

Using Adult PIT Tags to monitor and evaluate survival of reconditioned kelt steelhead in the Yakima River Basin

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Repeat spawning is a life history strategy that is expressed by some species from the family Salmonidae, including Columbia River steelhead. Increasing the natural expression of historical repeat spawning rates using fish culturing means could be a viable technique to assist the recovery of depressed steelhead populations. Reconditioning is the process of culturing post-spawned fish (kelts) in a captive environment until they are able to reinitiate feeding, growth, and again develop mature gonads. To test kelt steelhead reconditioning as a potential recovery tool, we capture wild emigrating steelhead kelts from the Yakima River and evaluate reconditioning (short and long-term) success at Prosser Hatchery (located at Yakima River kilometer 75.6) on the Yakima River. Steelhead kelts from the Yakima River are collected at the Chandler Juvenile Evaluation Facility (CJEF, located at the same site as the Prosser Hatchery) from March through July annually. Some of these kelts were previously PIT-tagged as adults migrating upstream through the Roza Dam fish ladder and trap (Yakima rkm 205.8). All kelts captured at Chandler which have not been previously PIT tagged are PIT tagged at Chandler upon capture. For the 2002 kelt migration, fish which survived the reconditioning process were released in three groups on May 20/28, 2002 (below Bonneville Dam rkm 234) and December 10, 2002 (in the Yakima River in the vicinity of the Prosser Hatchery). All PIT tags for released kelts are submitted to the regional PTAGIS database. The PTAGIS database is later queried to allow an assessment of all detection history on these fish since their release.