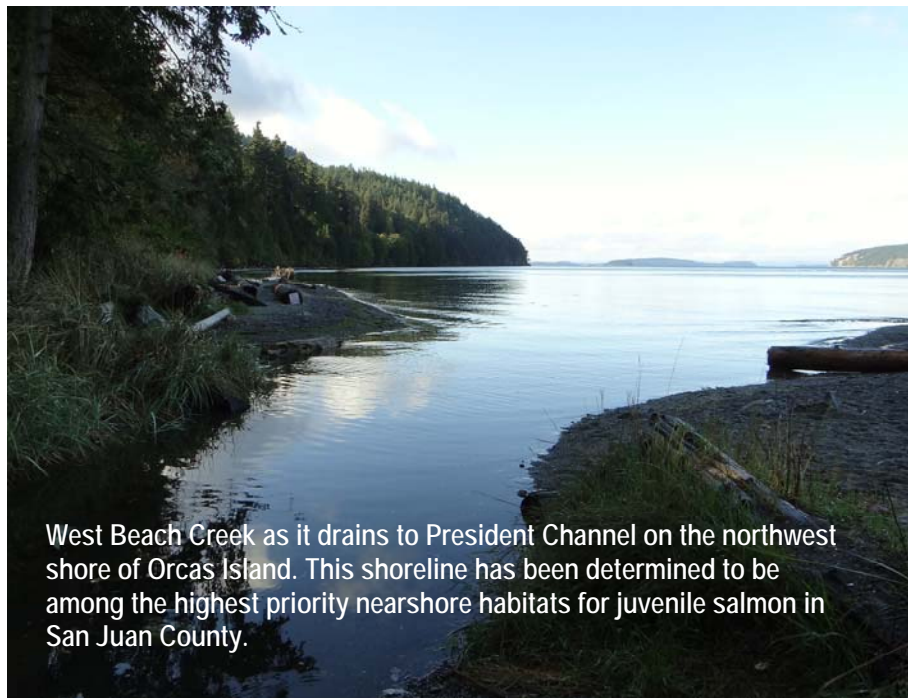


West Beach Creek Restoration Project

The Northwest Straits Foundation recently completed a project to remove a fish passage barrier located at the mouth of West Beach Creek in partnership with a private property owner. **The goal of the project is to restore habitat for use by juvenile and adult cutthroat and juvenile Chinook, chum, pink, and Coho salmon and to create potential spawning opportunities for chum and pink salmon.**

West Beach Creek is one of the few streams in the San Juan Island without a natural barrier, and so it was historically accessible to sea-going fish. The fish passage barrier we removed was formed by a combination driveway embankment and dam on private property which created a pond on the upstream side. Two 24-inch culverts located high up on the driveway prism, blocked fish access, limited flow, and created a build-up of sediment in the creek up to the culvert at West Beach Road.

The project removed the culverts and dam, replacing them with a 16-foot diameter culvert. The new passage allows fish to pass upstream and downstream, and accommodates high tides and future sea level rise. The creek's natural water and sediment flow processes have been restored.



West Beach Creek as it drains to President Channel on the northwest shore of Orcas Island. This shoreline has been determined to be among the highest priority nearshore habitats for juvenile salmon in San Juan County.



Photo on left shows current perched culverts on downstream side of West Beach Creek. These culverts were removed in October 2014 and replaced with one sixteen foot culvert, shown right, allowing fish to pass unobstructed. Good news: June 2015 monitoring activities documented a 3-4 inch salmonid approximately 100 feet upstream of the new culvert.

Watershed Focus

A second, subsequent culvert improvement project sponsored by **San Juan County Public Works Department** is in the planning and design stages. This project will replace a fish passage barrier upstream at the West Beach Road crossing in the summer of 2015 or 2016. Removal of both these fish passage barriers will open up over a mile of stream for juvenile salmon and other fish to use for refuge, feeding, and possibly spawning.

Project Funding

Northwest Straits Foundation received funding for the feasibility, design, and construction of the project from the **Washington State Salmon Recovery Funding Board, the Puget Sound Acquisition and Restoration Fund, the U.S. Fish and Wildlife Service Fish Passage Program, and Alcoa Foundation**. In-kind and volunteer support for native planting has been provided by **Washington DNR/Puget Sound Corps and Friends of the San Juans**.

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Salmon and West Beach Creek

What's the connection? Why is it important?

- **Only 22 of 37** historic Chinook populations remain. (Populations are generally described as groups of salmon that are genetically distinct.)
- Chinook salmon are **only at 10%** of their historic numbers.
- The decline is closely associated with the **decline in the health of Puget Sound**.
- Recent studies **confirm the use of the West Beach Creek nearshore** by Chinook, chum, pink, Coho, and sockeye salmon.
- **West Beach Creek is one of the few streams** with year round flow on Orcas Island, and is located in a critical shoreline zone for juvenile salmon.
- **Salmon need cool, clean water**. Cool water is achieved in part in streams and along the shallow nearshore by maintaining overhanging native vegetation. Nearshore waters and estuaries are needed for rearing and feeding while salmon transition from freshwater to saltwater.

Project Implementation

Construction to remove the lower fish passage barrier was completed in fall 2014 and is projected to proceed as follows:

Year One – 2014:

- Culvert removal and replacement; removal of invasive and non-native vegetation, September to October
- Staging of large woody debris for Year 2 placement, September
- Year One Planting: November

Year Two – 2015:

- Placement of large woody debris in newly formed stream channel
- Phase two planting along the margins of the new stream corridor
- Maintenance (weeding/replacement) of Year One plants

Year Three – 2016:

- Maintenance of all plants