

# Impacts and Mitigation

This section of the DEIS evaluates the proposed project's effects on the "Built" and "Natural" environmental elements. The "Built" environment includes past and present land uses such as agriculture, recreation, transportation, and utilities. The "Natural" environments include geology and soils, water, fish, and wildlife and vegetation.

Projects can potentially impact or affect natural features (wetlands, streams, etc.) and built features (residences, businesses, and supporting infrastructure) in many ways. The effects of these projects may be intentional and positive. Some negative effects may not be intentional or may be unavoidable. For example, a project could potentially include extensive land disturbance such as grading or vegetation clearing. Some impacts may be relatively minor disruptions while others have more long-lasting effects. Information is gathered to determine how the project could affect all aspects of the environment in the project area.

Mitigation is defined in different ways to meet the requirements associated with different laws and regulations. A simple definition is that mitigation is a way to compensate for the impacts of an action. Early in a project's development, some studies are prepared that describe the environmental effects associated with a proposed design. One benefit of gathering environmental information early and integrating it into the design process is that it is often possible to identify and avoid some impacts. In other cases, unavoidable impacts can potentially be minimized.

When impacts are unavoidable, the project evaluates ways to compensate for these impacts. For example, compensating for unavoidable impacts such as wetland fill impacts or stream buffer clearing often means that a project will propose to enhance, restore, or create these important environmental features somewhere else.

## ENVIRONMENTAL ELEMENTS NOT AFFECTED

The following environmental elements are not evaluated in this document as they are either not present in the Smith Island project area or are not impacted by the Proposed Action Alternative:

- Air Quality and Odor
- Energy and Natural Resources
- Environmental Health (Noise)
- Public Services (Fire, Police, Schools, etc.)

## KEY QUESTIONS ADDRESSED IN THIS SECTION

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## Land and Shoreline Use

### EXISTING CONDITIONS

#### CURRENT AND ADJACENT USES

Approximately 90 percent of the project area is now vacant open space consisting of fallow pasture, forest of non-native species and freshwater wetlands. There are four land uses in the project area. River Delta Ranch, a small horse-boarding facility housing one to two dozen horses with associated structures and a caretaker's quarters, is located on 45 acres of County-owned property in the southwest portion of the project area. A public access road, 12<sup>th</sup> Street NE, traverses the southern portion of the project area from west to east ending at the City/County jurisdictional boundary. A PSE 16-inch underground natural gas pipeline also traverses the southern portion of the project area. City of Everett's portion of the project area south of 12<sup>th</sup> Street NE contains a poplar tree plantation where biosolids from its wastewater treatment plant have been applied. On the west side of the project area, there is a remnant of a former commercial tree nursery on approximately 72 acres of County-owned land.



View of horse-boarding facility looking northeast from the 12th St. NE overpass at the southern end of the project area. The road in foreground is the access road to IFF Holding's nursery operation.

The City's wastewater treatment plant is adjacent to the southernmost boundary of the project area. To the west of the project area lies the former Harnden Nursery property, purchased by IFF in 2009. IFF operates a business at this location known as Hima Nursery Inc.

Interstate 5 (I-5) is the major north-south highway in Western Washington. I-5 is adjacent to River Delta Ranch, west of the project area. On the west side of I-5 and adjacent to Union Slough is Buse Timber, an employee-owned independent sawmill. Buse Timber owns a 15-acre property that lies east of I-5, adjacent to and northwest of the project area; it is primarily fallow pasture-land. The County was initially interested in the IFF and Buse Timber properties for inclusion in the Smith Island Restoration Project but was not successful in acquiring them.

The 1.2-acre Klepadlo property is located in the northeast corner of the project area, on a portion of a lobe of land outside of the existing dike and adjacent to Union Slough. The remaining portion

of the lobe is owned by Snohomish County. The property is used for duck hunting (John Klepadlo, 1/20/11) and is subject to tidal inundation and seasonal flooding because it does not receive protection from the existing dike. Access is primarily by boat as there is a ditch between the property and the dike which effectively precludes landward access. There are no rights-of-way or easements that provide land access to the property. It is located in the floodway area and County code prohibits the construction of structures intended for human habitation because of flood designation and access limitations.

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## COMPREHENSIVE PLAN - LAND USE DESIGNATIONS

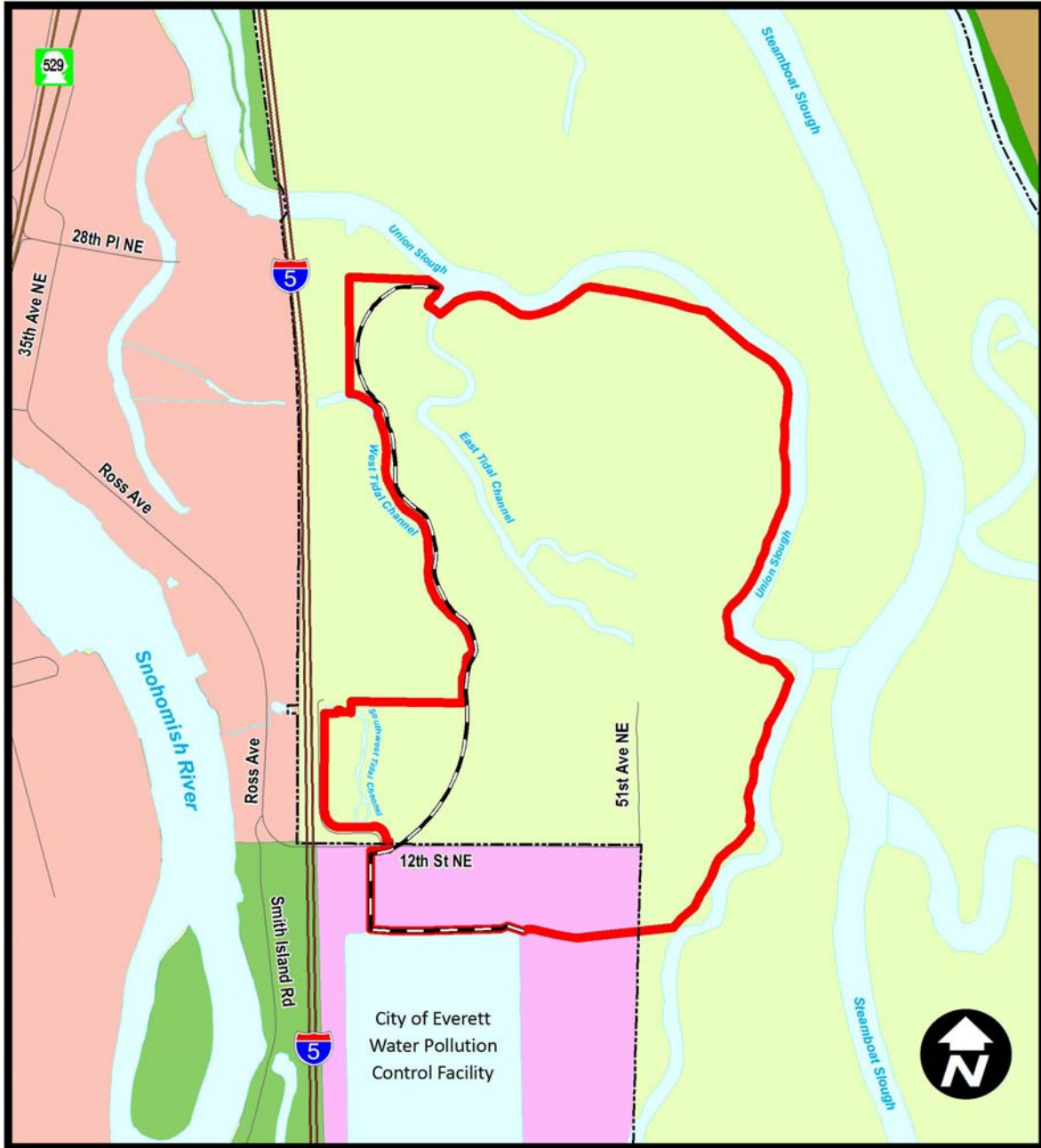
The County adopted the updated 2025 Growth Management Act (GMA) Comprehensive Plan (Comprehensive Plan) in December 2005. The Comprehensive Plan contains major components such as the General Policy Plan (GPP), Transportation Element, Capital Facilities Plan, etc., and includes a Future Land Use (FLU) Map. The FLU Map contains future land use designations and shows planned land uses and densities, urban growth area boundaries, and urban, rural, commercial agricultural and timber lands adequate for the expected population and employment growth through 2025 (Snohomish County Comprehensive Plan 2005).

The FLU Map designates the Smith Island Restoration Project area as *Riverway Commercial Farmland* (RCF). This future land use designation includes farmland areas generally characterized as being in a river valley, floodplain or shoreline area, having continuous prime farmland soils, and having approximately 50 percent or more of the land area in parcels of 40 acres and larger.

There are 58,304 acres of lands designated RCF in Snohomish County. With the addition of 3,584 acres of agricultural lands designated *Local Commercial Farmland* (LCF) and *Upland Commercial Farmland* (UCF), total designated agricultural lands in the County according to the FLU Map equate to 62,528 acres.

The City of Everett adopted its first GMA Comprehensive Plan in 1994 and since then has adopted yearly updates. Like Snohomish County's Comprehensive Plan, it contains major components such as a Land Use Element, Transportation Element, Capital Facilities and Utilities Element, etc., and includes a Land Use Map. The City's Land Use Map designation for its project area south of 12<sup>th</sup> Street NE is *Public/Quasi-Public Facilities*. This designation is applied to existing government-owned facilities and to various nonprofit social service facilities (see Figure 8, Land Use Designations).

Zoning and development regulations normally implement these map designations as well as planning policies discussed further.



**Key to Features:**

- Parks / Public Open Space (Everett)
- Heavy Industrial (Everett)
- Public Facilities (Everett)
- Proposed Dike Alignment

- R4.5- Single Family Medium (Marysville)
- Riverway Commercial Farmland (SnoCo)
- Open (Marysville)
- Project Area

0 500 1,000 Feet



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**FIGURE 8. LAND USE DESIGNATIONS**

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## COUNTY'S COMPREHENSIVE PLAN – GENERAL POLICY PLAN

The Comprehensive Plan contains the GPP that describes the County's overall goals, objectives, and policies and serves as a guide to the County's growth and development from now until 2025. The organization of the GPP reflects the goals and requirements of the GMA. The plan chapters include goals, objectives, and policies for topics like land use, transportation, economic development, the natural environment, etc. Each chapter is organized around several major goals, which build upon and augment the 13 goals of the GMA. Each GPP goal has one or more objectives and policies which, together, implement the 13 GMA goals.



### IS THE PROJECT CONSISTENT WITH COUNTY PLANNING POLICIES?

The project is consistent with Capital Facilities Policy 3.D.6<sup>1</sup>, as privately-owned adjacent agricultural lands (Buse Timber, IFF, Klepadlo) will not be affected to result in a net loss of acreage or productivity. The project is consistent with Economic Development Policy 6.A.2<sup>2</sup> that directs the County to conserve and enhance existing agriculture efforts. The construction of the new dike will continue to help conserve and enhance Hima Nursery's existing agricultural operations, and the reservation of approximately 35 acres landward of the proposed new dike would conserve existing agricultural practices primarily for River Delta Ranch.

The project is consistent and supportive of Land Use Policy 10.B.4<sup>3</sup> since there is a proposed plan to incorporate the City's existing trail network into the proposed Smith Island Restoration Project.

Restoring estuarine marsh in the project area is strongly supportive of Natural Environment Policy 2.A.6<sup>4</sup> and Capital Facilities Policies 3.D.3<sup>5</sup> and 3.D.5<sup>6</sup>; the County and City have been coordinating with public agencies and tribes for many years and have sought funding to acquire

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<sup>1</sup> Capital Facilities Policy 3.D.6: Habitat restoration projects adjacent to agricultural resource lands should be undertaken to prevent, if possible, net loss to the agricultural resource lands of the county.

<sup>2</sup> Economic Development Policy 6.A.2: The county shall conserve and enhance existing agriculture efforts and support innovative farming approaches as an essential part of local and regional economy and food and farm product supply.

<sup>3</sup> Land Use Policy 10.B.4: To work with cities to create an integrated system of passive parks, open spaces, and trails in areas that are accessible to all residents of the county and cities, and provide for a variety of recreational activities, and contribute to neighborhood or community identity.

<sup>4</sup> Natural Environment Policy 2.A.6: The County should participate in regional salmon recovery planning efforts and aggressively pursue funding that can provide multiple environmental benefits.

<sup>5</sup> Capital Facilities Policy 3.D.3: The County should work with federal, state and tribal governments and agencies to fund and construct high priority aquatic habitat restoration projects as defined in WRIA based salmon recovery plans and other planning efforts.

<sup>6</sup> Capital Facilities Policy 3.D.5: The county shall consider acquiring properties, where feasible, for larger restoration projects or for the preservation of critical watershed functions.

properties for the purpose of constructing habitat restoration projects. The project is also supportive of Natural Environment Policy 5.A.7<sup>7</sup> and Capital Facilities Policies 3.D.1<sup>8</sup> and 3.D.2<sup>9</sup> which state that the County should prioritize restoration projects based on recommendations in the watershed management plans and salmon recovery plans, and correct fish passage problems to improve the conservation of ESA-listed and non-listed salmonid populations.

As for the County's Economic Development policies 3.A.7<sup>10</sup> and 6.B.5<sup>11</sup>, the project is a water-related and dependent shoreline use and will improve the chances of more fish reaching adulthood which will, in the long run, lead to an increase in the fish population bringing economic benefits to the fishing industry. The project could result in an increase in tourism due to greater fishing, bird-viewing and walking opportunities, as well as kayaking/canoeing in the Snohomish River.

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## CITY'S COMPREHENSIVE PLAN – LAND USE ELEMENT

The Land Use Element establishes the framework for the City's future physical development and includes the various topics required by the GMA to be addressed such as agriculture, timber and mineral resources, water resources, critical areas, commercial, residential, etc. The Land Use Element (both maps and policies) serves as a guide to future decision-making by the public and private sector relating to property investments, land development, public services, and infrastructure. The policies and maps of the Land Use Element may require the City to evaluate and revise land development regulations and zoning boundaries; and will influence land use permit decisions. Similar to the County's GPP, the policy statements in the Land Use Element describe specific actions to be undertaken for the City to realize its objectives and goals (Everett Comprehensive Plan Land Use Element 2010).

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<sup>7</sup> Natural Environment Policy 5.A.7: The County should consider the recommendations contained in the watershed management plans and salmon recovery plans as the basis for prioritizing restoration and enhancement projects.

<sup>8</sup> Capital Facilities Policy 3.D.1: The County shall consider implementing recommendations and constructing improvements in coordination with property owners and other agencies to achieve the 20-year capital improvement goals of adopted watershed basin plans including Salmon Conservation Plans.

<sup>9</sup> Capital Facilities Policy 3.D.2: The County shall consider correcting the highest priority fish passage problems in unincorporated Snohomish County to improve the conservation of ESA-listed and non-listed salmonid populations.

<sup>10</sup> Economic Development Policy 3.A.7: The county shall encourage water dependent and related development and use of shorelines as an economic development effort through the Shoreline Management Plan.

<sup>11</sup> Economic Development Policy 6.B.5: The county shall encourage water-dependent and water-related tourism development and use of shorelines consistent with the Shoreline Management Act.



## IS THE PROJECT CONSISTENT WITH CITY PLANNING POLICIES?

The proposal is consistent with the City of Everett’s Land Use Policy 2.9.1<sup>12</sup>.

Restoration and recreation use are compatible with existing and adjacent land uses south of 12<sup>th</sup> Street NE. City regulations allow restoration and mitigation activities to occur in the proposed project area.

Unlike the County’s GPP, the City’s Land Use Element expressly provides for dike breaches for the purposes of habitat restoration projects. The Smith Island Restoration Project is consistent with the City’s Flood Hazard Area Policy 2.15.37<sup>13</sup>.

The project would promote Land Use Policy 2.12.26<sup>14</sup> and Water Resource Critical Areas Policy 2.15.9<sup>15</sup> as it will contribute to the protection and restoration of endangered species and their habitat as well as conservation and protection of critical areas. Many of the City’s natural resources policies such as Water Resources Critical Areas Policies 2.15.10<sup>16</sup>, .11<sup>17</sup>, .24<sup>18</sup>, and .26<sup>19</sup> are similar to the County’s policies for the Natural Environment. They promote protection and

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<sup>12</sup> Agriculture Resources Land Use Policy 2.9.1: Agriculture: Agricultural land uses in Everett are located within the floodplain and flood fringe of the Snohomish River. These areas shall continue to be permitted to be used for commercial agricultural purposes and other compatible land uses as specified in the Everett zoning code.

<sup>13</sup> Flood Hazard Area Policy 2.15.37: Provide for breaching of dikes where flood hazards will not result, and when appropriate and feasible for habitat restoration projects.

<sup>14</sup> Land Use Policy 2.12.26: The City will protect and restore proposed, threatened, or endangered species, and their habitat.

<sup>15</sup> Water Resource Critical Areas Policy 2.15.9: Preservation. Because alteration of natural water resource critical areas can result in environmental degradation, increased costs to the public, flooding, erosion, sedimentation, and damage to water quality, fish and wildlife habitat, Everett’s natural water resource critical areas should be protected, maintained and enhanced.

<sup>16</sup> Water Resource Critical Areas Policy 2.15.10: The City should encourage participation in landscape level planning efforts, such as the Snohomish Estuary Wetland Integration Plan (SEWIP) and Salmon Overlay, and subarea planning to manage aquatic resource critical areas at a watershed or subarea planning level when such efforts will provide better overall preservation or protection of aquatic resources within the watershed, basin, or subarea.

<sup>17</sup> Water Resource Critical Areas Policy 2.15.11: The City should continue to participate in regional watershed planning efforts directed toward the protection and preservation of endangered species under the federal Endangered Species Act, and the ESA’s goal of delisting endangered species.

<sup>18</sup> Water Resource Critical Areas Policy 2.15.24: Restoration and Enhancement. Because urban development has degraded the natural condition of many of the wetlands and stream systems in Everett and because new land developments or redevelopment may provide an opportunity for restoration and enhancement of certain wetlands and stream segments, the City should allow wetland or stream alteration when alteration results in restoration or enhancement of functions and values of altered or degraded wetlands and streams. The City should provide opportunities for restoration through watershed, basin, or subbasin mitigation strategies.

<sup>19</sup> Fish and Wildlife Conservation Areas Policy 2.15.26: Protect and restore proposed, threatened, or endangered species and their habitat.

conservation of critical areas and restoration of degraded habitat for fish, wildlife and especially endangered species. They all encourage inter-jurisdictional coordination and landscape-planning within meaningful subareas or watersheds.

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## ZONING REGULATIONS IN THE PROJECT AREA

Zoning codes govern the range of uses allowed on a property but do not require property owners to make any specific use of it. The current zoning for the project area within County jurisdiction is *A-10* (Agricultural 10 Acres). The intent and function of zoning classification *A-10* is to implement the goals and objectives of the County's GPP which includes the goals of protecting agricultural lands and promoting agriculture as a component of the County economy. Allowed uses in the *A-10* zone, either outright or with a conditional use permit, include but are not limited to farm product processing, farmers market, farm support business, nurseries and greenhouses, alcohol distilleries, parks, and wedding facilities.

The City's area south of 12<sup>th</sup> Street NE is zoned *A-1* (Agriculture). The purpose of the agricultural use zone is to provide and protect areas for certain agricultural uses on lands which are not appropriate for residential, commercial or industrial development at urban intensities. Allowed uses in the *A-1* zone include but are not limited to agricultural industries, farms, dairy, horticulture, nurseries and greenhouses, public parks and the City's wastewater treatment plant (see Figure 9, Zoning).

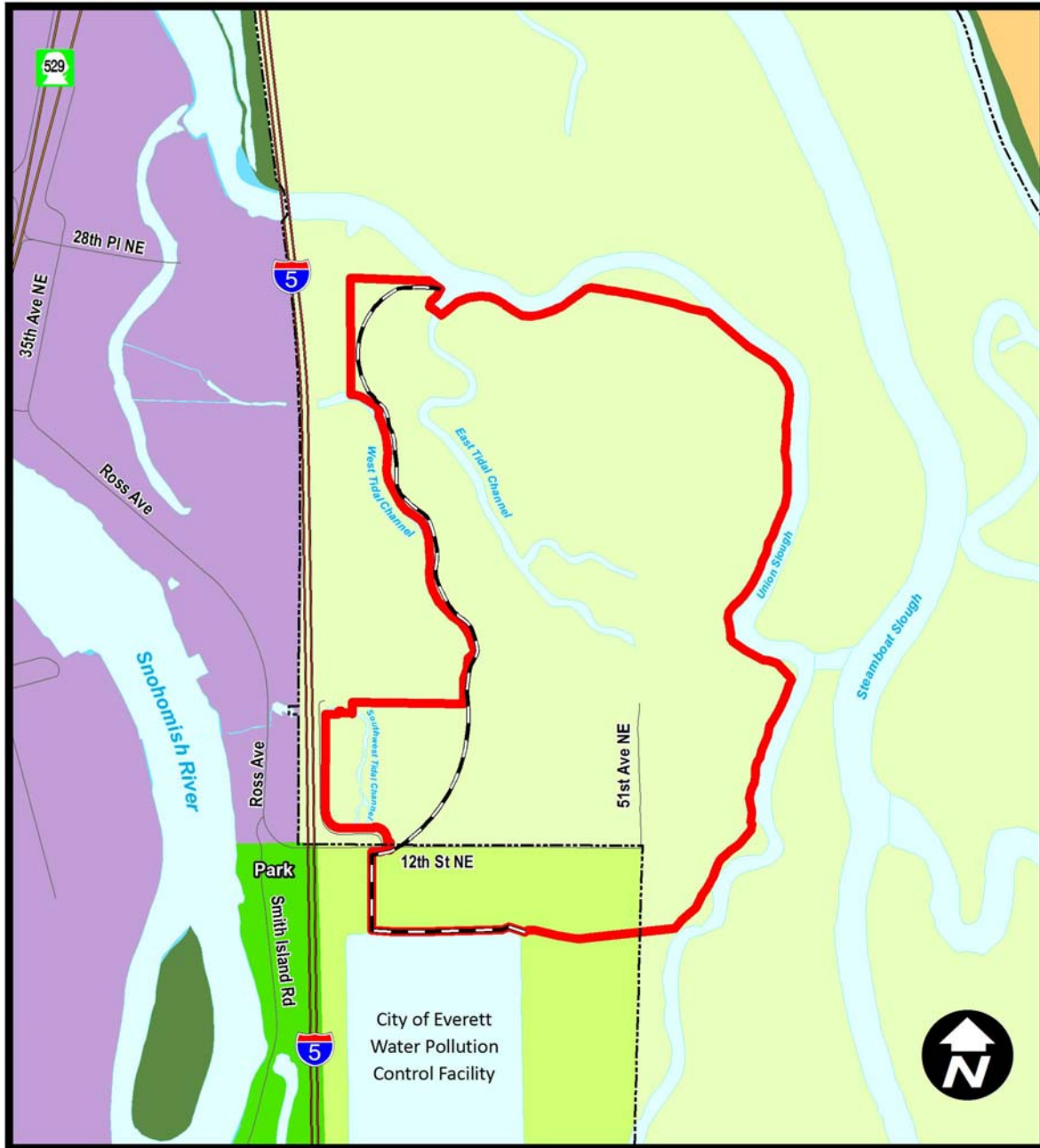


### IS THE PROJECT CONSISTENT WITH ZONING REGULATIONS?

The project is consistent and will not require changes in County zoning. The project is also consistent with the City's *A-1* zone in which restoration and mitigation activities are allowed.

The County's zoning code does not specifically list "restoration" of estuaries or marshlands nor "mitigation" as a "use" in the *A-10* Use Matrix. In 1995, AgAmerica Farm Credit Bank, Robert Houck and Dave Shorett proposed wetland restoration on 444 acres of land zoned *A-10*, a project similar to the proposal. John A. Postema, French Slough Flood Control District, et al. questioned whether or not the restoration was an allowed use in the *A-10* zone. The County's Planning and Development Services Department issued an Administrative Determination (AD 1-95) stating that restoration and mitigation activities are allowed in the County's *A-10* zone. The administrative determination was appealed and Snohomish County's Hearing Examiner ruled and documented the decision in an Order of Summary Dismissal that the allowance of land to lie fallow and revert to an undeveloped condition is, by definition, not a "use." The Hearing Examiner upheld the Planning Department's administrative determination.

Restoration and mitigation elements of the proposed project are, therefore, not considered as a "use" of land and not subject to the limitation and control of uses identified in code for the *A-10* zone.



**Key to Features:**

- |  |                               |  |                                         |  |                      |
|--|-------------------------------|--|-----------------------------------------|--|----------------------|
|  | Project Area                  |  | R4.5- Single Family Medium (Marysville) |  | Park (Everett)       |
|  | Heavy Manufacturing (Everett) |  | Agriculture- 10 Acre (SnoCo)            |  | Open Space (Everett) |
|  | Proposed Dike Alignment       |  | Agriculture (Everett)                   |  |                      |
|  | City of Everett Boundary      |  |                                         |  |                      |

0 500 1,000 Feet



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**FIGURE 9. ZONING**

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## SHORELINE MANAGEMENT MASTER PROGRAMS

The proposed project is located in an area subject to the Shoreline Management Act of 1971 (SMA) and will be required to comply with each jurisdiction's shoreline management programs and shoreline regulations.

### COUNTY'S MASTER PROGRAM

The Snohomish County Shoreline Management Master Program (SMMP) was adopted in 1974 with the most recent revision completed in 1993. There are several components to the SMMP but the shoreline use activity categories have been formulated as the implementing tools to assist in carrying out the intent and policy of the SMA and the master program.

The policies and regulations developed for each use activity category are intended to serve as the primary set of criteria for evaluating proposed developments and alterations to the shoreline environment. The use activity regulations supplement, but do not duplicate, specific requirements of other County land use regulations (SMMP 1993).

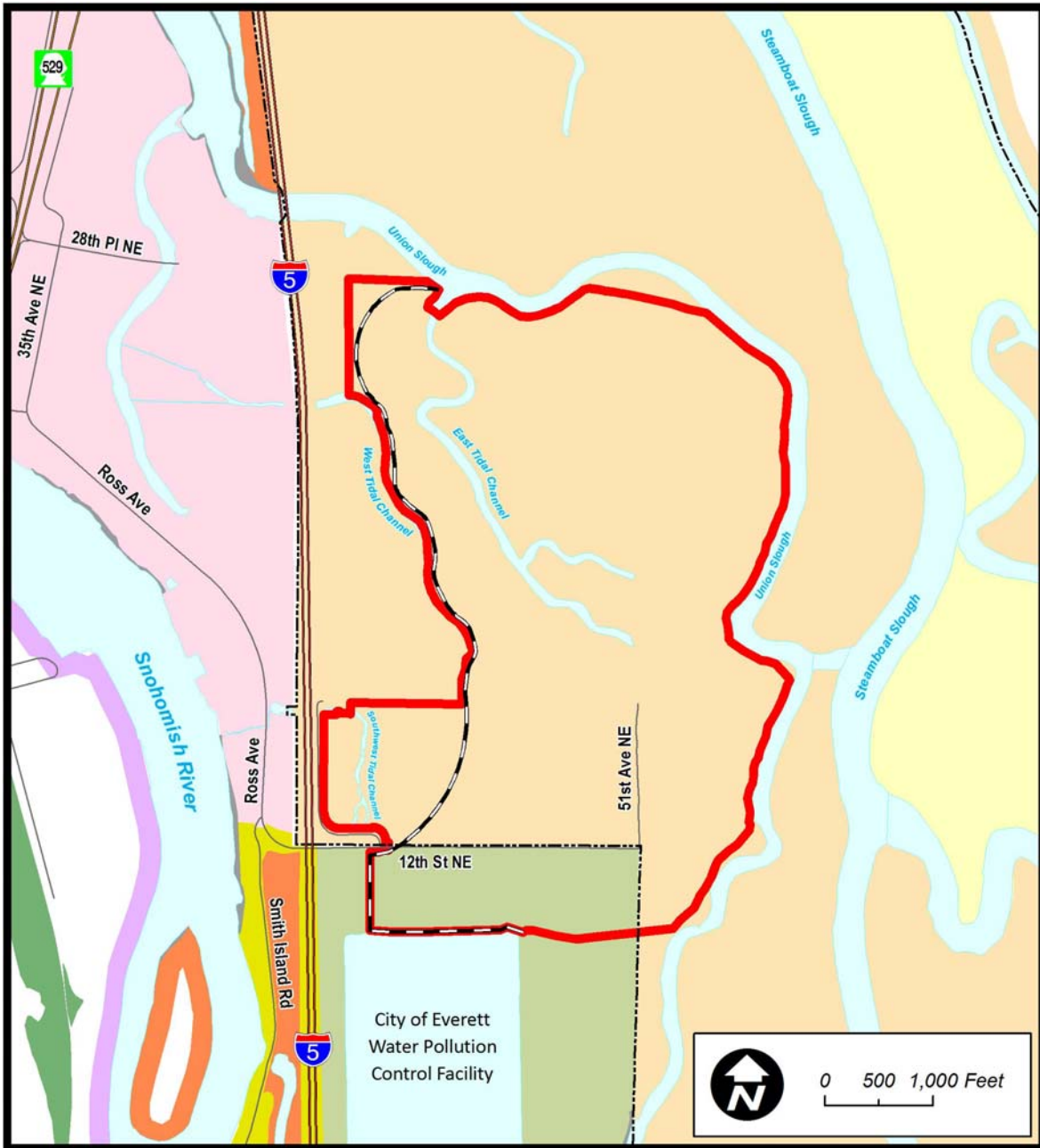
The Compatibility Matrix found in the SMMP lists all allowable shoreline uses and refer to them as "Use Activity." It is comparable to the Use Matrix found in the zoning code except that the shoreline Environment designations (e.g. *Natural, Conservancy, Rural, Suburban, Urban*) are comparable to zoning designations (*A-10, R-5*, etc.). There are Environment-specific regulations under each Environment designation for all uses listed in the Compatibility Matrix. These regulations may specify whether or not uses are allowed or prohibited under certain Environment designations.

The Smith Island Restoration Project is located in a shoreline area designated *Rural Environment* on the SMMP maps (see Figure 10, Shoreline Designations). The objective of designating a *Rural Environment* is to protect agricultural land from urban expansion, restrict intensive development along undeveloped shorelines, function as a buffer between urban areas, and maintain open spaces and opportunities for recreational and other uses compatible with agricultural activities.

The Use Activities applicable to the Smith Island Restoration Project are "Beach and Stream Enhancement" and "Shoreline Stabilization and Flood Protection." According to the SMMP, beach and stream enhancement consists of the upgrading of shorelines for the purposes of recreation, aquatic habitat restoration, or both. Policies and regulations for Flood Protection can be applied to the construction of the new setback dike in the shoreline area.

The proposed project will be reviewed for compliance with all SMMP policies and regulations for "Beach and Stream Enhancement," "Shoreline Stabilization and Flood Protection," "Public Access," "Vegetation Management," and "Water Quality."

Under the SMA, the Snohomish River is also designated as a "Shoreline of Statewide Significance." This designation applies to shoreline areas that are important to the entire state and not just the local jurisdiction. The local jurisdiction must give preference to uses which favor public and



**Key to Features:**

- Proposed Dike Alignment
- Project Area
- Urban Industrial (Evt)
- City of Everett Boundary

- |                       |                                    |                                  |
|-----------------------|------------------------------------|----------------------------------|
| Conservancy Shoreline | Urban Conservancy (Evt)            | Municipal / Water Quality (Evt)  |
| Rural Shoreline       | Aquatic Conservancy (Evt)          | Urban Mixed Use Industrial (Evt) |
| Wetlands (Evt)        | Urban Conservancy Recreation (Evt) |                                  |

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**FIGURE 10. SHORELINE DESIGNATIONS**

long-range goals and which meet certain principles such as recognizing and protecting state-wide interest over local interest, preserving the natural character of the shoreline, promoting long-term environmental benefits over short-term economic gains, protecting the resources and ecology of the shorelines, increasing public access to publicly-owned areas of the shorelines, and increasing shoreline recreational opportunities for the public (SMMP 1993).

#### County's Proposed Master Program Update

Snohomish County is currently updating its SMMP pursuant to state guidelines. The Snohomish County Council adopted the draft Shoreline Management Program Update (SMP Update) in October 2010. The County has submitted the adopted draft SMP Update to WDOE for review; however, the SMP Update will not become effective until final approval is issued by WDOE. A decision is expected mid-2011.

The proposed SMP Update gives preference to shoreline uses that maintain or restore shoreline ecological functions, protect water quality and the natural environment, depend on proximity to the water, and provide or enhance public access and recreational use of the shoreline. A significant feature of the state guidelines is a requirement that local governments include within their shoreline master program a strategy to address restoration of shorelines. To provide a framework for this, a Restoration Element has been included in the SMP Update and identifies Capital Improvement Program projects for 2008-2013; the Smith Island Restoration Project is included in this Program.

County goals and policies associated with the Restoration Element include:

- Restoring priority habitat and species in shoreline areas (Policy 1)
- Aggressively seeking funding from state, federal, private and other sources to implement restoration, enhancement and acquisition projects (Policy 10)
- The County should incorporate recommendations contained in salmon conservation plans as the basis for prioritizing restoration and enhancement projects (Policy 11)
- Shoreline restoration should be designed to be similar to what would have historically been found on the site (Policy 17) (SMP Update 2010)

The SMP Update maps designate the project area as a *Resource Environment*. This designation applies to areas landward of the ordinary high water mark that are located outside of designated urban growth areas and are designated resource lands on the County's FLU Map. The intent of this designation is to conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use. An important goal of this designation and required under the SMA are the provisions for additional public access and recreational opportunities that are compatible with the resource.

## CITY'S MASTER PROGRAM

The City of Everett adopted its Shoreline Master Program (SMP) in 1976, with the most recent revision completed in 2011. The shoreline designation for the project within the City is *Municipal-Water Quality*. The purpose of the *Municipal-Water Quality* designation is to “provide for the continued operation, maintenance, and expansion of the City’s WPCF as necessary to protect public health, safety and welfare, while encouraging public access and wetland restoration actions that will not conflict with the facility.”

The City’s SMP program includes a Restoration Element which describes the City’s restoration strategy for shoreline areas. This element includes a list of proposed restoration actions, ranked in order of importance, for the Snohomish River estuary. The proposed Smith Island Restoration Project is ranked third in importance out of 25 potential restoration projects listed.



### IS THE PROJECT CONSISTENT WITH SHORELINE MANAGEMENT PROGRAMS?

“Stream enhancement/restoration” and “flood protection” which are components of the Smith Island Restoration Project and listed in the Compatibility Matrix are permitted uses in the *Rural Environment* subject to respective General Regulations (SMMP 1993).

The project will be designed to comply with these regulations. In addition, the project is consistent with the policies and regulations for water quality, vegetation management, and public access.

The project strongly promotes new guidelines in the Proposed SMP Update, which contains a Restoration Element that specifically calls for restoring priority habitat and species and shorelines to historical conditions, as well as listing the Smith Island Restoration Project as a capital improvement project to implement during the 2008-2013 timeframe. In the event the SMP Update goes into effect, the project must comply with “flood protection” and “shoreline habitat restoration and enhancement” land uses pursuant to the table entitled Allowed and Conditional Uses by Shoreline Environment Designation (SMP Update 2010). The project is consistent with the policies and regulations for each land use category and is consistent with the respective requirements under *Resource Environment*.

The project is consistent with the City of Everett’s shoreline designation of *Municipal-Water Quality* because wetland restoration is allowed if it does not conflict with the operations of the wastewater treatment plant. The project is also consistent with the SMP Restoration Element since the project has been identified in the City’s SMP as a high-ranking priority project.

Prior to the issuance of shoreline permits, the project will need to comply with the regulations contained in Chapter 30.44 Snohomish County Code and Chapter 33D Everett Municipal Code.

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## FLOODPLAIN MANAGEMENT

### COUNTY'S SPECIAL FLOOD HAZARD AREAS

Snohomish County regulates development in floodplain areas through application of its Special Flood Hazard Areas regulations in Snohomish County Code Chapter 30.65. The majority of the project area lies within the 100-year floodplain's Density Fringe and only the southwest corner is in the Floodway Fringe (see Figure 11, Flood Hazard Areas). Properties identified as being within the Density Fringe are "areas of high flood damage potential where conventional floodway areas cannot be established."

Permitted uses in the Floodway Fringe include agriculture and dikes, while development is allowed in the Density Fringe with some restrictions.

### CITY'S FLOODPLAIN OVERLAY DISTRICTS AND REGULATIONS

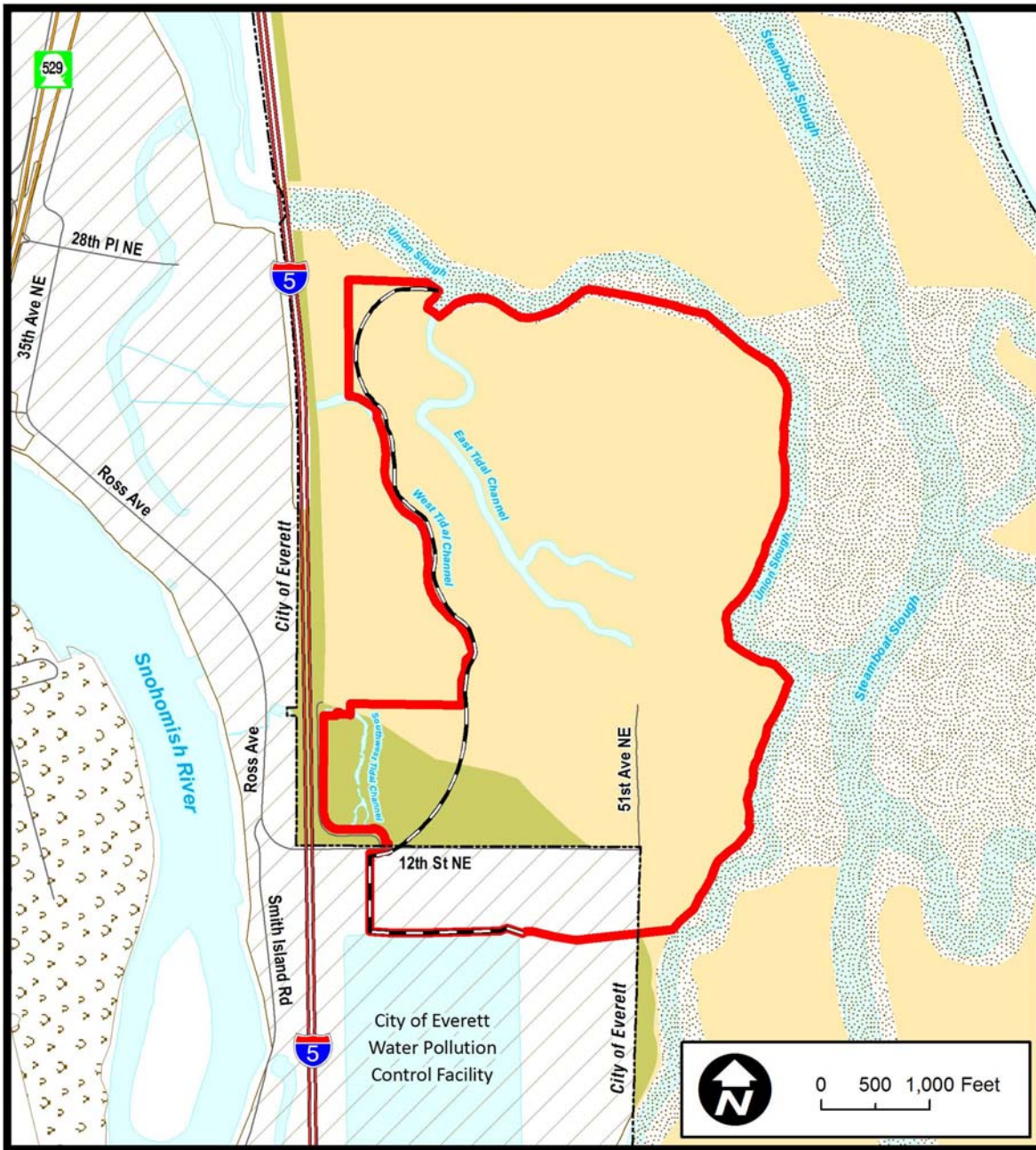
The City's project area is designated with a Rural Flood Fringe District (RFFD) overlay. The purpose of the floodplain overlay zones is to protect the public health, safety and welfare in areas subject to periodic inundation due to flooding. The development regulations that would apply are in Everett Municipal Code Title 19, Chapter 30. Permitted uses for the RFFD include any use consistent with the controlling shoreline master program and a permitted use in the City's A-1 zone. Restoration and mitigation are allowed in all City zones.





#### IS THE PROJECT CONSISTENT WITH FLOODPLAIN MANAGEMENT REGULATIONS?

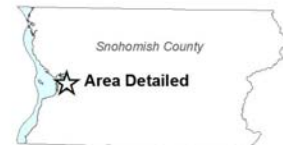
The project will be designed to be consistent with County regulations as dikes are a permitted use in flood hazard areas pursuant to Snohomish County Code Section 30.65.280 (11) provided that adverse effects upon adjacent properties would not result, natural drainage ways are minimally affected, and the proposal has been coordinated through the appropriate diking district.

If the proposed project is to be implemented, construction of the new setback dike must comply with all applicable floodplain management regulations. The project would comply with the City of Everett's RFFD floodplain overlay as mitigation and restoration activities are allowed under all land use designations and zones. The new dike will be designed to comply with applicable provisions in Title 19, Chapter 30 Everett Municipal Code.



**Key to Features:**

-  Proposed Dike Alignment
-  Project Area
-  Rural Flood Fringe District (City of Everett)
-  Floodway Fringe Area (Snohomish County)
-  Density Fringe Area (Snohomish County)
-  Floodway
-  Urban Flood Fringe District (City of Everett)



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**FIGURE 11. FLOOD HAZARD AREAS**

### CURRENT AND ADJACENT LAND USES

Implementation of the project would restore estuarine tidal marsh to approximately 400 acres of land. The majority of this area is County-owned land that was purchased for restoration purposes, with approximately 50 acres owned by the City of Everett. Excavation and grading for the new setback dike will impact River Delta Ranch, the horse boarding facility. Approximately one quarter of the pasture land leased by River Delta Ranch lies within the footprint of the proposed dike alignment. The entire 50 acres of City-owned property including the poplar plantation will be converted to tidal marsh.

In 2008, Harnden Nursery terminated its lease agreement with the County but its tree nursery stock remained. Approximately 72 acres of ornamental and exotic varieties of trees were offered at public auction to allow for the purchase and harvest of the existing trees. A-1 Landscaping and Construction, Inc. was awarded the bid to harvest the trees until February 2011. The tree nursery on County-owned property is no longer in operation and the trees remaining in the project area are those that have been assessed to no longer have commercial value due to size or age, crowding, root binding, rodent or beaver damage, and water-logging.



#### HOW WOULD THE PROJECT AFFECT CURRENT AND ADJACENT LAND USES?

The proposed Smith Island Restoration Project would have no significant adverse impacts on existing agricultural uses landward of the new setback dike. None of the structures within River Delta Ranch would be affected by the project.

To ensure no adverse impacts to drainage occur landward of the dike, the project will include construction of new ditches and installation of a tide gate to replace the function of drainage facilities that will be lost during project implementation. Present land uses and drainage conditions on IFF's property would not be impacted given that the tidal channel separates the property from the proposed new dike. IFF would be adequately protected from possible negative impacts during construction. As the project would result in an increase in the volume of tidal waters in Union Slough, the County is coordinating with Buse Timber to ensure its log rafting operations are not disrupted.

Potential impacts to the natural gas pipeline are discussed in the Utilities section, and impacts to 12<sup>th</sup> Street NE are discussed in the Transportation section.



**IS THE PROJECT INCONSISTENT WITH ANY PLANNING POLICIES OR DEVELOPMENT REGULATIONS?**

Pursuant to state and local regulations, a project must be determined to be consistent with policies and regulations; project inconsistencies usually result in adverse impacts. Although the project is proposed in an area designated *Riverway Commercial Farmland* (RCF), the project area has not been farmed for many years. The project may seem inconsistent with the County’s vision for RCF-designated lands, but there are no development regulations in place that preclude habitat restoration and mitigation activities on any designated agricultural lands.

The proposed project is inconsistent with the County’s GPP policies related to the preservation of agricultural lands in that restoration of the project area to estuarine marshlands would preclude future agricultural use. The project would not promote Land Use Goal 7<sup>20</sup> nor Land Use Objective 7.B<sup>21</sup> which limits intrusion of non-agricultural uses into designated agricultural areas. County code, however, does not prohibit the use of agricultural land for open space, habitat restoration, roads and many other lawful purposes. Restoration and mitigation activities are not considered land “uses” pursuant to zoning regulations.

The proposed project can be designed to comply with all adopted federal, state, and local development regulations.



Fallow pasturage typical of the project area. Much of the area is characterized by wetlands similar to the one shown. This view is looking northward from the middle of the project area; an area that would be restored to tidal marsh lands after sections of the existing dike are removed.

<sup>20</sup> Land Use Goal 7: Conserve agriculture and agricultural land through a variety of planning techniques, regulations, incentive and acquisition methods.

<sup>21</sup> Land Use Objective 7.B: Conserve designated farmland and limit the intrusion of non-agricultural uses into designated areas.



**IS MITIGATION REQUIRED FOR CONSTRUCTING THE PROJECT ON DESIGNATED AGRICULTURAL LANDS?**

Snohomish County’s Comprehensive Plan does not prohibit the use of designated agricultural land for habitat restoration purposes. There are no specific provisions in Snohomish County Code that impose compensatory mitigation for restoration projects that involve inundation of designated agricultural lands. Currently, there are a variety of non-agricultural uses allowed outright to occur on designated agricultural lands pursuant to the zoning code. These non-agricultural conversions have also taken designated agricultural lands out of production and have not been required to provide compensatory mitigation.

Construction of the setback dike is not a development activity regulated by zoning code but by other development regulations, including critical areas ordinances, hydraulic code, floodplain management regulations, clearing, grading, drainage and shoreline regulations.

As listed in the Fact Sheet (see page *i*) this project is required to obtain numerous approvals and permits not only from local agencies but from federal and state agencies. There are many adopted development regulations that the project will be required to comply with. If the proposal goes forward, construction permits will need to be obtained. Regulatory agencies will review all permit applications and issue permits with conditions of approval. These permit conditions will contain numerous mitigation measures including best management practices required for the construction of the project.

The Smith Island project area is one of the few sites adjacent to Union Slough that are optimal for the type of restoration identified in the 2005 Plan and other restoration plans. In 2005, the Snohomish County Council passed Resolution 05-026 (see Appendix A) acknowledging its commitment to support salmon recovery plans including the implementation of the Smith Island Restoration Project. The resolution also identifies the importance of agriculture to the community and economy, and the Council pledged to support actions that benefit both farming and salmon recovery.

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**PROTECTION OF DESIGNATED AGRICULTURAL LANDS**

The Smith Island Restoration Project proposal has brought into sharp focus conflicting GPP policies and community positions between restoring fish habitat and protecting farmlands. The County’s GPP recognizes the need to balance competing interests. Natural Environment Goal 4<sup>22</sup>

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<sup>22</sup> Natural Environment Goal 4: Balance the goals of protecting elements of the natural environment while promoting the long-term viability of commercial agriculture.

and Economic Development Objective 1.B<sup>23</sup> state that a balance should be found between the concerns and goals of protecting the natural environment while promoting the long-term viability of commercial agriculture, while Natural Environment Objective 4.B<sup>24</sup> discusses the use of incentives to ensure both occur.

Land Use Policy 7.D.9<sup>25</sup> directs the County to investigate programs that have the potential to convert farmland for habitat restoration, mitigation, or flood storage; these programs' long-term effects on agriculture; and to subsequently develop policies and regulations to protect farmlands. There are no adopted regulations to implement this key policy but a community-supported process has begun to address this issue.

The agricultural community through the Agricultural Advisory Board issued a position paper (see Appendix B) recommending an evaluation of proposals to result in "no net loss" of designated agricultural lands when parcels are converted to non-agricultural uses. Again, there are currently no adopted regulations to implement a goal of "no net loss" of designated agricultural lands. There is no codified baseline for assessing net loss or net gain of farmlands when proposals are put forth that would convert designated agricultural lands to non-agricultural uses or that would add new farmlands to the agricultural land base. No regulatory method exists for calculating compensatory mitigation when proposals are submitted that remove designated agricultural lands from production.

Without the benefit of an objective framework provided by GPP policies and implementing regulations by which a project's impacts on the local farm economy can be measured and mitigated, a meaningful comparison of the impacts on agricultural land between the Proposed Action and No Action alternatives is not possible.

In order to find a permanent and satisfactory solution to this dilemma, the County Executive and County Council jointly sponsored and launched the Snohomish County Sustainable Lands Strategy (SLS) initiative in early 2010. Major stakeholders - agricultural and environmental groups including the Tulalip Tribes and the Stillaguamish Tribe – were asked to be involved. The goal of this initiative is to develop "a broadly supported framework of tools, strategies, and policies, including Comprehensive Plan amendments that will drive harmonized sustainable land use and resource management decisions."

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<sup>23</sup> Economic Development Objective 1.B: Snohomish County shall balance economic and environmental concerns – recognizing that a healthy environment is essential to quality of life.

<sup>24</sup> Natural Environment Objective 4.B: Use incentives to encourage protection of the natural environment and the continued operation of working farms.

<sup>25</sup> Land Use Policy 7.D.9: The County shall investigate programs that have the potential to convert farmland for habitat restoration, mitigation, or flood storage and their resulting long-term effects on agriculture. This investigation shall provide the basis for a subsequent analysis of the effects of such programs on farmland and shall be followed with appropriate policies and regulations to protect designated commercial farmlands.

Phase I of this process concluded on April 12, 2011, with a non-regulatory agreement that reflected a commitment by all parties to reconcile competing interests through a “net gain” model for both fish and farms. The second phase of the SLS initiative commenced in May 2011 with the goal of developing specific plans aimed at achieving long-term net gains for both farms and fish. These plans are expected to include new Snohomish County Code provisions that will ensure that the land-base and resource needs of both native salmon and local farmers are protected and secure.

#### EFFECT OF NO ACTION ALTERNATIVE ON LAND AND SHORELINE USE

Under the No Action Alternative, the goals, objectives and policies in the County’s GPP for preserving agricultural lands would not be compromised. This would also mean the amount of land with the potential to support commercial farming on Smith Island would not be diminished by the project.

The No Action Alternative would mean that the City of Everett would need to decide independently on the future of its property within the project area. The City has indicated its intention to proceed with the construction of its own dike to complete the flood protection of its wastewater treatment facility regardless of whether the County constructs the setback dike described in this proposal.



## Recreation

### EXISTING CONDITIONS

#### RECREATIONAL USES IN THE PROJECT AREA

There is currently no authorized dike-top access or public trail in the project area. However, recreational walkers, bird watchers, wildlife enthusiasts, and fishermen are known to access the project area and Union Slough by way of the existing dike. Some parts of the project area are gated and posted with no trespassing signs.

The western part of the project area with the remnant tree farm is off limits to the public. Although it is difficult to distinguish boundaries, authorized access is allowed only on the eastern portion of the project area that was purchased with Salmon Recovery Funding Board funds. Horse-boarders ride their horses within the area leased by River Delta Ranch and may occasionally ride in areas beyond it. Hunting is prohibited on lands owned by the Snohomish County Parks Department (Parks) and the City of Everett.

#### RECREATIONAL USES IN THE VICINITY

Parks is co-owner with the Washington Department of Fish and Wildlife (WDFW) of Spencer Island, a 415-acre public area located southeast of the project across Union Slough. Access to Spencer Island is provided by an exterior bridge that spans Union Slough at the eastern end of 4<sup>th</sup> Street SE on Smith Island. Dikes have been breached on the island to create tidally-influenced wetlands; walking trails are provided and bird and wildlife viewing is a popular activity. Waterfowl hunting is seasonally allowed only within the northern portion of Spencer Island under WDFW's jurisdiction.

A paved dike-top trail originating in Langus Riverfront Park extends south along the Snohomish River, winds around the southern tip of Smith Island and continues northward along the east side of Smith Island adjacent to Union Slough. The trail intersects with the entrance to Spencer Island Regional Park at the east end of 4<sup>th</sup> Street SE. From this point, the trail runs westward to the City's WPCF and then northward along the east side of the facility on top of the dike. At the northeast corner of the WPCF, it connects to the east-west dike that provides trail users with access to Union Slough. The City constructed these dike sections as part of its 2007 Smith Island/Union Slough Restoration project. The City is responsible for maintaining the trail and plans to provide interpretive signs about its restoration site as a way to educate the public about intertidal wetlands and the Snohomish River estuary (see Figure 12, Existing and Future Trail Network).



**Key to Features:**

- Existing Trails
- Incorporated Cities
- Conceptual Trails (City of Everett)
- Project Area
- Existing Dikes
- Proposed Dike Alignment

0 500 1,000 Feet



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**FIGURE 12. EXISTING AND FUTURE TRAIL NETWORK**

The two nearest watercraft launch sites are at Ebey Waterfront Park in the City of Marysville and at Langus Riverfront Park in the City of Everett. Ebey Waterfront Park is a three-acre facility located along Ebey Slough at 1st Street and has two boat ramps. Langus Riverfront Park is a 96-acre facility located along the Snohomish River on the east side of Smith Island. It has one boat ramp and one kayak ramp. Union Slough is used by kayakers and other recreational boaters.

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## RECREATION MANAGEMENT AND PLANS FOR THE PROJECT AREA

Parks manages the County-owned lands in the proposed project area. The 2007 Snohomish County Parks and Recreation Comprehensive Plan (the Parks Plan) identifies most of the Smith Island project area as “Snohomish River Estuary Properties” which is classified as *Open Space/Preserve*. This park classification is for preserving wildlife habitat, wilderness, special natural areas and/or unique qualities of open space. *Open Space/Preserve* parks are usually characterized by unique natural resources. Park amenities are typically limited to picnic areas, trails, boardwalks, and interpretive signs. Public access is restricted. The Open Space Corridors/Greenbelt Areas Map and the Lands Useful for Public Purposes Map designate the area as “Snohomish County Parks Lands (undeveloped).” (Snohomish County Comprehensive Plan, Parks Plan 2007)

The City of Everett Comprehensive Plan’s Parks Element has an overall goal of preserving, protecting and enhancing recreational facilities and waterfront access, and improving pedestrian and bicycle access to waterfront areas through a trail system as described in its Shoreline Public Access Plan. This plan depicts a trail running through Langus Riverfront Park and Union Slough via 12<sup>th</sup> Street NE, the new dike that will be built adjacent to the north boundary of its WPCF, and the dike constructed in 2007 for its Smith Island/Union Slough Restoration Project.



### ARE THERE PLANS FOR FUTURE RECREATIONAL USES IN THE PROJECT AREA?

Snohomish County Parks Department has considered several recreational options for the project area that would be consistent with its Parks Plan designations. Final recreation amenities for the project area, however, will be dependent on priorities at the time of development, on available funding, and Parks’ maintenance capabilities.

In August 2009, Parks held a design charrette (interactive workshop) for interested agencies to consider potential recreation uses which would be compatible with the proposed Smith Island Restoration Project. There was interest in providing interpretive signage or kiosks on site which reference the ecological benefits of the proposed project, the history of the property, and information about other estuaries with public access sites across Washington. Participants were also in favor of a trail on top of the new setback dike which would connect with the City’s trails to the south, as well as a parking lot and restroom facilities.

The City of Everett’s Shoreline Public Access Plan recommends that a trail be constructed from Langus Riverfront Park north to 12<sup>th</sup> Street NE, east along 12<sup>th</sup> Street NE across I-5, and then

south for approximately 700 feet where it would connect with the City's existing east-west dike at the northeast corner of the WPCF. However, the City's current intention is to locate the future dike-top trail which will extend south from 12<sup>th</sup> Street NE to the northwest corner of its WPCF. It would then run eastward adjacent to the facility until it is connected with the east-west dike that was constructed in 2007. From here, pedestrians and bicyclists would be able to reach Union Slough and access the trail on the east side of the WPCF, which eventually connects to the Union Slough trail south of 4<sup>th</sup> Street SE. Construction of the future trail would result in a paved pedestrian loop around the south half of Smith Island.

## IMPACTS TO RECREATION

Public access to the existing dike and areas of the project will be permanently impacted both during and post construction. There will be heavy machinery and truck traffic on 12<sup>th</sup> Street NE during construction. The project entails breaching sections of the existing dike and a significant portion of 12<sup>th</sup> Street NE will be removed for estuarine restoration.

The removal of 12<sup>th</sup> Street NE would not impact the City's plan to extend a pedestrian and bicycle trail to Union Slough. The City intends to locate the new dike-top trail that will extend south from 12<sup>th</sup> Street NE and run adjacent to the WPCF and connect to the current east-west dike.

### BOATING

Recreational boaters would be temporarily impacted during construction when sections of the existing dike are removed. Access to Union Slough would be restricted due to safety. The completed project is anticipated to have enhanced access benefits for fishermen and boaters as daily tidal inundation will provide a way into the project area through the east tidal channel. During high tide, it is expected that there would be enough water for kayaks and canoes to access the entire project area waterward of the new dike.

### HUNTING

Hunting is prohibited on lands owned by Snohomish County and the City of Everett. The removal of 12<sup>th</sup> Street NE would not impact hunters' access to north Spencer Island since a bridge located at the end of 4<sup>th</sup> Street SE is available for them to use.

## MITIGATION FOR IMPACTS TO RECREATION

Public access on the dike top north of 12<sup>th</sup> Street NE has never been allowed and no mitigation is proposed or required for impacts to this activity. The project proposes no mitigation for temporary impacts that affect the use of Union Slough by boaters and fishermen during project construction. To promote boater safety, a project website will be maintained to provide construction updates and any possible temporary restrictions to boating within Union Slough.

## EFFECT OF NO ACTION ALTERNATIVE ON RECREATION

Under the No Action Alternative, it is likely that the public will continue to use the project area and existing dike for recreation even though access is unauthorized. This use may be impacted when Diking District 5 is required to maintain or improve the existing dike. Boaters would continue to use Union Slough.

Parks would need to evaluate other options to implement goals and objectives in its Parks Plan and some of the potential recreation uses suggested in the August 2009 design charrette.



## Historic and Cultural Preservation

### EXISTING CONDITIONS

The project area falls within the ceded territory of the Tulalip Tribes, consisting of the Lushootseed speaking groups of the Coast Salishan language family. Prior to the arrival of Euro-Americans around the mid-19<sup>th</sup> century, the estuary downstream of the head of Ebey Slough contained approximately 10,000 acres of tidal marsh where the freshwater from the Snohomish River mixed with saltwater from Puget Sound (Haas and Collins 2001). Native American tribes established settlements in these coastal and river areas. They built winter villages of red cedar longhouses, and temporary summer dwellings of rush mats over wood poles as bases from which to hunt deer and bear, fish for salmon, harvest shellfish, and gather various plants and berries for food and medicinal purposes. Early tribal tools and weapons consisted of chipped stone and bone and were later made of deer antlers.

With the arrival of Euro-Americans, the estuary area was progressively logged and cleared and a system of dikes, tide gates, and linear ditches were constructed to drain the marshlands and prevent tidal inundation and flooding in the Snohomish River mainstem and its numerous sloughs. A prominent figure in early development was Dr. Henry A. Smith who settled on the island that now bears his name. Under the Donation Land Act of 1850, Dr. Smith purchased 600 acres in 1864 and reclaimed 75 acres by constructing a system of dikes (Landau 2009). He referred to his land as New Holland in honor of the Netherlands' model of wetland reclamation, a process by which flooded or other types of unsuitable lands are made usable for agriculture. While an 1869 General Land Office map indicates Dr. Smith's dikes and his residence were located in the northwest portion of the project area, these features no longer exist.

Logging and the arrival of the Great Northern Railway led to incorporation of the cities of Marysville and Everett in the 1890's (Landau 2009). More dikes were constructed to create farmland and between 1945 and 1955 farming became the mainstay in the vicinity of the Snohomish River.

A dike adjacent to Union Slough can be seen on aerial photographs dating from 1938, however the earliest mapping of features resembling dikes in the project area are shown on a Marysville 15' USGS quadrangle map dated 1941. A comparison of two Kroll maps dated 1952 and 1960 show that by 1960, a dike had been constructed on the western bank of Union Slough. It could not be confirmed that the dike was an improvement of an existing dike or a new dike atop an existing natural levee. The precise historicity of the dikes and drainage ditches within the project area is uncertain but they were most likely constructed between the early 1930's and 1960 (Landau 2010a). A 1936 Snohomish County statewide highway planning survey map is the earliest evidence of a road along the south boundary of the project area, now known as 12<sup>th</sup> Street NE.

Today, a survey of existing buildings and facilities within the project area include a double-wide mobile home (River Delta Ranch caretaker's quarters), a multi-stall wood-frame barn, approximately four refuge sheds in several horse paddocks, and a wood-frame barn with overhead hay storage.

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## HISTORIC AND ARCHAEOLOGICAL FINDINGS

Snohomish County retained an archaeologist in 2009 to conduct two investigations within the project area. The archaeologist conducted a pedestrian reconnaissance to evaluate an abandoned barn and residence that the County proposed to demolish for safety reasons. As available records identified these structures as being more than 50 years old, it was necessary to evaluate the buildings to determine their eligibility for inclusion in the National Register of Historic Place (National Register) and the Washington Heritage Register (State Register). It was concluded that neither the barn nor the caretaker's quarters were eligible for inclusion in the National or State Register because the buildings had no distinguishing architectural characteristics and no previous owner or associated event had been significant in local, state, or national history (Landau, May 2009).

In late 2009, the archaeologist conducted a pedestrian survey of the majority of the project area and evaluated the existing dike and irrigation ditch system. During this second investigation, the existing dike and irrigation ditch system were found to be ineligible for listing on either the federal or state historic registers. This second investigation also did not uncover any evidence of pre-Euro-American contact archaeological resources such as shell middens, faunal remains, oxidized sediment, fire-cracked rock, carbonaceous staining, and structural remains, or artifacts such as stone, bone, antler tools or fragments. The findings are documented in a Cultural Resources Assessment Report (Landau, January 2010).

The City retained an archaeologist to conduct a pedestrian reconnaissance of its project area south of 12<sup>th</sup> Street NE in October 2010. The archaeologist attempted to conduct shovel probes in the area but was not successful because of water inundation. The western half of the project area has previously been disturbed with the planting of poplar trees and infilling with biosolids from the City's wastewater treatment facility. The cultural resource assessment did not identify any prehistoric or historic archaeological features or artifacts (Landau 2010b).

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## CULTURAL AND HISTORIC PRESERVATION REQUIREMENTS

Snohomish County will be required to comply with Section 106 of the National Historic Preservation Act of 1966 (NHPA). NHPA is the nation's central historic preservation law and provides for establishment of the National Register and the State Historic Preservation Office (SHPO). It requires an evaluation of potential historic and cultural resources in the project area to determine eligibility in the National Register and to consider the effects of a project's activities

on historic and cultural properties. Any cultural resources discovered during construction are also addressed through the Section 106 process.

SEPA requires that state and local agencies evaluate and consider the impacts of their actions on historic and cultural resources, if any. The Washington State Department of Archaeology and Historic Preservation (DAHP) is the SHPO with technical expertise and provides formal opinions to local agencies on a site's significance and potential project impacts on such sites. At the local level, Snohomish County adopted a Historic Preservation Ordinance to identify, evaluate, and protect historic and archaeological resources; Snohomish County Code Chapter 30.32D is the implementing regulation.

## IMPACTS TO HISTORIC AND CULTURAL PRESERVATION

To date, historic and cultural resource investigations have concluded that there are no significant resources in the project area.

During construction, it is possible to encounter previously undisturbed cultural resources by way of clearing, grading and excavation. These resources could be associated with late 19<sup>th</sup> through 20<sup>th</sup> century homesteading and agricultural activities and involve architectural remains with associated utilitarian items of glass, metal, ceramic, and brick. Cultural resources associated with the activities of Native American tribes, such as dwelling construction, fishing, shellfish harvesting, hunting, and berry and plant gathering, may be encountered. These could take the form of shell midden, arrowheads, baskets, tools, charcoal and fire-modified rock. At post-construction, no impacts are anticipated to cultural resources or historic structures.

## MITIGATION FOR IMPACTS TO HISTORIC AND CULTURAL PRESERVATION

Project activities will comply with all federal, state, and local regulations. A formal subsurface archaeological assessment that would include shovel probing would be conducted within the project area prior to the start of ground disturbing activities. Shovel probes may be supplemented where necessary with manual bucket augers to achieve sufficient sampling depth. A report would be prepared that discusses the findings of the shovel probe investigations and submitted for review to DAHP and affected tribes.

Should archaeological or cultural resources be discovered at the time of construction, they would be handled pursuant to federal, state, and local regulations. If significant cultural resources are discovered, all activity in the immediate area will stop. The provisions of an unanticipated discovery plan usually prepared prior to construction would be used to guide all subsequent actions. This includes having a qualified archaeologist assess the context and integrity of the find. If the resources are human remains, the Snohomish County Sheriff, DAHP and affected tribes would be contacted immediately.

## EFFECT OF NO ACTION ALTERNATIVE ON HISTORIC AND CULTURAL PRESERVATION

Under the No Action Alternative, no potential exists for discovery or disturbance of any historic or cultural resources in the project area.

# Transportation

## EXISTING CONDITIONS

### ROADS IN THE PROJECT AREA

The roadway network in and adjacent to the project area includes roads owned and maintained by the WSDOT, City of Everett and Snohomish County. WSDOT maintains I-5 and State Route (SR) 529 to the west of the project area. The City maintains 12<sup>th</sup> Street NE, a gravel road in the south part of the project area and several nearby local roads that provide access to the project area. The only road within the County project area is 51<sup>st</sup> Avenue NE, a private dirt road that runs in a north-south direction and formerly served several residences which have since been removed. It intersects 12<sup>th</sup> Street NE near its eastern terminus a short distance from Union Slough.

While Smith Island is bisected by I-5, there are no exits providing access from the freeway directly to it. Sole access to the island is provided by SR 529, which has exits from both northbound and southbound lanes to local roads on Smith Island. Drivers using the northbound lanes off of I-5 heading to Smith Island must exit on to East Marine View Drive, then proceed to its intersection with northbound SR 529. Drivers then go north on SR 529 and exit at 28th Place NE onto Smith Island. From 28th Place NE, drivers turn south at 35<sup>th</sup> Avenue NE and then proceed southeast to Ross Avenue before crossing to the east side of I-5 using the 12<sup>th</sup> Street NE overpass. Drivers using the southbound lanes off of I-5 use the SR 529 exit, head south on SR 529, exit onto the island at Frontage Road, continue on to Ross Avenue and then proceed to 12<sup>th</sup> Street NE (see Figure 13, Road Network). I-5 is classified as a freeway/expressway; SR 529 and East Marine View Drive are classified as principal/major arterials. The remaining streets are classified as local roads.

### LEVEL OF SERVICE ON EXISTING ROADS

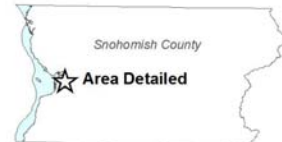
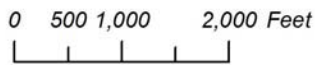
The Level of Service (LOS) of a road generally refers to the level of traffic congestion experienced by motorists at peak travel hours. Roadways are assigned ratings from A to F, with LOS A representing the least congested operating condition, and LOS F the most congested condition. I-5 and East Marine View Drive each have a LOS rating of E/F during afternoon peak driving hours, and SR 529 has a LOS rating of A/B. Average Daily Traffic levels on these roads vary from 133,000 for I-5, 31,000 for SR 529, and 9,000 for East Marine View Drive.

Local roads on Smith Island are lightly used. There are several businesses and facilities that generate traffic trips including Dagmars Marina on Ross Avenue, Langus Riverfront Park, the Snohomish County Animal Control Facility on Smith Island Road, Hima Nursery and River Delta Ranch that use 12<sup>th</sup> Street NE for access. Drivers exiting SR 529 pass through several intersections to access their various destinations.



**Key to Features:**

- Project Area
- Proposed Dike Alignment
- Freeway
- Unincorporated Snohomish County
- Arterial Road
- Local Road
- Incorporated Cities
- State Route



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**FIGURE 13. ROAD NETWORK**

The intersection of northbound SR 529 and 28<sup>th</sup> Place NE is LOS E, primarily due to the intersection being right-in turn/right-out turn, and having no acceleration lane for vehicles entering the highway. Both the intersections of Ross Avenue/35<sup>th</sup> Avenue NE and Smith Island Road/12<sup>th</sup> Street NE have LOS A ratings (Snohomish County 2011).

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#### TRANSIT SERVICE IN THE PROJECT AREA

There is no public transit service to Smith Island, nor is any service planned in the immediate future. Community Transit Route 200 travels from Everett to Marysville across SR 529 but does not make any stops on Smith Island. Everett Transit Routes 2 and 7 pass by the intersection of East Marine View Drive and SR 529. This is located 1.3 miles away from the project area by foot and for most of the route, there are no sidewalks available. There are currently no parking lots in the project area.

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#### PLANNED ROADWAY IMPROVEMENTS IN THE PROJECT AREA

The City of Everett Comprehensive Plan and the City of Everett 2009 Freight Access and Mobility Study originally envisioned the construction of a new interchange at I-5 and 12<sup>th</sup> Street NE to enhance access onto Smith Island. However, the City has since rejected this proposal in favor of a half interchange at northbound I-5 and SR 529, approximately two miles north of the project area. This option is also supported by the City of Marysville and the Port of Everett.

### IMPACTS TO TRANSPORTATION

The construction of the new setback dike will cause temporary impacts to the area's roadway network as it will require importing approximately 160,000 cubic yards of fill material from an off-site location. Assuming that transfer dump trucks - which pull an additional trailer behind them and have a total load capacity of around 20 cubic yards - are used, the delivery of materials would generate approximately 8,000 truck trips entering and leaving the project area during construction. Peak volumes of all construction trips are expected to take place primarily during the drier spring to early fall months and would occur during daylight working hours that typically extend from 7 a.m. to 6 p.m.

Construction is anticipated to take place over two construction seasons and could generate a total of 60 truck trips entering and leaving the project area per day over a ten to eleven-hour period. Additional vehicle trips would be generated by construction workers entering and leaving the site daily. This level of increased traffic would not be significant enough to alter the LOS levels of local roads or the intersection of SR 529/28<sup>th</sup> Place NE. The project's construction activities are also not anticipated to impact increased vehicle trips by the public to Langus Riverfront Park and Dagmars Marina during the peak summer recreation months since construction activities would take place during weekdays and recreation trips would be heaviest on weekends.



## HOW WILL ACCESS TO ADJACENT PROPERTIES AND ACTIVITIES BE IMPACTED BY THE PROJECT?

During construction, the truck traffic would temporarily impact Hima Nursery employees and River Delta Ranch customers who use the western end of 12<sup>th</sup> Street NE to access those properties.

The proposed project would permanently impact the general public who park at the east end of 12<sup>th</sup> Street NE as the road would be closed during construction to non-construction traffic. As part of the project, approximately 2,100 linear feet of 12<sup>th</sup> Street NE will be removed. The partial removal of this roadway would not impact the City's access to its WPCF since the main vehicular access is through 4<sup>th</sup> Street SE.

## MITIGATION FOR IMPACTS TO TRANSPORTATION

To mitigate the impacts from construction truck trips, construction materials available on site such as the existing dike material would be reused to reduce the number of dump truck trips. When offsite materials are required, the closest sources and most direct hauling routes would be utilized to reduce the number of vehicle miles traveled. Peak period driving hours will be avoided when possible. Construction staging areas for equipment, dump trucks and other vehicles would be located appropriately in the project area.

The construction contractor will be required to submit a traffic control plan to WSDOT and the City of Everett prior to construction. Traffic mitigation measures customary for large construction projects will be implemented and monitored. The County will prepare a communications plan to inform area businesses and property owners of the project construction schedule, and to identify anticipated traffic delays and required partial lane or road closures.

## EFFECT OF NO ACTION ALTERNATIVE ON TRANSPORTATION

Under the No Action Alternative, the City of Everett would still proceed with constructing its portion of the dike to protect its WPCF. Its project would result in impacts to area roads, businesses, and facilities from construction truck traffic and construction worker trips, but to a lesser degree than this larger project's construction impacts.

# Utilities

## EXISTING CONDITIONS

### UTILITIES IN THE PROJECT AREA

The Smith Island project area has limited utility services. The caretaker of River Delta Ranch is the only full-time resident. The house has an onsite septic system. Water service is provided by an underground water line that extends from the City of Everett's water main at Ross Road. Electrical service to River Delta Ranch is currently provided via overhead power lines. Phone service is also provided via overhead lines. There is a power pole at the City of Everett's staging area southeast of the east terminus of 12<sup>th</sup> Street NE which is used by the City's contractors for their construction trailers.

The main utility within the project area is a segment of a 16-inch natural gas pipeline which was constructed by the Northwest Pipeline Corporation. Ownership and operation of the pipeline was transferred to PSE in October 2009. The nine-mile pipeline extends from North Everett at the Snohomish River to northeast of Lake Stevens. Within the project area, the pipeline is primarily buried in a shallow trench under five to seven feet of fill. It transitions to a deeper, horizontally bored shaft on the east side of the project area to pass under Union Slough.

PSE has a 50-foot wide easement authorizing the maintenance of the pipeline through the project area. The easement also stipulates that no road, reservoir, or structure can be built, nor excavation activities occur within the easement without the permission of PSE.

### UTILITIES IN THE PROJECT AREA VICINITY

The City's WPCF, a wastewater treatment plant, is located south of the project area. The 160-acre facility has been operational since 1960 and has undergone several upgrades. A 2007 plant expansion increased the WPCF's total hydraulic capacity to 36.3 million gallons a day. The facility's aeration/oxidation ponds (lagoon system) provide primary and secondary treatment processes and operate 24 hours a day to service the Everett area. A biosolids operation associated with the facility is located within the project area. The existing dike system protecting the WPCF is maintained by the City of Everett under an agreement with Diking District 5.

Several utilities are located to the west and northwest of the project area. On the east side of I-5, there are two buried telecommunication lines. One line is a 96-count transport fiber optic line owned by Comcast, Inc. that provides service between the cities of Everett and Marysville. The second line is a 216-count fiber optic line used by multiple providers, which provides service as far north as the Canadian border. The lines are located within easements granted by Buse Timber and IFF properties, and within the WSDOT right-of-way. At river and slough crossings, the lines

are above ground and attached to bridges. Verizon has a line to the northwest of the project area within public and private easements and public right-of-way.

## IMPACTS TO UTILITIES

### PSE NATURAL GAS PIPELINE

The new setback dike alignment would cross the natural gas pipeline at the west end of 12<sup>th</sup> Street NE. The pipeline could potentially be impacted during construction as the weight of the new dike would likely cause settlement of underlying soils from 16 to 30 inches. The compressed soils are estimated to extend from the ground surface to greater than 80 feet below grade. There is the potential that this compaction could bend and elongate the pipe (CH2M Hill 2008).



#### WILL TIDAL INUNDATION AFFECT THE PIPELINE?

Post construction, approximately 3,500 linear feet of the pipeline would be located waterward of the new setback dike and beneath the restored estuary. However, excessive scour and channel migration impacts are not expected to expose the pipeline or otherwise disrupt its operation as the pipeline is buried underground in a trench and is of sufficient distance from where sections of the existing dike would be breached (West 2008).

### CITY OF EVERETT WATER POLLUTION CONTROL FACILITY

The new setback dike alignment is not expected to impact the City's WPCF as there will be extensive coordination between the County and City on the engineering design to ensure the connection to the existing dike on the WPCF's northern boundary is not compromised. Electrical and phone service to the caretaker's residence at the horse boarding facility would not be impacted as this area would be landward of the new dike. The electrical service provided by the power pole at the east end of 12<sup>th</sup> Street NE would be decommissioned. All construction activities would be a sufficient distance to the east of the I-5 corridor to avoid impacts to utilities owned, operated, or utilized by Comcast, Verizon and multiple entities.

## MITIGATION FOR IMPACTS TO UTILITIES

To address concerns regarding soils settlement around the natural gas pipeline, the County has conducted a geotechnical study and is working on a Consent Agreement with PSE that would allow construction of the dike across their pipeline. As part of this agreement, the setback dike will be designed and constructed across the pipeline utilizing engineered protective measures prescribed by PSE that will protect the pipeline's integrity and ensure public safety during and post construction. See the Geology and Soils section for more discussion.

No mitigation is offered for the decommissioning of electrical service to the power pole at the east terminus of 12<sup>th</sup> Street NE as electrical service may no longer be required in that particular area by the time project construction begins.

## EFFECT OF NO ACTION ALTERNATIVE ON UTILITIES

Under the No Action Alternative, no ground disturbing activities would take place on County-owned lands and the PSE natural gas pipeline would not be impacted. The City of Everett would proceed with constructing its portion of the proposed setback dike as part of their planned improvements. The City would not have to decommission electrical service to the power pole at the east terminus of 12<sup>th</sup> Street NE.

