Sequalitchew Creek is a small spring-fed stream that originates in a forested ravine near Joint Base Lewis-McChord. Once an open coastal inlet with salt marshes, the stream now flows to Puget Sound through a brackish marsh and a concrete box culvert beneath a railroad corridor. During construction of the BNSF railroad, the ravine at the mouth of Sequalitchew Creek was filled with a high embankment to support the railroad tracks. The goal of the restoration project is to modify the railroad crossing to restore tidal flows to the marsh area and recreate an open coastal inlet at the mouth of Sequalitchew Creek.

Processes Restored

- Movement of sand and gravel along shorelines.
- Natural erosion and accretion of beaches.
- Unrestricted flow of freshwater rivers and streams into estuaries.
- Natural exposure to wind and wave action.

Conditions Improved

- 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 connectivity between nearshore and adjacent uplands.
- Improved resiliency of the shoreline to respond to changes in the environment such as rising sea levels and increasing storm events.
Key Design Elements

The **full restoration** alternative would replace the railroad embankment across the mouth of Sequalitchew Creek with a bridge. The area under the new bridge would be graded to create a series of tidal channels connecting the marsh to Puget Sound. Shoreline armoring and fill material would be removed from the intertidal zone. Over time, the existing brackish marsh would be exposed to wind and waves from Puget Sound, eventually transforming into an open coastal inlet.

The **partial restoration** alternative would leave the railroad embankment in place. An additional culvert or series of culverts would be installed through the embankment. As much shoreline armoring and fill would be removed as possible without jeopardizing the stability of the railway. This would improve tidal flows and formation of tidal channels in the existing brackish marsh, but would not fully restore an open coastal inlet at the mouth of Sequalitchew Creek.