

PRESS RELEASE

Karuk Tribe • Salmon River Restoration Council

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CALIFORNIA ADDS PROTECTIONS FOR KLAMATH SPRING SALMON

- *Klamath Spring Chinook a Candidate for CESA Listing*
- *Fishing Restrictions Take Effect Immediately*

Sacramento, CA – Yesterday the California Fish and Game Commission made Klamath-Trinity Spring Chinook salmon a candidate for listing under the California Endangered Species Act (CESA). The decision was in response to a petition filed last year by the Karuk Tribe and the Salmon River Restoration Council. A final decision to list the species will be made within 12 months; in the meantime Klamath-Trinity Spring Chinook will be afforded all the protections of a listed species.

The move by the Fish and Game Commission forces California to restrict fishing to protect the fish, however, the Tribe and SRRC want to work with fishermen and the agency to develop common sense fishing regulations. “There is a population of hatchery born spring Chinook on the Trinity River that can and should be fished,” says Karuk Tribe Executive Director Joshua Saxon.

Researchers at the University of California, Davis led by Dr. Michael Miller, recently published two reports in the journal [Science Advances](#) and the [Proceedings of the National Academy of Sciences](#) that explains the genetic differences between fall Chinook and spring Chinook. The research provides new insights into salmon evolution and reveals that spring Chinook salmon deserve to be treated as its own evolutionarily distinct unit separate from fall Chinook. Before the age of dams, industrial mining, and clear-cut logging, spring Chinook salmon were the most abundant run of salmon in many Pacific Northwest Rivers. Today these fish are nearly extinct throughout much of its historic range.

“These fish have been on the brink of extinction for years,” explains Saxon, “but no one believed us when we said they were a distinct species from fall Chinook until now.”

Spring Chinook enter rivers in the spring when snow melt swells rivers allowing the fish travel into the upper reaches of a watershed. Then they must reside in cold water areas all summer until they spawn and die in the fall. Fall Chinook migrate into rivers in the fall where they spawn and die relatively soon after entering fresh water. Having two life strategies allow Chinook to

take advantage of the entire watershed instead of just the upper or lower reaches. This behavioral diversity enhances the chances of long-term survival for the entire population.

“Dams are the single greatest threat to Spring Chinook,” explains Karuna Greenberg of the Salmon River Restoration Council. “Dams prevent Springers from accessing the upper reaches of watersheds where most of the cold-water habitat they need to survive the summer is located.” Greenberg cites diversions, mining, and poor logging practices as additional factors.

Miller and his colleagues’ research rewrites our understanding of Chinook salmon’s evolutionary history. “By using new advances in molecular biology, they quickly compared hundreds of thousands of DNA segments of one individual salmon to hundreds of others. This allowed them to locate a very small region of DNA that is always different between spring and fall Chinook,” explains Craig Tucker, Ph.D., Natural Resources Consultant to the Karuk Tribe. “Miller’s research shows that the difference between spring and fall run Chinook is a small change in a single gene. This change has occurred only once in Chinook’s evolutionary history which means that if we lose spring Chinook, we can’t expect them to re-appear for millions of years.”

Miller’s findings contrast with the previously held notion that salmon populations evolved the spring run behavior many times over across watersheds. If that were true, it would mean that the spring run behavior is relatively easily for Chinook to develop. In the past, federal agencies have declined to add spring Chinook to the Endangered Species List for this very reason. “This new finding is forcing agencies to reconsider their stance on spring Chinook in the Klamath and many other watersheds,” says Tucker.

The genetic difference between spring and fall Chinook is in a gene called *Greb1L* which has been shown to play a role in fat metabolism. This makes sense to Saxon. “We can taste the difference. Springers have a long way to swim before reaching their spawning grounds so they enter the river full of body fat which is why they taste so good.” Spring Chinook typically have 30% more body fat than fall Chinook.

The population of Chinook salmon that swims up the Klamath River in the spring once numbered in the hundreds of thousands. Last summer, divers at the Salmon River Cooperative Spring Chinook and Summer Steelhead Population Snorkel Survey only found 160 Spring-run Chinook, which is the third lowest return in over 28 years since the counts started, divers found even less on the South Fork of the Trinity River, another location of a remnant population of wild Spring Salmon in the Klamath-Trinity River system.

A similar petition to list Klamath Trinity Spring Chinook under the federal Endangered Species Act is currently under review.

Spring Chinook advocates currently have January 2021 circled on their calendars. That’s when the removal of the lower four Klamath River dams is slated to begin pursuant to an historic agreement between dam owner PacifiCorp, California, Oregon, Tribes, and conservation groups. The project would be the largest salmon restoration project in US history. For spring Chinook and the Karuk Tribe, it can’t come soon enough.

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