



Juvenile Salmonid Population Monitoring

In the Klamath Basin

Overview

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 Trinity River Basin Fish and Wildlife Management Act in 1984 and the Klamath River Basin Conservation Area Fishery Restoration Program in 1986, to restore the fishery resources of the Klamath. Following the 1984 Trinity Act, additional federal decisions led to the creation of the Trinity River Restoration Program, which created a multi-faceted restoration strategy for the Trinity River.



Juvenile Chinook. Credit USFWS

As one of many projects initiated to address objectives of these Congressional Acts, the Arcata Fish and Wildlife Office began conducting juvenile salmon monitoring on both the Klamath and Trinity rivers. Surveys are conducted when juvenile salmon are migrating from freshwater out to the ocean. Although monitoring objectives differ between the Klamath and Trinity

Rivers, data collected for both are used to calibrate a salmon production model as well as assess status and trends of salmonid populations in the Klamath River.

The Trinity River

In 1989, the Arcata FWO began monitoring the abundance, timing, hatchery/natural composition, and condition of juvenile salmon and steelhead outmigrating from the Trinity River. In 2000, monitoring was expanded through a joint partnership with the Hoopa Valley and Yurok Tribes.

The primary monitoring objective for the Trinity is to evaluate effectiveness of the Trinity River Restoration Program's (established by the 1984 Trinity Act) habitat restoration and flow management actions in increasing juvenile salmonid production.

Monitoring occurs at two rotary screw trap locations on the mainstem Trinity River: Pear Tree, operated by the Hoopa Tribal Fisheries Department, near Helena, California, and Willow Creek, operated by the Yurok Tribal Fisheries Program near Willow Creek, California. Traps are operated from January to late August. The Arcata FWO primarily provides coordination, with varying levels of funding, for these projects.



Rotary Screw Trap on the Trinity River. Credit: USFWS



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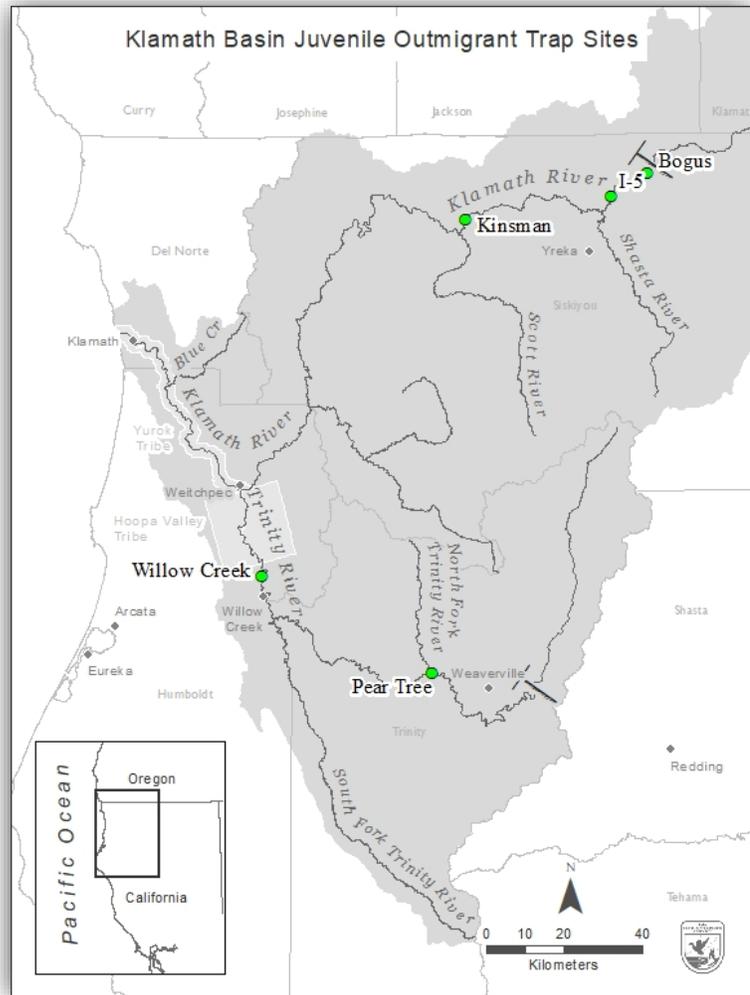
The Klamath River

In 2000, the Arcata FWO, in collaboration with the Karuk Tribe and U.S. Geological Survey (USGS), began trapping juvenile outmigrant salmonids on the Klamath River between Iron Gate Dam and the Scott River confluence. Monitoring objectives for the mainstem Klamath are to generate estimates of production and disease prevalence. Data collected include weekly trap catches, size, and disease information.

Monitoring occurs at three rotary screw trap and frame net locations: downstream of Bogus Creek, upstream of the Interstate 5 bridge, and upstream of the Scott River confluence. Traps are operated by Arcata FWO staff from late February to late May.

For More Information

To find out more, see the annual monitoring reports on Arcata FWO's website: <http://www.fws.gov/arcata>.



Map of the Service supported juvenile salmon outmigrant trap sites in the Klamath Basin. Credit: USFWS

How Does a Rotary Screw Trap Catch Fish?

A rotary screw trap has a large, aluminum cone held up on a floating frame. River flow rotates the cone and funnels some of the migrating, juvenile fish into an underwater holding tank at the back of the trap. Fisheries biologists check the traps daily during the migration season to remove debris and count, measure, and release the collected fish. The cone can be raised to prevent fish from entering when crews are not able to check the trap.



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