

TITLE: Pacific lamprey abundance in Fifteenmile Creek and recolonization in Hood River after removal of Powerdale Dam.

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Fifteenmile Creek and Hood River, in the mid-Columbia Basin, are traditional sites for Pacific lamprey harvest of the Confederated Tribes of The Warm Springs Reservation of Oregon (CTWSRO). With declining lamprey counts at Columbia River dams since the 1960s and the cultural and environmental value of lamprey to the CTWSRO and other Columbia River tribes, Bonneville Power Administration, under the Columbia River Accords, provided funding for studies of Pacific lamprey, including Fifteenmile Creek and Hood River. Population estimates, using a two event mark-recapture experiment, were completed in Fifteenmile Creek from 2011 to 2014. Tribal harvest of Pacific lamprey in Fifteenmile Creek was estimated from 2011 to 2014 allowing escapement to be calculated. With the removal of Powerdale Dam in Hood River during fall 2010, recolonization of Pacific lamprey into Hood River was documented in 2012-2014. Other objectives of this study that will be discussed include juvenile rearing distribution and migration patterns using half-duplex PIT tag technology. Factors limiting Pacific lamprey production within Fifteenmile Creek Subbasin are underway with the assistance from multiple agencies, stakeholders, and interested parties. Results from our research will contribute to a growing body of information about Pacific lamprey population status and trends in the Columbia Basin as well as advance ecological and biological understanding of this culturally and ecologically important fish.