Deer Harbor includes the largest estuary on Orcas Island. The Cayou Valley Lagoon, also known as Deer Harbor Lagoon or Slough, is an open coastal inlet north of the Channel Road bridge. Tidal flushing from the larger bay into the northern inlet is limited by fill and Channel Road bridge armoring. These constrain the inlet mouth to less than half its historical width. This constriction altered the tidal prism and freshwater flows leading to sedimentation and loss of intertidal marsh, mudflats and tidal channels. The proposed Deer Harbor Estuary restoration entails widening the inlet mouth to allow full tidal flushing and freshwater flows, restoring 16 acres of tidally influenced marsh and mudflats. Fish passage will also improve in the estuary.

Ecosystem Restoration Benefits

- Restore coastal embayment that provides valuable nursery habitat for juvenile threatened salmon species, increasing survival and supporting Puget Sound population recovery
- Restore intertidal and shallow subtidal habitat areas for recreationally- and culturally-important shellfish
- Re-establish intertidal and shallow subtidal areas to encourage kelp and eelgrass growth, increasing nearshore productivity for fish, birds and other marine species
- Improve estuary water quality

Significance

- Restoring the largest estuary on Orcas Island will support young fish from many nearby river systems
- Restoration will support native oyster beds
- As the only San Juan County site, it improves the Tentatively Selected Plan’s geographic scope
Key Design Elements
The restoration will return the estuary width opening to pre-development conditions. It entails removing the existing 50-foot timber Channel Road bridge including fill and riprap under it. A new 110-foot long bridge across the estuary opening allows for complete tidal exchange, sediment supply and transport, and natural tidal channel formation.

Site Summary Statistics
- Area of Restored Process: 16 acres
- Total Project Cost: $8.2 million

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