U.S. Fish & Wildlife Service

Salmon Spawning Population Assessments

In the Klamath Basin

Background

The Klamath River and its largest tributary, the Trinity River, historically supported large runs of Chinook salmon, coho salmon, and steelhead. Declines in commercial and culturally significant fish populations led Congress to enact the Klamath River Basin Conservation Area Fishery Restoration Program in 1986 and the Trinity River Basin Fish and Wildlife Management Act in 1984, to restore the fishery resources of the Klamath. Following the 1984 Trinity Act, subsequent federal decisions led to the creation of the Trinity River Restoration Program (TRRP), which primarily focuses on restoration actions.

To assist in the effort to restore declining fisheries, the Arcata Fish and Wildlife Office initiated salmon spawning surveys on the mainstem Klamath and Trinity Rivers. Objectives for Klamath River surveys are to estimate the annual fall-run Chinook salmon escapement, or the number of fish that escape being harvested and survive to spawn. Objectives for the Trinity River spawning surveys are to provide feedback on river restoration actions conducted by the TRRP.

Tag placed on a fall Chinook salmon carcass as part of the population assessment study. Credit: USFWS

Biologists collecting scales to later determine the age of a fall-run Chinook salmon carcass on the Klamath River. Scales show growth rings and are used to age salmon, much like trees. Credit: USFWS

Klamath River

Since 1993, the Arcata FWO, in collaboration with the Karuk and Yurok Tribes, has conducted annual fall-run Chinook salmon spawning surveys on the mainstem of the Klamath River from below Iron Gate Dam to upstream of Clear Creek, California. Surveys typically take place from early October to early December.

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This effort was initiated to supplement existing fall-run Chinook salmon spawning escapement and harvest monitoring. The objectives of the surveys are to estimate annual escapement and to characterize the age, sex composition, and spawning success of the run. Data collected are used to estimate overall run-size and to set harvest limits for the following year's fall-run Chinook salmon fishery.

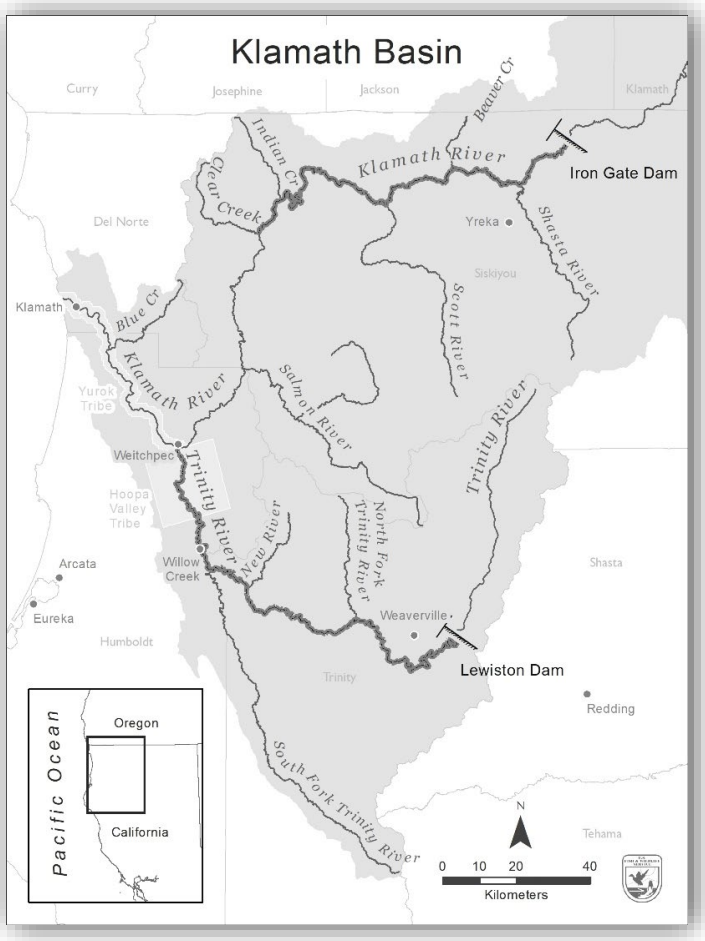
Spawning monitoring efforts consist of both redd surveys (documenting where, how many, and when salmon create their nests) and carcass surveys (sampling fall-run Chinook salmon individuals, all of which die after spawning).

Trinity River

Salmon redds and carcasses are surveyed on the mainstem Trinity River from Lewiston Dam to the confluence with the Klamath River. Survey partners include the Yurok and Hoopa Tribes, California Department of Fish and Wildlife, and the Shasta-Trinity National Forest. Data collected are used to evaluate the effectiveness of the Trinity River Restoration Program's actions, specifically the objective of restoring and maintaining natural production of anadromous fish populations.

For More Information

Klamath and Trinity spawning reports are available on Arcata FWO's website: http://www.fws.gov/arcata.



Darkened sections depict spawner survey reaches on the Klamath and Trinity Rivers. Credit: USFWS

Cataraft used to conduct redd surveys. Credit: USFWS

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