



Connecting Traditional Ecological Knowledge and Natural Science: A Partnership Between State and Tribal Department of Natural Resources



Samish Indian Nation

Background

Cypress Island is the fifth largest and least developed of the San Juan archipelago. In 1987, the Washington State legislature designated lands on the island as one of the first Natural Resource Conservation Areas and, in 2007, the tidelands and bed lands were designated as the Cypress Island Aquatic Reserve.

Secret Harbor, used seasonally by local tribes prior to European settlement, was first homesteaded in the late 1800's. The land was altered substantially by land clearing, planting of orchards and diking. Knowledge of conditions prior to homesteading has been handed down through generations of Samish People.

Historic land clearing, ditch and pond creation, and the diking of the estuary altered the hydrologic functions and connectivity of the area. This site, however, is surrounded by functioning forests, seeps and streams, which provide ground and surface water flow to the area.

This project has transformed the site from previous agricultural and homestead features with disconnected hydrologic functions to naturally connected systems linking upland forests to the lowland freshwater streams, marsh and wetlands of the Secret Harbor estuary.



“The more we delve into modern science, the more we find that there’s a relationship with the old teaching. That there’s some sense of the two not being so vastly different after all.”

Leslie Eastwood
Samish Indian Nation
General Manager



Culture and Science

“Since time immemorial”, Samish People have been stewards of the places they live. They continue to care about our natural environment holistically and are concerned by changes in climate, ocean acidification and loss of habitat that birds, animals, fish and humans depend on.

The Samish Indian Nation Department of Natural Resources is working to integrate traditional ecological knowledge and guidance coupled with science to create holistic project plans with our partners. Examples of these efforts are vegetation surveys that identify culturally significant plants and beach seining that establish fish assemblages and usage.

The pictures seen left show historic photos and examples of natural resources important to the Samish Indian Nation as well as examples of the work we are involved in at the Secret Harbor Estuary Restoration project. This project is an example of how Government and Tribes can work together to blend science and culture into holistic, meaningful projects.

Scan this QR code for further information:



Monitoring

WADNR and the Samish Indian Nation collaborated on the monitoring components of this project. Monitoring efforts both pre and post restoration will provide data useful to describe the rate of change in habitat conditions over time.

Monitoring elements include:

- Meteorological station to collect long-term weather data including rainfall, wind speed, direction and temperatures.
- Water quality and temperature monitoring.

Biological and habitat surveys include:

- Amphibian surveys, avian surveys, shellfish surveys, beach seining, forage fish surveys and plant species composition.

Results

The construction portion of this project was completed in July of 2014. There have been significant changes to the project area including a 7.5 acre freshwater marsh where sedges and rushes, traditionally used by Samish basket weavers, have emerged. Long-toed Salamanders (*Ambystoma macrodactylum*) and Virginia Rails (*Rallus limicola*), not documented before restoration, have been recorded in the project area. This marsh area is also being utilized by a large number of water fowl known to be hunted by Samish People.

Funding and Volunteer Groups

This project was funded through:

The Jobs Bill, WADNR's Aquatic Lands Restoration Program, an Environmental Protection Agency grant administered by the Northwest Fisheries Commission, USFWS and Washington State Recreation and Conservation Office.

Local volunteers for monitoring efforts include:

- Sound Water Stewards of Island County
- Skagit Audubon
- The Coastal Volunteer Partnership
- And other extremely helpful, knowledgeable and talented community members

Contacts

Jodi Bluhm, Samish Indian Nation
Department of Natural Resources
Field Supervisor
jbluhm@samishtribe.nsn.us

Paul McFarland, Washington Department of Natural Resources
Natural Areas Manager

