

Title:

Yakima River Floodplain Mining Study: Fish Assemblage Report

Authors:

Jim Cummins, John Easterbrooks and Jonathan Kohr, Department of Fish and Wildlife (WDFW), Yakima Washington

Phone numbers: Jim Cummins - 457-9316; cummijlc@dfw.wa.gov

Summary of Presentation:

The Yakima River Floodplain Mining Study is a cooperative multi-agency study. WDFW and Yakama Nation (YN) conducted the fish assemblage part of this multifaceted study.

Fish populations were sampled between May and November 2002 at 10 floodplain mining study sites in the Yakima Basin. Ponds were sampled with a boat-mounted electroshocker, gill nets, and fyke nets following a standard WDFW protocol. River reaches adjacent to each pond were sampled by backpack electrofishing, drift boat electrofishing and snorkeling. We were unable to sample river reaches below and above each pond with identical sample techniques because of variable water depths, flow (water velocity) and turbidity.

We estimated species composition at each study site and compared species composition between sites and between the ponds and the river. We sampled 18,617 fish representing 24 species or genera. Fifty-three percent (9,862) were sampled in ponds and 47 percent in the Yakima River (8,755), including side channels and sloughs. Two exotic species, pumpkinseed sunfish (21%) and yellow perch (15%), followed by native sucker (10%), chinook salmon (8%), and mountain whitefish (8 %) were sampled most frequently based on all pond and river samples.

The results of our fish assemblage work and studies conducted by the Floodplain Mining Study participants will help managers determine which ponds should be connected to the river or protected from natural avulsion to protect/enhance native salmonid populations. Study results also provide insight into how to best design and implement breaching projects to increase the probability of successfully creating high quality river habitat.

