



Juvenile Salmonid Collection System Pilot Project

Overview

The Juvenile Salmonid Collection System (JSCS) is a 1-2-year pilot project that assesses the feasibility and viability of collecting juvenile salmonids as they emigrate out of their historical habitat upstream from Shasta Dam. The initiative is a part of efforts to return salmon to their historical environments in ways that support ecosystems, waterways, Tribes, and local communities – particularly during a time of historic drought and climate change.

- ⦿ The project is scheduled to begin on September 6 in the upstream end of the McCloud Arm of Shasta Reservoir.
- ⦿ Testing will run until mid-November 2022. The collection system will then be removed from the testing location.
- ⦿ No salmon will be collected during this stage of the project.

Background

In the 1940s, construction of Shasta and Keswick dams blocked winter-run Chinook salmon from reaching their historical spawning grounds in the cold waters of the McCloud River. They began

reproducing instead in the Sacramento River below the dams but encountered warmer waters and exposure to summer heat. These adverse environmental conditions limited salmon's ability to thrive and their numbers have declined. Historic drought and climate change have added challenges for the species.

Supporting Salmon

The pilot project is designed to solve what may be the biggest challenge in reintroducing winter-run Chinook salmon to the McCloud River – collecting the juveniles as they emigrate from colder waters critical for rearing. Biologists and engineers aim to collect the juvenile salmon before they enter the warm water temperatures of Shasta Reservoir, where they are at risk of predation and other threats.

How The Project Works

The three JSCS components to be tested in the fall of 2022 are guidance nets, a temperature curtain, and a debris boom. The debris boom blocks any floating debris, the guidance nets run from bank to bank and water surface to bottom, funneling fish to the trap area (a trap will be used in future years),



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and the temperature curtain blocks warm reservoir water from entering the collection area. DWR wants to assure that the physical aspects of the JSCS work correctly before beginning any testing with fish.

Looking Ahead

If the system operates as expected in 2022, a fish trap will be designed and fabricated, and studies will continue in 2023. In addition, fish collection efficiency will be assessed in future years, which could pave the way for reintroduction of winter-run Chinook salmon into the McCloud River. Given its adaptability, the JSCS may be considered for other reintroduction efforts above high-head dams in California.

Contact Information

For more information or questions on the Juvenile Salmonid Collection System pilot project, please contact: RSP@water.ca.gov. Or visit water.ca.gov

