

Using Artificial Rearing as a Tool to Save Bull Trout from Extinction

Abstract

In 2018, a partnership was formed between the Yakama Nation, U.S. Bureau of Reclamation and Washington Dept. of Ecology. This partnership was created to save 2 adfluvial Bull Trout populations, Kachess and Keechelus (Gold Creek) from extinction. Both populations have natal rearing habitat that dewateres every summer. Habitat degradation, climate change and poaching have all contributed to driving these two populations to the verge of extinction. With guidance from the Yakima Integrated Plan Partners, the project implemented and separated into 2 phases. Phase I, “life boating” and understanding captive rearing techniques, and Phase II, reintroduction and supplementation.

Phase I, was implemented to capture and transport stranded Bull Trout from dewatered reaches to artificial rearing vessels, then raise them to sub adult size for release. In 2019, the first fish were captured for rearing, they were released in 2020. Rearing survival in the Kachess population was significantly lower than the Gold Creek population. Using adaptive management, densities were reduced and the capture window was condensed in an effort to increase rearing survival. As a result, the survival rates tripled in the 2020 population of Kachess, and increased to Gold Creek to 98%. The current (2021) rearing population has experienced similar gains approaching 99%.

Large habitat restoration projects are planned for both dewatering reaches. The goal of Phase 1 is to maintain Bull Trout populations in Kachess and Keechelus until suitable habitat is restored. The captive rearing techniques learned in Phase 1, will benefit the implementation of Phase 2 and the reintroduction and supplementation efforts in the Yakima Basin.