

Spring Chinook Survival and Understanding Food Web Dynamics in Lake Wenatchee

Project Description:

This summer, fisheries biologists will begin data collection in Lake Wenatchee, the Little Wenatchee, and the White River to monitor juvenile spring Chinook salmon. The results will help scientists understand the distribution, feeding behavior, growth, and risk of predation as these fish migrate through the Lake. This research will also estimate which fish eat juvenile spring Chinook salmon. This data will also provide an initial estimate for predation losses imposed on juvenile salmon by different predators. Future studies, if funded, will calculate the survival rate of spring Chinook as they migrate through the lake. Data will be collected by Washington State Department of Fish and Wildlife, US Geological Survey, and US Forest Service Research Station.

How will this project help fish?

This information will be used to develop proposed management actions aimed to increase spring Chinook survival rates as they emigrate through Lake Wenatchee. Increased survival of spring Chinook juveniles will increase the productivity and abundance of White River and Little Wenatchee River spring Chinook runs in order to reach salmon recovery goals. The data will also be used to populate the life cycle model for spring Chinook which is currently under development in the Wenatchee basin. The life cycle model uses data to identify critical life stages, or bottlenecks, to spring Chinook survival. The outcome of the life cycle model will be used to help prioritize future salmon recovery efforts in the Wenatchee watershed.

Project Tasks and Status:

1. Evaluate predation risk associated with habitat selection in spring Chinook (Starting in 2017)
2. Estimate spring Chinook juvenile survival rates by life history type to the outlet of Lake Wenatchee (Still working to secure funding for this project element)
3. Estimate the distribution and abundance of predators in Lake Wenatchee. (Starting in 2018)
4. Estimate predation rates by species of sub-yearling and yearling spring Chinook in Lake Wenatchee. (Starting in 2018)
5. Identify, implement and evaluate management actions that would result in an increase in spring Chinook survival.