

PUGET SOUND NEARSHORE ECOSYSTEM RESTORATION PROJECT (PSNERP)

POTENTIAL RESTORATION SITES





Big Beef Creek Estuary

Big Beef Harbor is located at the north end of Hood Canal on the Kitsap Peninsula just north of the town of Seabeck. This small estuary encompasses 27 acres of tidal wetlands, extensive mudflats, and tidal channels that provide habitat for fish, birds, and invertebrates. Historically, a narrow spit extended half way across the mouth of the estuary, but today Seabeck Highway extends across the entire estuary mouth on a filled causeway with a 100 foot-long-bridge opening to allow for tidal exchange. The causeway and associated fill reduce tidal flows in to and out of the estuary and cause increased sedimentation to the adjacent tidal wetlands. The causeway fill, placed over the historical spit, also degraded the beach ecosystem. Proposed restoration actions would reopen the estuary mouth by elevating the roadway onto a longer bridge which would restore tidal flow, sediment transport, and re-create tidal channels.



Processes Restored

- · Movement of sand and gravel along shorelines.
- · Natural erosion and accretion of beaches.
- · Natural formation of tidal channels in estuaries.
- Unrestricted movement of saltwater through tidal channels in estuaries.
- Unrestricted movement and migration of fish and wildlife.

Conditions Improved

- Restored tidal wetlands, which are highly productive habitats that support biodiversity and provide connectivity between the land and sea.
- Restored coastal embayment that provides valuable nursery habitat for threatened species of juvenile salmon such as Chinook, increasing their survival and supporting population recovery in Puget Sound.
- Restored sand and gravel beaches that serve as spawning grounds for forage fish (e.g., surf smelt and Pacific sand lance), which are a key element of the marine food chain.
- Improved quality of the water flowing through the estuary.

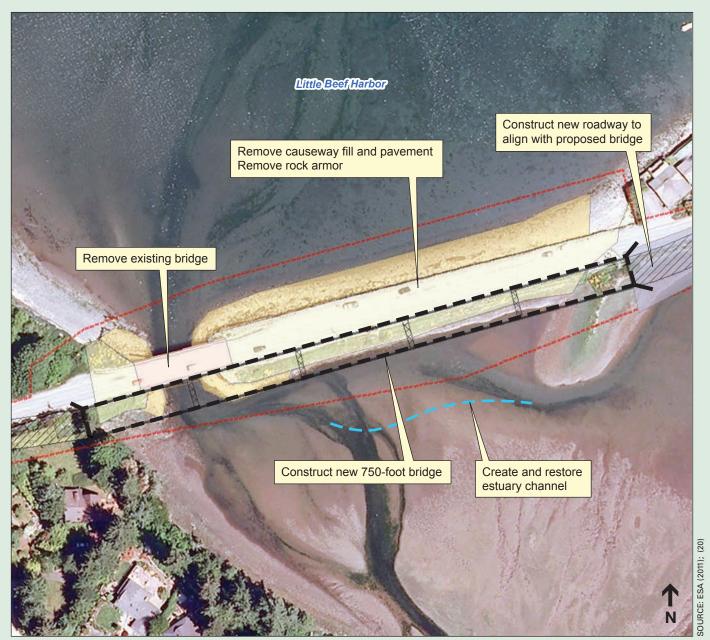


Image above depicts major project features. See design report for additional details.

Key Design Elements

The restoration proposal would remove the existing highway to include all roadway fill, armoring, bridge and pavement. A new 750-foot-long bridge would be built to span the entire estuary mouth from the right-of-way on the spit to the low bank at the west shore. The new highway bridge would be constructed immediately south of the current highway, which would allow the road to remain open during construction activities. Restoration would also include restoration of tidal channels within the estuary.

Site Summary Statistics

• Area of Restored Process: 30 acres

• Total Project Cost: \$32.6 million

For more detailed information regarding this conceptual design, please visit our website at

www.pugetsoundnearshore.org/cdr.html.