

Evaluation of the PIT-Tag Detection Arrays in the Priest Rapids Dam Adult Ladders

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The adult ladder PIT-Tag detection array at Grant County Public Utility District's (GCPUD) Priest Rapids Dam was installed in the winter of 2002-2003 and began actively reading tags in spring 2003. Two weirs near the upstream exit of each ladder, East Shore and West Shore, have been equipped with PIT-tag antennas. Each weir has two submerged orifices that are approximately 61 cm wide and 122 cm high. PIT-tag antennas are mounted to the upstream face of each orifice. An adult trap in the East Shore ladder is operated intermittently and collects fish from a ladder pool between the two monitored weirs. We used detections of adult salmonids detected in 2003 to evaluate the performance of the PIT-Tag array and characterize fish movement within and between the ladders. In this preliminary investigation, we calculated detection efficiency for each ladder, transit time between weirs, re-ascension rate, and the pattern of use between the two ladders. We also evaluated the pattern of detections when the East Shore ladder adult trap was operated and when it was off.