McElroy Slough Estuary Restoration Project Summary
Location: Samish Watershed

Project Partners: Salmon Recovery Funding Board, Skagit County, US Fish and Wildlife Service, WA Department of Fish and Wildlife, WA Dept of Ecology, USDA Natural Resource Conservation Service Wetlands Reserve Program, Skagit River System Cooperative, and the Blanchard Community.

McElroy Slough Project Map

Project Description:
The McElroy Slough project restores tidal flushing, fish passage and estuary rearing area for chinook, coho, chum and cutthroat within the McElroy Slough watershed. McElroy Slough is an independent drainage which enters Samish Bay in northern Skagit County. Three salmon bearing creeks drain into McElroy Slough: Whitehall, Colony and Harrison Creeks. Previous salmon enhancement projects have occurred on both Colony and Harrison Creeks. Restoring the estuary functions to the McElroy watershed enhances the fish and wildlife uses, improves water quality as well as reduces flood hazards to the Blanchard Community.

The preliminary design for this project was completed using a multi-agency collaborative approach. Representatives from local, state and federal agencies formed a technical advisory

committee to oversee the development and design of the project with the local community members. This committee acquired funds in 1998 for a consultant to complete a preliminary design report in 1999. Funding was secured through the Salmon Recovery Funding Board in 2000.

By the end of 2001, the project was fully funded and permitted, and ready for construction bidding. Project partners and Blanchard residents anticipated that project implementation would commence during the 2002 construction season. A solid monitoring plan had been created by the committee to look at both physical and biological changes and baseline data related to adult fish use, surface water and ground water levels were monitored.

However, complications occurred which postponed the implementation of the project. In a nutshell, political and engineering issues related to replacing tide gates on a Skagit County road with a tide gate that allows tidal inundation delayed the project from occurring for 4 years. Monitoring continued over this time, while project partners patiently (yet frustratingly) waited for resolution of these complicated issues through additional analysis and design review and modification.

In May 2006 Skagit County finally put the project out for bid and in July 2006, the McElroy Slough Project construction bid was awarded. The project replaced the three existing McElroy Slough culverts with tidegates at Blanchard Road with four 6' x 6' box culverts and tidegates. Three of these tide gates are traditional gates with top hinges and one tide gate is side hinged and is self regulating to allow saltwater into the slough at certain tide levels. The new gates have a combined total area of 144 square feet (the old gates had a total of 69 square feet). The project also removed two culverts under Flinn Road (one third of a mile upstream) and replaced the crossing with a 45 foot long bridge.

Allowing tidal inundation into the slough on a daily basis will help kill invasive vegetation species and flush sediment out of the system. Recreating estuarine habitat upstream of the tidegates allows for better fish access into the slough and increases habitat available to juvenile salmonids using Samish Bay for rearing. The physical shape of the channel, vegetation and juvenile fish use are all being monitored. Increasing the capacity of the culverts to convey water out of the system helps alleviate flooding hazards to the surrounding community and protects their mounded septic systems from being flooded which protects water quality.

McElroy Slough Tide Gates Before

McElroy Slough upstream of tide gates before construction

The currently funded project will open 1 mile in length or approximately 9 acres of estuary area for anadromous fish use within the slough. It will also improve access to 5 miles of Colony Creek used by anadromous fish, a half mile of Whitehall Creek and 3 miles of Harrison Creek. The second project has the potential to recreate at least 24 acres of estuary habitat. In addition to providing significant benefits to fisheries and many other wildlife species, the project will also provide flood reduction benefits to the Blanchard community. At the McElroy Slough outlet the current project will remove all existing culverts (two-72" pipes and one-48" pipe) and install two-10' x 6' box culverts with two standard tide flap gates per barrel and an additional 5' x 6' culvert with a self regulating tide gate for fish passage. These new pipes with double the hydraulic capacity of the outlet and allow saltwater to flow in and out of the slough on a daily basis. At the Flinn Road crossing (1/3 mile upstream from the outlet) the project will remove two existing 72" culverts which are undersized for the slough and install one large box culvert. Again this replacement with double the hydraulic capacity of the crossing structure.

Community based habitat restoration has been occurring in the McElroy Slough watershed since early 1990's. SFEG has been an active participate of these restoration projects since 1995. The most prominent were the restoration of Harrison and Colony Creeks through wetland areas which were previous ditched for agricultural purposes. The McElroy Slough tide gate project is expected to be instrumental in the restoration of this watershed, by allowing better fish access and recreating juvenile habitat for chinook while simultaneously reducing flood risks to area residents. In 1997 design funds were received for the McElroy Slough project from US Fish and Wildlife Service and a technical advisory committee was formed to develop a preliminary design using a multi-agency collaborative approach. This committee hired a consultant to complete a design report which was used to develop the SRFB application. Construction commenced the first week of August. The following is a status report as of 10/10/06 provided by Skagit County engineer Barb Hathaway.

to upgrade two crossing structures to better accommodate fish passage and high water flows, while also reintroducing salt water to the slough area by replacing traditional tide gates with a self-regulating tide gate. Reintroducing saltwater into the system is expected to kill non-native vegetation such as reed canary grass and cattails that currently exists in the channel, recreating 9 acres of natural estuary habitat

Colony Creek Restoration

Project Partners: Jobs for the Environment (WA DNR), USDA NRCS Wetlands Reserve Program, US Fish and Wildlife Service

Project Costs: $ 100,000

Project Dates: Instream work completed in 1999, riparian work through 2000

Project Summary:

This project re-meandered 2,560 feet of the ditched Colony Creek into its historic dendritic channel using aerial photos to identify its previous path. A large pond was reconnected to the channel to provide juvenile salmon rearing habitat and large woody debris, root wads and spawning gravel were placed throughout the new channel. Channel work was completed in October 1999. Reed canary grass was removed from the new riparian area and over 3,000 native trees and shrubs were planted in the fall of 1999 and the spring of 2000 by volunteers throughout the riparian area. Spawning surveys have indicated both coho and chum have utilized the restored stream channel. This project was funded primarily by a 1998 grant from the Jobs for the Environment Program.

Colony Creek- Before *Colony Creek- After*

Harrison Creek Restoration

Project Partners: Jobs for the Environment (WA DNR), WA Department of Fish and Wildlife,

Project Costs: $ 80,000

Project Dates: Instream work completed in 1996 & 1997, riparian work through 1999

Project Summary:

This 1996-97 project re-meandered 3,400 feet of Harrison Creek (a tributary to Colony Creek) into its historic dendritic channel and reconnected two off channel ponds for salmon rearing habitat. The project installed large woody debris, root wads and spawning gravel throughout the new channel. Over 3,000 native trees and shrubs were planted by volunteers in the riparian area and 3,700 feet of fencing was installed upstream of this project area to exclude livestock from Harrison Creek and protect water quality. Thanks to four cooperative streamside landowners over ¾ of a mile of Harrison Creek was improved for salmon. Spawning surveys have indicated a healthy number of coho and chum returning to the project area. This project was funded by a 1996 grant from the Jobs for the Environment Program.