



Telegraph Slough

The historic salt marsh south of Padilla Bay once supported extensive mudflats and eelgrass beds, with a complex system of tidal channels. Beginning in the 1860s and continuing into the early 1900s, the estuary was developed for agriculture through the installation of tidal dikes along the Padilla Bay shoreline (north of present day State Route 20) and riverine dikes along the east side of the Swinomish Channel. The U.S. Army Corps of Engineers converted the Swinomish Channel from a natural slough to a dredged navigation channel in 1937. Construction of State Route 20 in the early 1970s severed the tidal connection between the north and south portions of Telegraph Slough. The restoration would remove the dikes and install a bridge over Telegraph Slough at State Route 20 and the BNSF railroad crossing, restoring tidal flows to the historic estuary.



IMAGE: Washington State Department of Ecology (2006)

Processes Restored

- Natural formation of tidal channels in estuaries.
- Unrestricted flow of freshwater rivers and streams into estuaries.
- Unrestricted movement of saltwater through tidal channels in estuaries.
- Accumulation and retention of organic material from plants and aquatic animals.

Conditions Improved

- Restored large river delta 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.
- Re-established intertidal and shallow subtidal areas to encourage the growth of kelp and eelgrass, increasing nearshore productivity for fish, birds and other marine species.

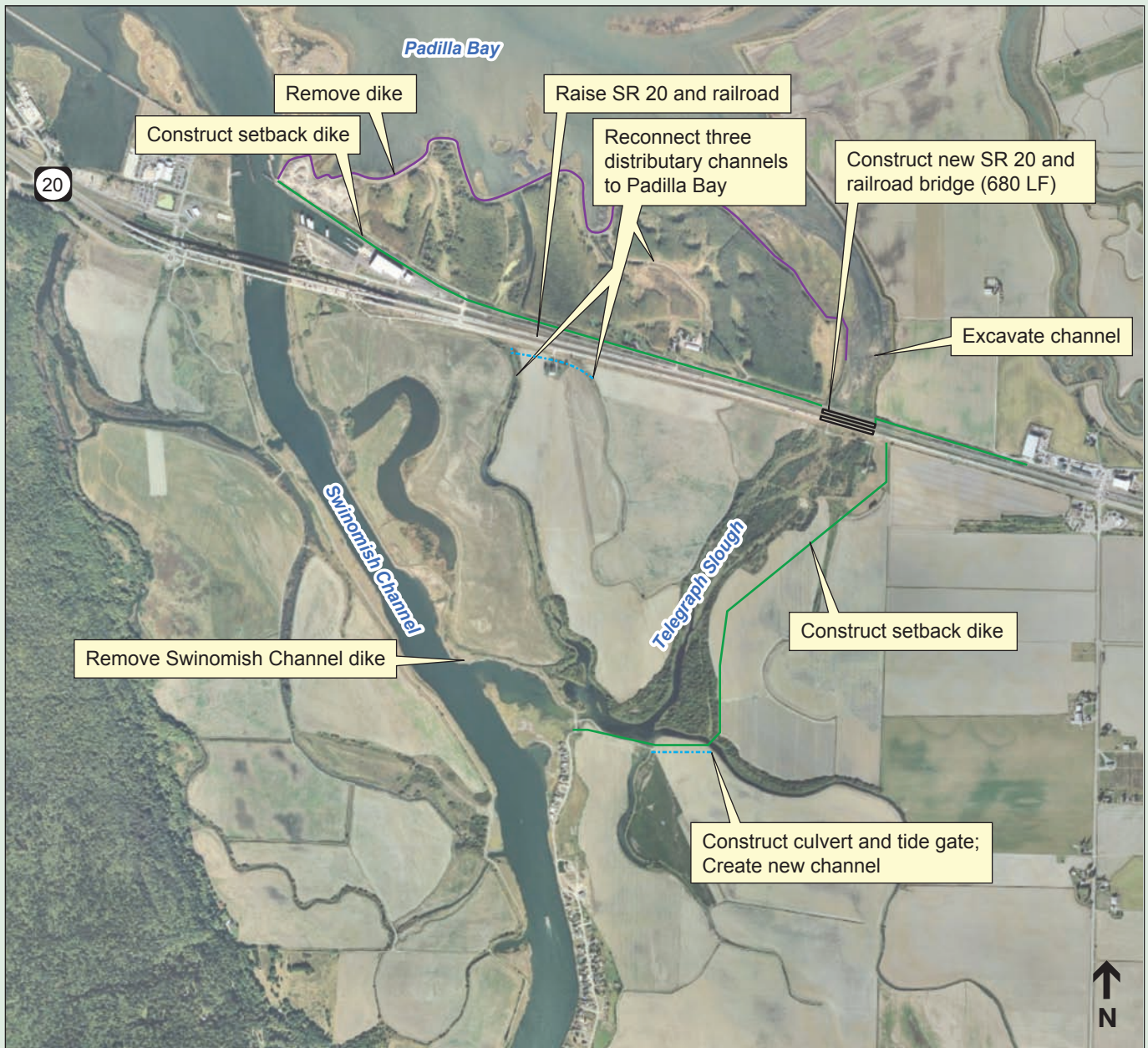


Image above depicts major project features. See design report for additional details.

SOURCE: ESA (2011); Bing Maps (2011)

Key Design Elements

The restoration would remove most of the existing dikes along Telegraph Slough, Padilla Bay, and the Swinomish Channel (east). Removal of dikes necessitates raising the railroad and State Route 20 from the Swinomish Channel to Telegraph Slough to keep them above the limits of inundation and wave action. Both the Railroad and State Route 20 would cross the Slough on new elevated long-span bridges. A new setback dike along the east and south sides of Telegraph Slough would contain flood flows and extreme tides. Dike removal would restore approximately 780 acres of former salt marsh to tidal influence. The restoration would require acquisition of several hundred acres of private property and removal of all structures in the restoration area.

Site Summary Statistics

- Area of Restored Process: 832 acres
- Total Project Cost: \$198.6 million

For more detailed information regarding this conceptual design, please visit our website at www.pugetsoundnearshore.org/cdr.html.