Nearshore Restoration Strategy for Twin Rivers

Twin Rivers is located on the northern shore of the Olympic Peninsula between Clallam Bay and Port Angeles. The East and West Twin Rivers flow into the high-energy environment of the Strait of Juan de Fuca and support several salmon stocks including Chinook, coho, cutthroat, chum and steelhead. A large (>5 acre) rectangular fill area (termed a “mole”) was constructed in the intertidal zone to allow barge loading (there is a quarry nearby). The restoration action is to remove the rock-armoring and sheet pile walls surrounding the fill area and the fill itself to uncover the buried intertidal zone.

Processes Restored

- Movement of sand and gravel along shorelines.
- Natural erosion and accretion of beaches.
- Accumulation and retention of organic material from plants and aquatic animals.
- Unrestricted movement and migration of fish and wildlife.
- Natural exposure to wind and wave action.

Conditions Improved

- 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.
- Restored intertidal and shallow subtidal areas that are habitat for recreationally and culturally important shellfish such as oysters, mussels, and clams.
- 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.
- Improved connectivity between nearshore and adjacent uplands.
Key Design Elements

The **full restoration** alternative would remove the rock armoring and sheet pile walls around the Twin Rivers mole along with the fill itself for disposal offsite. Prior to demolition, the existing access road would need to be improved to allow movement of the large equipment needed for restoration.

The **partial restoration** alternative would remove the shoreline armor and sheet pile walls from the site, but the fill left behind would be exposed to high-energy waves and allowed to naturally redistribute in the nearshore. The fill is understood to be native sand and sediment from historic bluff landslides and is assumed to be safe for redistribution by waves and currents, but soil testing is needed to confirm this. The existing access road would be improved the same as under the full alternative.