

What is the SRRC doing?



- Collecting tissue samples which, through genetic analysis, are used to differentiate spring from fall run individuals. This will help us understand more about the distribution and life history of spring Chinook.

- Monitoring the population size, based on returning adult fish and spawning adult fish.



- Working to open up tributaries for spring Chinook to access additional spawning and rearing habitat by manually enhancing fish passageways. Historically, as noted through oral tradition, spawning took place largely in the creeks.



- Enhancing rearing habitats by adding cover and complexity with woody debris and riparian vegetation.

- Re-connecting and restoring winter and summer rearing habitats.



How can you help?

-Over the last few years we have been experiencing record low flows and warm river conditions.

-If your water comes from a cold water tributary, cut back on your lawn watering, hydro-power use and water use in general during a drought.

-Return outflows from your micro-hydro system back to their source stream. By locating your hydro system near enough to the stream for water to return on its own, or by piping the water back to the stream, this water can provide your power while still supporting aquatic life.



-Poach eggs not fish! Help spread the word that if we want spring Chinook to be part of the future of the Salmon River, we cannot spare a single one while numbers are so critically low.

-If you witness poaching call (1-888)-DFG-CALTIP or -334-2258

Please report any observations of large numbers of dead or dying fish to the Klamath Fish Health Assessment Team 1-800-852-7550. When reporting a fish kill, please try to provide the following information: Location of fish (road mile, river mile or other known points), time of day, condition of fish (size, sick, dead, gill rot), estimated number of fish and species. Any other specific information will be appreciated.



C. Shasta in a juvenile trout, note distended belly. Photos from fishpathogens.net.



Gill rot in spring Chinook carcasses

Over the course of the previous 150 years, wild spring Chinook have been reduced to a mere fraction of what they once were. Only an estimated 10% of the historic population remains. And this remnant population exists only in a few key watersheds, such as the Salmon River, where the ruggedness of the terrain has prevented the infrastructure that has wiped out spring-run populations elsewhere.

Funding for this brochure comes from the California Dept. of Fish & Wildlife Fisheries Restoration Grant Program.




Salmon River



A Refugia for Spring Chinook




Salmon River Restoration Council
www.srrc.org info@srrc.org 530-462-4665
 Stop by the Watershed Center in Sawyers Bar when you're passing through for more information, maps, tee shirts & WiFi access.

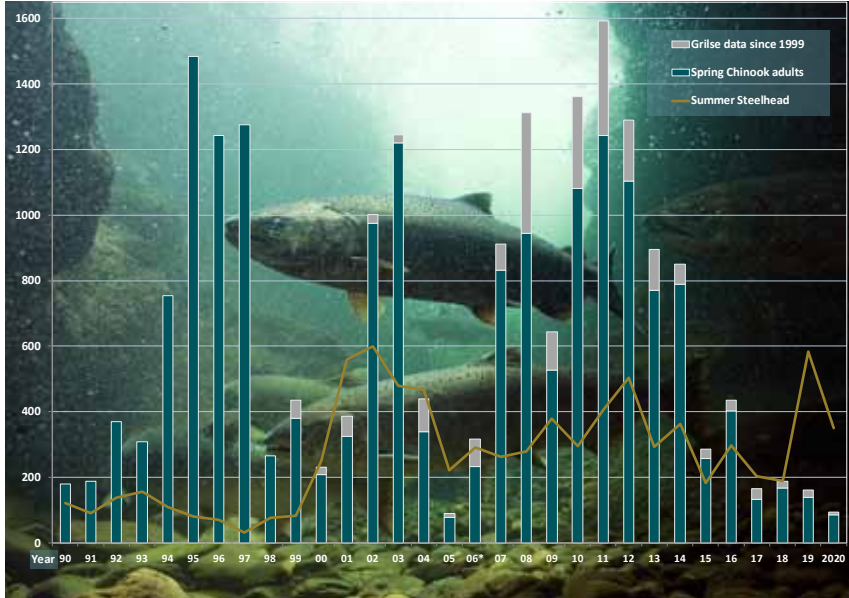
WHO ARE SPRING RUN CHINOOK?



Since spring Chinook have a different life history from fall Chinook salmon, they represent a distinct population. The challenges faced by spring Chinook—many of them related to residing in the river through the hot summer months—are different than those faced by fall Chinook. Spring and fall Chinook populations have been historically segregated both temporally and spatially. Spring Chinook spawn earlier and higher up in the watershed than fall Chinook. This has allowed for two distinct populations of fish to thrive in the past.

Spring Chinook require large stores of fat to make the long journey to their spawning grounds. These abundant fat reserves give them their famously rich taste that everyone craves, from babies to bear cubs, and is the key adaptation that allows this unique life-history pattern.

Salmon River spring-run Chinook population data 1990-2020



In the Salmon River, annual monitoring has revealed returns of between 90 and 1600 fish each year since 1990, with the average sitting at about 660 fish.

In 2012 California was struck by a drought which lasted for four years. The last year of the drought saw Salmon River spring Chinook enter into a deep trough in their population cycle, and over the following years their population sunk into even further decline rather than pulling out of the trough in accordance with the usual pattern.

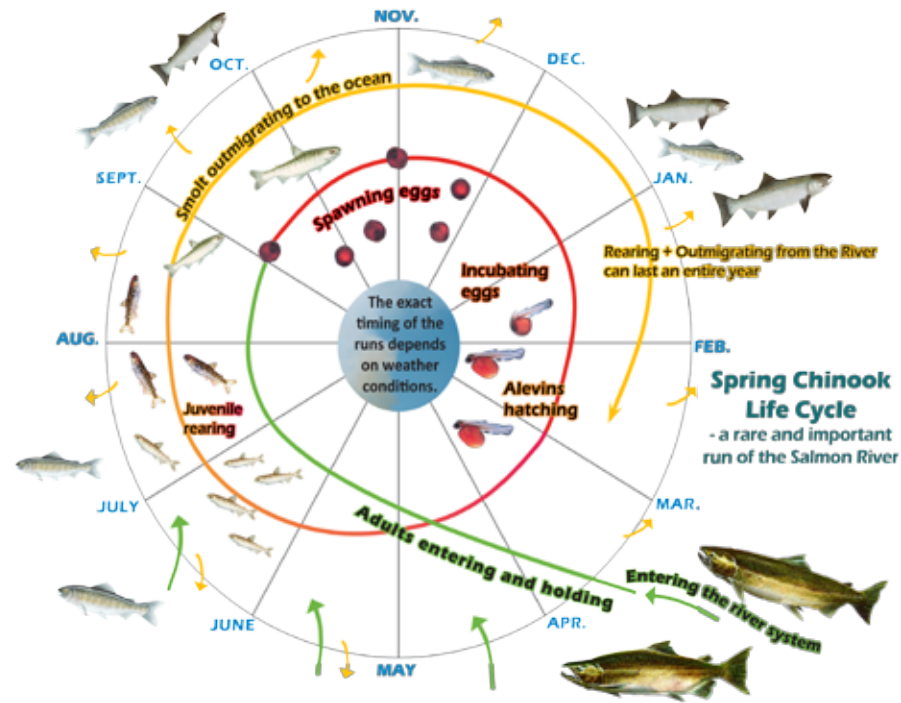
The year 2020 marks the second lowest number of returning spring Chinook since surveys began in 1990 and the sixth consecutive year that numbers have been below average, making it the longest running trough since 1990 as well.

Tribal Relationship to Spring Chinook

The Springers that make their way up the Klamath, into the Trinity and Salmon Rivers connect the Yurok, Hupa, Karuk, Shasta, and Klamath Tribes that have subsisted on these fish for physical nourishment and spiritual nourishment.

The Karuk World Renewal Ceremonies began with the Spring Salmon Ceremony, called “saruk’ámkuuf” which means “downhill smoke”. The smoke comes from the priests’ sacrifice of the first spring salmon caught at “ameekyáaraam” near the confluence of the Salmon and Klamath Rivers. That smoke signified the beginning of the harvest.

This traditional annual event also indicated the importance of managing fish as a sustainable resource, as no one was allowed to harvest fish until after the Spring Salmon Ceremony was done by the Karuk “upriver” people.

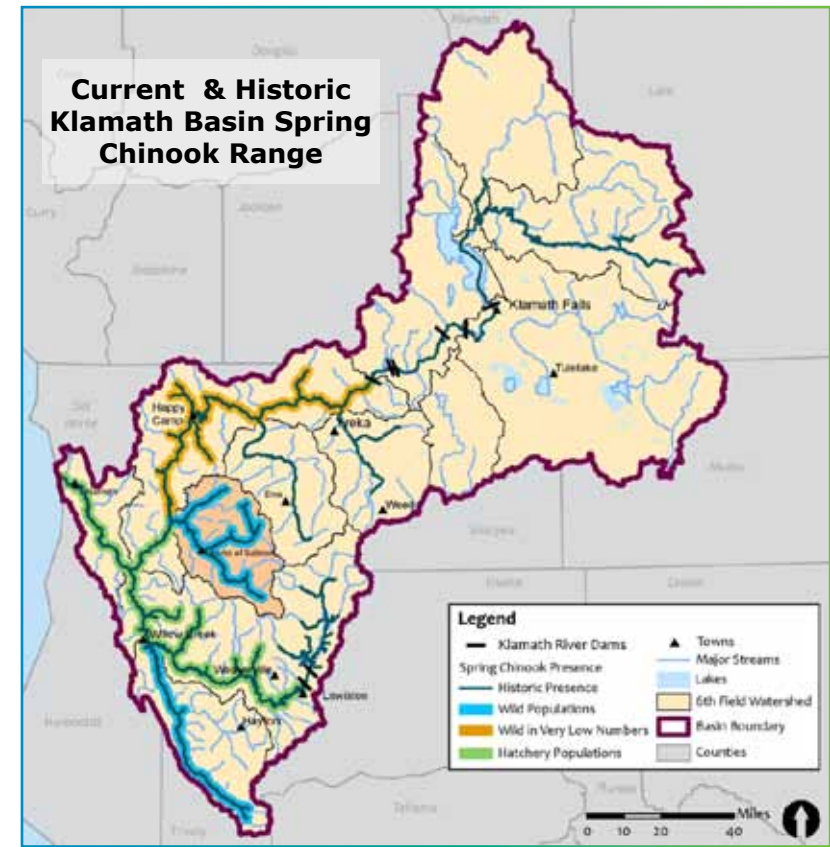


New Genetic Information

Until recently, spring Chinook were considered to be genetically identical to fall Chinook, differentiated only by their life history. New research has revealed that spring Chinook are *genetically distinct* from fall Chinook, and this difference is the result of a single evolutionary event. This suggests that premature migration behavior is unlikely to re-evolve for a very long time. This genetic evidence helps support the idea that spring and fall Chinook should be managed as different *Evolutionarily Significant Units*.

- A defined genetic marker can differentiate between spring and fall Chinook.
- We can use tissue samples to quickly, easily, and accurately identify individuals to run type.
- Hybrid or ‘heterozygous’ fish exist in the Salmon River as well. They demonstrate an intermediate migration timing.

Current & Historic Klamath Basin Spring Chinook Range



• Spring-run Chinook were once the predominant run of salmon in the Klamath Basin. Historically, the Shasta, Scott, Sprague, Wood, and Williamson Rivers all supported large runs. Between dams, habitat degradation and harvest, Spring Chinook are hit the hardest by the impacts of human development.

• In the Klamath River Basin, only the Salmon River and the Trinity River still host viable wild spring Chinook runs. Unlike the Trinity River, the Salmon River does not have a hatchery, making this a unique refugia for wild Spring Chinook.

• Spring Chinook play an important ecological role by carrying marine nutrients higher into watersheds than mature migrants.



The local schools participate in fall salmon surveys. They take data on the carcasses they find, tag them and remove the ear bone for research purposes.

