideline)

and 20,500 Coho (98% of the quota). The Chinook minimum size limit was 24 inches and the Coho minimum size limit was 16 inches with a sub-area closure in the Columbia Control Zone.

Preliminary estimates of Coho encounters (retained and released) and mark rate in the Area 1 Coho mark-selective sport fishery, June 23 – September 3, 2018.			
Coho retained	Coho released	Total encounters	Mark %
20,500	14,600	35,100	58%

Westport, Washington

Ocean Area 2 (Westport, WA) opened for all-species salmon sport fishing on July 1 with a pre-season quota of 15,540 marked Coho and a guideline of 13,100 Chinook. The fishery closed on its automatic closure date, September 3. The catch estimates for Area 2 were 4,900 Chinook (37% of the guideline) and 15,400 Coho (99% of the quota). The Chinook minimum size limit was 24 inches and the Coho minimum size limit was 16 inches with a sub-area closure in the Grays Harbor Control Zone beginning August 13.

Preliminary estimates of Coho encounters (retained and released) and mark rate in the Area 2 Coho non-retention sport fishery, July 1 – September 3, 2018.			
Coho retained	Coho released	Total encounters	Mark %
15,400	16,900	32,300	48%

La Push, Washington

Ocean Area 3 (La Push, WA) opened for all-species salmon sport fishing on June 23 with a pre-season quota of 1,090 marked Coho and a guideline of 1,500 Chinook. The fishery closed on its automatic closure date, September 3. The catch estimates for Area 3 were 400 Chinook (27% of the guideline) and 1,000 Coho (92% of the quota). The Chinook minimum size limit was 24 inches and the Coho minimum size limit was 16 inches.

Preliminary estimates of Coho encounters (retained and released) and mark rate in the Area 3 Coho non-retention sport fishery, June 23 – September 3, 2018.			
Coho retained	Coho released	Total encounters	Mark %
1,000	1,600	2,600	38%

Neah Bay, Washington

Ocean Area 4 (Neah Bay, WA) opened for all-species salmon sport fishing on June 23 with a pre-season quota of 4,370 marked Coho and a guideline of 4,900 Chinook. Following an in-season transfer from the non-Tribal troll fishery to modify the area Coho quota to 5,370 and a transfer to the troll fishery to modify the area Chinook guideline to 3,024, the fishery closed upon attainment of the Coho quota on August 12. The catch estimates for Area 4 were 3,000 Chinook (100% of the guideline) and 4,900 Coho (91% of the modified quota). The Chinook minimum size limit was 24 inches and the Coho minimum size limit was 16 inches.

Preliminary estimates of Coho encounters (retained and released), in the Area 4 Coho non-retention sport fishery, June 23 – September 3, 2018.			
Coho retained	Coho released	Total encounters	Mark %
4,900	7,900	12,800	38%

NORTH OF CAPE FALCON INSIDE FISHERIES

WASHINGTON COASTAL RIVER FISHERIES

North Washington Coastal Rivers

Net and sport fisheries targeting salmon in northern Washington coastal rivers were implemented based upon pre-season, Tribal-State agreements. The 2018 north coastal rivers net harvest (all by Tribal fisheries that are non-selective) includes catch from the Sooes, Quillayute system, Hoh, Queets, and Quinault Rivers. The 2018 commercial Tribal net fisheries in north coastal rivers harvested an estimated 11,000 Chinook salmon and 21,800 Coho salmon through November 15, 2018.

Recreational fisheries conducted during 2018 in the Quillayute, Hoh and Queets River systems included mark-selective fisheries targeting hatchery Chinook in the Quillayute and Hoh systems as well as hatchery summer and fall Coho in the Quillayute system. The Queets system had a hatchery coho sport fishery in September, but was closed to sport fishing during October and November when the wild fall coho and Chinook returned. Harvest or impact estimates for these fisheries are unavailable at this time.

Grays Harbor, Washington

Harvest numbers reported for Grays Harbor, Washington include catch from both the Humptulips and Chehalis Rivers through November 15, 2018. The non-selective Tribal net fisheries in Grays Harbor, and including fisheries in the Humptulips and Chehalis Rivers, harvested an estimated 2,600 Chinook salmon and 8,300 Coho salmon. The non-Tribal commercial fishery in the northern portion of Grays Harbor near the Humptulips River (Area 2C) was non-selective and harvested 43 Chinook and 19 Coho. There were 2 Chinook salmon (mark-selective) and 799 Coho harvested in the Non-Tribal commercial gillnet fishery in Areas 2A and 2D. Sport fisheries conducted in the Chehalis and Humptulips Rivers included mark-selective components for Chinook and Coho salmon. Harvest data for these fisheries are not available at this time.

COLUMBIA RIVER FISHERIES

Tribal and non-Tribal net and sport salmon fisheries were implemented in 2018 during the winter/spring (January – June 15), summer (June 16 – July) and fall (August – October) periods. All fisheries were constrained by impacts on ESA-listed stocks. Winter/spring fisheries were primarily constrained by impacts on ESA-listed upper Columbia River spring Chinook and Snake River spring/summer Chinook. Summer season fisheries were constrained by impacts to ESA listed sockeye and summer steelhead. Fall fisheries were mainly constrained by impacts to ESA listed Snake River fall Chinook. Additionally, careful in-season management to limit the fishery impacts on upriver summer steelhead, wild lower Columbia tule fall Chinook, and wild lower Columbia River Coho further constrained Columbia River fall fisheries during 2018.

Columbia River salmon fisheries are developed and regulated to meet conservation standards. Fisheries are managed to operate within the impact limits set for ESA-listed stocks, meet the objectives for healthy Columbia River natural stocks, and ensure broodstock needs are met for

hatchery salmon. Mainstem Columbia River fisheries are also developed and managed to remain within the requirements of the 2018 – 2027 *US v. Oregon* Management Agreement (MA), which includes Tribal/Non-Tribal sharing agreements. All 2018 data are preliminary and subject to change; some fisheries are still ongoing at the time of this report. The following section includes harvest numbers from Columbia River fisheries that are considered to be of the interest to PSC; therefore, the data may not match other reports that include total harvest.

Winter-Spring Fisheries

Non-Tribal Net

The mainstem winter/spring commercial fishery operated under mark-selective fishery (MSF) regulations during 2002 - 2016. As a result of recent guidance from the Oregon and Washington Fish and Wildlife commissions, there were no winter/spring non-Tribal commercial salmon seasons in the mainstem Columbia River since 2016. Commercial fisheries during the winter/spring timeframe did occur in off-channel areas (Select Areas) in the Columbia River estuary but are not reported in this document.

Sport

Mainstem Columbia River mark-selective sport fisheries began in 2001. For 2018, the area below Bonneville Dam was open from January 1 – April 7, April 14, and May 25 through June 15 for hatchery Chinook retention. Catch estimates for this area totaled 7,509 hatchery adult spring Chinook kept and 1,530 non-adipose fin clipped Chinook released. From Bonneville Dam to the Washington-Oregon state line, there were 613 hatchery adult spring Chinook kept and 100 non-adipose fin clipped Chinook released. The Snake River fishery structure included three specific catch areas open on a days-per-week rotation as was open April 20 – June 12. Catch in the Snake River fishery totaled 740 hatchery adult spring Chinook and 302 non-adipose fin clipped released. Fisheries also occurred in tributaries but are not reported in this document.

Preliminary estimated encounters of adult Spring Chinook in the 2017 Winter/Spring Columbia River mark-selective sport fishery.					
System	Area	Chinook Kept	Chinook Released	Total Encounters	% Kept
Columbia River	Below BON (LCR)	7,509	1,530	9,039	83%
Columbia River	BON to WA-OR S/L	613	100	713	86%
Snake River	Washington Waters	740	302	731,072	69%

Tribal

Tribal mainstem winter/spring fisheries typically occur from January 1 through June 15. Tribal mainstem fisheries are not mark-selective. Tribal fisheries are primarily conducted in the mainstem Columbia River from Bonneville Dam upstream to McNary Dam (Zone 6). Some additional harvest occurs just downstream of Bonneville Dam in platform and hook-and-line fisheries. Spring season fisheries may include three fishery sectors, a ceremonial permit gillnet fishery, a platform and hook and line fishery and a commercial gillnet fishery (during winter and periodically in the spring, after ceremonial needs have been met).

During 2018, the platform and hook-and-line fishery was open for subsistence fishing

throughout most of the winter/spring period. Fisheries were temporarily closed for just 4 days to assess catches. Commercial sales did not occur in 2018 Tribal fisheries during the spring management period. Harvest estimates from the combined ceremonial and subsistence fisheries totaled approximately 10,870 upriver spring Chinook (includes harvest from below Bonneville Dam). Tribal harvest in tributaries is not included in this report.

Summer Fisheries

Non-Tribal Net

As a result of guidance from the Oregon and Washington Fish and Wildlife commissions, non-Tribal commercial fisheries did not occur in the 2018 summer management timeframe. Non-Tribal commercial fisheries are now restricted to non-gillnet gear and did not occur since a suitable alternative has not been identified.

Sport

Summer season recreational fisheries occurred from June 22-30 from the Astoria-Megler Bridge near the mouth of the Columbia River upstream to Bonneville Dam. The fishery was mark-selective the entire season. Catch estimates below Bonneville Dam (BON) totaled 1,027 adult Chinook kept (750 non-adipose fin clipped released). The season upstream of Bonneville Dam was open June 16-July 6. Catch estimates from Bonneville Dam upstream to McNary Dam totaled 12 adult Chinook kept (0 non-adipose fin clipped released). The majority of harvest occurred in fisheries upstream of Priest Rapids Dam and in tributaries, which are not reported in this document.

Adult Summer Chinook Salmon Handle in the 2018 Sport Mark-Selective Fishery.					
System	Area	Chinook Kept	Chinook Released	Total Handle	% Kept
Columbia River	Below BON (LCR)	1,027	750	1,777	58%
Columbia River	BON to PRD	12	0	12	100% ¹

¹ The high mark rate may be an artifact of small sample size in the creel.

Tribal

Summer season Tribal fisheries occurred from June 16 through July 28. Tribal mainstem fisheries are not mark-selective. Tribal fisheries are primarily conducted in the mainstem Columbia River from Bonneville Dam upstream to McNary Dam (Zone 6). Some additional harvest occurs just downstream of Bonneville Dam in platform and hook-and-line fisheries. Seven weekly commercial gillnet fishing periods were conducted from June 16 – July 29. Platform and hook-and-line fisheries also occurred throughout the season, and fish were sold commercially or retained for subsistence use. Tribal fisheries within the mainstem harvested a total of approximately 9,498 Upper Columbia Summer Chinook.

Fall Fisheries

Non-Tribal Net

Fall season mainstem fisheries are typically categorized into early and late fall seasons. The early fall season generally encompasses the month of August and in some years, early September,

whereas the late fall season generally begins in mid-September and may continue through October. Time, area, and gear restrictions were in place for fall season commercial gillnet fisheries. Fall gillnet fisheries are non-MSF. No seining or Coho tangle net fisheries occurred in 2018 due to ESA constraints. In 2018, the early fall season consisted of four fishing periods during August 21-30 in commercial Zones 4-5 (Warrior Rock to Beacon Rock). There were insufficient ESA impacts to open the late fall season. Harvest estimates are estimated to include 8,320 Chinook and 380 Coho Salmon.

Sport

Fall season recreational fisheries are mark-selective for Coho, and in recent years have included some mark-selective periods for Chinook in the Buoy 10 area and in the 69-mile stretch of the lower Columbia River from the Tongue Point line upstream to Warrior Rock, which is near the mouth of the Willamette River. There were no mark-selective periods for Chinook in the mainstem Columbia River during 2018 and closed to salmon fishing September 12 through the remainder of the fall season due insufficient ESA impacts remaining. The Buoy 10 fishery opened August 1 and continued through September 12; Chinook retention was allowed August 1 through August 24. Additional regulations for the Buoy 10 fishery included minimum size limits for Chinook (24-inches) and Coho (16-inches), and in 2018, steelhead retention was prohibited beginning August 18. Released Chinook typically consisted of fish that did not meet the minimum size requirement, fish released during non-retention periods, and any voluntary releases of legal-sized Chinook throughout the season.

Buoy 10 catches included 11,608 Chinook and 6,734 hatchery Coho Salmon kept. Released fish included 4,700 Chinook and 6,242 Coho Salmon. The lower Columbia River (LCR) mainstem sport fishery from the Rocky Point – Tongue Point line upstream to Bonneville Dam opened August 1 and continued September 12. In the area from the Rocky Point – Tongue Point line upstream to the Lewis River, Chinook retention was open August 1 through September 2. Chinook retention was allowed August 1-September 12 from the Lewis River upstream to Bonneville Dam. The kept catch estimate for the LCR sport fishery was 9,802 adult Chinook through September 12; an additional 877 adult Chinook were released. The mainstem sport fishery from Bonneville Dam to the Highway 395 Bridge (near Pasco, Washington) was open August 1 – September 12. Adult catch estimates for the Bonneville to McNary area totaled 958 fall Chinook and 12 Coho Salmon. Additional fisheries occurred on the Columbia River in the Hanford Reach area (downstream of Priest Rapids Dam), in tributaries and in the Snake River, but are not reported in this document.

Adult Fall Chinook and Coho Salmon Handle in the 2018 Columbia River Fall Sport Fisheries					
System	Area	Chinook Kept	Chinook Released	Total Handle	% Kept
Columbia River	Buoy 10	11,608	4,700	16,308	71%
Columbia River	LCR Sport	9,802	877	10,679	92%
Columbia River	Bonneville-McNary	958	97	1,055	91%
System	Area	Coho Kept	Coho Released	Total Handle	% Kept
Columbia River	Buoy 10	6,734	6,242	12,976	52%
Columbia River	LCR Sport ¹	650	417	1,067	61%

Columbia River	Bonneville-McNary ²	12	6	18	66%
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Tribal

Fall season Tribal fisheries occur from August 1 through December 31. Tribal fisheries are not mark-selective. Tribal fisheries are primarily conducted in the mainstem Columbia River from Bonneville Dam upstream to McNary Dam (Zone 6). Some additional harvest occurs just downstream of Bonneville Dam in platform and hook-and-line fisheries. Platform and hook and line fisheries will remain open through December 31.

The Tribal commercial gillnet fishery consisted of seven weekly fishing periods from August 21 through October 5. Preliminary harvest estimates for all fall season fisheries total 53,343 adult fall Chinook and 3,705 adult Coho; however, some additional fish may be landed in the ongoing platform fisheries. Harvest estimates reported herein include catch from Zone 6 tributary fisheries.

PUGET SOUND FISHERIES

Puget Sound marine fisheries of interest to the Pacific Salmon Commission were regulated to meet conservation and allocation objectives for Chinook, Coho, Chum, Pink, and Sockeye salmon stocks, per Tribal-State agreement. For Puget Sound Chinook listed under the ESA, fisheries were managed according to the Puget Sound Chinook Harvest Management Plan (PSIT and WDFW 2010). This management plan defines limits to total exploitation rates for natural stocks and was determined by the National Marine Fisheries Service (NMFS) to be consistent with requirements specified under the ESA 4(d) Rule.

Release requirements were applied to many sport and net fisheries for Chinook, Coho, and Chum salmon -- the latter to protect ESA-listed Hood Canal and Strait of Juan de Fuca summer Chum.

Puget Sound marine fisheries were constrained by the need to meet management objectives for ESA-listed Puget Sound Chinook and due to conservation concerns for some Puget Sound Coho stocks. The primary constraining Puget Sound Chinook stocks during 2018 pre-season planning included Mid-Hood Canal, Snohomish, and Nooksack Chinook. Strait of Juan de Fuca, Snohomish, and Stillaguamish Coho were the primary Coho management units of concern for developing fisheries in the Strait of Juan de Fuca, San Juan Islands, and Puget Sound.

Strait of Juan de Fuca Sport

Marked Chinook retention was allowed for sport fishing in salmon management Area 5 from March 16, 2018 through April 30, 2018 and in Area 6 from March 1, 2018 through April 8, 2018. Sport fishing regulations allowed retention of marked Chinook and marked Coho from July 1 through August 15 in Areas 5 and 6, with marked Coho retention also permitted through September 30 in Area 5. Dungeness Bay was open for marked Coho retention during the month of October. Preliminary estimates of Chinook encounters and the legal-size mark rate in the Area 5 sport mark-selective fishery are presented in the following table.

Preliminary estimates of Chinook retained, released (legal and sub-legal size), and the legal-size mark rate in the Area 5 sport mark-selective fishery, July 1 – August 15, 2018.			
Chinook retained	Chinook released	Total encounters	Mark % (legal size)

3,838	18,069	21,907	62.3%
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A detailed report of this summer period sport fishery, including estimated catch, effort and other results of sampling and monitoring programs, will be available from the Washington Department of Fish and Wildlife in early 2019.

Strait of Juan de Fuca Tribal Troll (Area 4B, 5, and 6C)

During the winter Tribal troll fishery in Areas 4B, 5, and 6C (November 1, 2017 – April 15, 2018), 800 Chinook and zero Coho were caught. In the summer Tribal troll fishery in Areas 5 and 6C only (June 1 – September 30, 2018), 200 Chinook and 500 Coho were caught. The Tribal catch estimates from this area do not include catch from Area 4B during the May-September PFMC management period, which have been included in the North of Cape Falcon Tribal ocean troll summary.

Strait of Juan de Fuca Tribal Net

Preliminary estimates of the 2018 catch in the Strait of Juan de Fuca Tribal net fisheries (no non-Tribal net fisheries in the Strait of Juan de Fuca) are 2,200 Chinook and 4,400 Coho salmon.

San Juan Islands Net (Areas 6, 7, and 7A)

Preliminary estimates of the 2018 catch in the San Juan Island net fishery directed at Sockeye, Pink, or Chum salmon totaled 9 Chinook and 869 Coho salmon in the non-Tribal fishery. Tribal fishery landings from this area for all gear types totaled 4,000 Chinook and 2,900 Coho.

San Juan Islands (Area 7) Sport

Marked Chinook retention was allowed in the entire Area 7 during the winter/spring season from January 1, 2018 through April 30, 2018. Preliminary estimates of Chinook retained and released by anglers during this fishery were produced via an intensive sampling program and are presented in the table below. A detailed report of this fishery, including estimates of catch, effort and other results of sampling and monitoring programs, is available from the Washington Department of Fish and Wildlife.

Estimated Chinook retained, released (legal and sub-legal size) and the legal size mark rate in the Area 7 sport mark-selective fishery, January 1 through April 30, 2018.			
Chinook retained	Chinook released	Total encounters	Mark % (legal size)
2,227	4,383	6,610	72%

During the summer season in Area 7, recreational anglers were allowed to retain Chinook from July 1 through September 3. Mark-selective regulations (release of unmarked Chinook required) were implemented during the month of July only. The southern Rosario Strait and eastern portions of Area 7 were closed from July 1 – September 30 to protect Puget Sound Chinook salmon. Additional sub-area closures are described in the 2018-19 Washington State Sport Fishing Rules Pamphlet. The table below presents estimated Chinook encounters (retained and released) and the legal-size mark rate in the Area 7 sport mark-selective fishery, from July 1-31, 2018.

Estimated Chinook retained, released (legal and sub-legal size) and the legal size mark rate in the Area 7 sport mark-selective fishery, July 1-31, 2018.			
Chinook retained	Chinook released	Total encounters	Mark % (legal size)
2,349	6,744	9,093	62%

Catch estimates and sampling information for this area during the period from August 1 through September 3, 2018 are not available at this time.

Inside Puget Sound (Areas 8-13) Sport

Mark-selective sport fisheries (MSFs) targeting adipose fin-clipped (marked) hatchery Chinook were conducted in Area 8.1 (Deception Pass, Hope Island, and Skagit Bay), Area 8.2 (Port Susan & Port Gardner), Area 9 (Admiralty Inlet), Area 10 (Seattle-Bremerton), Area 11 (Tacoma-Vashon Island), Area 12 (Hood Canal), and Area 13 (South Puget Sound) during the winter (October 2017 – April 2018) period, and in Areas 9, 10, 11, 12, and 13 during the summer (May – September 2018) period. Additionally, marked and unmarked Chinook retention was permitted in the Tulalip Bay (Area 8-2) from May 26 through September 25 (Fridays through noon Mondays), and from September 8 through September 30 (Saturdays and Sundays).

Puget Sound Chinook mark-selective sport fisheries conducted in marine areas during 2017-2018.	
Areas	Season
8.1 & 8.2	Winter: November 1, 2017 – November 12, 2017; February 16, 2018 - April 30, 2018.
9	Winter: November 1 – November 12, 2017; February 16, 2017 – April 15, 2018. Summer: July 16 – July 22, 2018; July 26 – July 29, 2018.
10	Winter: November 1, 2017 – February 28, 2018. Summer: July 16 – August 16, 2018; Sinclair Inlet: July 1 – September 30, 2018.
11	Winter: October 1, 2017 – April 30, 2018. Summer: June 1 – August 25, 2018 (only Fridays – Mondays from July 17 – July 30).
12	Winter: October 1, 2017 – April 30, 2018. Summer: July 1 – September 30 (South of Ayock Point).
13	Year round: January 1 – December 31

Post-season reports detailing results of these Chinook MSFs, including estimates of retained and released encounters, effort and mark rates from sampling and monitoring programs, will be available from the Washington Department of Fish and Wildlife in the spring of 2019.

Mark-selective sport fisheries during 2018 directed at marked Coho were conducted in the following marine catch areas: Area 9 from July 16 – September 30 and in Area 13 from January 1 – December 31. Marked and unmarked Coho retention was permitted in Tulalip Bay from May 25 – September 3 (on Fridays through noon, Mondays only) as well as from September 8 – September 30 (Saturdays, Sundays); in Area 11 from June 1 – December 31; and in Area 12 from January 1 – April 30, 2018 in the whole area, as well as from September 1 – December 31, 2018 in the areas North of Ayock Point and from July 1 – December 31, 2018 in the area South of Ayock Point.

Puget Sound Marine Net (Areas 8-13 & 7B-D)

To achieve conservation objectives for natural Puget Sound Chinook, limited marine net fishing opportunities directed at returns of hatchery Chinook and both hatchery and natural Coho were planned for 2018. Chinook and Coho were also intercepted in fisheries directed at Pink and Chum salmon. A total of 56,700 Chinook and 116,300 Coho were landed in the Tribal marine net fisheries in Puget Sound (Areas 8-13 & 7B-D) during 2018. Non-Tribal net fishery landings from these areas totaled 12,100 Chinook and 10,900 Coho. Nearly all Chinook landed in the non-Tribal net fishery occurred during Chinook-directed fisheries in Areas 7B, 7C, and 12C.

Puget Sound Rivers Fisheries

Tribal net and non-Tribal sport fisheries were implemented in freshwater systems based upon pre-season, Tribal-State agreements and subject in part to in-season adjustment. Harvest of Chinook and Coho in the Tribal in-river net fisheries (includes catch from river systems in the Strait of Juan de Fuca, Hood Canal, and Puget Sound) totaled 40,500 Chinook and 112,000 Coho during 2018.

Also, recreational fisheries targeting Chinook salmon were conducted in nine Puget Sound Rivers that have PSC Chinook coded wire tag (CWT) exploitation rate indicator stocks or double index tag (DIT) groups, as listed in the table below. Of these, seven rivers had mark-selective fisheries and two rivers had non-selective fisheries, as follows:

Chinook mark-selective sport fisheries conducted in Puget Sound rivers during 2018.	
River	Season
Nooksack River	September 1 - 30
Cascade River	June 1 – July 15
Skagit River	June 1 – July 15
Skykomish River	June 1 – July 31
Carbon River	September 1 – November 30
Puyallup River	August 15 – December 31
Nisqually River	July 1 – September 30
Chinook non-selective sport fisheries conducted in Puget Sound rivers during 2018.	
River	Season
Samish River	August 1 – October 31
Green River	September 1 – December 31

During the 2018 season there were no mark-selective sport fisheries targeting hatchery Coho in the rivers of Puget Sound that have PSC Coho CWT exploitation rate indicator stocks or DIT groups. However, recreational non-selective Coho fisheries were conducted on the Skykomish River, Green River, Carbon River, Puyallup River, and Quilcene River.

REFERENCES

Pacific Salmon Treaty (PST) Act of 1985. 2008 Agreement. U.S.-Canada. Public Law 99-5, 16 U.S.C. 3631.

Puget Sound Indian Tribes and Washington Department of Fish & Wildlife (PSIT and WDFW). 2010. Comprehensive Management Plan for Puget Sound Chinook: Harvest Management

Component. Northwest Indian Fisheries Commission, Olympia, Washington. 237 p.

Pacific Fishery Management Council (PFMC). 2008. Fishery Regulation Assessment Model (FRAM): An Overview for Coho and Chinook v3.0. Pacific Fishery Management Council, Portland, Oregon. 43 p.

Table 15. Preliminary 2018 Landed Chinook Catch for Washington and Oregon Fisheries of Interest to the Pacific Salmon Commission. Values are presented in number of fish rounded to the nearest 100. ^{9/}

Fisheries	2018		Landed							
	Preseason ^{5/}									
	Total Mortality ^{1/}	Landed ^{2/}	Preliminary Landed	2017	2016	2015	2014	2013	2012	
OCEAN FISHERIES										
Commercial Troll										
Neah Bay and La Push (areas 3,4,4B) ^{3/} Columbia Ocean Area and Westport (area 1,2) ^{4/}	54,600	48,100	33,700	35,200	28,100	73,600	77,100	63,700	79,400	
	30,600	19,400	13,900	24,700	14,200	50,900	39,100	28,300	20,600	
Sport (see text for quota information)										
Neah Bay (area 4)	5,500	4,900	3,000	7,300	3,300	8,500	5,900	6,200	5,600	
La Push (area 3)	1,700	1,500	400	500	300	2,400	1,600	2,400	1,300	
Westport (area 2)	14,600	13,100	4,900	6,600	8,400	19,100	23,500	13,700	19,500	
Columbia Ocean Area (area 1) ^{13/}	10,300	8,000	2,200	7,600	6,000	12,200	11,300	8,500	9,100	
INSIDE FISHERIES										
Sport ^{10/}										
Strait of Juan de Fuca (area 5,6)	16,300	10,300	na	9,810	15,000	11,800	11,100	14,900	13,900	
San Juan Islands (area 7)	11,000	7,600	na	7,000	5,900	8,600	9,200	9,500	5,800	
Puget Sound Marine (area 8-13)	36,500	29,500	na	21,600	16,700	9,000	12,100	16,600	22,000	
Puget Sound Rivers ^{12/}	12,500	12,000	na	23,700	9,600	11,100	11,800	19,600	23,200	
North WA Coastal Rivers	-	-	na	1,600	600	2,200	1,200	2,700	1,600	

Grays Harbor ^{7/}	1,700	1,500	na	2,200	2,800	3,800	1,200	3,800	4,600
Columbia River (Spring) ^{6/}	-	-	8,200	9,100	14,100	23,100	21,400	8,400	17,000
Columbia River (Summer) ^{6/}	2,800	2,600	1,000	3,800	6,800	6,700	2,300	2,100	3,200
Columbia River (Fall) (incl. Buoy 10) ^{6/}	25,900	24,800	21,900	60,400	65,600	91,300	63,000	74,500	47,000
Commercial^{11/}									
Strait of Juan de Fuca net and troll (area 4B,5,6C)	7,200	4,500	3,200	1,900	700	5,900	6,100	4,000	3,900
San Juan Islands (area 6,7, 7A)	8,000	7,900	4,000	2,600	100	4,800	6,900	3,800	400
Puget Sound Marine (8-13,7B-D)	45,500	44,700	70,400	90,600	55,800	33,100	28,400	70,100	75,700
Puget Sound Rivers ^{12/}	35,900	35,900	40,500	53,900	23,300	21,200	19,900	26,800	39,500
North WA Coastal Rivers	-	-	11,000	14,200	9,400	17,300	20,200	14,400	12,800
Grays Harbor (area 2A-2D) ^{7/}	1,000	1,000	2,600	3,700	2,100	10,500	5,100	2,900	4,000
Columbia River Net (Winter/Spring) ^{8/}	-	-	8,700	8,100	20,400	37,600	28,200	11,200	23,800
Columbia River Net (Summer) ^{8/}	-	-	10,600	16,300	23,400	41,700	22,200	15,300	9,500
Columbia River Net (Fall) ^{8/}	-	-	61,700	140,600	188,900	343,900	365,900	312,500	119,800

Table 15 Footnotes:

^{1/} Estimates of total mortality (not adjusted for adult equivalents) include non-retention mortality. Total Mortality is estimated by Fishery Regulation Assessment Model (FRAM) as catch + incidental mortality, where incidental mortality = drop off + non-retention mortality (PFMC 2008).

^{2/} For the ocean fisheries, this column shows the Chinook troll and recreational quotas used for 2018 pre-season fishery planning as distributed by ocean area (Landing Quotas = Landed). See text for any in-season adjustments.

^{3/} Includes Area 4B catch during the PFMC management period (May 1 – September 15); Area 4B Treaty troll catch outside PFMC period included under Strait of Juan de Fuca net and troll (October-April).

^{4/} Includes Oregon troll catch in Area 1.

^{5/} FRAM modeled pre-season fishery impacts cover the current fishery planning year, for Chinook defined as May 1 through April 30.

^{6/} Mainstem retained adult sport catch only (upstream to McNary Dam for spring, Priest Rapids Dam for summer and to Hwy 395 for fall). See tables 10, 22-23 in the current Joint Staff Report regarding spring and summer Chinook and tables 25-27 in the annual fall report.

http://wdfw.wa.gov/fishing/crc/staff_reports.html.

^{7/} Includes Grays Harbor catch, as well as catch from the Chehalis and Humptulips Rivers and their tributaries for sport and Chehalis and Humptulips Rivers for net estimates.

^{8/} Mainstem retained catch only, includes tribal C&S and Commercial from all gear types and non-tribal (Columbia River mouth upstream to McNary Dam). Catch data from annual Joint Staff Reports. Winter and spring catch Tables 7 (Tribal) and T18 (non-Tribal). Summer catch is in Table 10. Fall catch from annual fall report T21, 23 and 29. http://wdfw.wa.gov/fishing/crc/staff_reports.html.

^{9/} Includes catch from mark-selective fisheries as shown in table 3.

^{10/} Sport data for the most recent two years are preliminary. All data subject to change.

^{11/} Includes non-tribal & tribal commercial, as well as tribal C&S for all gear types.

^{12/} Chinook fisheries in Puget Sound Rivers are modeled using the Terminal Area Management Module (TAMM), based upon FRAM output of terminal run sizes. Total Mortality is estimated in TAMM as catch + non-retention mortality (PFMC 2008).

^{13/} Includes Oregon sport catch in Area 1.

Table 16. Preliminary 2018 Landed Coho Catch for Washington and Oregon Fisheries of Interest to the Pacific Salmon Commission. Values are presented in number of fish rounded to the nearest 100. ^{6/}

Fisheries	2018			Landed							
	Preseason ^{9/}		Preliminary Landed	2017	2016	2015	2014	2013	2012		
	Total Mortality ^{1/}	Landed ^{2/}									
OCEAN FISHERIES											
Commercial Troll											
Neah Bay and La Push (area 3,4,4B) ^{3/} Columbia Ocean Area and Westport (area 1,2) ^{10/}	15,000	13,600	11,300	13,300	-	4,100	60,100	48,500	38,600		
	8,000	4,500	1,200	1,800	-	4,800	19,000	5,400	2,800		
Sport (see text for quota information)											
Neah Bay (area 4)	5,300	4,400	4,900	3,500	100	7,800	5,600	6,500	7,500		
La Push (area 3)	1,300	1,100	1,000	1,750	-	600	4,600	2,800	2,200		
Westport (area 2)	18,100	15,500	15,400	15,750	-	30,700	54,500	20,400	11,900		
Columbia Ocean Area (area 1) ^{12/}	23,900	21,000	20,500	21,600	18,600	44,600	75,100	20,500	11,400		
INSIDE FISHERIES											
Sport ^{7/}											
Strait of Juan de Fuca (area 5,6) San Juan Islands (area 7)	23,400	19,600	na	5,450	200	62,900	63,000	41,300	76,200		
	1,400	1,300	na	100	100	3,700	2,000	2,600	2,200		
Puget Sound Marine (area 8-13)	45,900	40,900	na	35,200	5,200	77,200	59,200	72,100	91,300		
Puget Sound Rivers	21,200	20,200	na	9,000	11,300	18,600	17,900	70,000	43,500		
North WA Coastal Rivers	2,500	2,300	na	4,900	1,600	3,600	8,800	7,200	2,700		

Grays Harbor ^{5/}	5,700	5,400	na	7,400	4,300	8,200	27,300	21,200	18,300
Columbia River Buoy 10 ^{4/11/}	29,300	25,000	6,700	18,800	9,200	36,900	57,700	7,600	7,400
Commercial ^{8/}									
Strait of Juan de Fuca net and troll (area 4B,5,6C)	1,600	1,600	4,900	1,200	700	1,700	2,300	2,700	3,500
	13,000	9,800	3,800	3,400	4,100	3,900	19,800	19,400	10,500
San Juan Islands (area 6,7,7A)	125,900	123,000	125,100	134,400	210,900	28,800	108,400	168,500	236,300
Puget Sound Marine (area 8-13,7B-D)	62,300	61,100	112,000	63,200	65,400	17,800	73,400	136,000	132,400
Puget Sound Rivers	50,200	49,200	21,800	63,400	57,200	18,400	101,500	44,800	39,700
North WA Coastal Rivers	13,100	12,800	8,300	22,800	3,200	12,600	67,200	22,000	30,700
Grays Harbor (area 2A-2D) ^{5/}									

Table 16 Footnotes:

^{1/} Estimates of total mortality include non-retention mortality. Total Mortality is estimated by Fishery Regulation Assessment Model (FRAM) as catch + incidental mortality, where incidental mortality = drop off + non-retention mortality (PFMC 2008).

^{2/} For ocean fisheries this column shows the Coho troll and recreational quotas used for 2018 pre-season fishery planning as distributed by ocean area (Landing Quotas = Landed). See text for any in-season adjustments.

^{3/} Includes area 4B catch during the PFMC management period (May 1 – September 15); area 4B Treaty troll catch outside the PFMC period included under Strait Juan de Fuca net and troll (October-April).

^{4/} Retained catch only. See table 26 in the current Fall Joint Staff report available on line at http://wdfw.wa.gov/fishing/crc/staff_reports.html.

^{5/} Includes Grays Harbor catch, as well as catch from the Chehalis and Humptulips Rivers; their tributaries are included in sport estimates only.

^{6/} Includes catch from mark-selective fisheries where estimates are available.

^{7/} Sport data for the most recent two years are preliminary. All data subject to change.

^{8/} Includes Non-Tribal and Tribal commercial and take home, as well as Tribal ceremonial and subsistence (C&S) for all gear types. Starting in 2012, the Copalis, Moclips, and Ozette Rivers have been removed from landed catch.

^{9/} FRAM modeled pre-season fishery impacts cover the current fishery planning year, for Coho defined as January 1 through December 31.

^{10/} Includes Oregon troll catch in Area 1.

^{11/} Sport data after March 2013 are preliminary. For Buoy 10, see tables 25 in the annual fall report.

^{12/} Includes Oregon sport catch in Area 1.

Table 17. Mark-Selective Chinook and Coho Fisheries by Area and Year. "Yes" denotes that a mark selective fishery occurred, even if it only occurred in a subset of the fishing area, season, gear type, or user group.

Selective Coho	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Ocean Troll										
Cape Flattery & Quillayute (Areas 3/4)	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Columbia R & Grays Harbor (Areas 1 & 2)	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Ocean Sport										
Neah Bay (Area 4)	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
LaPush (Area 3)	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Grays Harbor (Area 2)	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Col. R. (Leadbetter Pt. to Cape Falcon)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Inside Fisheries										
Sport										
Juan de Fuca (Areas 5 & 6)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
San Juan Islands (7)	no	no	no	yes	yes	yes	yes	yes	yes	yes
Puget Sound Sport (Areas 8-13 all year)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Puget Sound Rivers	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
North WA Coastal Rivers	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Grays Harbor (Areas 2-2)	yes	yes	yes	yes	yes	yes	yes	no	yes	yes
Willapa Bay (Area 2-1)	no	yes	no	yes	no	no	no	no	yes	no
Columbia River Buoy 10	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Commercial										
North WA Coastal Rivers	no	no	no	no	no	no	no	no	no	no
Grays Harbor (Areas 2A-2D)	yes	yes	yes	yes	yes	no	no	yes	yes	yes
Willapa Bay (Area 2-1)	no	no	no	no	no	no	no	no	yes	no
Columbia River Net/ - Fall	no	no	no	yes	yes	yes	no	no	no	no
Strait of Juan de Fuca (Areas 4B/5/6C) Net & Troll	no	no	no	no	no	no	no	no	no	no
San Juan Islands (Areas 6, 7 & 7A)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Puget Sound Marine (Areas 8 - 13)	no	no	yes	no	no	no	no	no	no	no

Puget Sound Rivers	no	no	no	no	no	no	no	no	no	no
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