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Qwuloolt Estuary Restoration FACT SHEET

August 2015

Objectives

The 400-acre Qwuloolt Estuary lies within the Snohomish River floodplain four miles upstream from its outlet to Puget Sound. The Qwuloolt Estuary Restoration Project will restore the historical tidal marsh ecosystem that existed prior to clearing and draining the area for farming over the last 100 years. The main elements of the project include levee breaching, levee setback, channel restoration, topographic restoration, and native planting. The project is critical for regional salmon recovery as it restores juvenile salmon rearing habitat and provides habitat for other marsh wildlife, such as shorebirds and waterfowl.



Landscape and Cultural Context

The Snohomish River watershed drains 1,856 square miles of the western Cascades and is the second largest river basin in Puget Sound. The watershed's three major rivers, the Skykomish, the Snoqualmie, and the Snohomish, support significant runs of coho, Chinook, chum, and pink salmon, as well as steelhead. River flows carry sediment downstream and deposit rich silt and nutrients in the lowlands of the estuarine delta, helping to form 19 square miles of marshes, forested islands, distributary sloughs, mudflats, and connecting channels. Today, only 17% of the total historical estuarine area remains due to extensive diking and tide gates, which have restricted the river and tides from reaching wetland areas in the floodplain.

Ancestors of the Tulalip Tribes, including the Snohomish, Snoqualmie, Skagit, Suiattle, Samish and Stillaguamish lived throughout the Snohomish River basin and estuary, depending for subsistence on marine life as well as other natural resources from the surrounding lands, wetlands and forests.

Restoration Elements

Constructed elements have been the responsibility of the Tulalip Tribes and the US Army Corps of Engineers and their respective contractors.

TULALIP ELEMENTS: Stream & Tidal Channel Restoration, Natural Topography Reconstruction, Wave Attenuation Berm Construction, Native Planting, Stormwater Treatment Ponds, Tide Gate Sealing



The first phase of site work comprised stream channel and upland re-contouring, wave attenuation berm construction, and native vegetation restoration work. Over one and a half miles of stream channel in lower Allen and Jones Creeks were restored to their natural alignments by December 2012. In addition, interior site work included the filling of relict agricultural drainage ditches as well as excavating additional channels to facilitate natural tidal function. The construction of the new outlet channel connecting Jones Creek with the inboard side of the Ebey Slough levee was completed in August 2013. The construction of wave attenuation berms began in 2012 and was completed in August 2015.

The majority of native vegetation planting along the eastern and northern perimeter of the project area was completed in 2012. Seven and a half acres of native vegetation has already been planted along the northern and eastern perimeters of the project area. Further native plantings have occurred on the wave attenuation berms, and will be completed along additional berms and at the perimeter of the stormwater ponds in Autumn 2015. In addition, two stormwater filtration ponds have been constructed to the west of the setback levee to improve the quality of stormwater runoff coming from the nearby industrial park, with the last in the series to be constructed in September 2015. Sealing of the three tide gates in September 2015 at the southwestern end of Jones Creek will assist in the final step of restoring natural hydrology to the site.

US ARMY CORPS OF ENGINEERS' ELEMENTS: Setback Levee Construction and Levee Breaching

The process phase of restoration implementation, the most important phase, involves the hydrologic reconnection (return of tidal inundation) of the Qwuloolt site. Construction of a 4,000 foot setback levee on the western edge of the project area, in order to protect adjacent private and commercial property, will be completed in 2015, with most of the work having been completed by November 2014. This structure will afford the opportunity to breach the north Ebey Slough levee, as it will protect critical infra-structure to the west of the project area (industrial park and wastewater treatment plant). Once the western setback levee is complete, the southern levee in the project area (along the northern edge of Ebey Slough) will be breached in late August 2015, allowing saline and fresh water to mix within the approximately 400-acre marsh. Estuarine water circulation will provide for natural hydrologic processes that sustain salmon and wildlife, as well as facilitate the transport and deposition of sediment and seeds for successional native plant restoration.

Project Oversight

The Qwuloolt Estuary Restoration Project is overseen by a planning team from the Tulalip Tribes of Washington, the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, and the Washington Department of Ecology. Known as the Natural Resources Damage Assessment Trustees, the group was formed in 1994 to assess injury to natural resources and the public from a now closed landfill and Superfund site in the lower Snohomish River Estuary. From 1964 to 1979, mixed commercial and industrial use of the landfill resulted in the loss of 147 acres of



intertidal estuary wetland. The Trustees, responsible for restoring, rehabilitating, replacing, or acquiring the equivalent of the injured natural resources, cleaned up the landfill and identified the Qwuloolt Estuary Restoration Project as a way to restore the area's lost tidal wetlands. The Trustee group has used settlement funds to purchase land at Qwuloolt and has worked together with additional state, regional, and private planning partners to design and implement the project.

The Tulalip Tribes act as the project manager for the Qwuloolt Project as part of an environmental conservation program that protects and restores the Snohomish region's natural resources. These areas include marine waters, tidelands, rivers and lakes, wetlands, and forests. The Tribes address the four "H"s critical to ecosystem and salmon recovery: habitat; hatcheries; harvest management; and, hydropower. Kurt Nelson, Environmental Division Manager, and Josh Meidav, Restoration Ecologist, co-manage the Qwuloolt Project for the Tribes and host a project website at: www.qwuloolt.org

This type of work is only possible with extensive support from private, federal and state community partners:

- The Natural Resource Trustees for the project:
 - \Rightarrow The Tulalip Tribes
 - \Rightarrow The National Oceanic and Atmospheric Administration* (Federal)
 - \Rightarrow The U.S. Fish and Wildlife Service* (Federal)
 - \Rightarrow The Washington Department of Ecology (State)
- The US Army Corps of Engineers* (Federal)
- The Natural Resource Conservation Service* (Federal)
- The City of Marysville
- The Washington Department of Fish and Wildlife* (State)
- Sound Transit*
- The Puget Sound Partnership*
- The Washington State Recreation and Conservation Office* (State)
- The National Fish & Wildlife Foundation* (Nonprofit)
- Sound Salmon Solutions (Nonprofit)

* funding partners

About the Tulalip Tribes

The Tulalip Tribes of Washington is a federally recognized Indian Tribe and the successors in interest to the Snohomish, Snoqualmie, Skykomish, and other allied tribes and bands who were signatory to the Treaty of Point Elliott. The 22,000 acre Tulalip Indian Reservation is located north of Everett and the Snohomish River, and west of Marysville, Washington. Tribal government provides health and dental clinics, family and senior housing, utilities, cultural and history activities, schools, childcare, higher education assistance, environmental preservation and recreation activities. Developable land and an economic development zone along the I-5 corridor provide revenue and services for these efforts and for tribal members. This economic development is managed through Quil Ceda Village, the first tribally chartered city in the United States. The Tulalip Tribes have approximately 4,200 members, with 2,600 members living on the reservation. The governing body is the seven-member Tulalip Board of Directors. For more information on our responsible environmental protection, restoring area history and culture, and economic development to benefit the community and tribes, please visit the following link: www.tulaliptribes-nsn.gov