



# Project Highlight: Golf Club Hill Road Culvert Replacement

This project replaced an undersized concrete box culvert with a 140-ft span bridge on Chico Creek, removed a log weir fishway, and restored the stream channel, floodplain, and riparian habitat upstream and downstream. The undersized culvert and log weir fishway were barriers to fish passage; they also severely impacted habitat and stream processes up and downstream.

## BENEFITS TO SALMON, HABITAT, AND PEOPLE

**Restored passage** for salmon and other fish and wildlife species:

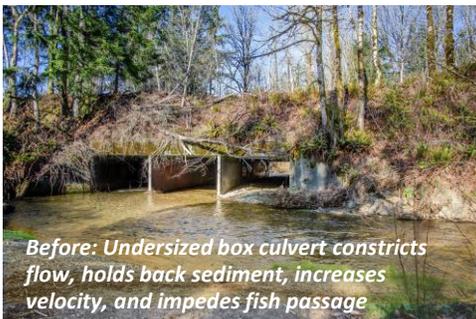
- *Chum and coho salmon, steelhead, coastal cutthroat trout*

**Restored stream processes** that build and maintain habitat:

- *Natural stream velocity, channel meander and complexity*
- *Connections to groundwater and floodplains*
- *Recruitment of wood and other habitat structure*
- *Sediment movement and deposition*

**Increased climate resiliency and public safety:**

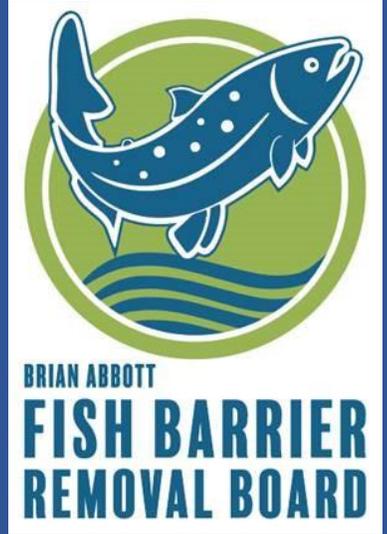
- *Reduce flooding during storm events*
- *Improve stream flows during drought conditions*
- *Improve water quality*



*Before: Undersized box culvert constricts flow, holds back sediment, increases velocity, and impedes fish passage*



*After: 140-ft bridge restored natural flow, floodplain connection, stream meander, sediment transport, and passage for fish*



**Total Project Cost:**

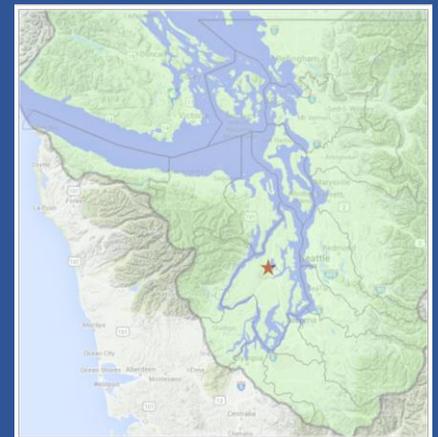
\$5,236,000

**Funding Sources:**

Brian Abbott Fish Barrier Removal Board

Washington State Recreation and Conservation Office (RCO)

Kitsap County Public Works Road Fund



For more Information on the Golf Club Hill Road Project, please contact **Brittany Gordon**, Natural Resources Coordinator, Kitsap County Department of Community Development Mobile (360) 801-6240 Direct Office (360) 337-4679 Email: [bgordon@kitsap.gov](mailto:bgordon@kitsap.gov)

## INNOVATIVE DESIGN & CONSTRUCTION

A temporary road was built atop the existing culvert to minimize traffic impacts during construction of the new bridge. Leaving the existing culvert in place also minimized impacts to fish and stream habitat. When the new bridge was complete, the temporary road and culvert were removed.

### Project Management:

Kitsap County Public Works

### Design:

Natural Systems Design

### Construction:

Interwest Construction & Port Madison Enterprises



Before any work in the stream, the water was bypassed around the site using a pump. Fish were removed and relocated to safe waters.



The original 36-foot triple box culvert was built in 1946 by the US Navy for a railroad spur.

Chico Creek is Kitsap County's most abundant salmon run, exceeding 100,000 chum in some years.

The Golf Club Hill Road Culvert Replacement Project is one of many restoration actions in the Chico Creek watershed and would not have been possible without many partners.

