



State of Washington

DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: P.O. Box 43200, Olympia, WA 98504-3200 • (360) 902-2200 • TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

April 16, 2020

Ms. Lynne Barre
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
7600 Sandpoint Way
Seattle, WA 98104

**RE: Actions taken in development of WDFW managed fishery season for 2020-2021
beneficial for Southern Resident killer whales**

Dear Ms. Barre:

The Puget Sound treaty Indian tribes and the Washington Department of Fish and Wildlife (WDFW) have completed their salmon season setting process associated with the Pacific Fishery Management Council's development of ocean fisheries for the 2020-2021 salmon fishing season (May 1, 2020 – April 30, 2021). The information presented below describes actions taken in developing the fishing package for fisheries managed by the WDFW determined to be of importance to the recovery of federal and state Endangered Species Act listed Southern Resident killer whales (SRKWs). It is the belief of WDFW that actions taken in the development and subsequent implementation of the 2020-2021 fishing season for Puget Sound will result in neutral or slightly decreased risk to SRKWs across Washington waters of the Salish Sea relative to recent fishing seasons. These actions include:

- Increased abundance of prey available in forage areas typically utilized by SRKWs (though abundance increases due to fishery decreases are anticipated to be small relative to the total Chinook population; see subsequent sections);
- Reduced vessel noise and emission of sound frequencies in the audible range of SRKWs, principally sonar, loud vessels, etc., due to both the decreased presence of fishing vessels in certain times and areas, and planned outreach and education efforts;
- Reduced on water presence of vessels engaged in fishing.

Evidence for a neutral impact or potential benefit of these actions are demonstrated by:

Expectation for an overall increase in salmonid prey availability

- Using methodology developed by the Pacific Fishery Management Council SRKW ad hoc workgroup, the estimated starting abundance (prior to natural or fishing mortality) of Chinook in the SALISH region (aggregated Puget Sound, San Juan Islands, Juan de Fuca, and Georgia Strait) in October is approximately 628,000 Chinook (Table 1). This is slightly above the recent 10-year post-season average of approximately 612,000 (2007 through 2016; Table 1).
- The 2020 predicted return of adult Puget Sound Chinook that will escape pre-terminal fisheries is approximately 234,000. This represents a 10% increase over the most recent ten-year average and a 15% increase over the available data series (Table 2).
- Annual Puget Sound pre-terminal fisheries are estimated to reduce the overall abundance of Chinook in the Salish Sea by an average of 3% relative to the starting abundance (Table 3). Reductions to Salish Sea Chinook abundances caused by pre-terminal fisheries have decreased substantially over time (Figure 1). Given the current magnitude of pre-terminal fishing in Puget Sound, fisheries management actions can not appreciably increase overall Chinook abundance to a level that quantifiably improves SRKW demographic rates. Recognizing this, SRKW populations have declined in recent years and actions described in this document may have some small and unquantifiable benefit to SRKW, by reducing vessel traffic and slightly increasing Chinook abundance. Recreational salmon fisheries in Puget Sound (recreational salmon catch reporting areas are shown in appendix A) which directly overlap in time and space with SRKW foraging activity have been curtailed for 2020-21 relative to recent years to address conservation needs for various stocks of ESA-listed Puget Sound Chinook.
- Evidence suggests that the winter can be a particularly biologically taxing period for SRKW. In addition to Chinook biology, which suggests fish are more concentrated in the summer than the winter, and SRKW dietary studies, which suggest greater diet diversification during the winter, recent J-Pod photogrammetry data has recorded J-Pod body condition declining over the winter period. J-Pod is of particular concern, as this pod has seen recent annual overall body condition declining and has driven recent overall SRKW population declines (Figure 2). Unlike K and L-Pod, which typically distribute along the West Coast in the Winter, J-Pod primarily remains in the Salish sea during the winter. Puget Sound fishery closures this year focused on the winter time period (Oct.-Apr.) and include the complete winter closure to Chinook fishing in Marine Areas 6, 7, 8, 9, 11, and 12. These closures are substantial compared to recent fishing seasons (Appendix C) and, recognizing that Winter fisheries in Puget Sound are typically of a low magnitude (both effort and catch) relative to other Chinook-directed fisheries along the West Coast, may provide some small benefit to J-Pod.

Table 1. Estimated starting abundance (October) of age 3-5 Chinook in the SALISH Shelton region. 2007-2016 represent estimates from post-season FRAM runs (validation round 6.2) and 2020 represents the final pre-season FRAM run estimate.

Year	Region	Oct. Abundance
2007	SALISH	546292
2008	SALISH	599589
2009	SALISH	441117
2010	SALISH	823667
2011	SALISH	607614
2012	SALISH	521929
2013	SALISH	740847
2014	SALISH	634667
2015	SALISH	639575
2016	SALISH	568810
2020	SALISH	627581
07-16 Avg		612411

Table 2. Forecasted return of Puget Sound adult (age 3-5) Chinook escaping pre-terminal fisheries. Historic data (1975-2018) comes from the Puget Sound Chinook Run Reconstruction.

Year	Source	Total
1975	PS RR	174,606
1976	PS RR	178,760
1977	PS RR	174,026
1978	PS RR	183,278
1979	PS RR	181,060
1980	PS RR	236,410
1981	PS RR	190,974
1982	PS RR	192,185
1983	PS RR	183,776
1984	PS RR	245,838
1985	PS RR	254,148
1986	PS RR	232,091
1987	PS RR	208,024
1988	PS RR	209,090
1989	PS RR	266,307
1990	PS RR	293,477
1991	PS RR	162,663
1992	PS RR	115,818

1993	PS RR	125,550
1994	PS RR	135,324
1995	PS RR	172,052
1996	PS RR	167,360
1997	PS RR	153,156
1998	PS RR	172,094
1999	PS RR	219,240
2000	PS RR	173,137
2001	PS RR	252,119
2002	PS RR	252,374
2003	PS RR	194,287
2004	PS RR	211,139
2005	PS RR	207,637
2006	PS RR	256,967
2007	PS RR	264,069
2008	PS RR	221,123
2009	PS RR	170,666
2010	PS RR	193,634
2011	PS RR	208,924
2012	PS RR	237,931
2013	PS RR	227,624
2014	PS RR	130,888
2015	PS RR	142,306
2016	PS RR	225,432
2017	PS RR	327,406
2018	PS RR	251,830
2020	2020 Pre	233,768
	10 yr avg	211,664
	75-18 avg	204,018

Table 3. Analysis of difference in post-fishing September Chinook abundance using Chinook FRAM validation runs (v6.2) and Chinook FRAM validation runs with no Puget Sound fishing. Abundances represent starting SALISH abundance in October and the effects of Puget Sound fisheries throughout the entire management year (Timestep 1-3; expressed as annual abundance reduction). This analysis used the PFMC SRKW ad hoc workgroup framework and was conducted jointly by WDFW and NWIFC. However, it should be noted that NOAA, NWIFC, and WDFW are exploring potential improvements to this framework and its specific application to Puget Sound.

Year	Oct-Apr Abundance	Annual Abundance Reduction	% Reduction of Total
2007	546292	25696	4.7%
2008	599589	21566	3.6%
2009	441117	16476	3.7%
2010	823667	19880	2.4%
2011	607614	22089	3.6%
2012	521929	21077	4.0%
2013	740847	25240	3.4%
2014	634667	16798	2.6%
2015	639575	16558	2.6%
2016	568810	15601	2.7%

Figure 1: Reduction to post-fishing September abundance caused by Puget Sound pre-terminal fisheries from 1992 to 2016. This analysis used the PFMC SRKW ad hoc workgroup framework and was conducted jointly by WDFW and NWIFC. However, it should be noted that NOAA, NWIFC, and WDFW are exploring potential improvements to this framework and its specific application to Puget Sound.

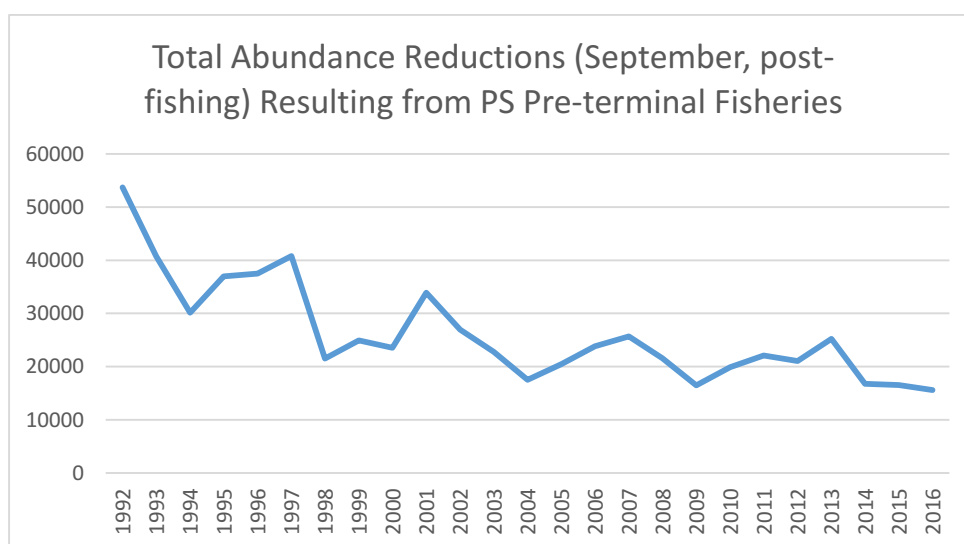
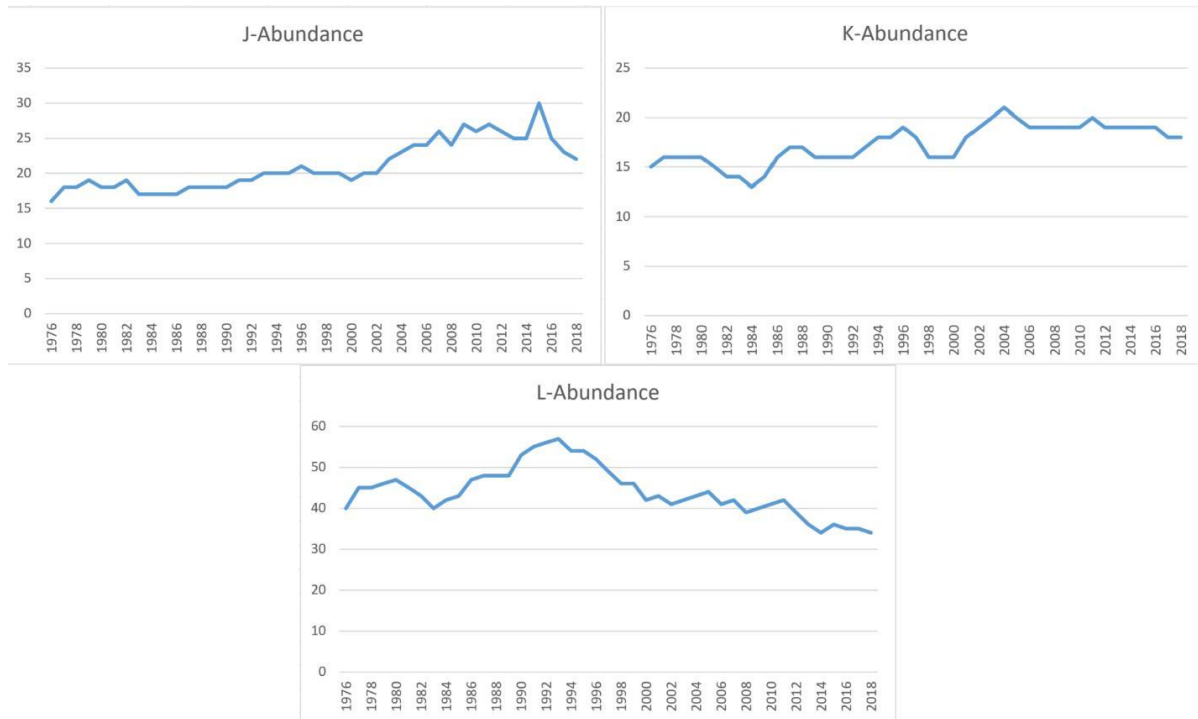


Figure 2: SRKW pod-specific population trends (1976-2018).



- Summer Puget Sound Chinook fisheries are similar to recent years, with the exception of Marine Area 7 (San Juan Area). The Marine Area 7 Chinook season is reduced by 1.5 months relative to recent years (Appendix C). Historically, SRKW are most concentrated in Marine Area 7 during the summer, so fishery reductions to this area may provide some benefit to SRKW.
- Total abundance of Puget Sound chum for 2020 is forecasted to be 874,307; this is the lowest projected return in over a decade. It is worth noting that south Sound co-managers have agreed to manage for towards conservative fishing targets to meet escapement goals for wild chum returning to south Sound. Until in-season updates to run sizes are available, this change will reduce harvest in WDFW managed commercial fisheries in marine areas 10 and 11 compared with 2019.
- The Fraser River sockeye return for 2020 is another sub-dominant sockeye year and may be further constrained due to a landslide at Big Bar north of Lillooet, British Columbia, that is still partially blocking natural fish passage despite an extensive restoration effort. The forecast for the 2020 return year of Fraser sockeye is 941K; for comparison the 2019 estimated return was 4.8M. At this forecast there is no harvestable surplus available for harvest in commercial fisheries management by WDFW. Unpublished data from NOAA researchers indicate that sockeye are present in the diet of SRKWs; although in sub-dominant years the prevalence is low.

Reduced vessel noise and emission of sound frequencies in the audible range of SRKWs

- Governor Inslee’s Orca Task Force recommended several measures to further protect SRKWs from noise and disturbance. As a result, the Washington State legislature has passed a bill in both the House and the Senate that includes:
 - a speed restriction of 7 knots within a half nautical mile of SRKW,
 - an increased approach distance for vessels around SRKW (from 200 yards around and 400 yards in the path to 300 yards on the sides and 400 yards in the path and behind), and
 - the establishment of a commercial whale watching license program by January 2021 to reduce daily and cumulative impacts on SRKW and consider the economic viability of license holders.

- WDFW intends to continue outreach and education programs that promote messaging about boating regulations, “Be Whale Wise” guidelines, the voluntary no-go zone, and the adjustment or silencing of sonar in the presence of SRKWs. Outreach efforts are focused at recreational as well as commercial fishers at boat launches and marinas in the San Juan Islands, key access points for vessels intending to travel to the islands, and boat shows. Educational materials include websites, pamphlets, and items such as the “Whale Wise” decal presented below (Figure 2). In addition, the Washington State Legislature passed a bill that requires State Parks to integrate educational materials regarding whale watching regulations and guidelines in their boating safety education program. This ensures that all boaters taking the course are aware of current vessel regulations and best practices for SRKW protection. Finally, both WDFW and the “Be Whale Wise” partnership are coordinating with U.S. and Canadian governments and organizations on regulatory changes and education and outreach, ensuring transboundary benefits for SRKWs.

- WDFW will continue to promote the adherence to the voluntary “No-Go” Whale Protection Zone along the southwest portion of San Juan Island in MA7 for all recreational vessels (Figure 3). The geographic extent of this area stretches from Eagle Point in the southeast to Mitchell Point in the north and extend offshore ¼ mile between these locations and ½ mile centered on Lime Kiln Lighthouse. This area is consistent with that already promoted by San Juan County, proposed by NOAA Fisheries as *Alternative 4* in the 2009 Environmental Assessment on New Regulations to Protect SRKWs from Vessel Effects in Inland Waters of Washington, and represents the area most frequently utilized for foraging and socialization in the San Juan Islands. WDFW will continue to work with San Juan County and will plan to adjust outreach on a voluntary zone to be consistent with any outcomes of current marine spatial planning processes.

- Commercial salmon fishing vessels licensed by WDFW operate in the vicinity of San Juan Island. This includes the area identified above in Figure 3 as the Voluntary “No-Go” Whale Protection Zone. These fisheries are under the regulatory control of the Pacific Salmon Commission’s Fraser River Panel. For the most part, vessels operating within ¼ mile of San Juan Island utilize purse seine gear. This area is critically important to the purse seine fleet. Beyond ¼ mile of the Island there is a mix of gillnet and purse seine

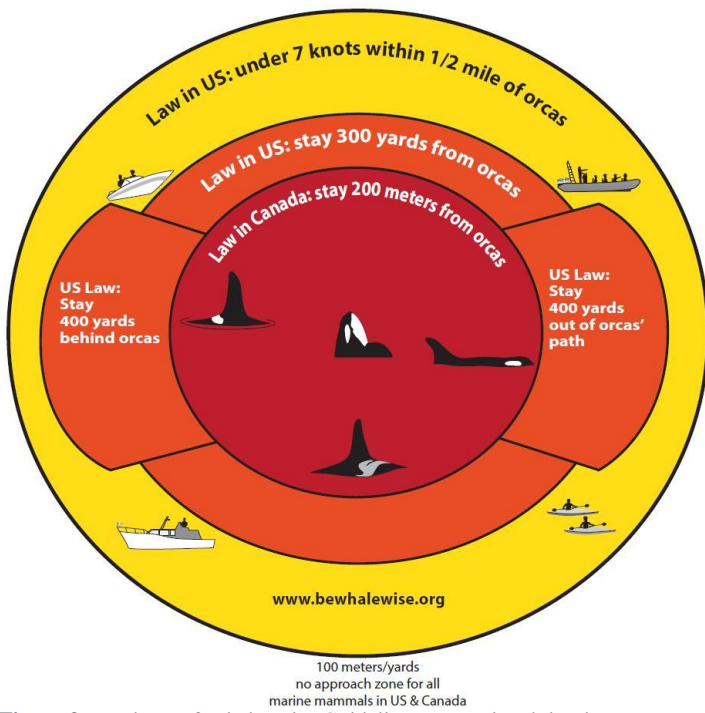


Figure 2. Mock-up of Whale Wise Guidelines promotional decal.

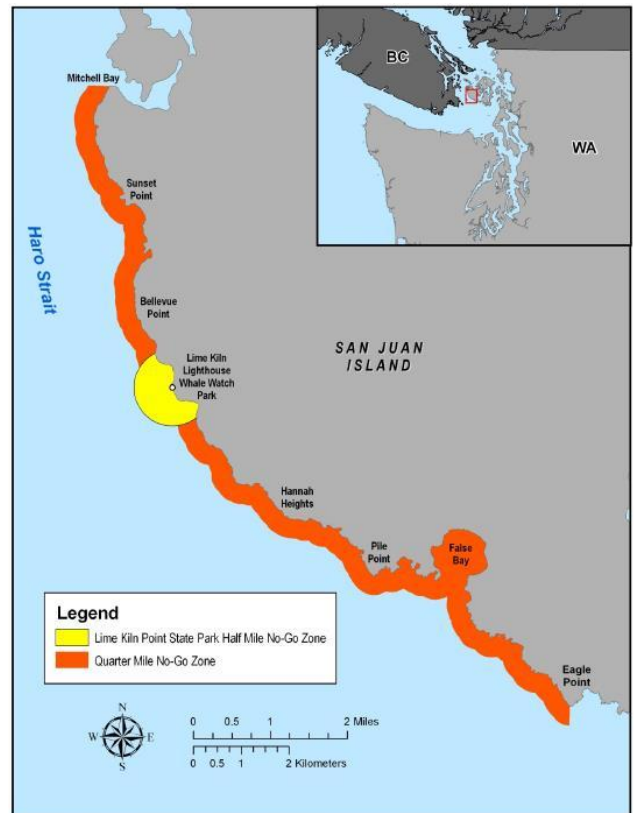


Figure 3. Recreational Vessel Voluntary "No-Go" Whale Protection Zone.

vessels. These vessels target sockeye and pink salmon returning to the Fraser River. More information on these fisheries is presented in the section below, which describes the “on-water presence of fishing vessels in key areas/time periods.” Briefly, however, with the current forecast there is no harvestable surplus available for harvest in commercial fisheries management by WDFW.

Enforcement Emphasis

- Currently WDFW enforcement conduct coordinated patrols with the U.S. Coast Guard, NOAA Office of Law Enforcement, San Juan County Sheriff’s Office, Sound Watch, and other partners year-round. These patrols include monitoring and enforcement of fisheries and the Marine Mammal Protection Act related to vessel operation in the presence of marine mammals throughout Puget Sound. Patrols in the marine areas of northern Puget Sound, particularly MA7 are specifically targeted to enforce regulations related to killer whales. These patrols will be increased in intensity at times SRKW calves are present. For comparison, in 2017, WDFW Police conducted 55 patrols; 50 federal and 5 state-funded whale patrols. In total for 2018, WDFW Police conducted 140 patrols; 50 federal and 90 state-funded patrols. For 2019, WDFW Police conducted 105 patrols specific to MA7 during the summer; (50 federal-funded and 55 state-funded patrols).
- WDFW is able to provide an increased enforcement and monitoring presence this summer through a combination of funds from the Joint Enforcement Agreement (JEA) with NOAA Fisheries as well as additional state general funds. As you know, maintaining the JEA is critical to funding enforcement efforts that align with NOAA Fisheries priorities and is one of the programs scheduled to be eliminated in the President’s budget for federal FY19. Without the JEA in future years, WDFW’s ability to enforce and monitor federally managed fisheries and state fisheries that interact with ESA-listed stocks as well as protected species will be significantly diminished.

Reduced on-water presence of fishing vessels in key areas/time periods

- Marine Area 7 will be closed to Chinook fishing in early August (1-15) and September. This will likely result in a reduction to the amount of vessel traffic from sport anglers in an area and time where SRKWs are frequently observed. Additionally, winter sport fisheries in 2020-2021 are closed in Marine Areas 6, 7, 8, 9, 11, and 12 (Appendix C). Some of these also represent a potential spatio-temporal overlap with SRKW distribution (particularly with J Pod), thus, the reduction in vessel traffic here may provide a benefit.
- Appendix C (below) displays the general recreational season structure for 2020/21 season fisheries. Notably there are no Chinook directed fisheries in May-June and September-April in the Strait of Juan de Fuca (with the exception of MA 5 March and April), San Juan Island, Georgia Strait, Admiralty Inlet, and Port Susan/Port Gardner areas (MAs 6-9). Reductions in fisheries were considerable this year and greatly reduced from the average in many areas.
- The number of days fished in WDFW managed commercial purse seine and gillnet fisheries in US waters of the San Juan Island and Strait of Georgia (MAs 7 and 7A; San

Juan Islands and Point Roberts areas respectively, see Appendix B) during 2008, 2012, and 2016 averaged 7.3 days in August and early September; with the majority of days in August. Specific to these gear types for 2020 fisheries in MAs 7 and 7A targeting Fraser River sockeye, are likely to be zero or dramatically reduced in comparison to recent years on the 2020 cycle-line (2008, 2012, and 2016). Based on the low forecast with no harvestable surplus, days open for WDFW managed purse seine and gillnet fisheries will be determined in season by the Fraser River Panel.

- Non-target species (Chinook and coho) are required to be released by purse seines during the Fraser fishery. Generally speaking, these are small footprint fisheries targeting specific portions of commercial Marine Areas 7 and 7A (San Juan Islands to the US-Canada border).

We hope this information is helpful in understanding changes in WDFW managed fisheries for 2020/21 relative to recent year fisheries.

Sincerely,

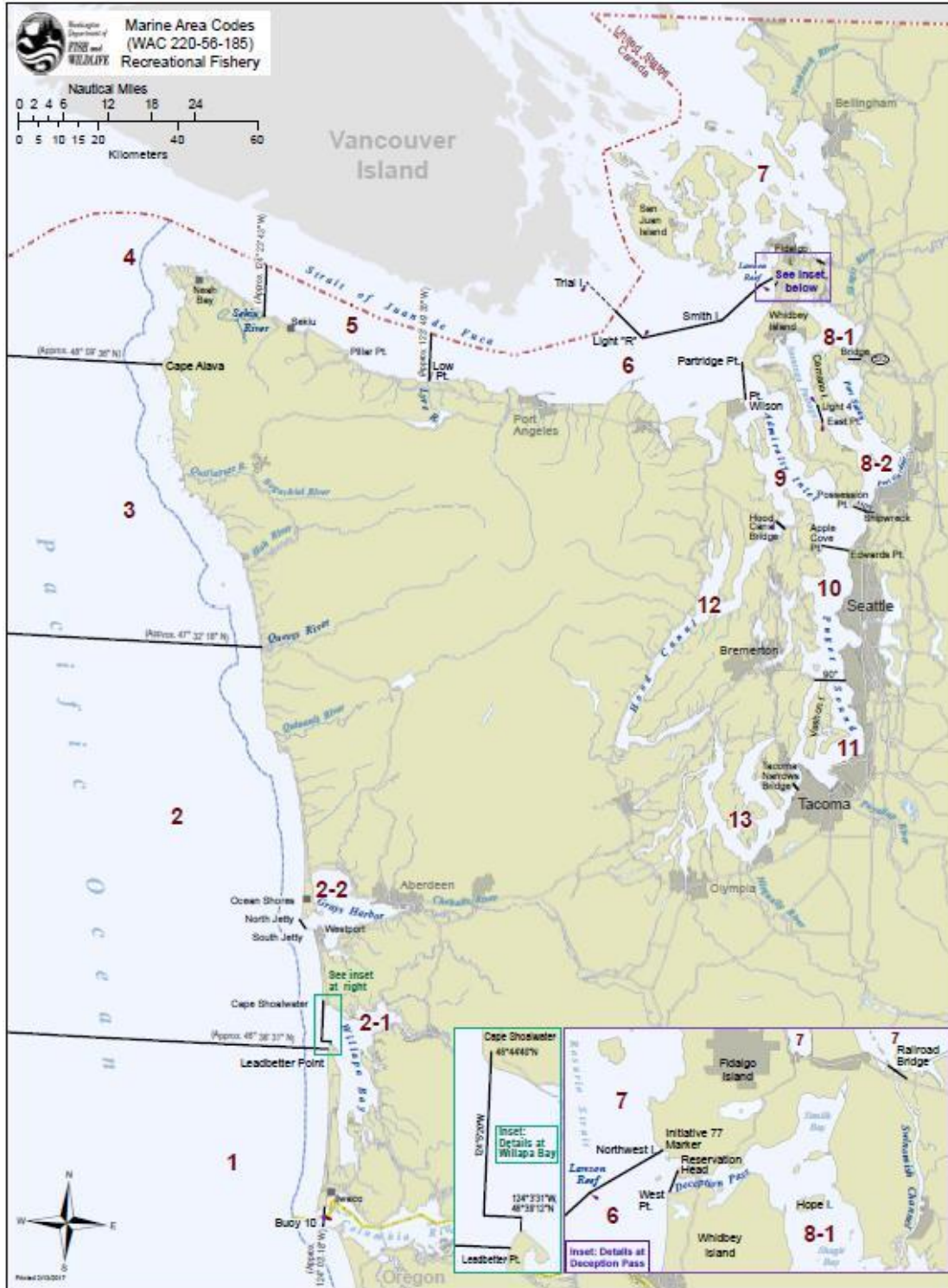


Kelly Cunningham
Fish Program Director

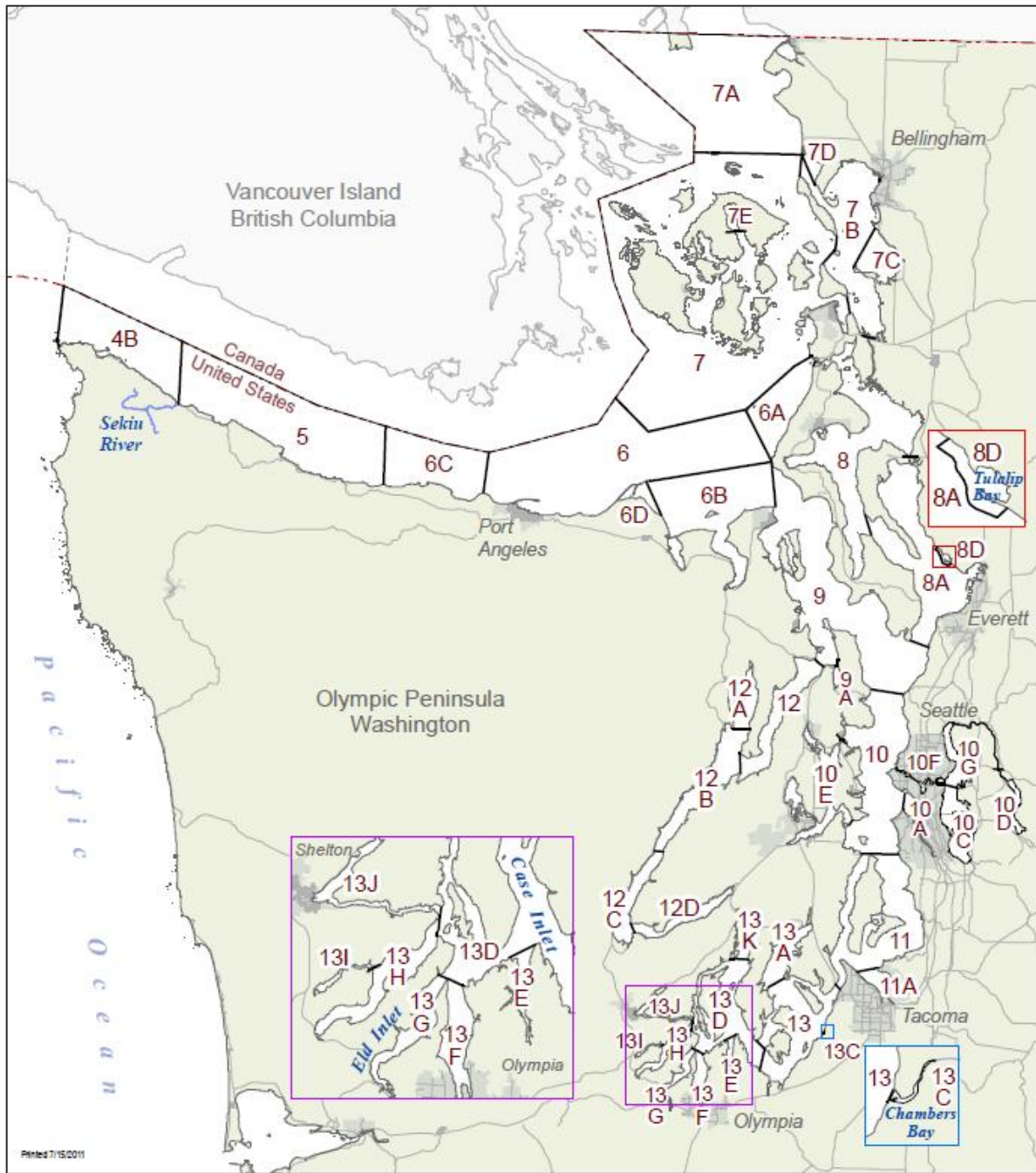
cc: Teresa Mongillo, NOAA Fisheries
Susan Bishop, NOAA Fisheries
James Dixon, NOAA Fisheries
Jeromy Jording, NOAA Fisheries
Kelly Susewind
Kyle Adicks

Michele Culver
Ron Warren
Craig Burley
Julie Watson
Derek Dapp

APPENDIX A: Puget Sound Recreational Salmon Management and Catch Reporting Areas.



APPENDIX B: Puget Sound Commercial Salmon Management and Catch Reporting Areas.



Appendix C: 2020-21 recreational Puget Sound Chinook salmon seasons relative to recent years.

Puget Sound Marine Pre-Season Recreational Chinook Seasons (2017-20)													
Area	Yr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
5	2017			MSF MSF	MSF NR							MSF	MSF MSF
5	2018			MSF MSF	MSF NR	NR NR					MSF	MSF MSF	MSF MSF
5	2019			MSF MSF	MSF NR	NR NR						MSF MSF	MSF MSF
5	2020			MSF MSF	MSF NR	NR NR						MSF MSF	MSF MSF
6	2017			MSF MSF	MSF							MSF MSF	MSF
6	2018			MSF MSF	MSF NR	NR NR					MSF MSF	MSF MSF	MSF
6	2019			MSF MSF	MSF NR	NR NR						MSF MSF	MSF
6	2020			MSF MSF	MSF NR	NR NR							
7	2017			MSF MSF	NS NS	NS NS				MSF MSF	MSF MSF	MSF MSF	MSF MSF
7	2018			MSF MSF	NS NS	NR NR				MSF MSF	MSF MSF	MSF MSF	MSF
7	2019			MSF MSF		NR NR					MSF MSF	MSF MSF	MSF
7	2020			MSF MSF	NR MSF	NR NR							
81	2017							MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
81	2018				NR NR	NR NR			MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
81	2019				NR NR	NR NR	NR NR				MSF MSF	MSF MSF	MSF MSF
81	2020												
82	2017				NR NR	NR		MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
82	2018				NR NR	NR NR			MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
82	2019					NR NR					MSF MSF	MSF MSF	MSF MSF
82	2020												
9	2017			MSF	MSF NR	NR		MSF MSF		MSF	MSF MSF	MSF MSF	MSF
9	2018			MSF	MSF NR	NR NR				MSF MSF	MSF MSF	MSF MSF	MSF
9	2019			MSF	MSF NR	NR NR					MSF MSF	MSF MSF	MSF
9	2020			MSF	MSF NR	NR NR							
10	2017			NR MSF	MSF NR	NR NR	NR NR	MSF MSF	MSF MSF	MSF MSF	MSF MSF		
10	2018			NR MSF	MSF MSF	NR NR	NR NR	NR		MSF MSF	MSF MSF	MSF MSF	
10	2019		NR NR	NR MSF	MSF MSF	NR NR	NR NR	NR		MSF MSF	MSF MSF	MSF MSF	
10	2020		NR NR	NR MSF	MSF MSF	NR NR	NR NR	NR		MSF MSF	MSF MSF	MSF MSF	
11	2017		MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
11	2018		MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
11	2019			MSF MSF	MSF MSF	MSF MSF				MSF MSF	MSF MSF	MSF MSF	MSF MSF
11	2020			MSF MSF	MSF MSF	MSF MSF							
12	2017			SoA msf	SoA msf	SoA msf	SoA msf	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
12	2018			SoA msf	SoA msf	SoA msf	SoA msf	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
12	2019			SoA msf	SoA msf	SoA msf	SoA msf	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
12	2020			SoA msf	SoA msf	SoA msf	SoA msf	NR NR	NR NR				
13	2017	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
13	2018	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
13	2019	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF
13	2020	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF	MSF MSF