

PRE AND POST MONITORING AT TWO ECOSYSTEM RESTORATION SITES, JULIA BUTLER HANSEN NATIONAL WILDLIFE REFUGE, 2005-2008

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ABSTRACT

Restoring tidally influenced wetlands to improve conditions for juvenile anadromous salmonids is an important component of many recovery and management plans and regulatory requirements. Although restoring tidal wetlands and improving fish access to them are major components of recovery strategies for anadromous salmonids, considerable uncertainty exists concerning appropriate restoration actions. Information on specific habitat requirements and restoration needs of juvenile salmonids in these areas is lacking. The U.S Army Corps of Engineers has proposed such restoration actions in Julia Butler Hansen National Wildlife Refuge. As a component of these actions, replacement of traditional top-hinge tide gates with new designed tide gates has been proposed. These new tide gates are designed to provide habitat and fish passage benefits when compared to traditional tide gates. The U.S. Fish and Wildlife Service, Columbia River Fisheries Program Office has begun to monitor biological and physical attributes of treatment and control sloughs to assess the affect of tide-gate replacement. Specific objectives addressed include assessing tide gate function, fish passage opportunity, habitat parameters and fish community composition among treatment and control sloughs. Fundamental differences exist between fish communities and temperature regimes among treatment and control sloughs pre-construction. Though juvenile salmonids will enter sloughs through tide gates, frequency is low when compared to control sloughs. Installation of tide gates designed to allow improved fish passage and improved habitat quality began in summer 2007 and additional replacements will occur in 2009 through 2011. Assessment of these actions will continue.