



COMMUNITY DEVELOPMENT

80 Columbia Avenue ♦ Marysville, WA 98270  
(360) 363-8100 ♦ (360) 651-5099 FAX

Mitigated  
Determination of Non-Significance

File Number: PA 10013

Applicant: The Tulalip Tribes of Washington  
6406 Marine Drive  
Tulalip, WA 98271

Contact Person: Kurt Nelson  
Tulalip Tribes Natural Resources

Lead Agency: City of Marysville  
Community Development Department

SEPA Contact: Cheryl Dungan, Planning Manager – Land Use  
(360) 363-8206

**A. Project Location**

The property is generally located north of Ebey Slough, south and west of Sunnyside Blvd, and east of 47<sup>th</sup> Ave NE, within the 100-year floodplain of Ebey Slough. It is bordered by the City's wastewater treatment plant to the west, Brashler Industrial Park to the northwest, residential neighborhoods to the north and east, and Ebey Slough to the south. Located within Sections 33 and 34, Township 30 North, and Range 5 East.

**B. Project History and Description**

The affected area was diked and converted to agricultural land in the late 1800's. The Qwuloolt Estuary Restoration project will restore the area to its historic tidal marsh condition. The restoration project has been underway since 1996, when the Natural Resource Conservation Service obtained a conservation easement under the Wetland Reserve program for the site. Since that time the Tulalip Landfill Resources Trustees-the Tulalip Tribe, the National Marine Fisheries Service, the US Fish and Wildlife Service, and the Washington State Department of Ecology have been planning to restore the site to its historic tidal condition.

The project goal is to restore tidal processes to 341.5 acres on a 360 acre site. This will be accomplished by breaching the existing dike at Ebey slough to reestablish tidal inundation and reconnect the site to Ebey Slough. The project includes mitigation measures to protect adjacent properties affected by tidal inundation after the breach; to restore habitat in the tidal inundation area, and to preserve public access to the site.

The current proposal consists of two phases (Phase 1 and 2) of the restoration project. Earlier site preparation activities were approved and performed in prior years and included additional site preparation, excavation of drainage channels and stockpiling activities. Phase 1 of this project will be initiated in 2011 and Phase 2 in 2012. The Phase 1 work is subject to a Shoreline Substantial Development Permit. The Phase 2 work is subject to a Conditional Shoreline Substantial Development Permit due to shoreline modification of dikes and levees and fill within the floodway areas. The final phase of construction involves breach of the existing dike to enable tidal connection of Ebey Slough with the project site.

### **Phase 1 (work to begin in Summer 2011)**

Shoreline Substantial Development Permit:

- 1) Prepare staging areas on 47<sup>th</sup> Avenue NE.
- 2) Excavate connection to Allen and Jones Creek
- 3) Contour work within shoreline area to create berms for protection against wave energy
- 4) Cathodic protection of sewer lines within the restoration area
- 5) Stockpiling of materials on 47<sup>th</sup> Avenue NE
- 6) Construction of a water quality treatment wetland to treat existing runoff from the Brashler Industrial Park during a 25-year storm event.
- 7) Excavation of outlet channel.
- 8) Phase 1 of Christofferson grading project.

### **Phase 2 (work to begin 2012)**

Conditional Shoreline Substantial Development Permit:

- 1) Construct 4000 feet of new levee along the western perimeter of the site to protect adjacent properties.
- 2) Excavate and remove 1,800 linear feet of dike at Ebey Slough (breach area would be approximately 200 feet long and 21 feet deep)
- 3) Create a 1.1 acre fill pad (Phase 2 and 3 of Christofferson grading project) adjacent to Allen Creek.
- 4) Fill to raise a segment of existing public trail along the eastern boundary of the site
- 5) Fill farm ditches to eliminate the artificial linear drainage system
- 6) Phase 2 and 3 of Christofferson grading project.

## **C. Site Description**

The property is undeveloped agricultural land which has remained fallow for a number of years and has reverted back to a freshwater wetland. The site is located entirely within the 100-year floodplain. The topography is predominately flat and is surrounded by levees and short steep slopes.

According to the *Soil Survey of Snohomish County*, soils are predominately classified as Puget silty clay loam, with some inclusions of Snohomish silt loam and Mukilteo muck. All three soil types are considered hydric. These soil types are characterized by low permeability with a high available water capacity, and is primarily found in depressional areas on floodplains. The eastern edge of the site has several distinct soil types including Mukilteo muck and Snohomish, Pastik, and Tokul silt loam.

#### **D. Environmental Assessment**

The US Army Corps of Engineers filed a Final Environmental Assessment (EA) dated May 2010, in accordance with the National Environmental Policy Act (NEPA). The EA evaluates the potential environmental impacts of the federal action. A Finding of No Significant Impact (FONSI) was made by the Corps of Engineers on February 4, 2009. The EA and all referenced studies and documentation are incorporated by reference in this environmental determination.

#### **E. Critical Areas Study and Biological Evaluation**

The applicant has submitted a critical areas study dated March 2007, as well as a biological assessment (BA) describing the project background, populations potentially impacted by the proposed action, and demonstrating consistency with terms and conditions developed under the *Restoration Center Biological Opinion*. In a letter dated June 18, 2007, Paul Cereghino, Restoration Ecologist for NOAA Fisheries concludes that "the planned actions are 'not likely to adversely affect' Puget Sound chinook salmon and steelhead trout, and will have 'no effect' on NOAA trust species limited to marine environments including killer whales, Steller's sea lions, humpback whales, or leatherback sea turtles. The BA also states that the area has not been designated as critical habitat for Marbled Murrelet. It further states that Allen Creek has not been designated as critical bull trout habitat. According to the BA, no bald eagles nests have been observed within a 0.5 mile of the proposed disturbance area. The nearest documented bald eagle nest is located approximately two miles southwest of the project site along the north shore of Ebey Slough.

#### **F. Cultural Resources**

Three historic and cultural resource surveys have been completed on site. The first survey was conducted in the interior portion of the project in 2006 by the U.S. Fish and Wildlife Service and Tulalip Tribe staff members. The second survey was conducted in August of 2008 by Lara Rooke and Tulalip Tribe staff. Based upon the surveys conducted on the site, there is anticipation of no effect on cultural resources. In a letter dated December 9, 2008, from the Washington State Department of Archaeology and Historic Preservation, the State Archaeologist concurred that no historic properties will be affected.

In July 2008 a cultural resources survey in support of section 106 compliance of the National Historic Preservation Act was performed. A Corps archeologist defined the "Areas of Potential Effect (APE)". Literature review and field studies were completed. 40 excavator test pits were dug throughout the APE. The survey

and report concluded that no archaeological materials were located and that the project would have no effect on cultural properties.

### **G. Flood Modeling and Analysis**

Several studies have been performed by the agencies and consultants to identify and analyze flood impacts and analysis. Flooding impacts are a critical issue for project review and has been identified as a key concern by neighboring residential and industrial property owners, and the City of Marysville.

*Phillip Williams and Associates, LTD ("PWA")* conducted the hydrologic assessments of the project through various design assessment memorandums. These include the following:

- 1) Assessment of Flood Risk, dated 12/1/08 (Exhibit 20)
- 2) Qwuloolt Tidal Wetland Preliminary Design, dated 12/2/08 (Exhibit 22)
- 3) Outboard Levee Breach and Tidal Channel Sizing dated 12/1/08 (Exhibit 23)
- 4) Industrial Park Stormwater Improvements (Exhibit 24)
- 5) Allen Creek Flood Modeling (Exhibit 25)
- 6) Preliminary Model Results: Restoration Impacts on Ebey Slough, dated 1/30/05 (Exhibit 26)

A principle design objective of the restoration project is to "not worsen existing flood risk to adjacent properties and uses". The existing levee system is estimated adequate for a 10 year water levels. The surrounding development to the restoration project has been built above the 100-year water level. The various memorandums and analysis conducted by the project consultants and agencies examine the ensuing conditions created by the restoration project and identify design recommendations to mitigate flood and erosion impacts introduced by the changed tidal environment.

Some of the principle assumptions made through the PWA analysis are to assume that existing flood protection is at the low point in the levee crest, which is 11.7 ft NAVD, which is also the approximate 10-year flood level. Minimum proposed design heights also include assumptions for wave runup of 2 ft, and predicted future sea level rise by 2050 of .5 ft. This results in a base elevation to reach a total water level of 14.2 ft as a design minimum for the Qwuloolt restoration project in order to meet the objective of not increasing flood risk.

Some of the issues that PWA specifically addresses through their analysis on the impact of the Qwuloolt restoration project are:

- Wave runup potential through a wind-wave analysis to examine wave height in 100-year wind speed conditions;
- Design levee crest elevation to prevent increased risk of flooding;
- Ground water seepage behind levee and drainage management;

- Necessary levee improvements including the “West Levee” and “Archie Levee”. The Archie Levee was deemed unnecessary as a result of property purchase by the Tribes;
- Cross sections of proposed levees;
- Analysis of the existing Third Street crossing;
- Runoff storage basins to calculate pond improvements necessary to provide existing levels of protection to Brashler Industrial Park;
- Drainage improvements needed for Brashler Industrial park to provide existing levels of protection;
- Levee design as a result of increased water levels resulting from wave runup;
- Breach design to maximize tidal exchange between restoration site and Ebey Slough, while minimizing velocity increases and scour in Ebey Slough;
- Project construction and design to meet restoration and mitigation goals such as starter channels, ditch fill, internal berms;
- Protection of existing sanitary sewer facilities and storm drain system;
- Settlement and consolidation of proposed levee and requirements for construction design;

All recommendations of the PWA analysis were integrated into the proposed design and are incorporated by reference as mitigation measures in this environmental determination.

*Battelle Memorial Institute (“Battelle”)* was commissioned to perform additional modeling of the Snohomish River Estuary for this project. They developed a three-dimensional (3-D) hydrodynamic model of the Snohomish River estuary and included 4 separate restoration projects planned within the estuary.

The following reports and memorandums summarize their analysis;

- 1) Hydrodynamic Modeling Study of the Snohomish River Estuary: Snohomish River Estuary Restoration Feasibility Study dated October 2007 (Exhibit 33);
- 2) Memorandum from Zhaoqing Yang with subject line “Snohomish River High Flow Model Run and GIS Product” dated 11/7/08;
- 3) Memorandum from Zhaoqing Yang with subject line “Modeling Analysis of New Restoration Alternative for Qwuloolt Restoration Site” dated 6/11/10;
- 4) Memorandum from Steve Winter, ESA Adolfson with subject line “Summary of Battelle Hydrodynamic Model Results in Relation to Qwuloolt Estuary Restoration Project” dated 4/13/11.

Issues that Battelle analyzed through their studies included the issue of cumulative impact of multiple restoration projects proposed within the Snohomish River estuary. These include the Qwuloolt Marsh Restoration, the Biringer Farm Restoration, the Smith Island Restoration and the Union Slough Marine Wetland Restoration. The Battelle model used a combination of tides, freshwater discharges, and surface-wind stresses as input to test the estuary response. The model was used to simulate tidal inundation, tidal currents, and salinity intrusion in the study area.

The initial model run (October 2007) indicated that “the effect on the bed shear stress seems to be insignificant in most of the area in Ebey Slough, except in some local areas near the entrance to Qwuloolt Marsh site. Severe erosion would not be expected in the river channels and most of the project area, except in the restored slough channel.”

As a result of the above-referenced October 2007 model results, an alternative breach design was proposed for the Qwuloolt Project site. Battelle modeled the alternative design and captured results in the 6/11/10 memorandum referenced above.

The above-referenced ESA Adolfson memorandum dated 4/13/11 summarized the key findings as follows:

- 1) Moving the levee breach location further upstream (east) appears to have eliminated the localized area of high shear stress along the eastern berm of the City’s wastewater treatment plant lagoon noted in the 2007 results.
- 2) Modeled flow velocities and bed shear stresses are much higher during the fluvially-dominated scenarios than the tide-dominated scenarios for either existing or proposed conditions. This suggests that channel shape is likely related to high flow river processes, rather than daily processes.
- 3) The peak depth-averaged velocity at the SR 529 bridge for the 100 year flow, ebb tide, with-project scenario is less than 4 ft/sec, which is slow for a major river at flood stage.

In summary, the proposed Qwuloolt Restoration alternative design does not appear to result in significant adverse impacts to the surrounding area or result in significant alterations to existing condition velocities and channel scour. The analysis concludes that additional mitigation for these areas does not appear necessary, however monitoring of the site and Ebey Slough are proposed as part of the restoration project.

#### **H. Zero Rise Analysis for Floodplain Impacts**

The US Department of the Army, Seattle District, Corps of Engineers performed a zero-rise analysis for the proposed setback levee along Ebey Slough. The zero-rise analysis was completed on 3/29/11. The analysis identified a .1 ft rise in the unencroached flood level within the restoration site and potential .2 ft rise at points south of the site.

The City of Marysville met with staff from FEMA, US Army Corps of Engineers, Tulalip Tribes and Department of Ecology to discuss the results. FEMA has issued a policy on fish enhancement structures within the floodway. In the meeting FEMA staff described the policy as it relates to restoration projects, such as the Qwuloolt Restoration. The policy identifies that rather than “no-rise”, the community official should certify that the project was designed to keep the rise within the floodplain as close to zero as practically possible and that no structures are impacted by the rise. DOE staff also contacted Snohomish County staff to share this data and they did not indicate concern.

## I. Neighborhood Comments

To date, the City has received correspondence from 6 from neighboring property owners regarding the proposed project. In addition to the flooding concerns addressed above, the following concerns were raised:

- Unwanted odors related to the creation of a salt water marsh/mudflat;

**Staff Response:** The area will change from a former pasture and freshwater palustrine wetland to a tidal estuary. As a result, the type of odors in the project area will change. Short term, there may be odors associated with decomposition of existing organic matter after inundation. In order to mitigate this potential odor source, the applicant will be required to mow the existing vegetation just prior to dike breaching. Overtime, there may be odors associated with wet sediments in the tidal area. However, those odors are not expected to be offensive to most. Long term offensive odors associated with wetland areas occur because water stagnates. This project will experience tidal flushing twice a day which will help eliminate stagnation and minimize odors.

- Increase in rodent population onto adjacent properties;

**Staff Response:** According to the SEPA checklist, there would be expected changes in populations of some rodents due to a conversion of fresh water to brackish habitats as well as short term construction impacts. Inundation of the site after dikes are breached could temporarily flush rodents off-site and onto higher ground in the project area. Because much of the site is currently wetlands, it does not harbor the densities of rodents that would occur in grassy upland areas. The following project characteristics and actions would be expected to reduce any impacts associated with the displacement of rodents.

- Predators such as red-tailed hawks, northern harriers, short-eared owls and coyote are frequently observed in the project area, These predators would be expected to continue controlling the rodent population.
- When the project is complete, there will still be upland areas on-site that rodents would be able to occupy.
- There are non-residential areas adjacent to the project site to which rodents could disperse, such as the Allen and Jones Creek Corridors.
- Residential landowners near the project site should be encouraged to employ preventative measures to avoid impacts from rodents, including vegetation management and debris removal to ensure there is no protective cover for rodents, removal of any food source such as garbage that would attract rodents, sealing openings into buildings and setting traps. It is expected that these protective measures would only be required for a limited time because the rodent problem will be temporary.

- Salt water intrusion affecting adjacent properties

**Staff Response:** The applicant will be required to monitor and evaluate post-project conditions resulting from restoration project and identify and initiate appropriate mitigation measures accordingly.

- Affects of tidal action on Allen Creek;

Because the restoration includes a portion of Allen Creek, PWA conducted a one-dimensional, steady-state HEC-RAS hydrodynamic modeling study to determine if the restoration would raise the creek's water levels during flood events. Subsequently, PWA completed an unsteady model analysis. According to PWA, the modeling indicates that the project does not increase flood levels or flood risks upstream of the existing Third Street crossing. Hence the restoration project does not need to include modifications to the Third Street crossing. The modeling also indicates that the Third Street crossing is a hydraulic constriction and a larger culvert or bridge would reduce flood risk upstream of Third Street.

#### **Environmental Impacts:**

The proposed development could result in the following adverse environmental impacts:

1. Increase in flood hazard potential, if modeling proves inaccurate or if design recommendations are not adhered to during construction.
2. Increase in groundwater elevations behind the constructed levees.
3. Increase in short-term traffic and road impacts from construction activity. The project will generate an estimated 3,500 trucks during the two-year project construction.
4. Limited turning geometry and limited sight distance at 5016 61<sup>st</sup> St NE (Christofferson grading project) for truck ingress/egress.
5. Potential for temporary increase of odors emanating from the project.
6. Potential for temporary relocation of rodent populations to upland areas and longer term reductions in rodent population within the restoration area due to flooding and predators.
7. Potential salt water intrusion onto adjacent properties.
8. Potential erosion of existing, city-owned, southerly dike adjacent to Ebey Slough.
9. Short term impacts of noise and dust from construction activity.

#### **Mitigation Measures:**

Unless specifically revised by the responsible official or applicant, statements, representations, and mitigating measures contained in the environmental checklist, application, and supporting documentation shall be considered material conditions of any approval. Applicant revisions occurring after issuance of this SEPA determination must be accepted and approved by the City to ensure they do not adversely alter project impacts.

The following mitigation measures are required to minimize the probable significant adverse environmental impacts as a result of development and subsequent use of the proposed development:

1. The Restoration project will be required to incorporate all measures, including alternative design levee breach, as recommended in the modeling efforts by Battelle and PWA referenced in the issued technical memorandum, or as updated during final engineering design. These measures include, but are not limited to:
  - a. Brashler Industrial Park drainage improvements including construction of a stormwater detention facility as described in the 12/2/08 PWA preliminary design analyses;
  - b. Construction of levees to protect existing industrial and residential properties as described in the 12/2/08 PWA memo as the "West Levee";
  - c. Internal berms that shall be designed as wave breaks, and designed to help promote channel stability;
  - d. Removal and replacement of storm drain level spreaders that are below the +12' NAVD contour;
  - e. Raising the existing trail (Harborview system) where the trail is below 12' NAVD.
2. The applicant will provide annual monitoring reports to the City of Marysville for a 5-year monitoring period and then a final monitoring report at 10 years, evaluating the following improvements:
  - a. West Levee and related industrial park drainage facilities;
  - b. Water control structure evaluation for industrial park and monitoring reports for groundwater levels behind levee system;
  - c. Monitoring of south side of wastewater treatment plant (WWTP) levee to evaluate post-project conditions resulting from restoration project.
3. The applicant will implement measures to repair any degradation or failure of project improvements identified in the monitoring reports listed in condition 2 above.
4. The applicant shall submit a pre- and post-construction road evaluation report, as approved by the City Engineer, and repair any post-construction road damage caused by heavy truck traffic generated as a result of project construction;
5. Prior to commencement of construction activities related to the Christofferson grading project, the applicant shall submit a traffic control plan to the City Traffic Engineer for review and approval. The plan shall include the following elements: 1) The haul vehicle should be limited to vehicles not larger/longer than 10 wheel, 10-12 yard dumb trucks; and 2) the access on to and off of 61<sup>st</sup> St (Sunnyside Blvd) be controlled by a two way flagging control capable of safely holding approaching traffic during the access maneuvers.

6. The applicant shall mow the existing vegetation within the inundation area, or apply other vegetation management strategies to reduce the amount of organic matter immediately prior to dike breaching.
7. Post dike construction, the applicant shall be required to monitor and evaluate salt water intrusion onto adjacent properties and as necessary, initiate appropriate mitigation measures to address the situation.
8. The applicant will repair or armor the WWTP levee if any damages result from channel velocities or scour, as documented in the monitoring report for condition 2c above. The applicant will also be required to repair or armor the southern, city-owned levy if any damages result as result of channel velocities or scour. Maintenance vehicle access shall be maintained to the south levy post dike breach.

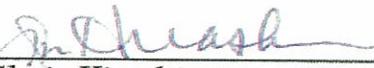
The conditions listed above along with the City of Marysville's codes governing noise, land use, traffic, drainage, fire protection and building will provide substantial mitigation of the aforementioned environmental impacts. The City of Marysville derives the authority to require mitigation from Chapter 22E.030, the City's regulations implementing the State Environmental Policy Act.

**THRESHOLD DETERMINATION:** The lead agency has determined that this proposal, as conditioned, does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) IS NOT required under RCW 43.21C.030(2)(c). This decision was made after review by the City of Marysville of a completed environmental checklist and other information on file with this agency. This information is available for public review upon request.

This MDNS is issued under 197-11-350; the lead agency will not act on this proposal for 15 days from the date below. Written comments may be submitted to the lead agency at the address below. The 15-day appeal period shall run concurrently with the comment period.

**RESPONSIBLE OFFICIAL:** Gloria Hirashima  
**POSITION/TITLE:** Community Development Director  
**ADDRESS:** 80 Columbia Avenue  
 Marysville, WA 98270

**DATE:** June 29, 2011

**Signature:**   
 Gloria Hirashima  
 Community Development Director

For further information, contact the Marysville Community Development Department at (360) 363-8100

Reviewed by: cd

Prepared by: ah

The issuance of this Determination of Non-significance should not be interpreted as acceptance or approval of the proposal as presented. The City of Marysville reserves the right to deny or approve said proposal subject to conditions if it is

determined to be in the best interests of the city and/or necessary for the general health, safety and welfare of the public to do so.

**DISTRIBUTION:**

Tulalip Tribes of Washington  
Washington State Department of Ecology - Environmental Review  
Washington State Department of Ecology - Shoreline Division  
Washington State Department of Transportation  
US Army Corp of Engineers  
US Fish and Wildlife  
Washington State Department of Fish & Wildlife  
Snohomish County PDS  
Marysville Public Works Department  
BNSF Railroad  
John & Jane Mack, Neighboring property owner(s)  
Jeanette Moore, Neighboring property owner  
Jim Seaver, Neighboring property owner  
Jennifer Rhodes, Neighboring property owner  
Pamela Jenson, Neighboring property owner  
Marysville Globe

**SEPA Appeal Procedure**

A fee of \$500.00 must accompany all SEPA appeals.

19.22.070(3) Appeals.

- (a) Any agency or aggrieved person may appeal the procedures or substance of an environmental determination of the responsible official under SEPA as follows:
  - (i) A DNS. Written notice of such an appeal shall be filed with the responsible official within 15 days after the date of issuance of the DNS. The appeal hearing shall be consolidated with the hearing(s) on the merits of the governmental action for which the environmental determination was made.
  - (ii) A DS. Writing notice of the appeal shall be filed with the responsible official within 15 days after the date of issuance of the DS. The appeal shall be heard by the city council within 30 days thereafter.
  - (iii) The Adequacy of an EIS. Written notice of appeal shall be filed with the responsible official within 15 days after the issuance of the final EIS. The appeal hearing shall be consolidated with the hearing(s) on the merits of the governmental action for which the EIS was issued.
  - (iv) Appeals of intermediate steps in the SEPA process shall not be allowed.
  - (v) For any appeal under this section, the city shall provide for a record that shall consists of the following:
    - (A) Finding and conclusions;
    - (B) Testimony under oath; and
    - (C) A taped or written transcript.
  - (vi) Determination by the responsible official shall carry substantial weight in any appeal proceeding.