



Basis for 2018 Chinook Salmon Conservation Measures in Southeast Alaska

April 3, 2018

The following summary is intended to increase transparency of considerations associated with the conservative management of Southeast Alaska (SEAK) Chinook salmon fisheries in 2018. Factual information includes stock assessment, forecast, genetic stock identification, and fishery performance data. In order to comply with the State of Alaska Policy for the Management of Sustainable Salmon Fisheries (AAC 39.222) and to meet obligations of the Pacific Salmon Treaty, Alaska will target 90% of the available all-gear harvest limit.

Stock-Specific Forecasts

The SEAK, transboundary rivers and Northern B.C. stocks of Chinook salmon are experiencing unprecedented levels of poor production and record low runs were observed for many of these stocks in 2017. Unfortunately, forecasts are for continued, or even worse, levels of production in 2018 are forecast as follows:

- Alsek River stock predicted to be <40% of recent 10-year average (lowest 5%);
- Taku River stock predicted to be <20% of recent 10-year average (record low);
- Stikine River stock predicted to be <30% of recent 10-year average (record low);
- Nass River stock predicted to be 70% of recent 10-year average; and
- Skeena River stock predicted to be <40% of recent 10-year average (record low).

Genetic Stock Composition

Chinook salmon originating from SEAK, British Columbia, and the Pacific Northwest are harvested in the SEAK fisheries. Genetic-based stock composition data gathered from the troll and sport fisheries provide information for various aggregates of Chinook salmon stocks that have contributed to the harvest in SEAK. The major contributors to the SEAK troll and sport fisheries are the *Southeast Alaska/Transboundary River, North/Central British Columbia, West Coast Vancouver Island (WCVI), South Thompson, Washington Coast, Interior Columbia River Summer/Fall, and Oregon Coast* reporting groups. Collectively, these 7 stock aggregates account for over 90% of the annual troll and sport harvests, and are referred to as driver stocks. Results from genetic analyses indicate considerable temporal variation in the composition of troll and sport harvests. Figure 1 illustrates the seasonal variability in contributions of 4 broad-scale stock groups and Figure 2 illustrates the seasonal variability in contributions of driver stocks to troll fisheries in 2016.

Coordinated Management Options

A range of options for coordinated management of fisheries in SEAK and Canada that would result in reduced harvests of Alek, Taku, Stikine, Nass and Skeena stocks of Chinook salmon were considered by Alaska and Canada, respectively. Detailed summaries of potential interception rate reductions, by fishery, based on a number of preliminary management strategies were developed and are presented in Tables 1-3. Notably, the potential management strategies evaluated could achieve the following (total) reductions:

- Taku River stock: ~ 85% decrease
- Stikine River stock: ~ 70% decrease
- Alek River stock: ~ 50% decrease
- Nass River stock: ~ 50% decrease
- Skeena River stock: ~ 40% decrease

Treaty Nexus

Alaska's obligations under the Pacific Salmon Treaty include, but are not limited to:

- meeting SEAK and transboundary rivers escapement goals,
- not exceeding the postseason all-gear harvest limit, and
- managing consistent with the standardized fishing regime as described by the Pacific Salmon Commission (TCCHINOOK 04-3).

Management actions to conserve SEAK, transboundary rivers and Northern B.C. stocks will inherently result in surplus allocations as part of the all-gear harvest limit. But because the stock composition of Chinook salmon in SEAK changes substantially across the year, fishing at other times and locations and fishing up to the all-gear harvest limit would impose different harvest rates on individual stocks than those negotiated in the current fishing plan; this would be contrary to the standardized fishing regime (TCCHINOOK 04-3). As a result, in 2018 Alaska will target 90% of the available all-gear harvest limit.

Allocations for the 2018 Chinook salmon harvest limit inclusive of a 10% reduction in response to conservation needs for SEAK, transboundary rivers and Northern B.C. stocks are as follows:

Fishery	Allocation
Set gillnet (1,000)	1,000
Purse seine (4.3% of all-gear)	5,600
Drift gillnet (2.9% of all-gear)	3,800
Troll (80% after net gear subtracted)	95,700
Sport (20% after net gear subtracted)	23,900
Total all-gear harvest limit	130,000

Figure 1. Estimated contributions of broad-scale reporting groups of Chinook salmon to SEAK troll fishery harvest by season, 2016.

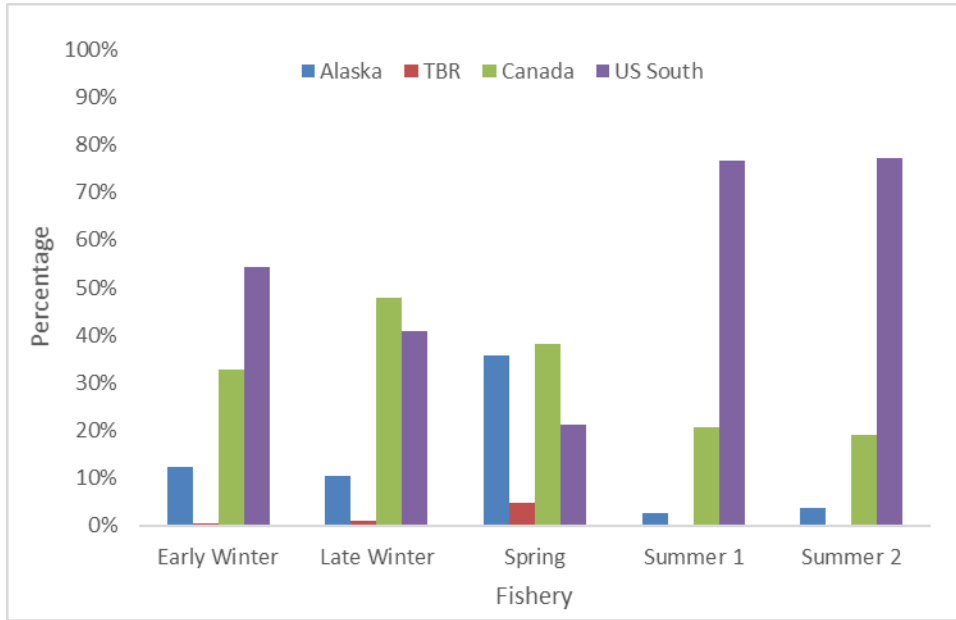


Figure 2. Estimated contributions of driver stock reporting groups of Chinook salmon to the southeast Alaska troll fishery harvest by season, AY 2016.

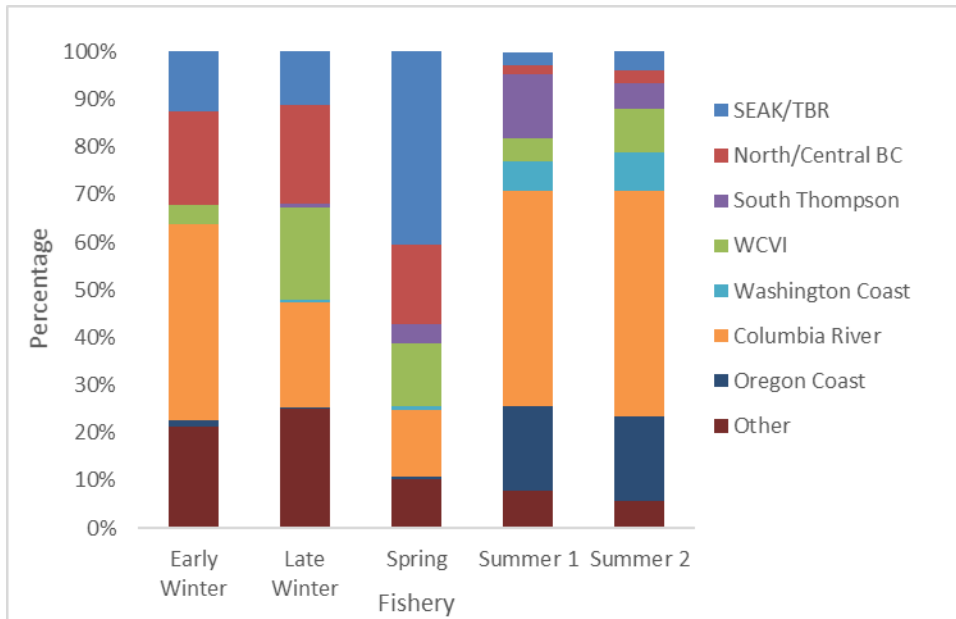


Table 1. Harvest percentages for various fisheries using three management strategies for the Taku River stock of Chinook salmon.

Fishery	Season/Area	Harvest percentages		
		10 yr avg	2017 Actions	2018 Plan
U.S. ¹	Early winter troll	0.0%	0.0%	0.0%
	Late winter troll	2.9%	4.7%	
	Spring troll	6.1%	1.1%	
	Summer R1 troll	0.6%	0.0%	0.6%
	Summer R2 troll	0.1%		0.1%
	Total Troll	9.8%	5.8%	0.7%
	NW quadrant sport	0.4%	0.0%	0.4%
NE quadrant sport	0.0%	0.0%		
SW quadrant sport	0.0%	0.0%	0.0%	
SE quadrant sport	0.1%	0.0%		
Terminal sport	2.3%	0.3%	0.4%	
Total sport	2.8%	0.3%	0.8%	
Non-terminal gillnet	0.4%	1.1%	0.4%	
Terminal gillnet	2.6%	1.6%	1.6%	
Total gillnet	3.0%	2.7%	2.0%	
Total U.S.	15.6%	8.8%	3.5%	
Canada ²	Commercial gillnet	6.3%	2.5%	0.1%
	Assessment/test	2.9%		
	Sport	0.3%	0.0%	0.0%
	Aboriginal	0.4%	0.1%	0.1%
Total Canada	9.9%	2.6%	0.2%	
Grand total	25.5%	11.5%	3.7%	

¹In the Southeast Alaska, the 2018 management strategy includes:

- a. no directed commercial or sport fisheries in District 111 for Chinook salmon;
- b. the winter troll fishery will be closed from March 15 through April 30;
- c. the spring troll fishery will be closed from May through June with the exception of openings in terminal harvest areas when hatchery Chinook salmon are in abundance and in a few areas on the outer coast;
- d. the sport fishery, with the exception of openings in the terminal harvest areas when hatchery Chinook salmon are in abundance, will be closed to the retention of Chinook salmon from April 1 through June 15 on the inside waters in Districts 101, 102, 106, 107, 108, 110, 111, 112, 115 and in portions of Districts 105, 109, 113, and 114; and
- e. the U.S. net fisheries in Districts 101, 102, 106, 107, 108, 110, 111 and 115 will potentially have additional time, area, mesh and retention restrictions in place beyond those enacted in 2017.

²In Canada, the 2018 management strategy includes:

- a. no directed commercial fishery and
- b. closed to retention of Chinook salmon in other commercial fisheries.

Table 2. Harvest percentages for various fisheries using three management strategies for the Stikine River stock of Chinook salmon.

Fishery	Season/Area	Harvest percentages		
		10 yr avg	2017 Action	2018 Plan
U.S. ¹	Early winter troll	0.2%	0.0%	0.2%
	Late winter troll	0.0%	4.5%	
	Spring troll	4.6%	3.1%	
	Summer R1 troll	0.6%	0.0%	0.6%
	Summer R2 troll	0.5%		0.5%
	Total Troll	5.9%	7.7%	1.3%
	NW quadrant sport	0.8%	3.5%	0.8%
	NE quadrant sport	0.0%	0.0%	
	SW quadrant sport	0.0%	0.9%	0.0%
	SE quadrant sport	0.4%	0.0%	
	Terminal sport	3.1%	1.5%	1.5%
	Total sport	4.4%	5.9%	2.3%
	Non-terminal gillnet	1.9%	0.0%	1.9%
Terminal gillnet	5.3%	0.2%	0.2%	
Total gillnet	7.1%	0.2%	2.1%	
Total U.S.	17.4%	13.8%	5.7%	
Canada ²	Commercial gillnet	10.8%	3.4%	0.5%
	Assessment/test gillnet	2.5%	0.1%	0.0%
	Sport	0.1%	0.0%	0.0%
	Aboriginal	2.5%	3.1%	3.0%
	Total Canada	16.0%	6.7%	3.5%
Grand total	33.4%	20.4%	9.2%	

¹ In the Southeast Alaska, the 2018 management strategy includes:

- a. no directed commercial or sport fisheries in District 108 for Chinook salmon;
- b. the winter troll fishery will be closed from March 15 through April 30;
- c. the spring troll fishery will be closed from May through June with the exception of openings in terminal harvest areas when hatchery Chinook salmon are in abundance and in a few areas on the outer coast;
- d. the sport fishery, with the exception of openings in the terminal harvest areas when hatchery Chinook salmon are in abundance, will be closed to the retention of Chinook salmon from April 1 through June 15 on the inside waters in Districts 101, 102, 106, 107, 108, 110, 111, 112, 115 and in portions of Districts 105, 109, 113, and 114; and
- e. the U.S. net fisheries in Districts 101, 102, 106, 107, 108, 110, 111 and 115 will potentially have additional time, area, mesh and retention restrictions in place beyond those enacted in 2017.

² In Canada, the 2018 management strategy includes:

- a. no directed commercial fishery and
- b. closed to retention of Chinook salmon in other commercial fisheries.

Table 3. Harvest percentages for various fisheries using three management strategies for the Alsek River stock of Chinook salmon.

Harvest percentages				
Fishery	Season/Area	10 yr avg	2017 Action	2018 Plan
U.S. ¹	Commercial	8.6%	6.6%	3.3%
	Test	4.0%		
	Subsistence	0.8%	0.2%	0.2%
	Total	13.4%	6.8%	3.5%
Canada ²	Aboriginal	0.8%	0.5%	0.5%
	Sport	1.0%	3.3%	
	Total	1.9%	3.8%	0.5%
Grand total		15.4%	10.4%	4.0%

¹In the Southeast Alaska, the 2018 management strategy includes:

- a. delaying the commercial opening by two weeks and
- b. similar actions in the subsistence fishery as those enacted in 2017.

²In Canada, the 2018 management strategy includes:

- a. closed to retention of Chinook salmon in the sport fishery.