

**Southern Resident Killer Whale Executive Order Immediate Action Report  
May 1, 2018**

<b>Executive Order Task</b>	
Review and amend, as needed, 2018 recreational and commercial fishing regulations prioritizing protection of key areas and fish runs for Southern Resident recovery.	

<b>Completion Date</b>	April 30, 2018		
<b>Lead Agency</b>	Washington Department of Fish and Wildlife (WDFW)		
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<b>Supporting Agencies, if applicable</b>			

<b>Outcomes/Progress Narrative</b>	
<p>Each year state, federal and tribal fishery managers gather to plan the Northwest's recreational and commercial salmon fisheries. This pre-season planning process is generally known as the "North of Falcon" process, which involves a series of public meetings involving federal, state, tribal and industry representatives and other concerned citizens.</p> <p>The North of Falcon (NOF), planning process coincides with the March and April meetings of the Pacific Fishery Management Council (PMFC), the federal authority responsible for setting ocean salmon seasons three to 200 miles off the Pacific coast. In addition to the two PMFC meetings, the State of Washington engages the treaty Indian tribes and our constituents in additional meetings to discuss alternative fishing seasons that meet conservation and allocation objectives. The reference of North of Falcon comes is related to Cape Falcon in northern Oregon, which marks the southern border of active management for Washington salmon stocks.</p> <p>During the NOF process for 2018, department staff engaged commercial and recreational constituents in this public to seek input of prioritizing protection of key areas and fish runs for Southern Resident killer whale (SRKW) recovery. In total there were six meetings around Puget Sound when SRKWs were specifically on the agenda. During these meetings staff presented information on the status of SRKWs and the three primary threats they face; contaminants, noise/disturbance, and prey availability. Acknowledging fisheries contribute to these treats; staff described geographic areas and times most often identified as priorities for SRKW for foraging and socialization and solicited input from the public on changes to fisheries could be made to provide to promote SRKW recovery.</p> <p>The information presented below describes actions taken in developing the fishing package for fisheries managed by the WDFW determined to be beneficial for 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</p>	

2018-2019 fishing season for Puget Sound will ultimately represent a net benefit to SRKWs across Washington waters of the Salish Sea. Benefits will accrue to SRKWs in the form of increased numbers of prey, particularly Chinook salmon, available in Salish Sea waters of Washington State as well as through the reductions in disturbance and noise related to fishing activities in areas routinely utilized by SRKWs to forage and socialize. Actions identified are expected to be an increase in benefit to SRKWs relative to long-term fishery removals and more importantly relevant to the more recent past (i.e. last year and over the last 5 or 10 year period); these actions include:

- Increased abundance of prey available in forage areas typically utilized by SRKWs;
- 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 the expected benefit of these actions are demonstrated by:

#### **Expectation for an overall increase in salmonid prey availability**

- Employing methods similar to those developed by NMFS, we used the FRAM model to estimate that the 2018 summer abundance of age 3-5 Chinook in Salish Sea waters will be 1.78 million. This is an increase of over 100,000 Chinook from last year's pre-season estimated abundance of 1.67 million (Table 1). Additionally, this ranks as the third highest predicted pre-season abundance over the past 10 years and is above the upper range of abundances described in the 2011 biological opinion regarding evaluation of the 2010-2014 Puget Sound Chinook Harvest Resource Management Plan.
- The 2018 predicted return of adult hatchery-origin Puget Sound Chinook that will escape pre-terminal fisheries is approximately 230,000. This represents a 65% increase over the average returns observed from 2014-2016, and a 25% increase over the most recent ten-year average (Table 2).
- For the 2018 fishing season, fisheries that directly overlap in time and space with SRKW foraging activity have been curtailed; i.e., Marine Areas (MAs) 7 sport closed to Chinook retention in September, MAs 9 and 10 sport closed to salmon fishing most of November and December (recreational salmon catch reporting area are shown in appendix A). Although difficult to quantify, these actions should have a direct positive impact on the amount of Chinook prey available SRKWs in the times and areas of most importance.
- Total abundance of Puget Sound chum is forecasted to be 1,314,700 in 2018; a modest 11% increase compared with a forecast of 1,186,662 chum in 2017.
- The Fraser River sockeye return for 2018 is the cyclically dominant return year. Returns on this cycle line in, 2006, 2010, and 2014 produced runsizes of 13.0M, 28.4M, and 19.9M respectively. The total expected return of sockeye destined for the Fraser River in 2018 is 14 million fish. These compare to recent sub-dominant and pink salmon returning years with Fraser sockeye runsizes (2015-2017) which averaged less than 1.5M sockeye

per year. Unpublished data from NOAA researchers indicate that sockeye are present in the diet of SRKWs; particularly in dominant cycle return years like 2018.

**Table 1.** Pre-season estimated abundance of age 3-5 Chinook in the Salish Sea by year and time period.

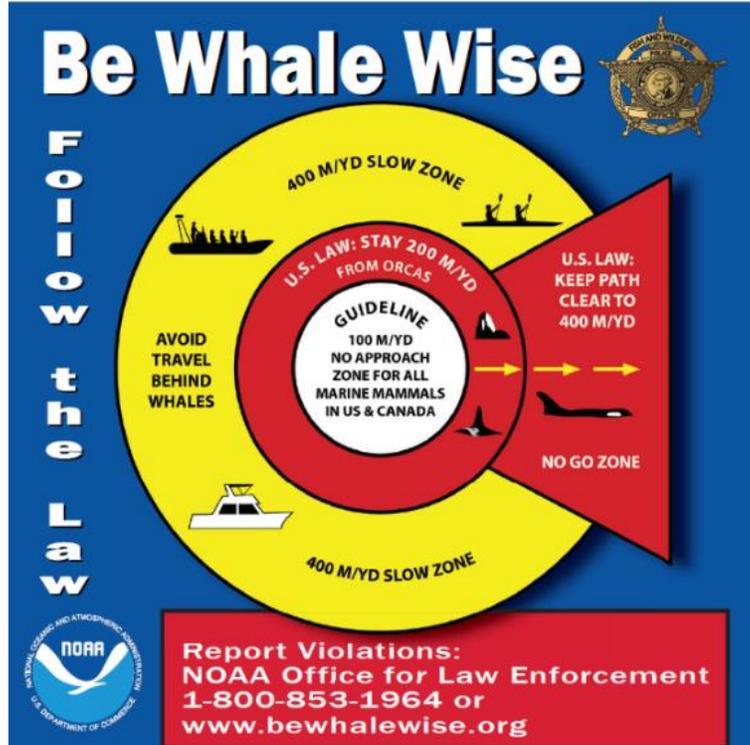
Year	Oct-Apr	May-Jun	Jul-Sep
2009	1,663,785	1,555,831	1,314,529
2010	2,304,592	2,152,004	1,842,735
2011	2,173,130	2,034,182	1,731,660
2012	1,825,616	1,704,286	1,444,268
2013	1,887,665	1,753,055	1,495,924
2014	2,393,487	2,224,331	1,884,386
2015	1,811,464	1,677,187	1,424,496
2016	1,594,884	1,472,721	1,234,688
2017	2,103,650	1,950,324	1,668,552
2018	2,253,247	2,084,546	1,777,545

**Table 2.** Forecasted return of Puget Sound hatchery-origin adult Chinook escaping pre-terminal fisheries.

Year	Total	North Sound	Mid/South Sound	HC + Straits
2003	166,892	47,291	81,773	37,828
2004	157,295	29,465	93,414	34,416
2005	174,693	30,896	86,647	57,151
2006	223,896	51,624	126,512	45,760
2007	248,533	48,305	161,702	38,527
2008	192,574	46,258	107,357	38,958
2009	156,897	31,238	82,695	42,963
2010	185,398	50,132	92,300	42,966
2011	194,089	51,314	84,177	58,597
2012	231,781	53,463	77,606	100,713
2013	220,351	47,480	93,857	79,015
2014	111,398	41,071	41,018	29,308
2015	118,283	30,821	50,233	37,228
2016	187,880	37,549	85,392	64,940
Forecast 2018	229,870	40,555	123,589	65,726
2018 % of 3yr avg.	165%	111%	210%	150%
2018 % of 10yr avg.	124%	93%	141%	123%

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

- WDFW intends to implement a package of outreach and education programs related to Whale-wise guidelines. Effort would be focused at boat launches and marinas in the San Juan Islands and key access point for vessels intending to travel to the islands, as well as commercial and recreational fishing vessels. This will include educational material promoting “Whale Wise” guidelines, and include items such as the draft decal presented below (Figure 1.).



**Figure 1.** Mock-up of Whale Wise Guidelines promotional decal.



- WDFW will promote the adherence to a voluntary “No-Go” Whale Protection Zone along the western side of San Juan Island in MA7 for all recreational boats—fishing and non-fishing—and commercial fishing vessels (Figure 2). The geographic extent of this area will stretch from Mitchell Bay in the north to Cattle Point in the south, and extend offshore ¼ mile between these locations. The voluntary “No-Go” Zone extends further offshore—out to ½ mile—from a point centered on Lime Kiln Lighthouse. This area reflects expansion of the San Juan County Marine Stewardship Area and the full protected area identified by the Pacific Whale Watch Association and is consistent with that proposed by NOAA Fisheries as

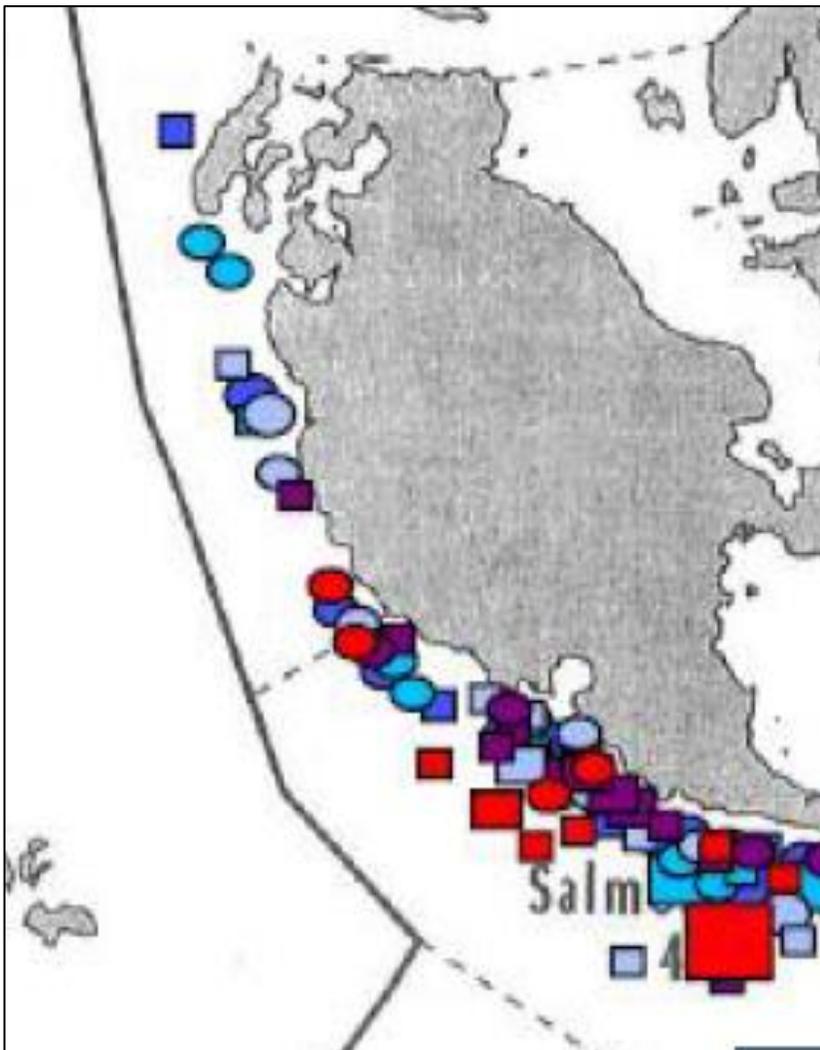
**Figure 2.** Voluntary “No-Go” Whale Protection Zone.

*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. To improve conditions for the whales, WDFW will ask all vessels to stay out of this key area to provide the full benefits of a quiet foraging area free from disturbance.

- Concurrent with the initiation of the voluntary program, WDFW will work with the Governor's Office, State Parks and Recreation Commission, and the Department of Natural Resources to discuss and consider utilizing our respective authorities to strengthen the efficacy of the voluntary program and outreach efforts. Additionally, we will work with our state partners to develop a new potential "No Go" Whale Protection Zone alternative for consideration by the Governor's Southern Resident Killer Whale Task Force as a proposed long-term solution.
- Commercial salmon fishing vessels licensed by WDFW operate in the vicinity of San Juan Island. This includes the northern portion of the area identified above in Figure 2 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 vessels. These vessels target sockeye returning to the Fraser River. More information on these fisheries is presented below in the section below, which describes the "on-water presence of fishing vessels in key areas/time periods." Briefly, however, it is anticipated that the Fraser River Panel will authorize vessels licensed by WDFW to fish in as many as 6 to 8 openings during 2018, mostly in the month of August. When authorized, these openings only occur on a given day from 5:00 a.m. to 9:00 p.m. for purse seine gears and from 8:00 a.m. to 11:59 p.m. for gillnet gears. With the exception of these Fraser Panel sockeye fisheries, WDFW will promote adherence to the Voluntary "No-Go" Whale Protection Zone by commercial fishing vessels.
- For all vessels, WDFW will work with Island County to maintain slow transit speeds (restricted to 7 knots or less) at a minimum and potentially reduce transit speeds in areas frequently utilized by SRKWs in the summer season (specifically off the west coast of San Juan Island) and to silence their sonar in the presence of SRKWs and when fishing gear is deployed (especially those transmitting at 83 kHz).
- Currently WDFW enforcement conduct coordinated patrols with the U.S. Coast Guard year-round that include monitoring and enforcement of fisheries and Marine Mammal Protection Act requirements 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. WDFW plans to increase our enforcement emphasis in these areas. WDFW is planning for more than 80 patrols between May 1 and September 30 (weather and other variables dependent) to focus in MA7 when SRKWs are known to frequent the area. These patrols will be increased in intensity at times SRKW calves are present.

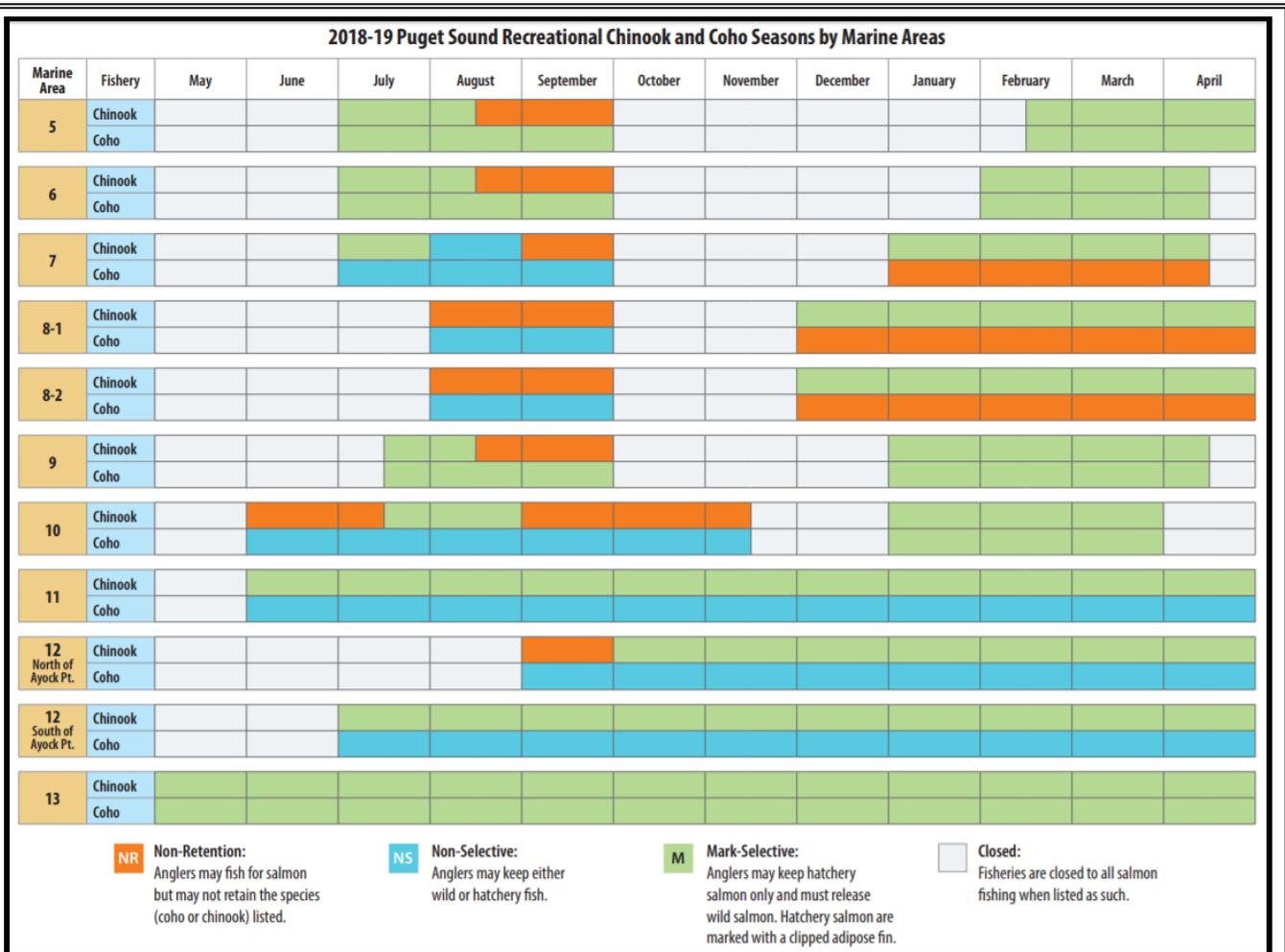
### Reduced on-water presence of fishing vessels in key areas/time periods

- Although Puget Sound wide it is anticipated that angler trips will increase over recent seasons, particularly in some months and areas where coho fisheries have been built back into the fishing schedule, the number of angler trips in certain locations, particularly those important to SRKWs will be reduced. For example, beginning September 4, MA7 will close to retention of Chinook. This will likely result in a significant reduction to the amount of vessel traffic from sport anglers in an area and time where SRKWs are frequently observed. Additionally, winter sport fisheries that have traditionally occurred in November and December in MAs 9 and 10 were closed for 2018. These also represent a spatio-temporal overlap with SRKW distribution, thus, the reduction in vessel traffic here will provide a benefit.



**Figure 3.** Relative Effort by WDFW Licensed Commercial Salmon Fishing Vessels in MA 7 along the south west side of San Juan Island 2001-2005 (○ ovals represent purse seine vessels, □ squares represent gillnet vessels).

- Figure 4 (below) displays the general recreational season structure for 2018/19 season fisheries. Notably there are no Chinook directed fisheries in May-June and September-November or later in the Strait of Juan de Fuca, San Juan Island, Georgia Strait and Admiralty Intel and Port Susan/Port Gardner areas (MAs 5-9).
- For Strait of Juan de Fuca, San Juan Island, Georgia Strait and Admiralty Intel and Port Susan/Port Gardner areas (MAs 5-9), total months of Chinook directed fisheries for Summer (May – September) and Winter (October – April) in 2018/19 are compared with the 2017/18 season are displayed in Table 3. Reductions in fisheries occurred in MAs 7-9.



**Figure 4.** Puget Sound Recreational Salmon Fisheries for the 2018/19 season

**Table 3.** Comparison (by number of months) of 2018/19 Summer and Winter Chinook fisheries relative to the 2017/18 season.

Area	SUMMER		WINTER	
	2017-18	2018-19	2017-18	2018-19
5	1.5	1.5	1.5	2.5
6	1.5	1.5	1.5	2.5
7	3	2	4	3.5
8-1	None	none	6	5
8-2	None	none	6	5
9	1	1	4	3.5

- 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 2006, 2010, and 2014 averaged 10 days in August and early September (Table 4). Specific to these gear types for 2018 fisheries in MAs 7 and 7A targeting Fraser River sockeye, effort is likely to be reduced in comparison to recent years on the 2018 cycle-line (2006, 2010, and

2014). Current pre-season planning through the Pacific Salmon Commission's Fraser River Panel process, days open for WDFW managed purse seine and gillnet fisheries is modeled for 6-8 days, primarily in August. Actual days fished will be determined in season by the Fraser River Panel.

- These fisheries are required to release non-target species (Chinook and coho); the total estimated release mortalities of Chinook and coho resulting from these fisheries are 2,823 and 1,033 respectively. Generally speaking, these are small footprint fisheries targeting specific portions commercial Marine Areas 7 and 7A (San Juan Islands to the US-Canada border).

**Table 4.** Daily gillnet and purse seine effort in WDFW managed fisheries targeting Fraser River sockeye in MAs 7 (San Juan Islands) and 7A (Point Roberts).

Year	Days Open Au g. Sept.		Gillnet effort by area per day open					
			7		7A		Total GN landings	
			Aug.	Sept.	Aug.	Sept.	Aug.	Sept.
2006	6	1	50	5	53	56	103	61
2010	5	3	52	22	67	26	119	48
2014	7	7	20	2	41	18	62	20
<b>Average</b>	<b>6</b>	<b>4</b>	<b>41</b>	<b>10</b>	<b>54</b>	<b>33</b>	<b>94</b>	<b>43</b>

Year	Days Open Au g. Sept.		Purse Seine effort by area per day open					
			7		7A		Total PS landings	
			Aug.	Sept.	Aug.	Sept.	Aug.	Sept.
2006	6	1	14	0	16	38	31	38
2010	5	3	30	11	13	19	43	30
2014	8	6	11	0	12	18	22	19
<b>Average</b>	<b>6</b>	<b>3</b>	<b>18</b>	<b>4</b>	<b>14</b>	<b>25</b>	<b>32</b>	<b>29</b>



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

