

Volume IV

Snohomish River Watershed Plan

Chapter 5 Smith Island Basin Plan



Chapter 5—Smith Island Basin Plan

The Smith Island basin is primarily managed by a diking district, not the City of Everett, and therefore is not evaluated in the same manner as other basins within the SWCP. A review of existing reports and plans are used to provide the summary characterization below.

5.1 Basin Summary

Smith Island basin comprises an area of approximately 1,937 acres, north and northeast of the Everett city center, between the Snohomish River and Union Slough. Interstate 5 transects the basin from north to south; State Route 529 and a BNSF Railway corridor also cross the basin. The City of Everett Water Pollution Control Facility (WPCF) occupies a large portion of the southern area of the basin. More than half of Smith Island is within City limits, though the majority of land is vacant space consisting of fallow pasture, native and non-native plant species, and freshwater wetlands. The entire basin area sits within the Snohomish River estuary and much of the basin is within its floodplain. Much of the developed portion of the basin has been elevated above the floodplain. The topography of the basin is flat. Smith Island contains several levees, the majority being under the jurisdiction of Diking Improvement District No. 5 (DD5). DD5 separately assesses properties within the district boundaries for surface water drainage, and these properties are not subject to the City's surface water fee. For this reason the Smith Island basin is not evaluated in the same manner as other basins within the SWCP.

The basin is considered a freshwater palustrine wetland ecosystem that is bounded by a small amount of estuarine wetland to the northwest. Existing vegetation in the Smith Island basin is dominated by meadow grasses and herbaceous species. Shrub habitat is also scattered throughout the island, as well as groupings of trees. As an important rest area on the migratory bird Pacific Flyway, numerous bird species are found within the basin, particularly waterfowl and shorebirds associated with the estuarine and freshwater wetland habitat. A diverse array of passerine (perching) birds and raptors also utilize the wetland habitats. Other wildlife includes voles, black tailed deer, coyote, beaver, raccoon, weasels, and other mammals. Reptiles and amphibians such as garter snakes and pacific chorus frogs have been observed within the basin. An ongoing project involves breaching and removal of existing levees along Union Slough. The project will provide restoration of additional estuarine wetland that is critical for the recovery of Chinook salmon.

Zoning designations within the Smith Island basin are mostly agricultural, such as Riverway Commercial Farmland (RCF), Local Commercial Farmland (LCF), Upland Commercial Farmland (UCF), and A-1 Agriculture. The northwestern portion is largely zoned Heavy Manufacturing and Langus Park is zoned Park. Land uses include agriculture, a marina, light and heavy industry, parklands, utility lines, roads, and low-density residential. Puget Sound Energy, Northwest Pipeline Corporation, WSDOT, and BNSF Railway all have easements within the basin. Passive recreation such as fishing, wildlife viewing, and walking occurs within the basin. Future Land Use maps designate the majority of this basin as agricultural. Future development is primarily expected to occur west of Interstate 5 in the area designated Heavy Industrial and at the Water Pollution Control Facility (WPCF).

Smith Island's levee system extends for approximately seven miles, covering most of the perimeter of the island. Most of the levees are located within DD5. The levees outside of DD5 are maintained by the individual property owners. Everett participates in DD5 levee maintenance and enhancement. Several levee maintenance and levee construction measures have been recommended per a levee analysis conducted by ESA in 2007. These recommendations include upgrading all DD5 levees to meet the 10-year plus 2 feet elevation U.S. Army Corps of Engineers

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(Corps of Engineers) requirement. It was concluded 19 percent of the levees in this system did not meet the requirement.

The City is not directly responsible for surface water issues and projects within land administered by DD5 but is responsible for permitting city projects within DD5. The City is responsible for issues and projects at the Everett WPCF and those within City limits and outside of DD5 borders, an area of about 349 acres mostly around State Route 529. However, as a stakeholder, the City coordinates and partners with DD5 and other administering agencies to implement projects within the Smith Island basin.

Expansion of the WPCF which began in the late 1980s impacted wetlands within the project area. As mitigation for these impacts the City restored 13.3 acres of degraded wetland lying south and east of the current aeration ponds (south of 4th Street SE). The project is identified in Figure 5-1. The mitigation project included improvements such as removing previously placed dredging material from the wetland, creation of a pond system, placement of organic soils, establishment of native plant species, and construction of a weir system to provide hydraulic controls of the wetland. A water management plan was established whereby water from Union Slough was diverted into the ponds to achieve a desired water elevation during the winter and spring months. To promote growth of emergent vegetation the water elevation was allowed to drop during the growing season leading to an 85% coverage of emergent vegetation in the final monitoring period in 1994.

A subsequent restoration project, called the Smith Island/Union Slough Restoration, east of the City's WPCF ponds restored 93 acres of intertidal salmon rearing habitat. The Union Slough dikes were excavated for three 180-foot breach locations in 2007, reintroducing tidal and riverine influence. Everett is managing 58 of these acres. A portion of these acres is for compensatory mitigation for the conversion of existing freshwater wetlands and for wetland impacts from concurrent dike improvements. The remaining acreage resulted in advanced mitigation for future impacts resulting from expansion of the WPCF and future dike improvements. The Smith Island/Union Slough Restoration project was a joint effort between the City and the Corps of Engineers. The City provided the land, local permitting, and financial participation in the restoration project. Concurrently the City also provided design and construction of flood control dike raising and widening improvements along the Union Slough and Snohomish River south of 12th Street NE. As a condition of the project the City has been constructing a paved dike top trail that provides a public shoreline access loop from 12th Street to the south tip of the island and connects to the bridge to Spencer Island at 4th Street. The Corps Civil Branch provided design, funding, and construction for the restoration site setback dike and restoration elements.

Subsequent to the breach, permitting requirements for the City mitigation site included a 10-year monitoring program to assess the intertidal restoration through seven parameters: benthic invertebrates, fish use, hydrology, soil, vegetation, water quality, and wildlife. The monitoring program has concluded and the City maintains a ledger indicating the advanced mitigation acreage that is available for use on future projects. This ledger is posted at the project website.

The Corps finalized and closed out the construction project in 2014 and transferred long-term responsibility for the setback dike and the 93-acre site to the City of Everett as the local steward. As part of the project the City raised the setback dikes to an elevation of 15 feet (NAVD88 datum) to be consistent with the other concurrent dike improvements and to provide an increased level of flood protection to the WPCF, I-5, local roads, and associated properties. The restoration project, shown during the low-tide freshwater condition, is identified in Figure 5-1.

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A second restoration project led by Snohomish County is in the process of being constructed, with the anticipated dike breach occurring in the summer of 2018. This project is adjacent to the above-mentioned Smith Island/Union Slough Restoration and consists of approximately 400 acres of land to be restored to riverine and intertidal influence. Approximately 50 acres of City-owned land from 12th Street NE south to the WPCF Polishing Pond will be part of the project and is proposed to be a second advanced mitigation site. For greater detail on the project and its impacts refer to the *Smith Island Restoration Project Final Environmental Impact Statement* (December 2013). The Smith Island Estuary Restoration project is identified in Figure 5-1. After breaching of the Union Slough dike, monitoring of the City's portion of the site will be required as well as a ledger that indicates available advanced mitigation credits for use on future projects.

5.2 Diking Improvement District No. 5

The majority of the Smith Island basin is located within Diking Improvement District No. 5 (DD5). DD5 was formed in the early 1930's under Chapter 85.05 RCW. DD5 has a publicly elected board of supervisors whose mission is to manage the flood infrastructure within their jurisdiction. DD5 is responsible for a system of improvements including the dikes and associated facilities, such as tide gates, culverts, and toe and borrow drainage ditches. Any plans to change the existing DD5 system of improvements must be approved by DD5 and the County Council.

Members of DD5 include IFF Holding, LLC (doing business as Hima Nursery), Dagmars Marina, Buse Timber and Sales Inc., Snohomish County, Washington State Department of Transportation, and the City of Everett. Several dikes within DD5's diking system are set to be breached as a part of the Smith Island Estuary Restoration Project. A new setback dike will be constructed east of I-5 to protect properties owned by DD5 members, public infrastructure including I-5, City roads, and the City's Water Pollution Control Facility.

DD5 is currently enrolled in the U.S. Army Corps of Engineers Flood Rehabilitation Program (PL 84-99). Under this program a diking district is eligible to receive funding for dike maintenance, emergency repairs, and dike engineering inspection assistance. A diking system is eligible for funding if it meets at least a "Minimally Acceptable" grade during routine inspections, which includes the District's dikes. By agreement the City of Everett maintains and improves all of DD5 and City dikes from 12th Street NE and south. These dikes are also part of the PL 84-99 program. The City has had an ongoing dike improvement program to raise and widen the dikes protecting the WPCF and other City infrastructure since the 1990's. The above referenced Advanced Mitigation site (shown on Figure 5-1) provides mitigation for wetland impacts from the dike improvements as well as future WPCF expansions.

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References

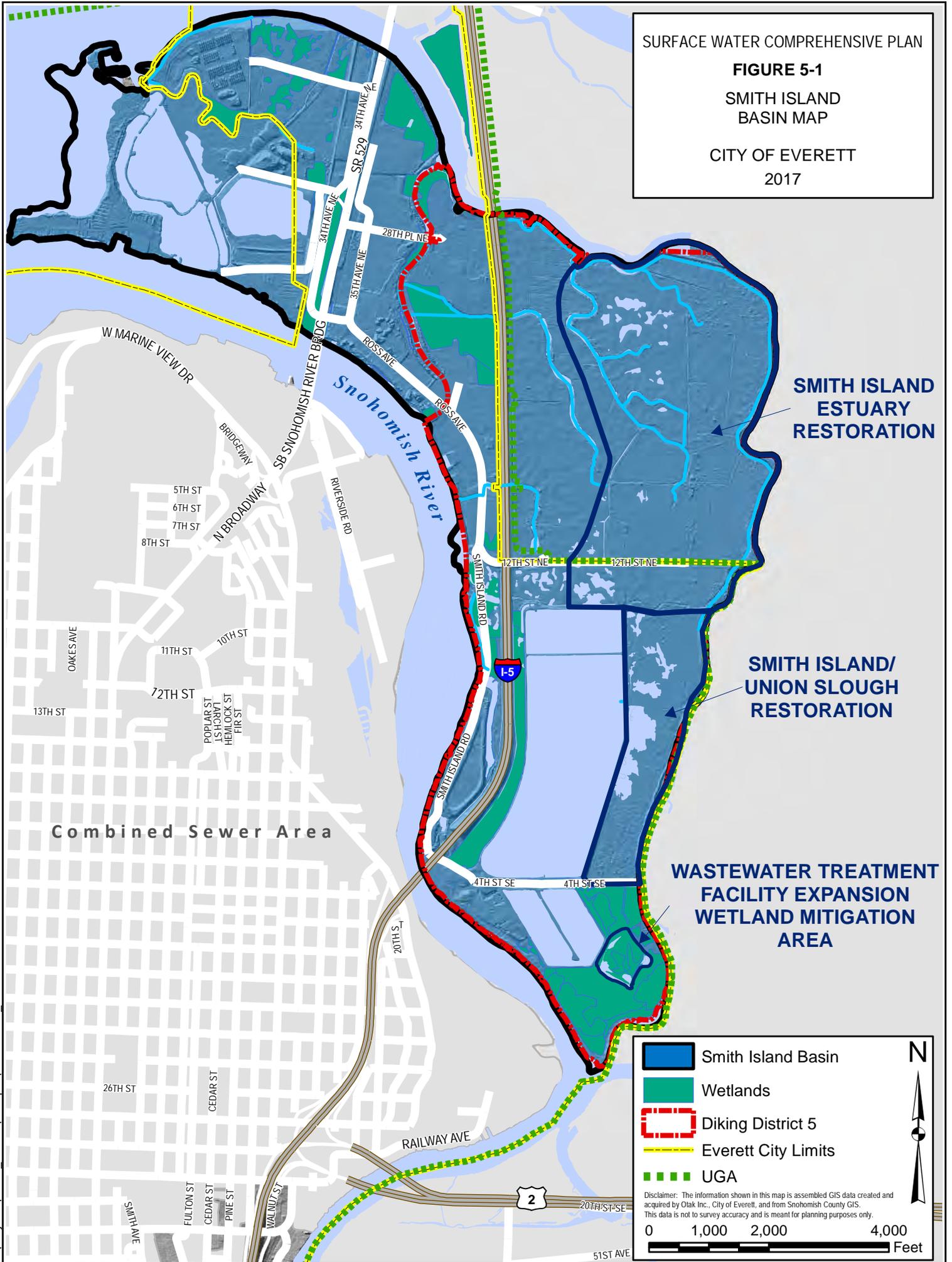
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FIGURE 5-1

**SMITH ISLAND
BASIN MAP**

CITY OF EVERETT

2017



Legend

- Smith Island Basin
- Wetlands
- Diking District 5
- Everett City Limits
- UGA

Disclaimer: The information shown in this map is assembled GIS data created and acquired by Otak Inc., City of Everett, and from Snohomish County GIS. This data is not to survey accuracy and is meant for planning purposes only.

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