

Fish Field of Dreams: If You Blow It Up, Will They Come? Juvenile Salmonids in the White Salmon River Following Dam Removal

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Condit Dam, on the White Salmon River, Washington, was breached in 2011 allowing anadromous salmonids access to habitat blocked for nearly 100 years. A multi-agency workgroup concluded the preferred salmonid restoration alternative was natural recolonization with monitoring to assess efficacy. Limited monitoring of spawning has occurred, but no juvenile monitoring occurred until 2016. During 2016, we operated a rotary screw trap at river kilometer 2.3 from late March through May, and used backpack electrofishing to assess juvenile salmonid distribution and abundance. The screw trap captured steelhead *Oncorhynchus mykiss* smolts, parr, and fry, and coho *O. kisutch* smolts and fry. We estimated the number of steelhead smolts at 3,851 (SE = 1,454) and coho smolts at 1,093 (SE = 412). Steelhead and coho smolts tagged with PIT tags were detected at Bonneville Dam. Few Chinook salmon *O. tshawytscha* fry were captured, possibly a result of trap location, or a December 2015 flood. Juvenile coho were present in Mill and Buck creeks (upstream of the dam site) indicating coho spawning there. We compared *O. mykiss* abundance at sites on Buck and Rattlesnake creeks to pre-dam removal data. During 2016, age-0 *O. mykiss* were more abundant in Buck Creek than in 2009 or 2010, although age-1 and older *O. mykiss* abundance was similar. In Rattlesnake Creek, 2016 age-0 *O. mykiss* abundance slightly exceeded mean abundance from 2001 - 2005, although age-1 and older *O. mykiss* abundance was lower than 2001 - 2005. These efforts also provided genetic samples to investigate parental origin. Juvenile salmonid sampling during 2016 showed that natural spawning is producing steelhead and coho smolts, coho are colonizing some tributaries, and provided the first post-dam juvenile abundance estimates. We hope to continue to monitor abundance trends, distribution, and life history patterns in the White Salmon River to assess natural recolonization.