

Subject:

90-Day Finding on a Petition To List Oregon Coast Spring-Run Chinook Salmon as Threatened or Endangered Under the Endangered Species Act

Recipient:

Gary Rule
NMFS West Coast Region

Dear Mr. Rule,

This letter is intended to provide feedback on NMFS's 90-Day Finding on a Petition To List Oregon Coast Spring-Run Chinook Salmon as Threatened or Endangered Under the Endangered Species Act. Non-tribal fishery resource user groups, such as sport fishermen represented by the various groups signing this letter, are central to Pacific Northwest culture and its economy. When faced with important policy determinations such as this, we urge NMFS to ensure that sport fishermen are represented amongst the parties consulted.

Chinook Salmon Life History and Habitat Preferences

Chinook salmon express diverse life history strategies, including variable juvenile and adult migration timing. Expression of different life histories is generally believed to maximize reproductive fitness of the species. It is well established that spring-run Chinook most often occur in higher elevation inland areas, whereas fall-run Chinook more frequently occur in lower elevation coastal areas (Quinn 2005). By returning to freshwater well in advance of spawning, spring Chinook are able to migrate further and ascend river segments that are only passable at higher flows. This adaptation requires relatively high energy reserves at the time of freshwater entry. Though advantageous for long migrations or ascending potential low-flow passage barriers, entering freshwater more than six months in advance of spawning also results in higher prespawning mortality relative to fall-run Chinook. Therefore, spring Chinook naturally exist in areas that are poorly suited for fall-run fish. Conversely, fall-run Chinook are well adapted to coastal areas where watersheds are smaller, migration distances are shorter, and river conditions favor brief freshwater residence time.

Genetic Differences Between Spring and Fall-Run Chinook

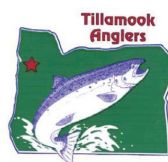
The Petition to List the Oregon Coast ESU of Spring-Run Chinook Salmon cites recently published genetic studies as the basis for requesting ESA protections for Oregon Coastal Spring Chinook. Specifically, Prince et al. 2017 and Narum et al. 2018 present findings pertaining to the Greb1L gene. According to the authors, different forms of this gene are associated with freshwater return timing in Chinook Salmon, providing evidence for a genetic basis for spring, summer, and fall-run life histories. In light of these findings, the petitioners contend that the Oregon coastal spring-run Chinook life history is genetically unique from fall-run Chinook. The petitioners go on to explain that natural-origin spring Chinook abundance is low on the Oregon coast and contend these genetically-unique fish warrant Endangered Species Act (ESA) protections.

To our knowledge, only three natural-origin runs of spring Chinook exist on the Oregon coast—two in the upper Umpqua Basin (ODFW 2014) and one in the upper Siletz River (Davis et al. 2019). Though they enter freshwater prior to their fall-run counterparts, spring-run Chinook in the Siletz and Umpqua Basins are more closely genetically related to fall-run fish within the same basin than to each other (Davis et al. 2019). Therefore, spring-run Chinook on the Oregon coast are a life-history variant within a larger reproductively-mixed population of Chinook Salmon, and Oregon Coastal Spring Chinook do not meet the definition of a Distinct Population Segment (61 FR 4722).

Genetic analyses are becoming increasingly more powerful, and the ability to isolate genes that influence specific phenotypic and behavioral traits in salmon is remarkable. We believe diversity in run timing, as well as other life-history characteristics, is important to the viability of Chinook Salmon populations, and advanced genetic assays provide an important monitoring tool. However, we do not believe each genetically-defined trait warrants its own designation as a Distinct Population Segment under the ESA, as this could lead to hundreds of discrete population designations within reproductively-mixed stocks. Instead, we agree with NMFS's approach whereby "diversity" is one of the four criteria evaluated when assessing population viability (McElhany et al. 2000).

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These organizations support this letter.



Spring Chinook Populations on the Oregon Coast

The Petition to List the Oregon Coast ESU of Spring-Run Chinook Salmon lists 11 rivers and streams that produce natural-origin spring Chinook. However, only three extant, endemic runs of spring Chinook salmon exist on the Oregon coast – the North Umpqua, South Umpqua, and Siletz River populations. The other rivers listed in the petition are either not recognized as having spring-run Chinook salmon, such as the Salmon, Coos, and Siuslaw Rivers, or spring-run Chinook are remnants of hatchery stocking, such as in the Nehalem and Alsea Rivers. With the exception of the Umpqua Basin and Siletz River, naturally occurring spring Chinook on the Oregon coast are the progeny of hatchery-origin fish that successfully spawned and produced natural-origin offspring. Good examples of this are spring Chinook found in the Wilson, Trask, Nestucca and Tillamook Rivers, which are derived from stocking that began in the early 1900s. The listing petition cites Nicholas and Hankin (1989) for much of its claims about occurrence of spring Chinook in Tillamook Bay streams, but fails to acknowledge that the hatchery-wild composition was poorly documented during spawning surveys (see page xi of Nicholas and Hankin 1989). We assert that none of the tributaries to Tillamook Bay provide habitat conditions conducive to the natural occurrence of spring-run Chinook. Unfortunately, early stocking records are not available, and Native Fish Status Reports produced by the Oregon Department of Fish and Wildlife appear to have erroneously characterized these hatchery-origin fish as endemic to the Oregon coast.

Removal of hatchery-origin spring Chinook from the populations listed in the petition dramatically changes the perceived status of Oregon Coastal Spring Chinook. More specifically, spring Chinook returns to the North Umpqua River are relatively strong, supporting harvest of natural-origin fish, and Siletz River returns are consistently adequate to fully seed the small amount of habitat available upstream of Valsetz Falls. We surmise that the Siletz population has always been a relatively small run of spring Chinook. The only natural-origin spring Chinook stock listed in the petition that are a conservation concern occurs in the South Umpqua River, where managers have employed strict protections to reduce poaching, which is thought to be the primary threat to that stock.

Use of Commercial Landings to Infer Population Declines

The petition relies on historic commercial landings data to infer large reductions in natural-origin spring Chinook salmon abundance along the Oregon coast. However, we do not regard commercial landings as a valid measure of natural-origin spring Chinook abundance. In the early 1900s, large numbers of hatchery-origin spring Chinook were planted throughout the Oregon coast to provide harvest opportunity for the most desirable commercial salmon species. In those days, commercial fisheries heavily targeted spring salmon due to their higher fat content. Therefore, commercial landings reflect the demand for spring Chinook salmon and the availability of hatchery-origin fish, and should not be used as a measure of the relative abundance of naturally-occurring fish.

Sincerely,



North Coast Salmon & Steelhead Enhancement Fund
President - Jack Smith



CCA/Oregon
Chairman
Dave Schamp



Nestucca Anglers
President
Ron Byrd



Tillamook Anglers
President/Founder
Jerry Dove



Hatchery & Wild Coexist
Director
Don New



NW Guides & Anglers Assoc.
President
Grant Putnam

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