

WETLANDS RESERVE PROGRAM

Klingel Wetlands



A post restoration view looking Northeast across the Klingel wetlands towards the Hood Canal.

Project Overview

NRCS Program: Wetlands Reserve Program (WRP)

Acquisition Year: 2003;
Permanent Easement

Conservation Practices: Wetland Restoration, Open Channel, Dike, Water Control Structure

Installation Year: 2010–2011

Restoration Funds Obligated:
\$235,000



Location of Hood Canal, Washington.

Klingel Wetlands

Perched on the narrow shoreline of the Hood Canal, the Klingel Wetland is an area rich in habitat diversity. A smaller cousin to larger Puget Sound river delta estuaries, this Wetlands Reserve Program (WRP) easement provides significant habitat for both terrestrial and aquatic priority species. Among those most dependant on salt marsh wetland communities include six populations of Puget Sound Salmonids, migratory shorebird concentrations, and wintering waterfowl.



Close-up Hood Canal area.

Early settlement of the Puget Sound interior by European Americans converted salt marsh estuary habitat, including the 13.5 acre Klingel Wetland, to pasture and hayland. Levee systems were installed in the 1890's and 1950's to restrict tidal hydrology from flooding the site, converting the wetland to a farmable freshwater plant community. This shoreline alteration diminished the site's productivity for native fish and wildlife populations which depend on the rich biological and chemical processes of a salt marsh estuary.

Project

Natural Resources Conservation Service (NRCS) purchased a WRP easement on property owned by the Great Peninsula Conservancy in 2003. Following an extensive planning, design, and permit process, the restoration project included building a setback dike to protect neighboring property owners and a state



Before: Aerial view of Klingel WRP, 2009, prior to restoration.



After: Aerial view of Klingel WRP, 2011, after restoration.

highway, excavation of historic tidal channels, concluding with removal of the 1950's era dike. Material from the levee removal was returned to the adjacent borrow ditch.

The project included:

- Construction of 1100 feet of new set back dike with four drainage culverts;
- Removal of 1500 feet of existing sea dike with associated culverts; and
- Tide gates to restore daily tidal inundation, allow fish and other aquatic organism passage, and facilitate recolonization of native salt marsh vegetation.

Results

One year following construction finds rapid progress in restoration of the native processes, functions, and values to the WRP easement's 13.5 acre estuary and to the adjacent 40 acre salt marsh. Rapid die off of invasive freshwater species such as reed canarygrass, quackgrass, and Himalayan blackberry have provided an opportunity for native salt marsh vegetation to repopulate the mud flat. Small distributary channels are beginning to form, setting the stage for recovering critical habitat required by three populations of salmon which are listed under the Endangered Species Act.

Paired with other local restoration activities, the Klingel wetlands will contribute to recovery of listed species and provide habitat for a myriad of other species which rely on the Hood Canal and greater Puget Sound waters for one or more portions of the resident or migratory lifecycle.

Partners

Great Peninsula Conservancy, Hood Canal Salmon Enhancement Group and ESA Inc. were essential partners in successful completion of this project. Ducks Unlimited, Hood Canal Coordinating Council, and Washington Salmon Recovery Funding Board also contributed to the planning and funding of the project.

Wetlands Reserve Program

The Wetlands Reserve Program (WRP) is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The USDA Natural Resources Conservation Service (NRCS) provides technical and financial support to help landowners with their wetland restoration efforts. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This program offers landowners an opportunity to establish long-term conservation and wildlife practices and protection.

NRCS is committed to delivering all Farm Bill programs authorized through the 2008 Farm Bill and is eager to consult with all interested parties about the many benefits that the WRP may offer.