

Monitoring and Evaluation of Avian Predation on Juvenile Salmonids on the Yakima River, Washington: Great Blue Heron Predation of Juvenile Salmonids

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Avian Predation of Juvenile Salmonids within the Yakima River Basin is a significant source of smolt mortality. Previous studies of avian predation have focused on the obvious avian predators which congregate in large numbers at areas deemed hotspots. Hotspots on the Yakima River usually occur near dams and typical avian predators are; Double Crested Cormorants, American White Pelicans, and California/Ring billed Gulls. In 2008 it was discovered that considerable amounts of juvenile salmonid mortality was associated with the Great Blue Heron which lives and feeds along river reaches. PIT tags implanted within juvenile salmonids were found in significant numbers within Great Blue Heron Rookeries located along river reaches. Within the Selah Rookery, below Roza Dam, PIT tags discovered represented hatchery and wild fish from 2000 to 2008 smolt migration years. Yearly numbers of PIT tags fluctuated at Selah and an initial study was conducted to assess the predation by Great Blue Heron as a function of Yakima River flow below Roza Dam. For 2009 studies of Great Blue Heron predation will focus on determining Heron population numbers within the Yakima Basin (16 known rookeries), and developing PIT tag detection efficiencies for various rookeries.