



BASIS FOR THE SOUTHEAST ALASKA CLOSURE TO CHINOOK SALMON RETENTION

August 18, 2017

The following is a summary of considerations associated with the management of Southeast Alaska Chinook salmon fisheries in August 2017. Factual information considered includes numeric and compositional stock specific assessment data, fishery stock composition data from genetics, and NOAA juvenile surveys. Relevant obligations under the State of Alaska Policy for the Management of Sustainable Salmon Fisheries and the International Pacific Salmon Treaty (PST) were considered. Further, there was consideration taken for any spring-run Chinook salmon stocks such as those that spawn in Southeast Alaska that would be harvested in August and September of 2017 and are potentially components of the 2018 and 2019 spawning runs.

Stock-Specific Escapement Assessments

Preliminary spawning escapement estimates are available for 9 of the 11 Chinook salmon index systems in Southeast Alaska, for the Nass and Skeena rivers in Northern British Columbia, and for early run-timed stocks returning to the Fraser River. Abundance of these stocks in 2017 is very low, and for the Southeast Alaska stocks in particular, runs since 2016 are the worst on record. In 2016, 9 of the 11 index systems in Southeast Alaska missed their respective spawning escapement goals. Preliminary information in 2017 suggests that 8 of 9 index systems surveyed to date in Southeast Alaska will miss their respective spawning escapement goals. At this time, Chinook salmon runs to Southeast Alaska streams are either the worst on record or on par with the disastrous runs seen in the mid-1970s. Provided below are current 2017 spawning escapement assessments for the 11 Chinook salmon index systems in Southeast Alaska.

- Situk River – Count through Situk weir of 1,200 large Chinook salmon, above the upper bound spawning escapement goal of 1,050 fish.
- Alsek River - Preliminary information suggests the spawning escapement will be below the lower bound of the goal.
- Chilkat River - Preliminary mark-recapture estimate is less than 1,200 large fish, well below the lower bound of the spawning escapement goal of 1,750 fish.
- Taku River - Preliminary mark-recapture estimate is around 7,000 large fish, less than half of the lower bound of the spawning escapement goal of 19,000 fish. All data suggests this will be the lowest escapement in over 40 years of detailed spawning escapement information, lower than the extremely poor runs seen in the mid-1970s.

- King Salmon River – Final spawning escapement is 85 large Chinook salmon, well below the lower bound of spawning escapement goal of 120 fish.
- Stikine River – Preliminary CPUE-based spawning escapement estimate is less than 10,000 large fish, well below the lower bound of the spawning escapement goal of 14,000 fish. All data suggests the lowest escapement in over 30 years and similar to the very poor runs seen in the mid-1970s.
- Chickamin River – Preliminary information suggests the spawning escapement will be below the lower bound of the goal.
- Unuk – Preliminary information suggests the spawning escapement will be below the lower bound of the goal.
- Keta River – Spawning escapement information is gathered beginning in mid-August.
- Blossom– Spawning escapement information is gathered beginning in mid-August.

Provided below is current 2017 abundance information for Chinook salmon that return to Northern British Columbia and the Fraser River.

- Nass River– Fish wheel index program suggests the run is about 25% of the average seen by mid-August.
- Skeena River– Tye test fishery suggests the run is about 25% of the average seen by early August.
- Fraser River– Albion test fishery information is the poorest ever observed and is a very small fraction of the historic average values seen by mid-August.

Genetic Stock Composition

Historic genetic-based stock composition data provide information for various aggregates of Chinook salmon stocks that have contributed to the harvest in Southeast Alaska in prior years. Average proportions of these data are provided in Figure 1 for the Southeast Alaska commercial troll fishery during the 2nd Chinook salmon retention periods from 2009 through 2016¹, when this retention period was allowed to take place. When opened, the 2nd retention period typically occurred between mid-August and early September. Figure 2 provides similar information concerning average contributions of various aggregates of Chinook salmon stocks to the Southeast Alaska sport fishery operating from early July to early September along the outer coast (Outside Area) from 2009 to 2016.

Various natural and hatchery-origin Chinook salmon that originate in the Interior Columbia stock aggregate, the Oregon Coastal stock aggregate and the Washington Coast stock aggregate were the largest average contributors during the 2nd troll retention period in these years. Significant variation in contributions to SEAK fisheries occurs each year.

¹ No 2nd retention period occurred in 2013 and 2015

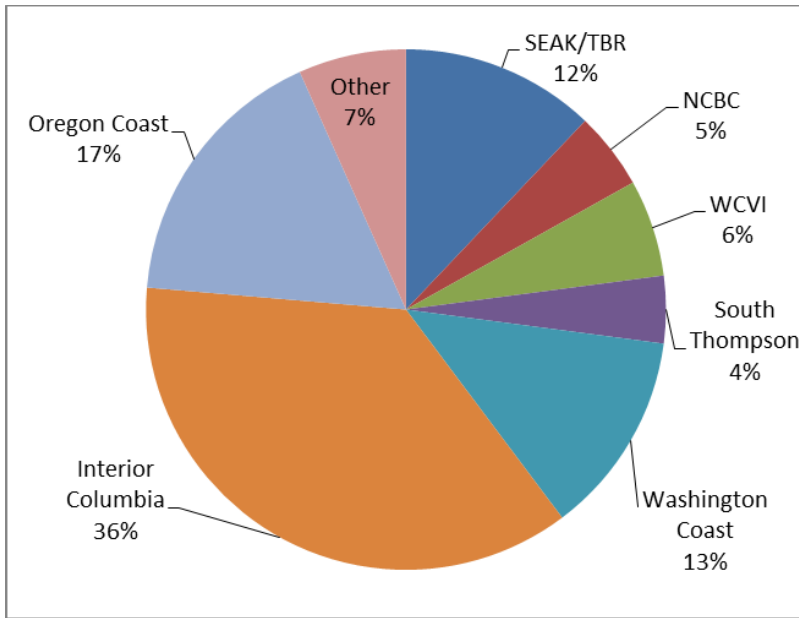


Figure 1.– Average proportional contributions of various aggregates of stocks to the Southeast Alaska commercial troll fishery during the 2nd Chinook salmon retention period, 2009–2016.

Estimates of contributions of stock aggregates to the Southeast Alaska fisheries based on genetic analyses are only available postseason so it is unknown if the stock composition of catches in July changed between 2016 and 2017. However, genetic stock composition estimates are available in-season for the Northern British Columbia summer troll fishery and information gathered in 2016 and 2017 suggests very large differences in these years (Table 1). Postseason results from the Southeast Alaska commercial troll fishery catches in July 2016 mirror those seen in the Northern British Columbia summer troll fishery in 2016. These comparisons suggest that the stock composition in northern PST fisheries has changed markedly since 2016, particularly so for the Interior Columbia stock aggregate, which is half that seen in 2016, for the Oregon Coast stock aggregate that is again about half that of 2016, and for the South Thompson stock aggregate, a run component in the Fraser River, for which the proportion has doubled since 2016.

Table 1.– Comparison of genetic stock composition results for the Southeast Alaska and Northern British Columbia commercial troll fisheries in early July.

Stock Aggregate	SEAK Troll		NBC Troll	
	2016	2016	2016	2017
Interior Columbia	45%	37%	15%	
South Thompson	13%	19%	40%	
Oregon Coast	18%	24%	13%	
Washington Coast	6%	6%	7%	
WCVI	4%	1%	3%	

In the Southeast Alaska sport fishery from 2009 to 2016, as was the case in the commercial troll fishery, the Interior Columbia stock aggregate was a major contributor. Combined with two other stock aggregates (i.e., WCVI and Washington Coast), these stocks comprised most of the sport harvest during the early July to early September timeframe.

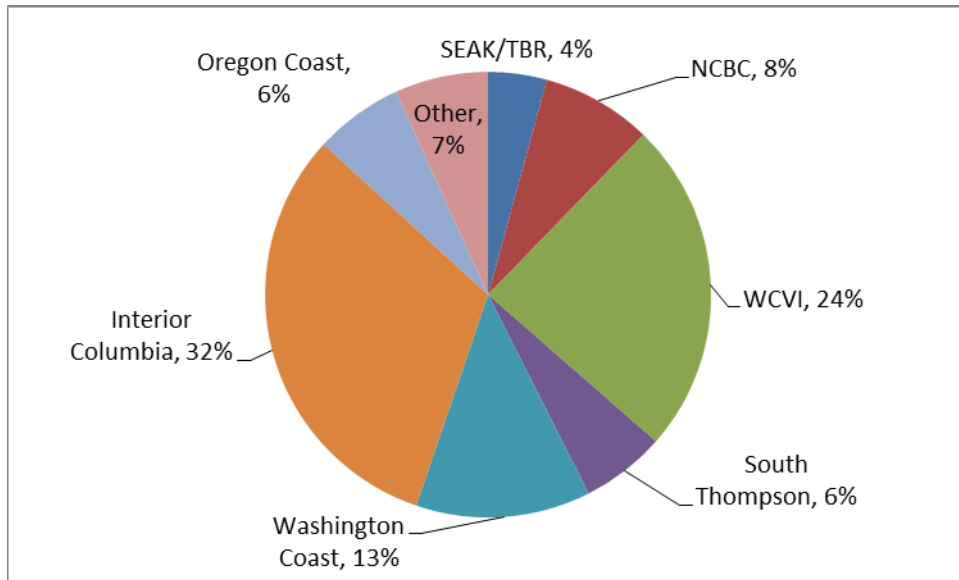


Figure 2.– Average stock composition in the Southeast Alaska sport fishery operating from early July through early September along the outer coast (Outside Area), 2009–2016.

Many of the stocks that contribute to the harvest in Southeast Alaska during August and September are fall-run stocks. As a result, at this time in 2017, it is too soon to fully evaluate the status of these stocks. In October stock status information for fall-run stocks will be available. Genetic-based stock composition information will be available for both the Southeast Alaska commercial troll and sport fisheries later this year.

Outlook for Southeast Alaska Chinook Salmon Stocks in 2018

For Southeast Alaska Chinook salmon, preliminary escapement information gathered in 2017 suggests the 2013 brood year is a failure in the Taku and Stikine rivers. Information from the other 9 indicator stocks is still being compiled, but at this time very few 4 year old (2013 brood year) Chinook salmon have been observed in any of the indicator stocks. A similar failure was seen in 2016 for the 2012 age class among most of the Southeast indicator stocks which prompted serious concerns for runs in 2017. By mid-September a more complete understanding on the outlook for 2018 will be available but at this time available information suggests the 2018 Chinook salmon runs in at least the Taku and Stikine rivers will be worse than those in 2017.

NOAA juvenile surveys

NOAA conducts annual trawl surveys off the coasts of Southeast Alaska, Washington and Oregon. Although the objectives of these surveys are not focused on Chinook salmon, all fish species caught are identified and enumerated. Only a single juvenile Chinook was caught during the

NOAA GOA survey off in Sitka in 2017; a typical low year would result in a catch of about 60 juvenile Chinook while a typical high year would be over 200. NOAA juvenile surveys off the coast of Washington and Oregon resulted in the lowest catches of juvenile Chinook since these surveys began. The warm water observed during 2016 oceanic surveys off of Southeast Alaska is still present, but is at a deeper depth in the water column.