WSDOT

# US 2 Trestle Capacity Improvements & Westbound Trestle Replacement PEL Study


## Environmental Existing Conditions Report

April 2025

*Prepared for*

WSDOT

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# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| ACS | American Community Survey |
| BFE | base flood elevation |
| BMP | best management practice |
| CAA | Clean Air Act |
| CAAA | Clean Air Act Amendments |
| CED | Chronic Environmental Deficiencies |
| CERCLA | Comprehensive Environmental Response Compensation and Liability Act |
| CFR | Code of Federal Regulations |
| $CH_4$ | methane |
| CO | carbon monoxide |
| $CO_{2e}$ | carbon dioxide equivalent |
| CWA | Clean Water Act |
| DAHP | Washington State Department of Archaeology and Historic Preservation |
| dBA | A-weighted decibel |
| DOH | Washington State Department of Health |
| Ecology | Washington State Department of Ecology |
| EFH | Essential Fish Habitat |
| EHD | Environmental Health Disparities |
| EMC | Everett Municipal Code |
| EO | Executive Order |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |

| Acronym/Abbreviation | Definition |
|---|---|
| ESP | Everett Smelter Plume |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FIRM | Flood Insurance Rate Map |
| FLP | Federal Lands to Parks |
| GIS | Geographic Information System |
| HEAL Act | Washington State's Healthy Environment for All Act |
| HOV | high occupancy vehicle |
| HPA | Hydraulic Project Approval |
| I-5 | Interstate 5 |
| IBL | Washington Department of Health Information by Location Mapping Tool |
| LEED | Leadership in Energy and Environmental Design |
| LEP | Limited English Proficiency |
| $L_{eq}(h)$ | hourly equivalent sound level |
| LSMC | Lake Stevens Municipal Code |
| LWCF | Land and Water Conservation Fund |
| MMPA | Marine Mammal Protection Act |
| MOA | Memorandum of Agreement |
| MP | milepost |
| MSAT | Mobile Source Air Toxics |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NAC | Noise Abatement Criteria |

| Acronym/Abbreviation | Definition |
|---|---|
| NEPA | National Environmental Policy Act |
| NFIP | National Flood Insurance Program |
| NHS | National Highway System |
| $NO_2$ | nitrogen dioxide |
| NOAA | National Oceanic and Atmospheric Administration |
| NPDES | National Pollution Discharge Elimination System |
| NR | National Register |
| NRCH | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NWI | National Wetlands Inventory |
| NWIFC | Northwest Indian Fisheries Commission |
| $O_3$ | ozone |
| Pb | lead |
| PEL | Planning and Environmental Linkages |
| PGIS | Pollution Generating Impervious Surface |
| PHS | Priority Habitats and Species |
| PM | particulate matter |
| PSCAA | Puget Sound Clean Air Agency |
| RCW | Revised Code of Washington |
| SCC | Snohomish County Code |
| SEPA | State Environmental Policy Act |
| SME | Subject Matter Expert |
| $SO_2$ | sulfur dioxide |

| Acronym/Abbreviation | Definition |
|---|---|
| SR | State Route |
| TTC | Tulalip Tribal Code |
| U.S. | United States |
| U.S.C. | United States Code |
| USACE | United States Army Corps of Engineers |
| USDOT | United States Department of Transportation |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| US 2 Trestle PEL Study | US 2 Trestle Capacity Improvements and Westbound Trestle Replacement Planning and Environmental Linkage Study |
| VMT | vehicle miles traveled |
| WAC | Washington Administrative Code |
| WDFW | Washington Department of Fish and Wildlife |
| WDNR | Washington State Department of Natural Resources |
| WHR | Washington Historic Register |
| WISAARD | Washington Information System for Architectural and Archaeological Records Data |
| WSDOT | Washington State Department of Transportation |
| WUI | wildland-urban interface |

# Chapter 1 Introduction

## 1.1 Study Background and Description

The Washington State Department of Transportation (WSDOT) is conducting the US 2 Trestle Capacity Improvements and Westbound Trestle Replacement Planning and Environmental Linkage Study (US 2 Trestle PEL Study) under the 23 United States Code (U.S.C.) 168 PEL authority, which requires collecting baseline environmental data and documenting existing conditions to support the development and screening of alternatives.

The US 2 trestle, including the structures over the Snohomish River and Ebey Slough, in Snohomish County connects US 2 to Interstate 5 (I-5) on the west side and the interchanges of State Route (SR) 204 and 20th Street Southeast on the east side (refer to Figure 1-1).

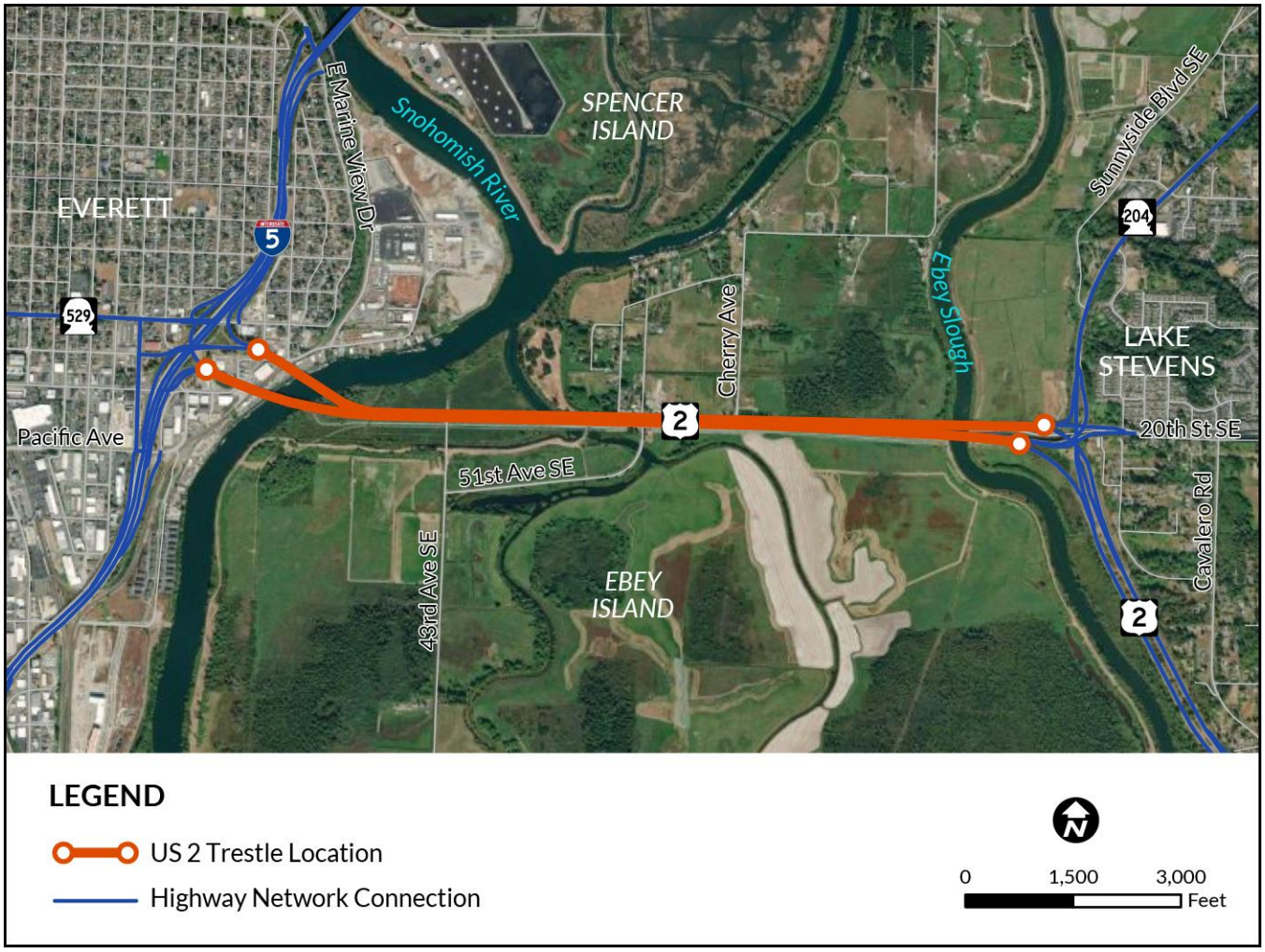
The US 2 trestle is the only direct route across the Snohomish River, Deadwater Slough, and Ebey Slough from eastern Snohomish County cities, such as Lake Stevens and Snohomish, to downtown Everett and the I-5 corridor. On a national level, US 2 begins in Everett, Washington and extends eastward to St. Ignace, Michigan. The significance of this segment of US 2 as a highway has been formalized through the following federal and state designations:

- Included in the National Highway System by the U.S. Department of Transportation.
- Classified as a federal and state Urban Principal Arterial.
- Identified as part of a Washington state scenic byway (the Cascade Loop).
- Identified as part of a National Scenic Byway (Stevens Pass Greenway).
- Designated as a Highway of Statewide Significance by the Washington State Legislature.
- Designated by WSDOT as a T-2 truck freight corridor.

With recent and locally planned population and employment growth in the area, traffic and traffic back-ups have increased on and near this segment of US 2, especially westbound in the morning and eastbound in the afternoon. Additionally, the structures that comprise the US 2 trestle, including its east and west connections, are aging and do not meet current seismic standards in some areas.

In recent years, several studies have identified needed short- and long-range improvements to this segment of US 2. Starting in 2018, WSDOT conducted a study focused on replacement and improvement options for the US 2 westbound trestle span, bounded by I-5 and SR 9. The key finding of that study was that a larger study area is required to adequately consider traffic bottlenecks and assess future conditions, evaluate reasonable alternatives, and develop long-term solutions. In 2022, the City of Everett launched the I-5/US 2 Interchange Planning Study to identify improvements to the interchange and connecting city streets. Also in 2022, the Washington State Legislature authorized funding for this US 2 Trestle PEL Study with a specific request to consider options to enhance transit and multimodal mobility.

**Figure 1-1. Location of US 2 Trestle and East and West Connections**




## 1.2 Purpose of Report

This report documents the existing conditions in the preliminary study area (refer to Section 1.4) for the following environmental resources:

- Earth (geology and soils).
- Air quality.
- Stormwater best management practice (BMP) sites and retrofit priorities.
- Wetlands and other waters (including wetland and other mitigation sites, and navigable waters).
- Chronic environmental deficiencies.
- Special flood hazard areas.
- Habitat connectivity.
- Fish passage barriers.

- Threatened and endangered species (plants, fish, and wildlife).
- Noise.
- Hazardous materials contamination sites.
- Publicly owned parks, recreational areas, and refuges.
- Cultural resources (including historic bridges, built historic resources, and archaeological resources).
- Social and community resources.

Each resource chapter has the relevant legal framework and guidance, data sources and collection methods used to identify existing conditions, and descriptions and figures of the existing conditions.

## 1.3 Laws, Regulations, and Guidance Relevant to All Resources

The following federal and state laws, regulations, and guidance provide a framework for all environmental resources analyzed in this report:

- WSDOT Environmental Manual Chapter 200, environmental considerations in transportation planning (WSDOT 2024a): Describes how the consideration of environmental context informs decisions during transportation planning and how the planning process can inform WSDOT's environmental review process, including through the federal PEL process. Chapter 200.04(6) specifically notes that PEL authority 23 U.S.C. 168 requires multidisciplinary consideration of potential effects on the human and natural environment.
- NEPA 42 U.S.C. 4321-4370: These rules are further refined by the FHWA, the Federal Railroad Administration, and the Federal Transit Administration in 23 Code of Federal Regulations (CFR) 771. It is anticipated that the Purpose and Need, range of alternatives, and other planning decisions and analysis developed during the US 2 Trestle PEL Study will be adopted into a future project-level NEPA process, and that FHWA will use the PEL Study findings to support its determination of the NEPA class of action.
- State Environmental Policy Act (SEPA) and state implementing regulations Washington Administrative Code (WAC) 197-11 and WAC 468-12: WSDOT is the SEPA lead agency. During the future environmental review process, after the US 2 Trestle PEL Study, WSDOT will determine the appropriate level of environmental review and documentation to satisfy SEPA requirements. This may include adopting the NEPA document for SEPA, per WAC 197-11-610.
- The Washington State Healthy Environment for All (HEAL) Act Revised Code of Washington (RCW) 70A.02: Requires WSDOT to assess impacts to overburdened communities and vulnerable populations for a wider range of agency actions and activities, including transportation grants and projects with a cost of $15 million or more.

## 1.4 Preliminary Study Area

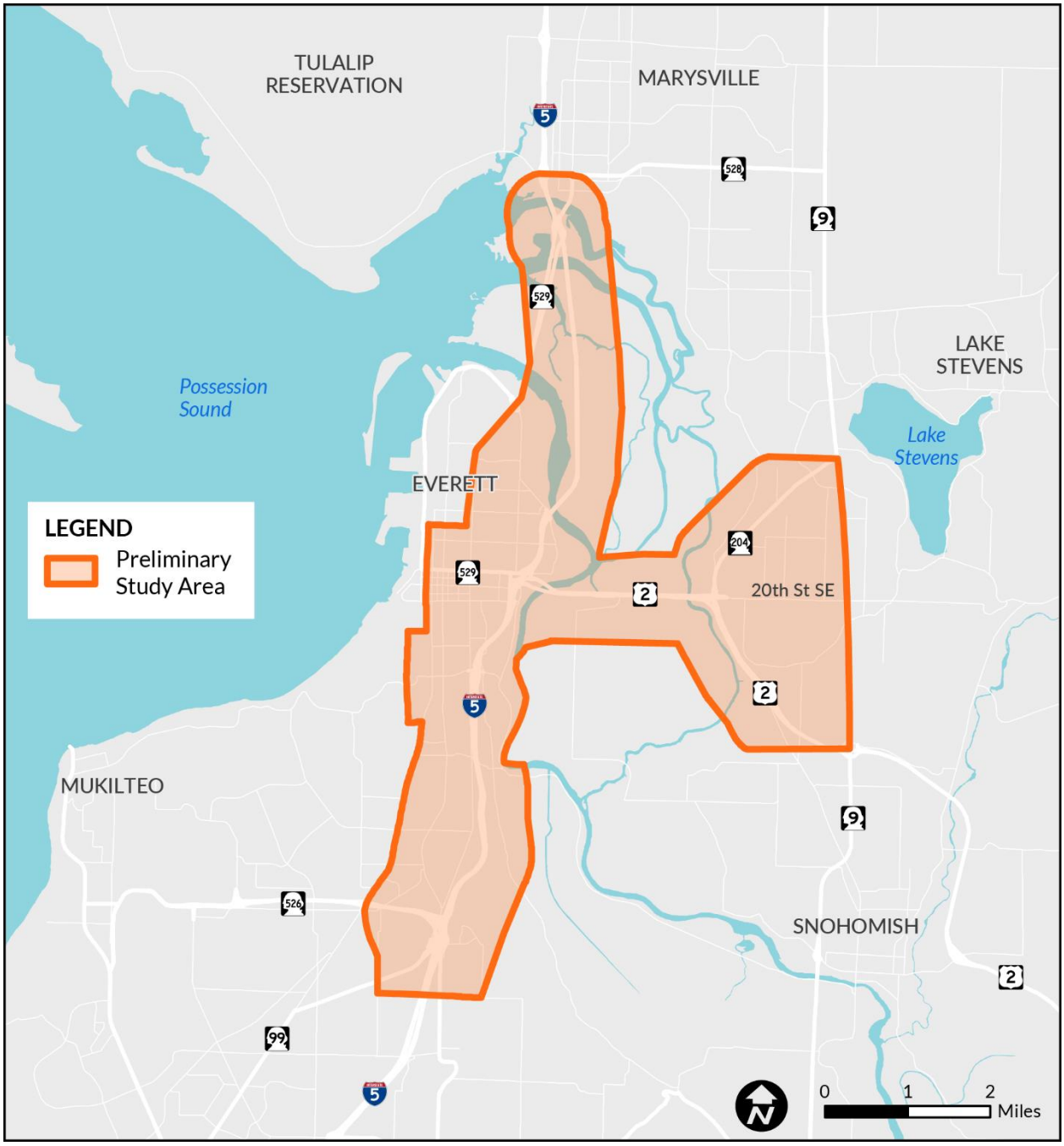
For all resources, the study area within which environmental existing conditions have been identified is the US 2 Trestle PEL Study's preliminary study area, as shown in Figure 1-2. The social and community resources analysis includes an additional larger study area for demographic analysis, as described further in Chapter 15.

The preliminary study area is entirely within Snohomish County and includes portions of the cities of Everett, Lake Stevens, Marysville, Snohomish, and Tulalip tribal land. It includes areas of potential direct effects (where infrastructure changes to the US 2 trestle and its connections could occur) and areas of traffic pattern influence (where traffic changes are expected to be prominent as a result of modifications to the US 2 trestle).

On the west side of the US 2 trestle, the preliminary study area limits include the approximately 11-mile segment of I-5 from just south of the connection with SR 99 and SR 526 to just north of the connection of I-5 and SR 529 and downtown Everett. On the east side of the US 2 trestle, the preliminary study area limits include the segments of SR 204 and US 2 east to SR 9 and the local streets and the approximately 3-mile segment of SR 9 between SR 204 and US 2.

The preliminary study area generally extends about 0.5 mile on each side of these major roadways. To more fully account for areas with potential traffic pattern changes and coincide with US census tracts, the preliminary study area extends farther than 0.5 mile in a few locations. West of the US 2 trestle, the preliminary study area extends about 1 mile to the west of I-5 in downtown and north Everett. East of the US 2 trestle, the preliminary study area encompasses the entire developed area west of SR 9 between SR 204 and US 2, including about 1.5 miles of 20th Street Southeast extending from the east end of US 2 in Lake Stevens.

**Figure 1-2. US 2 Trestle PEL Study – Preliminary Study Area**




## 1.5 Key Points of Environmental Existing Conditions

Table 1-1 summarizes key points from the environmental existing conditions analysis, with a focus on the area immediately surrounding the US 2 trestle and its east and west connections where possible. Key points of the social and community resources analysis includes the larger preliminary engagement area, representing communities that potentially use the US 2 trestle.

**Table 1-1. Key Points of Environmental Existing Conditions**

| Environmental Resource | Key Points |
|---|---|
| Earth (Geology and Soils) | • Generally flat topography with designated prime farmland surrounding most of the US 2 trestle and east end connections.<br>• Landslide hazard areas near the US 2 trestle's east end connections.<br>• Seismic ground shaking potential and soils with moderate to high liquefaction susceptibility along the full length of the US 2 trestle structures and near portions of east and west connections. |
| Air Quality | • Preliminary study area meets all ambient air quality standards and is in an area designated as in attainment for all criteria pollutants. |
| Stormwater Best Management Practice Sites and Retrofit Priorities | • Ebey Slough near the US 2 trestle does not currently meet state water quality standards.<br>• Stormwater treatment near the US 2 trestle primarily provided by ponds.<br>• WSDOT identifies all of US 2 in the preliminary study area on its draft list of stormwater retrofit priority segments. |
| Wetlands and Other Waters | • Numerous mapped wetlands and streams on either side of the US 2 trestle.<br>• Three WSDOT environmental mitigation sites adjacent to US 2 trestle and west/east end connections.<br>• Two navigable waterways (Snohomish River, Ebey Slough) pass beneath US 2 trestle structures. |
| Chronic Environmental Deficiencies (CED) | • No CED sites in preliminary study area. |
| Special Flood Hazard Areas | • Entire length of the US 2 trestle crosses existing Snohomish River regulatory floodways. FEMA is expected to remap the flood areas over the next several years, once levee recertification is completed. |
| Habitat Connectivity | • One roadway segment on US 2 just east of the trestle is ranked as medium-priority for ecological stewardship and wildlife-related safety.<br>• Three high-priority roadway segments for pollinator habitat based on urban gateway rankings in the immediate US 2 trestle vicinity: one at each end of the US 2 trestle and one on SR 204 near the trestle's east end connection. |
| Fish Passage Barriers | • No WSDOT fish passage barriers in immediate vicinity of US 2 trestle; 2 fish barriers at waterbodies under SR 204 closest to the trestle's east end connection.<br>• Eleven WDFW identified barriers at local roads north and south of the US 2 trestle and near its east end connections. |
| Threatened and Endangered Species (Fish, Wildlife and Plants) | • Snohomish River and Ebey Slough have documented occurrence of federal-listed fish species, including where they pass under the US 2 trestle.<br>• Waterways near and under the US 2 trestle are identified as Essential Fish Habitat for several federally listed species.<br>• Other ESA listed species that may require consideration include the Southern Resident killer whale, marbled murrelet, yellow-billed cuckoo, North American wolverine, and northwestern pond turtle.<br>• No federal-listed plant species are identified in the preliminary study area. Three state threatened and endangered plant species identified in Snohomish County. |

| Environmental Resource | Key Points |
|---|---|
| Noise | • No existing or planned noise walls in immediate vicinity of US 2 trestle or its connections.<br>• Limited noise-sensitive land uses (including residential) immediately near US 2 trestle. Large residential areas in Everett north of west end connections and in Lake Stevens near east end connections. |
| Hazardous Materials Contamination Sites | • No known hazardous materials contamination sites in immediate vicinity of US 2 trestle and east end connections.<br>• Six sites with status “awaiting cleanup” or “cleanup started” as determined by the Washington State Department of Ecology near west end connections. |
| Publicly Owned Parks, Recreational Areas, and Refuges | • Two potential Section 4(f) properties adjacent to the US 2 trestle: WDFW wildlife areas and Snohomish River Estuary open space.<br>• No Section 6(f) properties adjacent to the US 2 trestle. |
| Cultural Resources | • No historic bridges and listed built historic properties in immediate vicinity of the US 2 trestle and east end connections. Six listed or historic-register eligible properties within 0.5 mile of the US 2 trestle’s west end connections.<br>• 49 additional historic-aged resources are in the immediate vicinity of the west end connections and the US 2 trestle but have not been inventoried and/or evaluated for historic register eligibility.<br>• One recorded archaeological site in the immediate vicinity of the US 2 trestle, which is identified as a high-risk area for archaeological resources. |
| Social and Community Resources | • Higher concentrations of Hispanic/Latino residents (13 percent vs 11 percent); population-level poverty rates (about 8.4 percent compared to about 7.5 percent); and people living with disabilities (15.5 percent vs 13.4 percent) in the demographic study area compared to Snohomish County.<br>• About 6,000 households (5 percent) in the demographic study area do not have a vehicle. Limited transit options affect mobility, particularly for overburdened communities, in the demographic study area. Active transportation connections are described as challenging to navigate.<br>• Of 71 census tracts in the study area, 28 tracts (39 percent) located in and around Everett and along I-5 show high environmental health risks (ranks 9 or 10) in Washington Department of Health's assessment.<br>• Most community resources are concentrated in downtown and south Everett. Growing populations east of the US 2 trestle are increasing pressure on existing infrastructure. Communities living east of the US 2 trestle report being reliant on the US 2 trestle to access services and amenities to the west. |

# Chapter 2 Earth (Geology and Soils)

This chapter summarizes existing conditions for earth (geology and soils) in the preliminary study area, including the general topographic and geologic setting, significant features and landforms, soils and geologic units, prime and important farmland, geologic hazards, and available WSDOT geotechnical reports.

## 2.1 Relevant Laws, Regulations, and Guidance

The following laws, regulations, plans, policies, and guidance documents inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for earth (geology and soils). A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 2.1.1 Federal

- 7 CFR 658 Farmland Protection Act: Intended to minimize the impact of federal programs on the conversion of prime or unique farmland (defined in part by soil types) to nonagricultural uses.

### 2.1.2 State

- Governor's Directive on Acquisitions of Agricultural Resource Land (WAC 365-190-050): Provides criteria for defining agricultural lands and conservation of agricultural resource lands.
- WSDOT, Geotechnical Design Manual M46-03.16, February 2022 (WSDOT 2022): Suggests resources during the project planning phase, such as soil surveys, geologic maps, and topographic maps.
- WSDOT, Environmental Manual, Chapters 420 and 455 (WSDOT 2024a): Outlines considerations during the environmental review process for earth (geology and soils) and land use (including farmland) from planning through construction.

### 2.1.3 Local

#### 2.1.3.1 City of Everett

- Everett Municipal Code, Chapter 19.37.080, Geologically hazardous areas: Regulates development in geologically hazardous areas, including landslide hazard areas, seismic/liquefaction hazard areas, and erosion hazard areas.

#### 2.1.3.2 City of Lake Stevens

- Lake Stevens Municipal Code, Chapter 14.88, Critical Areas, Part VI, Geologically hazardous areas: Regulates development in areas susceptible to erosion, sliding, earthquakes, liquefaction, or other geological events.

#### 2.1.3.3 City of Marysville

- Marysville Municipal Code, Chapter 22E.010, Critical Areas Management Overview, Article IV, Geologic Hazard Areas: Regulates any activity that occurs in, on, or within 300 feet of, or potentially affects, a geologic hazard area, defined as lands or areas characterized by geologic, hydrologic,

and topographic conditions that render them susceptible to potentially significant or severe risk of landslides, erosion, or seismic activity.

#### 2.1.3.4 City of Snohomish

- Snohomish Municipal Code, Chapter 14.275, Geologically Hazardous Areas: Regulates development in areas designated by the city planner as potentially not suited to development based on public health, safety, or environmental standards because of such areas' susceptibility to erosion, sliding, earthquake, or other geological processes as designated by WAC 365-190-080(4).

#### 2.1.3.5 Snohomish County

- Snohomish County Code, Chapter 30.62B, Geologically hazardous areas: Provides regulations for the protection of public safety, health, and welfare pursuant to the Growth Management Act (Chapter 36.70A RCW) in geologically hazardous areas, including erosion hazard, landslide hazard, seismic hazard, mine hazard, volcanic hazard, and tsunami hazard areas.

## 2.2 Data Sources and Data Collection Methods

Data from the following sources were collected for the desktop identification of existing geologic, seismic, and soil conditions in the preliminary study area. Data from these sources were documented and presented in narrative descriptions with supplemental maps and tables.

- U.S. Geological Survey (USGS) Soil Maps (Minard 1985a, 1985b, 1985c): Provides federal-level information on topography, geologic setting and features, and mapped soil types.
- Washington State Department of Natural Resources Division of Geology and Earth Resources (Smith 1976, WDNR n.d.-a): Provides state-level mapping information on topography, geologic features, soil types, and potential geologic hazards (such as landslide areas and seismic hazards).
- U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) mapping (NRCS 2022): Identifies the location of soil types that are classified as prime and important farmlands per the Farmland Protection Act.
- Snohomish County Hazard Viewer: Provides county-level information on earthquake, liquefaction, earth movement (landslide), tsunami potential, and other geologic hazards that may influence the evaluation of alternatives (Snohomish County Emergency Management n.d.).
- City of Everett, Lake Stevens, Marysville, and Snohomish critical area maps for city-level information on landslide hazards, erosion hazards, and liquefaction (seismic) susceptibility that may influence the evaluation of alternatives (City of Everett 2024, City of Lake Stevens 2024, City of Marysville 2024).
- WSDOT's unstable slope database: Provides information about any historical problems in the preliminary study area.
- Coordination with WSDOT staff to obtain readily available WSDOT geotechnical reports within the preliminary study area and logs from existing borings: Provides information on soil indicators, such as depth to groundwater and potentially liquefiable soils, which may influence the evaluation of alternatives.

## 2.3 Existing Conditions

### 2.3.1 General Topographic and Geologic Setting

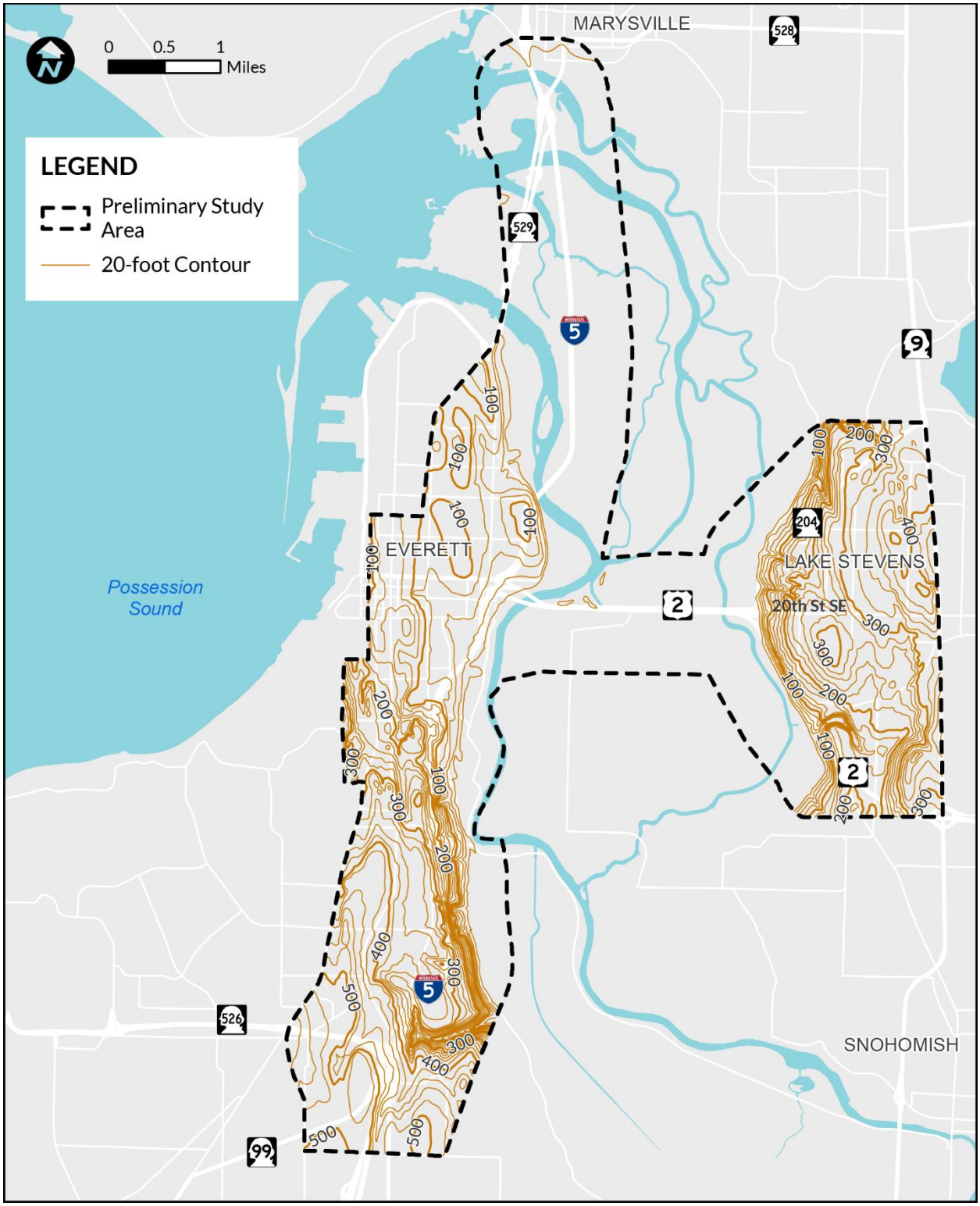
The preliminary study area includes portions of the I-5 corridor and the US 2 corridor, including its crossings of the Snohomish River, Deadwater Slough, and Ebey Slough. Figure 2-1 shows topography in the preliminary study area using 20-foot contour lines. South of the SR 526 interchange at the southern end of the preliminary study area, I-5 runs along a topographically flat area at an elevation of approximately 500 feet (Minard 1985a, 1985b, 1985c). Moving north, between the SR 526 and 41st Street interchanges, I-5 runs along a steep slope. The topography along the US 2 trestle and I-5, approximately 1.25 miles north and south of the I-5/US 2 interchange, is relatively flat and close to sea level. At the east end of the US 2 trestle, where US 2 turns south and SR 204 heads north, US 2 runs south along another steep slope for approximately 1.25 miles and SR 204 runs north along a steep slope for approximately 1.25 miles. The remainder of SR 204 and US 2 in the preliminary study area runs along relatively flat topography.

### 2.3.2 Significant Features and Landforms

There are no significant, or notable, geologic features or landforms, such as a prominent hill or butte, within the preliminary study area (Minard 1985a, 1985b, 1985c).

The preliminary study area is located within the Snohomish River delta and the estuary where the Snohomish River comes in contact with the saltwater of Possession Sound. This depositional environment created much of the delta's soil conditions.

**Figure 2-1. Topographic Map of the Preliminary Study Area**




Source: USGS 2023

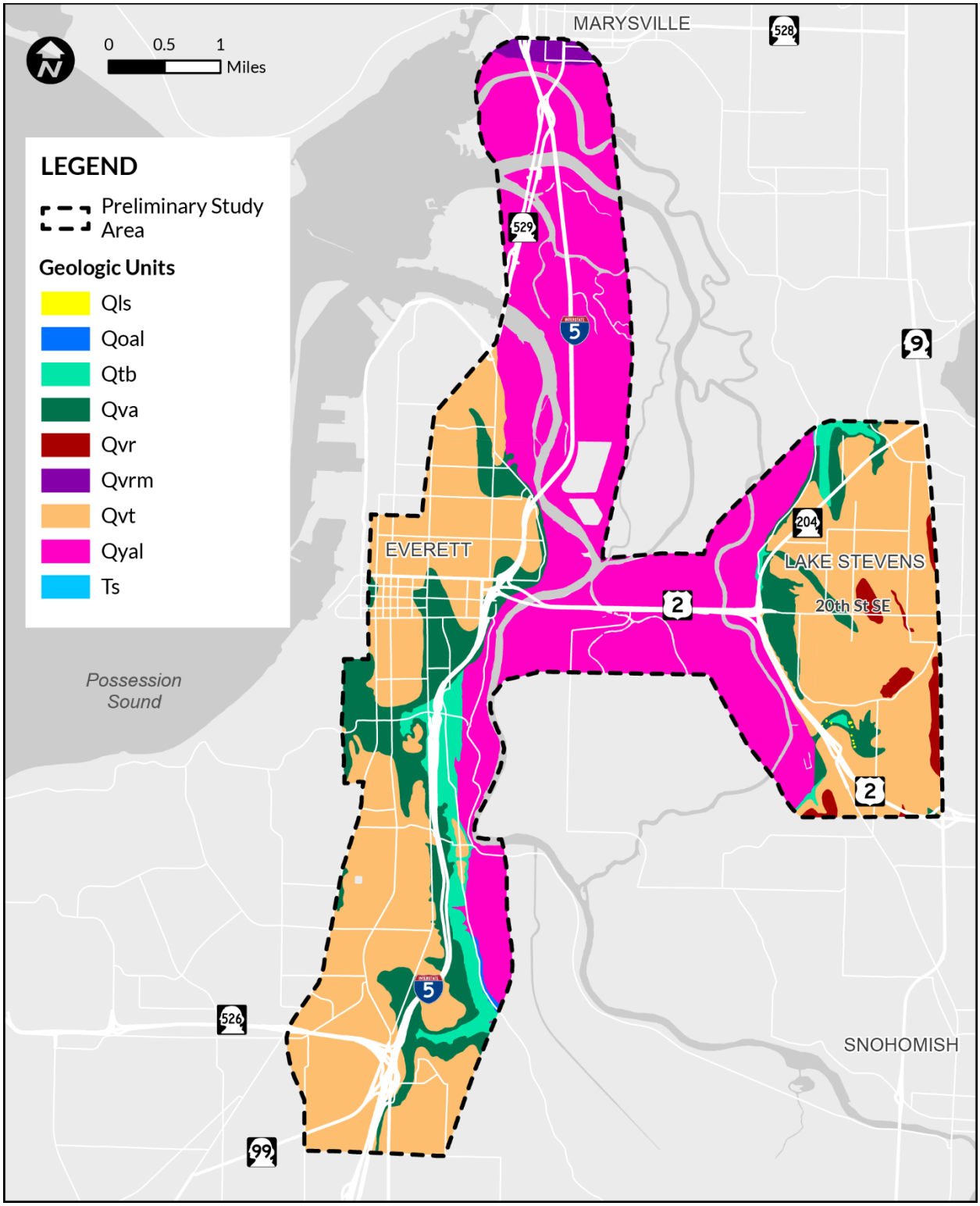
### 2.3.3 Soils and Geologic Units

Based on a review of the geologic maps for the area (Minard 1985a, 1985b, 1985c; Washington State Department of Natural Resources [WDNR] 2023), the following soils and geologic units are located within the preliminary study area:

- Recent Alluvium (Qyal): Mostly sand and gravel deposited by streams. May contain some silt, clay, and organic material.
- Vashon Lodgement Till (Qvt): Mixture of clay, silt, sand, pebbles, and cobbles with occasional large boulders. Extremely compact.
- Vashon Recessional Outwash (Qvr) and Marysville Sand Member (Qvrm): Loosely compacted sand and gravel.
- Older Alluvium (Qoal): Mostly sand and gravel with some silt and clay; occurs as alluvial fans.
- Advance Outwash (Qva): Sand with gravel and some silt.
- Transitional Beds (Qtb): Clay silt and fine sand.
- Landslide Deposits (Qls): Till and advance outwash units that have been deposited during a landslide event.
- Sedimentary Rocks (Tertiary) (Ts): Shale, siltstone and sandstone.

Within the preliminary study area, the primary geologic units near roadways are Recent Alluvium, Advance Outwash, Vashon Lodgement Till, and Transitional Beds. Generally, materials expected to be encountered near the surface are silt and sand with varying levels of gravel or clay. Figure 2-2 shows the location of these geologic units in the preliminary study area. The geologic units are classified according to their physical characteristics, such as soil texture, and according to their use for designing and building structures using soil and rock properties, such as their stability.

**Figure 2-2. Geologic Units in the Preliminary Study Area**




Source: WDNR 2023

### 2.3.4 Prime and Important Farmland

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. Farmlands of statewide importance are designated by state agencies and generally include areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods (NCRS 2023).

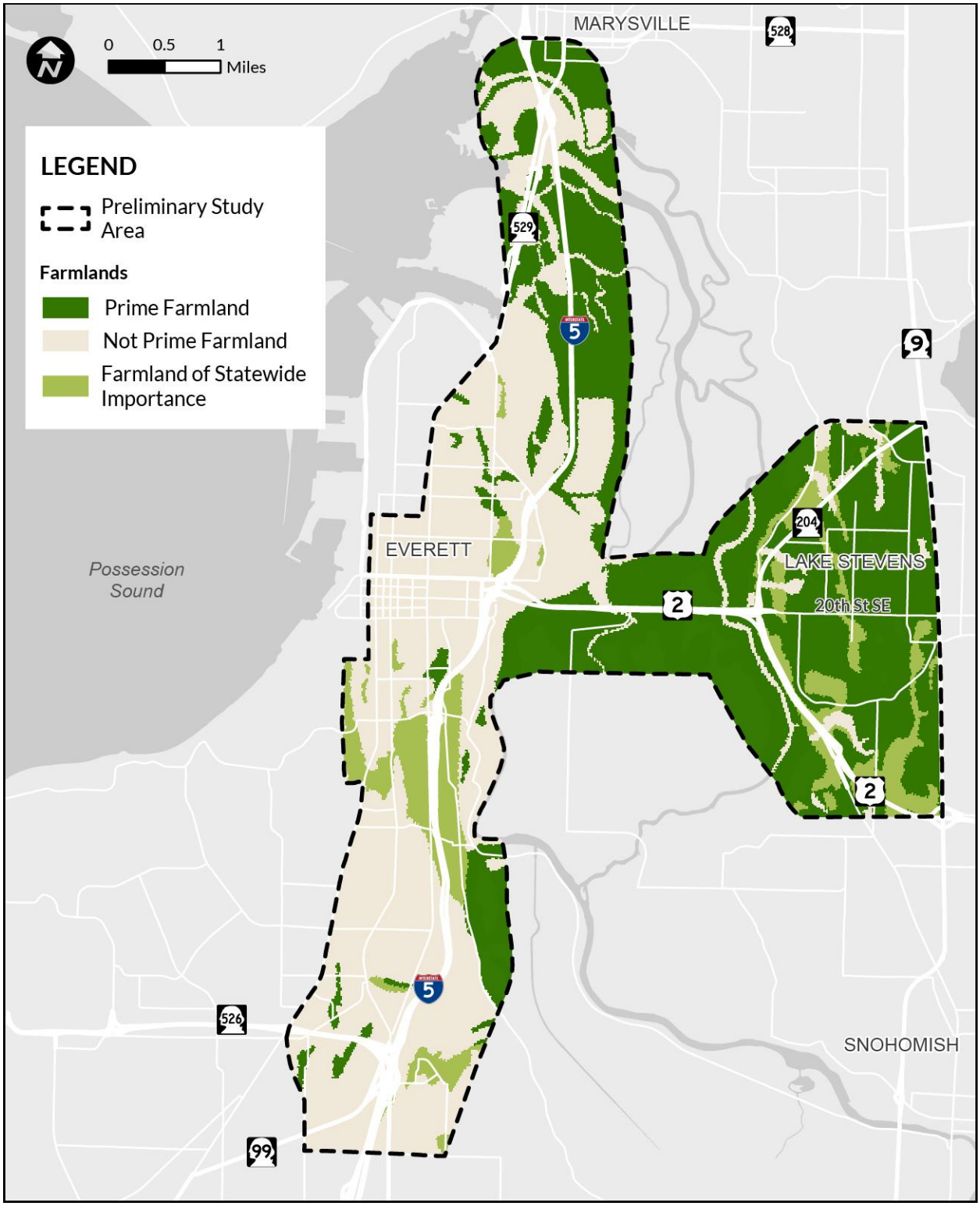
To encourage and facilitate the wise use of the nation's prime farmlands, the U.S. Department of Agriculture classifies lands to identify the extent and location of prime and important farmlands (NRCS 2024). Within the preliminary study area, there are three main classifications: not prime farmland, farmlands of statewide importance, and prime farmland (if drained and either protected from flooding or not frequently flooded during the growing season) (NRCS 2022). Figure 2-3 shows prime and important farmlands in the preliminary study area.

At the southern end of the preliminary study area, most of the land along I-5 south of the US 2 interchange is classified as not prime farmland. However, there is farmland of statewide importance along approximately 2 miles of I-5 south of downtown Everett.

Moving north through the preliminary study area, most land north and south of the US 2 trestle is classified as prime farmland if drained. East of the US 2 trestle, most land adjacent to US 2 and SR 204 is classified as prime farmland or farmland of statewide importance.

Along I-5 immediately north of the US 2 interchange, the area is designated as not prime farmland. The northernmost approximately 3 miles of I-5 in the preliminary study area is adjacent to large areas of prime farmland if drained.

**Figure 2-3. Prime and Important Farmland in the Preliminary Study Area**




Source: NRCS 2022

### 2.3.5 Geologic Hazards

Potential geologic hazards within the preliminary study area, such as landslides, tsunami hazards, and seismic-related (earthquake and liquefaction) hazards, are summarized in the following subsections.

#### 2.3.5.1 Landslide Hazards

Snohomish County defines landslide hazard areas as lands that are subject to mass earth movement due to a combination of geologic, topographic, and hydrologic factors with a vertical height of 10 feet or more (Snohomish County n.d.-b). Landslides can occur quickly or progressively over time and can be either deep-seated or shallow. Removing materials at the toe of the slope can increase the risk of landslides.

Within the preliminary study area, a number of identified landslide hazard areas occur along the I-5 corridor, US 2 corridor, and SR 204 corridor, as shown in Figure 2-4. From south to north, landslide hazard areas include the following:

- On the east side of I-5 near the interchange with SR 526.
- Near I-5 and 12th Street Northeast in Everett.
- East side of I-5 between Mileposts (MP) 196 and 197 on Smith Island.
- Both sides of I-5 about 0.25 mile south and 0.5 mile north of the crossing of Steamboat Slough.
- West side of I-5 for about 0.5 mile north of Ebey Slough.

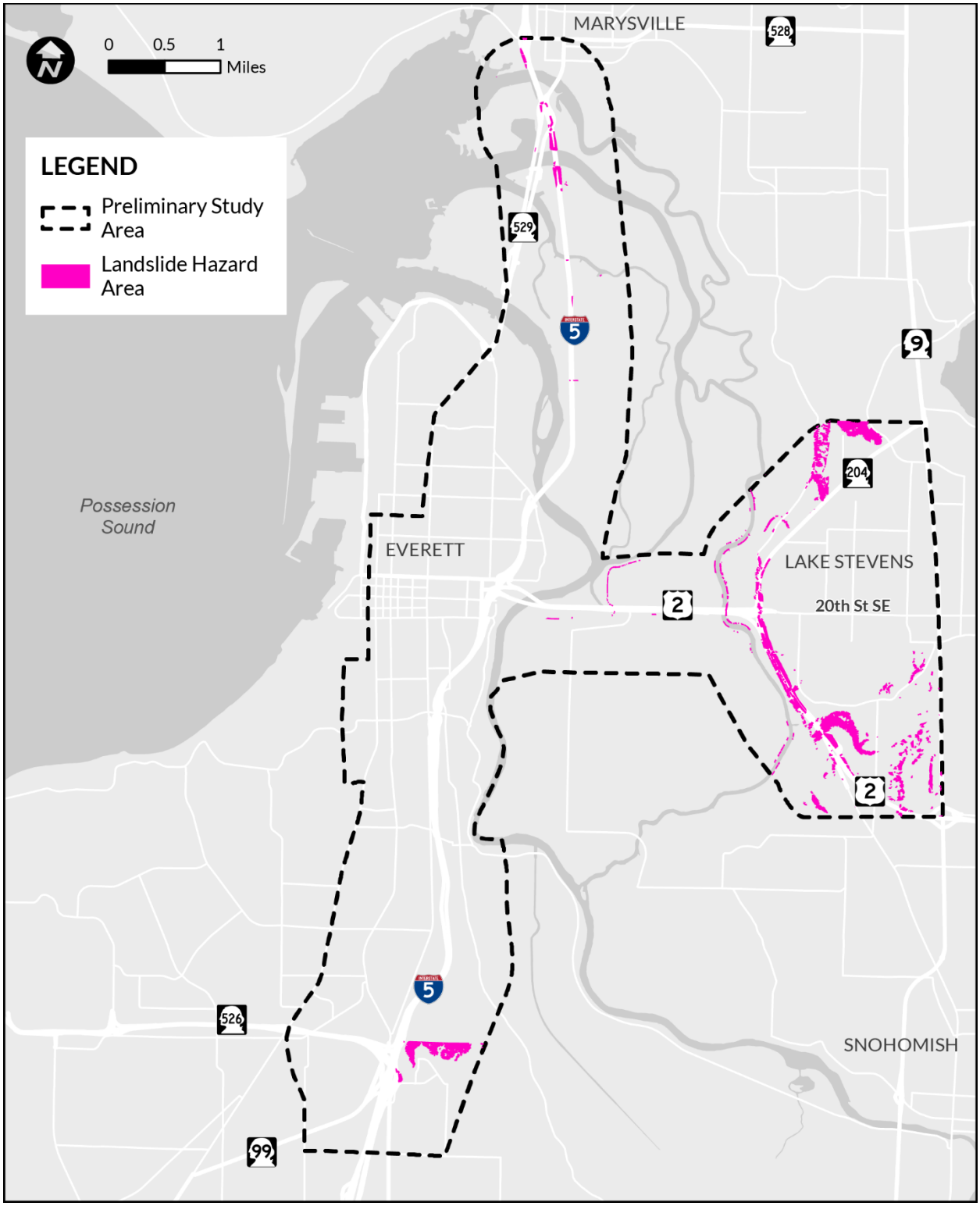
Along US 2 and in the eastern portion of the preliminary study area, from west to east, landslide hazard areas include the following:

- Both sides of US 2 around MP 1.
- Both sides of Ebey Slough under the US 2 trestle.
- US 2 south of the interchange with SR 204.
- Both sides of SR 204, approximately 0.5 mile north of the US 2 interchange.

#### 2.3.5.2 Tsunami Hazards

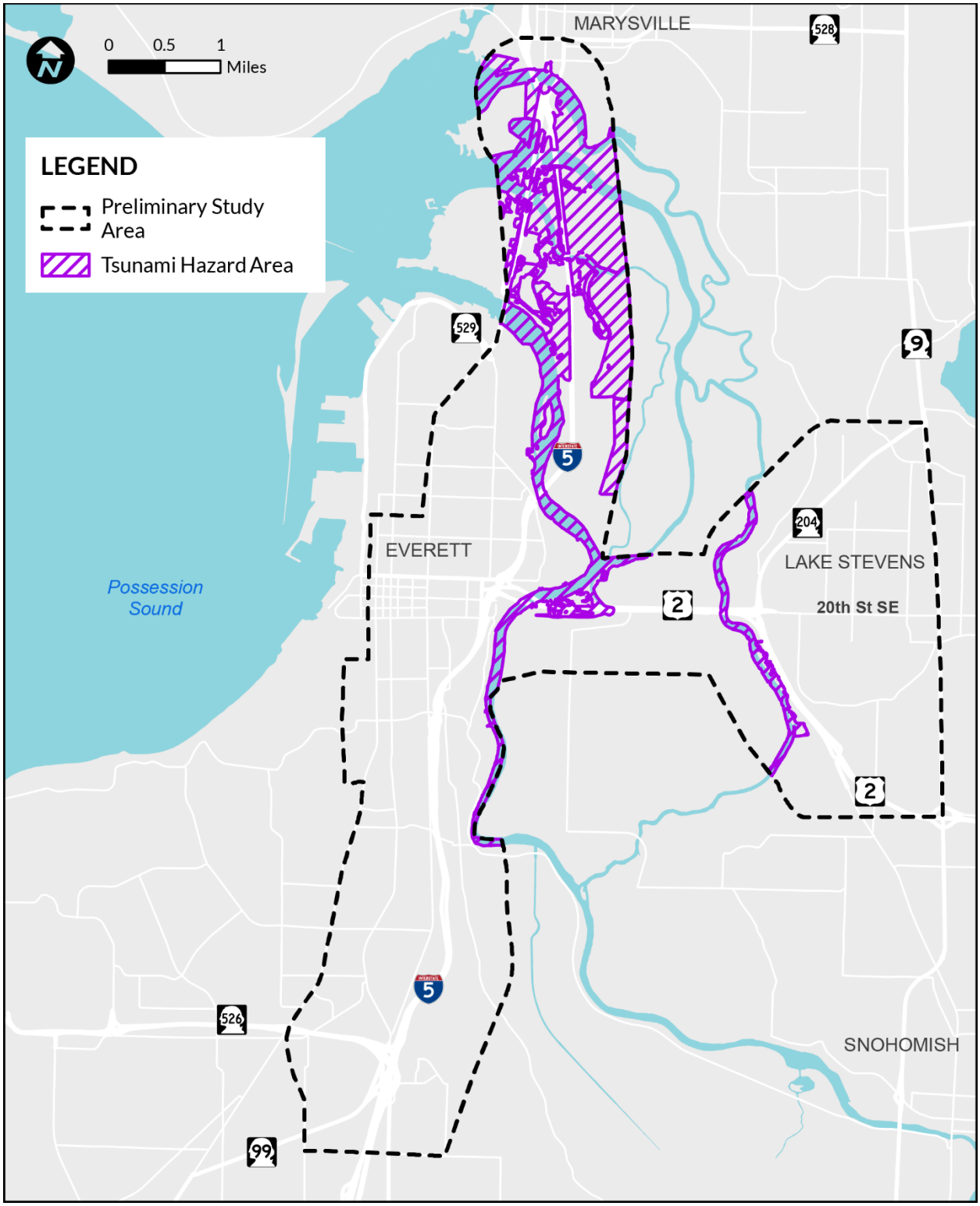
Tsunamis are a series of waves caused by underwater earthquakes or volcanic eruptions (WDNR n.d.-a). A tsunami's speed depends on the depth of the water it is traveling through. Figure 2-5 shows the locations of tsunami hazard areas in the preliminary study area, which includes portions of I-5 north of the Snohomish River and of US 2 just east of the Snohomish River and Ebey Slough under the US 2 trestle (Snohomish County Emergency Management n.d.).

**Figure 2-4. Landslide Hazard Areas in the Preliminary Study Area**




Source: Snohomish County n.d.-b

**Figure 2-5. Tsunami Hazard Areas in the Preliminary Study Area**




Source: Snohomish County Emergency Management n.d.

#### 2.3.5.3 Seismic Hazards

The preliminary study area is in a seismically active area (Snohomish County Emergency Management n.d.). The seismicity of the region is the result of the tectonic plates, including the Juan de Fuca Plate and the North American Plate, at the Cascadia Subduction Zone.

##### Ground Shaking

The following three earthquake zones could cause ground shaking within the preliminary study area (WDNR n.d.-a):

- Shallow crustal zone: Capable of producing earthquakes with magnitudes up to 7.5.
- Deep subcrustal zone: Capable of producing earthquakes with magnitudes up to 7.1.
- Interpolate zone (Cascadia Subduction Zone): Capable of producing strong earthquakes. Data suggests the magnitude of such an earthquake may range from 8.0-9.0. The last earthquake in this zone occurred approximately 300 years ago.

The most recent major earthquake that caused noticeable shaking in the preliminary study area was the 2001 Nisqually earthquake.

##### Fault-Related Ground Rupture

Based on the USGS Fault and Fold Database and Washington State Department of Natural Resources (WDNR), no known active faults cross the preliminary study area (WDNR 2023). The closest fault is the South Whidbey Island Fault Zone, approximately 2 miles southwest of the preliminary study area.

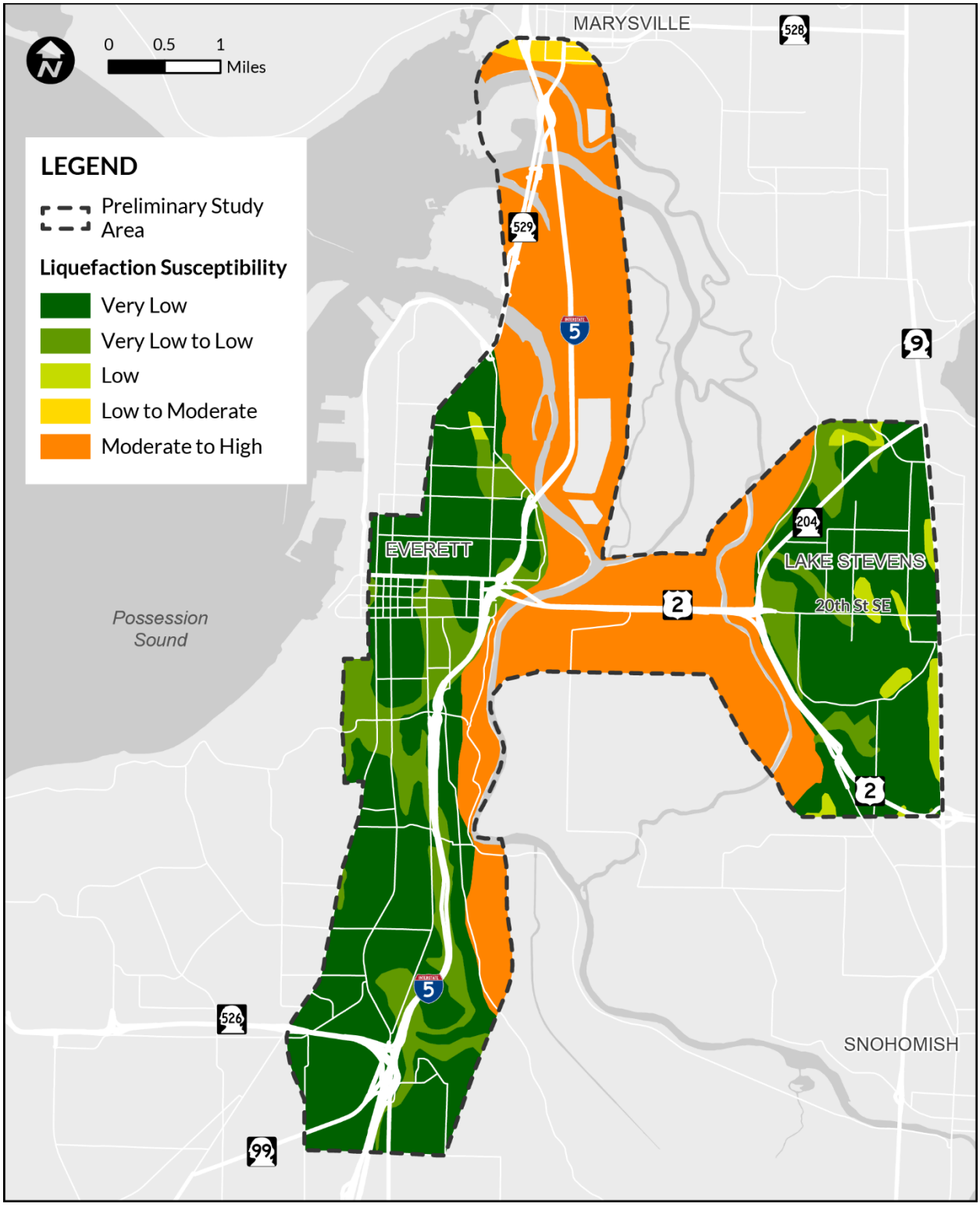
##### Liquefaction

Liquefaction is a phenomenon where saturated soils take on the characteristics of a liquid during the intense ground shaking of an earthquake. When the soil liquefies, it becomes a less stable base for structures and their foundations. During earthquakes, liquefaction occurring beneath structures can cause major damage, such as tilting or even collapse.

The US 2 trestle and portions of I-5 just north and south of the US 2 interchange span an area identified by WDNR as having a moderate to high liquefaction susceptibility, as shown in Figure 2-6 (WDNR 2023). Notably, alluvial deposits in the Snohomish River delta are susceptible to liquefaction. Where applicable, site-specific studies may be warranted to evaluate the liquefaction potential of alluvial deposits. For safety and stability, structures in areas that are susceptible to liquefaction require ground improvements to mitigate the liquefaction potential or a structural design to withstand the potential liquefaction.

The areas west of I-5 in Everett and east of the US 2 trestle in Lake Stevens are generally classified as having very low to low liquefaction susceptibility.

**Figure 2-6. Liquefaction Susceptibility Zones in the Preliminary Study Area**




Source: Snohomish County Emergency Management n.d.

### 2.3.6 Key Points

The topography of the area immediately surrounding the existing US 2 trestle is generally flat and surrounded by prime farmland. Landslide hazard areas are mapped near the east end connections to the US 2 trestle. Areas along the Snohomish River and Ebey Slough on either end of the US 2 trestle are identified as tsunami hazard areas. The entire preliminary study area is in a seismically active area with the potential for ground shaking. There is moderate to high liquefaction susceptibility along the full length of the US 2 trestle structures and near portions of its east and west connections. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 3 Air Quality

This chapter summarizes existing conditions for air quality in the preliminary study area, including regulated pollutants of concern called criteria pollutants, attainment status for criteria pollutants, and other regulated pollutants called mobile source air toxics.

## 3.1 Relevant Laws, Regulations, and Guidance

The following laws, regulations, plans, policies, and guidance documents inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for air quality. A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 3.1.1 Federal

- Clean Air Act (CAA) of 1970 and Clean Air Act Amendments (CAAA) of 1990: Defines the U.S. Environmental Protection Agency (EPA)'s responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer.
- National Ambient Air Quality Standards (NAAQS) established under the CAA: Identifies concentration standards for six criteria pollutants (carbon monoxide, lead, nitrogen dioxide, particle pollution, and sulfur dioxide). Primary standards provide public health protection and include protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.
- 40 CFR 93 Federal conformity regulations: Establishes policy, criteria, and procedures for demonstrating and assuring that transportation plans, programs, and projects conform to an applicable implementation plan developed under the CAA.
- FHWA Updated Interim Guidance on Mobile Source Air Toxics (MSAT) Analysis in NEPA Documents (FHWA 2023): Provides a tiered approach to determine when and how to analyze MSATs in the NEPA environmental review process for highways, and if a quantitative analysis is required to demonstrate the project's potential effects to MSAT emissions. MSATs are nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors, as identified by the EPA.

### 3.1.2 State

- WSDOT Environmental Manual, Chapter 425 (WSDOT 2024a): Contains policies to be followed when state transportation projects trigger air quality, GHG, or energy analyses.
- Washington Clean Air Act, RCW 70A.15: Defines Washington's responsibilities for implementing the CAA and CAAA and protecting and improving the state's air quality.
- WAC 173-420 state conformity regulations, including exempt projects in WAC 173-420-110 and WAC 173-420-120: Requires the state departments of ecology and transportation to develop criteria and guidance for demonstrating and ensuring conformity of transportation plans, programs, and

projects to the purpose of the state implementation plan for attaining and maintaining the NAAQS and meeting the requirements of the CAA and CAAA.

### 3.1.3 Local

- None at this time.

## 3.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for air quality in the preliminary study area. Data from these sources were documented and presented in narrative descriptions, with maps and tables as appropriate.

- EPA's AirData outdoor monitor values database (EPA 2024): Provides historical air pollutant concentrations at EPA-approved monitors.
- WSDOT Geographic Information System (GIS) Workbench layers and Washington State Department of Ecology (Ecology 2024a): Identifies locations of air quality maintenance and nonattainment areas in the preliminary study area to determine if a transportation conformity determination is required.

## 3.3 Existing Conditions

### 3.3.1 Criteria Pollutants

Under the authority of the CAA, EPA has identified several air pollutants as pollutants of concern nationwide and has established the NAAQS. These pollutants, known as "criteria pollutants," are carbon monoxide (CO), particulate matter with a diameter of 10 micrometers or less ($PM_{10}$), particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$), ozone ($O_3$), sulfur dioxide ($SO_2$), nitrogen dioxide ($NO_2$), and lead (Pb). The NAAQS are separated into two pollutant categories: Primary and Secondary standards (40 CFR 50). Primary standards were created to protect public health, and Secondary standards were established to protect public welfare and the environment.

Current NAAQS are listed in Table 3-1. Ecology and the Puget Sound Clean Air Agency (PSCAA) have the authority to adopt more stringent standards, although all current state and local standards are equivalent to the federal mandate.

**Table 3-1. National Ambient Air Quality Standards**

| Pollutant | Primary/ Secondary Standards | Averaging Time | Level | Statistical Form of the Standard |
|---|---|---|---|---|
| CO | Primary | 8-hour | 9 ppm | Not to be exceeded more than once per year. |
| CO | Primary | 1-hour | 35 ppm | Not to be exceeded more than once per year. |
| Pb | Primary and Secondary | Rolling 3-month average | 0.15 $\mu g/m^3$ | Not to be exceeded. |

| Pollutant | Primary/ Secondary Standards | Averaging Time | Level | Statistical Form of the Standard |
|---|---|---|---|---|
| $NO_2$ | Primary | 1-hour | 100 ppb | 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years. |
| $NO_2$ | Primary and Secondary | Annual | 53 ppb | Annual mean. |
| $O_3$ | Primary and Secondary | 8-hour | 0.070 ppm | Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years. |
| $PM_{2.5}$ | Primary | Annual | 9 µg/m$^3$ | Annual mean, averaged over 3 years. |
| $PM_{2.5}$ | Secondary | Annual | 15 µg/m$^3$ | Annual mean, averaged over 3 years. |
| $PM_{2.5}$ | Primary and Secondary | 24-hour | 35 µg/m$^3$ | 98th percentile, averaged over 3 years. |
| $PM_{10}$ | Primary and Secondary | 24-hour | 150 µg/m$^3$ | Not to be exceeded more than once per year on average over 3 years. |
| $SO_2$ | Primary | 1-hour | 75 ppb | 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years. |
| $SO_2$ | Secondary | 3-hour | 0.5 ppm | Not to be exceeded more than once per year. |

Source: www.epa.gov/criteria-air-pollutants/naaqs-table; http://www3.epa.gov/ttn/naaqs/criteria.html; EPA 2024
$PM_{2.5}$, $PM_{10}$ = particulate matter size, ppm = parts per million, ppb = parts per billion, µg/m3= micrograms per cubic meter

Nationally and locally, average pollutant concentrations have decreased substantially over the years as a result of improved vehicle technology and measures to control road dust. Air quality in the Everett area has followed similar trends. PSCAA and Ecology monitor air quality in the Puget Sound region. The Beacon Hill monitor site in Seattle is the only location that monitors CO, $PM_{10}$, and $SO_2$ in the region. Beacon Hill is also the closest $O_3$ monitoring site to the preliminary study area. $PM_{2.5}$ is monitored in Marysville, approximately 5 miles north of the US 2 trestle. Pb is not currently monitored in Washington. Table 3-2 displays the most recent three years of monitoring data from the Beacon Hill and Marysville monitoring stations, which show that the concentrations of air pollutants remain below the NAAQS.

**Table 3-2. Ambient Air Quality Monitoring Data (2021 to 2023)**

| Pollutant | Standard | 2021 | 2022 | 2023 | NAAQS |
|---|---|---|---|---|---|
| CO | 8-hour | 1 ppm | 1.3 ppm | 1 ppm | 9 ppm |
| $PM_{10}$ | 24-hour | 25 µg/m³ | 17 µg/m³ | 23 µg/m³ | 150 µg/m³ |
| $PM_{2.5}$ | 24-hour | 22 µg/m³ | 38 µg/m³ | 26 µg/m³ | 35 µg/m³ |

| Pollutant | Standard | 2021 | 2022 | 2023 | NAAQS |
|---|---|---|---|---|---|
| | (98th percentile) | | | | |
| $PM_{2.5}$ | Annual (average) | 7 µg/m³ | 9.1 µg/m³ | 8.5 µg/m³ | 9 µg/m³ |
| $O_3$ | 8-hour (4th high) | 0.052 ppm | 0.047 ppm | 0.049 ppm | 0.070 ppm |
| $SO_2$ | 1-hour | 2.9 ppb | 4.1 ppb | 14 ppb | 75 ppb |

Source: EPA 2024
Notes: $PM_{2.5}$ (24-hour) – Value shown is the 98th percentile for each year. Attainment determinations are made by averaging the 98th percentile for three years. $PM_{2.5}$ annual average is the weighted annual average.

### 3.3.2 Attainment Status

EPA may designate areas not in compliance with the NAAQS as nonattainment areas. An area remains a nonattainment area for that pollutant until monitored concentrations comply with the NAAQS. After the NAAQS are attained and EPA redesignates an area as attainment, the area must have a plan in place for 20 years to ensure maintenance of the air quality (i.e., a maintenance plan). These areas are often referred to as "maintenance areas," although that is not an official designation. Through a conformity demonstration, federal projects in a nonattainment or maintenance area must demonstrate that they will not cause or contribute to a violation of the NAAQS. EPA sets requirements for how these conformity demonstration analyses are conducted.

Snohomish County is currently in attainment of the NAAQS for all criteria pollutants (Ecology 2024a). Snohomish County has violated CO and $O_3$ standards in the past. In 1996 EPA redesignated the area as meeting the CO standard, requiring a 20-year maintenance period that expired in 2016. Snohomish County was designated as a maintenance area for the original 1-hour ground-level $O_3$ standard in 1996. A newer standard based on an 8-hour average concentration replaced the 1-hour standard as of June 15, 2005. The 1-hour standard was revoked, and the maintenance status no longer applies. Therefore, the preliminary study area, which is within Snohomish County, is not designated as nonattainment or maintenance for any NAAQS.

Because the preliminary study area is in an area designated in attainment for all NAAQS, transportation conformity (to show how the purpose of the state implementation plan for attaining and maintaining the NAAQS) does not apply.

### 3.3.3 Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, the EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., certain factories or refineries).

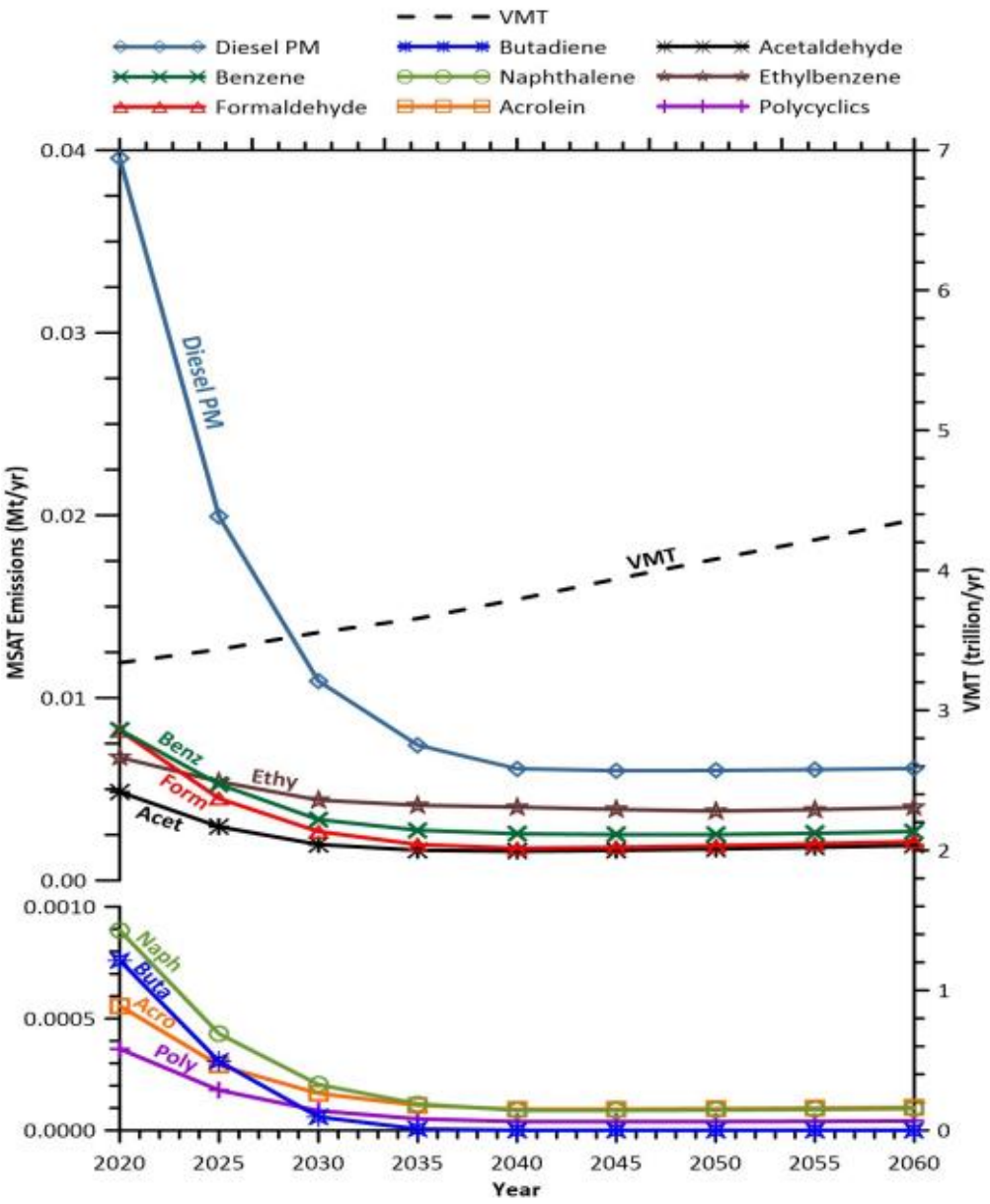
MSATs are a subset of the 188 air toxics defined by the CAA. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted

from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

EPA is the lead federal agency for administering the CAA and has certain responsibilities regarding the health effects of MSATs. Controlling air toxic emissions became a national priority with the passage of the CAA Amendments of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in its latest (2007) rule on the *Control of Hazardous Air Pollutants from Mobile Sources* (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System. In addition, EPA identified the following nine compounds with significant contributions from mobile sources that are among the national- and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment: benzene, acrolein, formaldehyde, acetaldehyde, ethylbenzene, 1,3-butadiene, diesel exhaust, naphthalene, and polycyclic organic matter. While the FHWA considers these nine compounds to be the priority MSATs, the list is subject to change and may be adjusted in consideration of future EPA rules.

The 2007 EPA rule requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOVES3 model, even if vehicle activity increases by 31 percent as assumed from 2020 to 2060, a combined reduction of 76 percent in the total annual emission rate for the priority MSATs is projected for that same period, as shown in Figure 3-1 (FHWA 2023).

**Figure 3-1. National MSAT Emission Trends 2020–2060 for Vehicles Operating on Roadways**




Source: FHWA 2023

### 3.3.4 Key Points

Air monitoring data in Snohomish County and King County demonstrate that the preliminary study area meets all ambient air quality standards. Snohomish County is designated by EPA as in attainment for all criteria pollutants, and no conformity analysis is required for projects to demonstrate conformance to the State Implementation Plan. MSAT emissions throughout the U.S. are expected to decrease dramatically over the next 35 years, despite the country's projected growth in vehicle miles traveled. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 4 Stormwater Best Management Practice Sites and Retrofit Priorities

This chapter summarizes existing conditions for stormwater best management practice sites and retrofit priorities in the preliminary study area, including descriptions of receiving waters and water quality.

## 4.1 Relevant Laws, Regulations, and Guidance

The following federal, state, local, and tribal laws, regulations, and guidance inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for stormwater BMP sites and retrofit priorities. A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 4.1.1 Federal

- Clean Water Act:
  - Section 401 (33 U.S.C. § 1341) – Water Quality Certification (delegated authority from the EPA to Tribe, and/or state): Protects surface water by requiring a water quality certification before allowing any discharge into US waters.
  - Section 402 (33 U.S.C. § 1342) – National Pollutant Discharge Elimination System (NPDES): Regulates water pollution by controlling point sources that discharge pollutants into US waters.
- Safe Drinking Water Act – 42 U.S.C. 300 et seq., Chapter 6A: Protects the quality of US drinking water in the US.
- Endangered Species Act (ESA) – 16 U.S.C. 35 § 1536, Section 7, Interagency Cooperation: Federal agency consultation with National Oceanic and Atmospheric Administration (NOAA) Fisheries and U.S. Fish and Wildlife Service (USFWS) on activities that may impact ESA-listed species and includes pertinent information about a project's stormwater treatment facilities.

### 4.1.2 State

- State Water Pollution Control Act, RCW 90.48: Prohibits the discharge of pollutants into waters of Washington state unless authorized. Implemented by WAC 173-201A, which prohibits the discharge of pollutants into waters of the state unless authorized and identifies and mandates water quality standards pertaining to surface waters, and WAC 173-200, which identifies and mandates groundwater quality standards to maintain the highest quality of the state's groundwater and to protect existing and future beneficial uses of the groundwater.
- NPDES WSDOT Stormwater General Permit (Ecology 2019): Protects water quality by requiring WSDOT to manage and control stormwater runoff from its rights of way. (Ecology reissuance of this permit is pending.)
- NPDES Construction Stormwater General Permit (Ecology 2020) Regulates point sources that discharge pollutants into waters of the United States.

- NPDES Western Washington Phase I and Phase II Municipal Stormwater General Permits (Ecology 2024b, Ecology 2024c): Protects water quality by requiring local governments to manage and control stormwater runoff.
- Drinking Water – Source Water Protection - RCW 43.20.050 (WAC 246-290-135 for Group A systems; WAC 246-291 for Group B systems): Protects drinking water quality by reducing the risk to a source from contamination or decline in production.
- Underground Injection Control – 40 CFR 144, RCW 43.21A.445, RCW 90.48, and WAC 173-218: Prevents contamination of underground drinking water sources by regulating the construction, operation, and closure of injection wells.
- Stormwater Management Manual for Western Washington (Ecology Manual) (Ecology 2024d): Provides guidance on the measures necessary to control the quantity and quality of stormwater produced by new development and redevelopment, such that they comply with water quality standards and contribute to the protection of receiving waters.
- WSDOT Environmental Manual, Chapter 430, Stormwater and Water Quality (WSDOT 2024a): Provides consistent, current, and accurate guidelines for complying with federal and state stormwater and water quality laws and regulations for all phases of project delivery for WSDOT and its environmental consultants.
- WSDOT Highway Runoff Manual (WSDOT 2019): Provides guidance for designing and planning stormwater management facilities for Washington state highways, rest areas, and other facilities.
- WSDOT Hydraulics Manual (WSDOT 2024b): Provides detailed information on hydrologic and hydraulic analysis related to highway design.
- Washington State Hydraulic Code, WAC 220-660: Sets guidance to ensure that construction or performance of work over water is done in a manner that protects fish life.

### 4.1.3 Local

#### 4.1.3.1 City of Everett

- Storm Drainage Water Connections, Everett Municipal Code (EMC) 14.08.040: Protects the City of Everett's water by regulating connections, interferences, alterations, and repairs of the Everett municipal sewer system.
- Surface and Storm Drainage, EMC Chapter 14.28: Prevents water quality degradation, flood damage, siltation, and habitat destruction in the city's creeks, streams, and other water bodies via comprehensive management of surface water and stormwater.
- Critical Areas, EMC Chapter 19.37: Designates, classifies, and protects the critical areas of the Everett community by establishing standards for development and use of properties that contain or adjoin critical areas and thus protect the public health, safety, and welfare.

#### 4.1.3.2 City of Lake Stevens

- Stormwater and Surface Water Management, Lake Stevens Municipal Code (LSMC) Title 11: Prevents water quality degradation, flood damage, siltation, and habitat destruction in the City of

Lake Stevens' creeks, streams, and other water bodies via comprehensive management of surface water and stormwater.

- Critical Areas, LSMC Chapter 14.88: Designates, classifies, and protects the critical areas of the Lake Stevens community by establishing regulations and standards for development and use of properties that contain or adjoin critical areas for protection of the public health, safety, and welfare.
- Shoreline Management, LSMC Chapter 14.92: Establishes policies and regulations for the development and use of the City of Lake Stevens' shoreline zones.

#### 4.1.3.3 City of Marysville

- Surface Water and Stormwater Management, City of Marysville Municipal Code Title 14: Protects waterbodies and streams in the City of Marysville from water quality degradation via comprehensive management of surface water and stormwater.
- Critical areas, City of Marysville Municipal Code Chapter 22E.010: Classifies, designates, and protects City of Marysville critical areas by establishing standards and regulations for use and development of properties that contain or adjoin critical areas for protection of public health, safety, and general welfare.
- Floodplain Management, City of Marysville Municipal Code Chapter 22E.020: Provides guidelines for development in special flood hazard areas for protection of the public health, safety, and welfare, as well as minimize public and private losses due to flood conditions.
- Shoreline Management, City of Marysville Municipal Code Chapter 22E.050: Establishes regulations and policies for the development and use of shoreline zones within the City.

#### 4.1.3.4 Snohomish County

- Water Pollution Control, Snohomish County Code (SCC) Chapter 7.53: Protects the quality of Snohomish County's receiving waters and the integrity of its public drainage facilities.
- Storm and Surface Water Management, SCC Chapter 25: Establishes programs, ordinances, and approaches to manage Snohomish County surface water.
- Unified Development Code, SCC Title 30, including:
  - Critical Aquifer Recharge Areas, Chapter 30.62C: Intended to designate and protect critical aquifer recharge areas pursuant to the Growth Management Act (Chapter 36.70A RCW) in order to safeguard the public health, safety, and welfare and to protect groundwater resources.
  - Drainage, Chapter 30.63A: Regulates stormwater discharges from all new development and redevelopment to prevent and control adverse impacts of drainage and stormwater on the public health, safety, and general welfare.
  - Land Disturbing Activity, Chapter 30.63B: Regulates land disturbing activities to minimize adverse impacts on water, fish and wildlife habitat, and soil and prevent earth instability movements.
  - Shoreline Management Program, Chapter 30.67: Establishes policies and regulations for the development and use of the county's shoreline zones.

### 4.1.4 Tribal

- Clean Water Act – Section 401 (33 U.S.C. § 1341) – Water Quality Certification (delegated authority from the EPA to Tribe).
- Environmental Infractions – Waters/Wetlands/Tidelands, Tulalip Tribal Code (TTC) Chapter 8.20.100: Protects tribal waters by making it a Class A infraction to excavate, dredge, fill, or alter wetlands, tidelands, or waters of the Tribes, or any water of the United States that lies within the exterior boundaries of the Reservation, without a permit, or in violation of the terms of a permit, from the Tribes or the appropriate federal authority.
- Environmental Infractions – Use of Fill Material, TTC Chapter 8.20.130: Protects tribal waters by making it a Class A infraction to use fill material to accommodate any development activity without certification from a licensed professional engineer that such fill will not alter or prohibit the natural flow of surface or ground water.
- Environmental Infractions – Earth or Construction Debris, TTC Chapter 8.20.140: Protects tribal waters by making it a Class B infraction to allows earth or construction debris to enter water, wetlands, or tidelands of the Tribes or any waters of the United States that lie within the exterior boundaries of the Reservation.
- Tidelands Management Policies, TCC Chapter 8.30: Establishes management requirements for the development and leasing of Tribally owned tidelands.

## 4.2 Data Sources and Data Collection Methods

The following data sources will be reviewed to identify stormwater BMP sites and retrofit priorities on US 2 and other state facilities that could be affected in the preliminary study area:

- WSDOT GIS Workbench stormwater management facility information – “Stormwater features, BMPs” data layer (Washington State GIS Workbench 2024).
- Coordination with the WSDOT stormwater features manager to locate medium and high retrofit priorities within the preliminary study area and verify the information in the GIS dataset.

## 4.3 Existing Conditions

### 4.3.1 Receiving Waters

Stormwater runoff is managed, in part, based on the requirements associated with the receiving waters to which the area would discharge. The preliminary study area is part of two watersheds, the Puget Sound Watershed and the Snohomish River Watershed. The preliminary study area crosses three tidal sloughs (Ebey Slough, Union Slough, and Deadwater Slough) and the Snohomish River Estuary, which is a marsh ecosystem particularly sensitive to the influences of stormwater runoff. Other water bodies are also present within the preliminary study area. Refer to Chapter 5 and Chapter 10, respectively, for additional information on waters and endangered species critical aquatic habitat within the preliminary study area.

### 4.3.2 Water Quality

Urban growth and development, coupled with runoff from adjacent highways, has led to pollution of some water bodies in the preliminary study area. Ecology reviews all readily available fresh and marine

water quality data throughout Washington every two years to determine if water bodies meet water quality standards. When a geographic reach of a surface water body does not meet their established standards, that reach is identified as “Category 5 – Impaired” under Section 303(d) of the Clean Water Act. For each water body reach identified as impaired, Ecology typically works to develop a pollutant cleanup plan or total maximum daily load (TMDL), and the water body reach is re-listed as Category 4 (Categories 1 through 3 indicate waters that have either been found to be clean or need additional data collection). Category 4 TMDL cleanup plans are established to bring waters back into compliance with standards. Table 4-1 lists water bodies that have a reach within the preliminary study area designated as impaired on the EPA 303(d) list (Ecology 2022a). Fecal coliform bacteria are the major impairment in the preliminary study area.

**Table 4-1. Impaired Water Bodies in Preliminary Study Area**

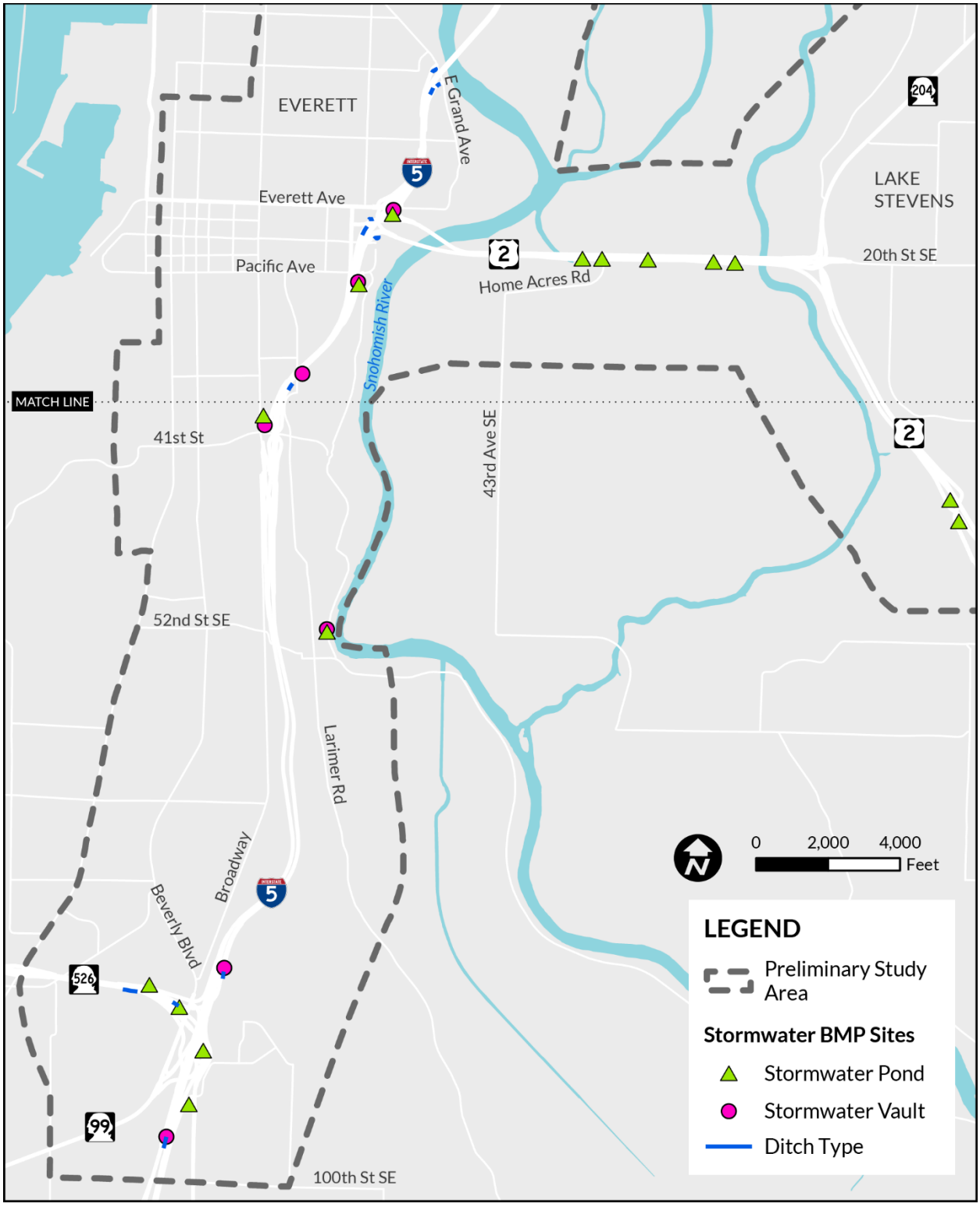
| Surface Water Body | Water Quality Impairment | Water Quality Impairment Category |
|---|---|---|
| Possession Sound (North) | Bacteria – Fecal Coliform | 5 |
| Ebey Slough | Bacteria – Fecal Coliform | 5 |

Source: Ecology 2022a

### 4.3.3 Stormwater Best Management Practice Sites

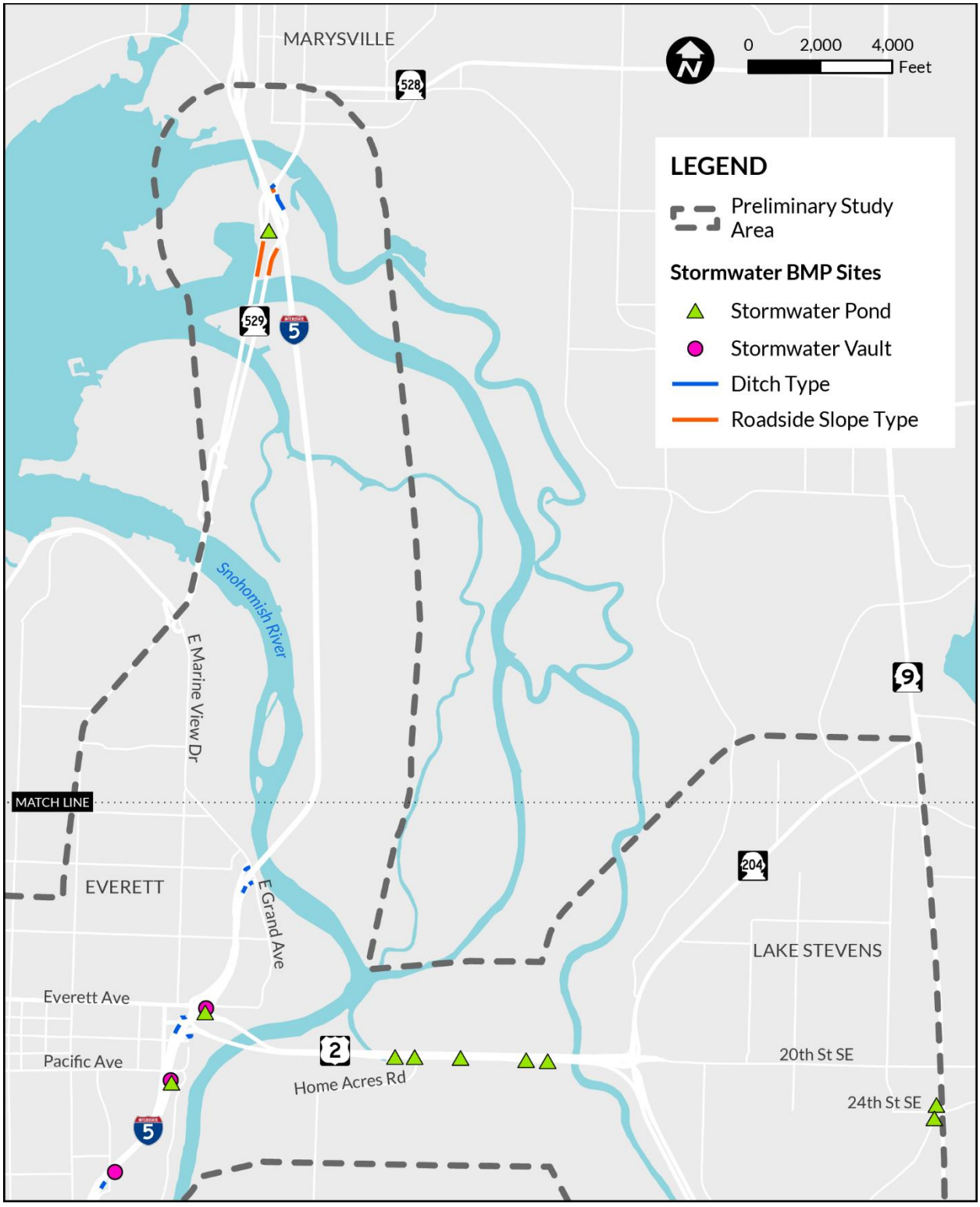
Existing stormwater BMP sites were identified using WSDOT GIS layers (Washington State GIS Workbench 2024). The stormwater BMP sites, whose primary function is runoff treatment, in the preliminary study area include 7 vaults, 18 stormwater ponds, 3 roadside slope types, and 13 ditch types. Locations of stormwater BMP sites are shown in Figure 4-1 and Figure 4-2 and further described in Table 4-2. The ditches shown in Figure 4-1 and Figure 4-2 are not included in Table 4-2 because their primary function is for conveyance, not runoff treatment.

**Figure 4-1. Stormwater BMP Sites in Southern Portion of Preliminary Study Area**




Source: Washington State GIS Workbench 2024

**Figure 4-2. Stormwater Best Management Practice Sites in Northern Portion of Preliminary Study Area**




Source: Washington State GIS Workbench 2024

**Table 4-2. Stormwater BMP Sites for Runoff Treatment in Preliminary Study Area**

| BMP Type | Approximate Location |
|---|---|
| Stormwater Vault | Intersection of I-5 and SR-2 (Everett Avenue) |
| Stormwater Vault | I-5 (Pacific Avenue) |
| Stormwater Vault | I-5 (Smith Avenue) |
| Stormwater Vault | I-5 (40th Street) |
| Stormwater Vault | South 2nd Avenue |
| Stormwater Vault | I-5 (SR 526) |
| Stormwater Vault | I-5 (Everett Mall) |
| Stormwater Pond | 24th Street Southeast |
| Stormwater Pond | 24th Street Southeast (I-9) |
| Stormwater Pond | Bickford Avenue (SR 2) |
| Stormwater Pond | Bickford Avenue (SR 2) |
| Stormwater Pond | US 2 (Cavalero Corner) |
| Stormwater Pond | US 2 (20th Street Southeast) |
| Stormwater Pond | US 2 (55th Avenue Southeast) |
| Stormwater Pond | US 2 (51st Avenue Southeast) |
| Stormwater Pond | US 2 (Douglas Avenue) |
| Stormwater Pond | US 2, I-5 (Everett Avenue) |
| Stormwater Pond | I-5 (Pacific Avenue) |
| Stormwater Pond | I-5 (39th Street) |
| Stormwater Pond | 52nd Street Southeast |
| Stormwater Pond | SR 526 (Puget Drive) |
| Stormwater Pond | SR 526 (Broadway) |
| Stormwater Pond | SR 527 (19th Avenue Southeast) |

| BMP Type | Approximate Location |
|---|---|
| Stormwater Pond | SR 527 (19th Avenue Southeast) |
| Stormwater Pond | I-5 and SR 529 |
| Roadside Slope Type | I-5 and SR 529 |
| Roadside Slope Type | I-5 and SR 529 |
| Roadside Slope Type | I-5 and SR 529 |

Source: Washington State GIS Workbench 2024

#### 4.3.3.1 Stormwater Retrofit Priorities

WSDOT has identified a draft list of segments of their facilities for stormwater retrofit projects that could be constructed, depending on allocated funding. These segments are then prioritized based on focus areas including salmon recovery and ecosystem health, reducing pollution, addressing health disparities, and cost effectiveness. These stormwater retrofit projects could help reduce pollutants in roadway runoff, including 6PPD-quinone, a chemical that is lethal to coho salmon and can contaminate water systems (Ecology n.d). The prioritization also incorporates input from tribes and federal, state and local agencies. Individual projects are evaluated by project engineers and hydrologists for feasibility and cost effectiveness (WSDOT n.d.-b).

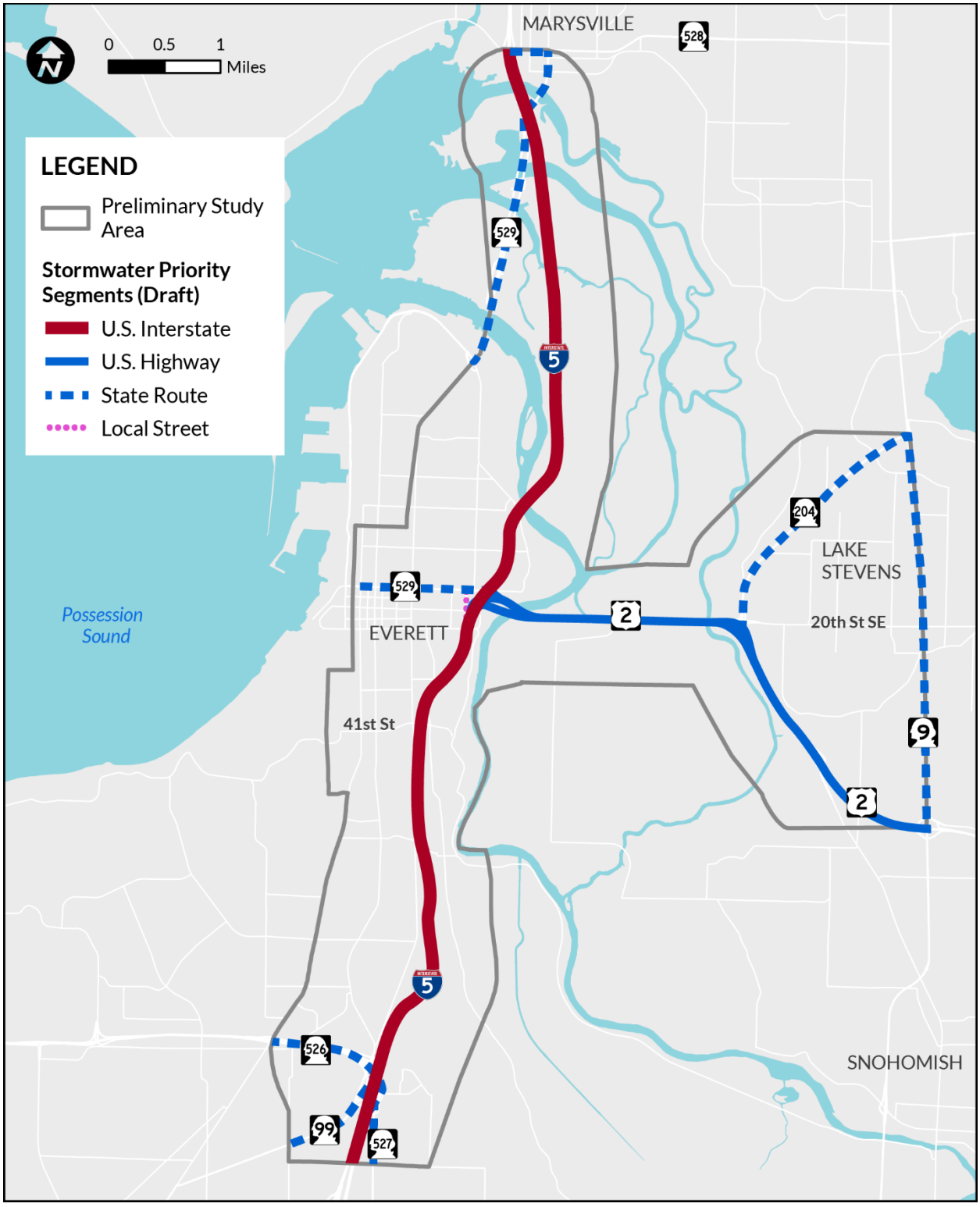
The preliminary study area does not currently include any segments of WSDOT facilities that have been identified as medium or high priority stormwater retrofit priorities on its draft list (Washington State GIS Workbench 2024). The following WSDOT facilities within the preliminary study area, as shown in Figure 4-3, are included on the current draft list of segments identified for potential stormwater retrofit:

- I-5 between the SR 527 interchange and Fourth Street in Marysville.
- SR 99 between I-5 and the preliminary study area boundary.
- SR 527 between the preliminary study area boundary and its interchange with I-5.
- SR 526 between Evergreen Way and I-5.
- SR 529 west of I-5.
- SR 204 starting at SR 9 northeast to its confluence with US 2.
- Maple Street between I-5 and SR 529.
- US 2 between I-5 and SR 9.
- SR 204 between US 2 and SR 9.
- SR 9 between US 2 and Seventh Place NE.
- SR 99 between I-5 and the preliminary study area boundary.
- SR 526 between Evergreen Way and I-5.
- SR 529.

- Maple Street between I-5 and SR 529.
- SR 528 between I-5 and State Avenue.
- SR 9 between Seventh Place Northeast and US 2.

Existing natural conditions present some challenges to future stormwater retrofit in the US 2 trestle area based on the proximity to wetlands, threatened and endangered species habitat, and other protected natural resources, which are located on over half of the land immediately adjacent to the US 2 trestle. Refer to Chapter 5 and Chapter 10, respectively, for additional information on wetlands and threatened and endangered species within the preliminary study area. However, installation of stormwater management facility retrofits is generally feasible, and would consider adjacent natural resources in its design.

**Figure 4-3. Draft WSDOT Stormwater Retrofit Priority Segments in Preliminary Study Area**




Source: Washington State GIS Workbench 2024

### 4.3.4 Key Points

The preliminary study area crosses multiple waterbodies that receive stormwater runoff from the US 2 trestle, including sensitive tidal marshes in the Snohomish River Estuary. Some nearby receiving waters, including Ebey Slough near the US 2 trestle, do not currently meet state water quality standards for bacteria (fecal coliform).

Existing stormwater runoff treatment in the vicinity of the US 2 trestle is currently provided predominantly by stormwater ponds. The US 2 trestle is among the stormwater retrofit priority segments on a draft list identified by WSDOT. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 5 Wetlands and Other Waters

This chapter summarizes existing conditions for wetlands and other waters in the preliminary study area, which also includes a discussion of streams, WSDOT environmental mitigation sites, and navigable waterways.

## 5.1 Relevant Laws, Regulations, and Guidance

The following federal, state, local, and tribal laws, regulations, and guidance inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for wetlands and other waters of the United States. A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 5.1.1 Federal

- Clean Water Act (CWA) of 1977 (Section 404 and 401)
  - Section 404: Regulates the discharge of dredged or fill material into waters of the United States, including wetlands and other special aquatic sites.
  - Section 401: Certifies that activities authorized by certain federal permits and licenses meet state water quality standards, which helps to protect the state's surface waters such as estuaries, wetlands, lakes, rivers, and streams.
- Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (EPA and USACE 2008): Joint EPA and U.S. Army Corps of Engineers (USACE) standards governing compensatory mitigation for permit-authorized activities affecting wetlands.
- Rivers and Harbors Act of 1899 (Section 10 and Section 408)
  - Section 10: Protects navigable waters of the U.S. by prohibiting their unauthorized alteration or obstruction without a permit from the USACE.
  - Section 408: Protects federal civil works (such as levees, flood reduction or navigation channels) built by the U.S. from temporary or permanent alterations without a permit.
- Title 33 Navigation and Navigable Waters, Part 332 Compensatory Mitigation for Losses of Aquatic Resources (33 CFR § 332.2): Establishes standards and criteria for all types of compensatory mitigation (including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation) to offset unavoidable impacts to waters of the U.S. through a USACE Section 404 permit.
- Joint Memorandum to the Field Between the USACE and the EPA Concerning Exempt Construction or Maintenance of Irrigation Ditches Under Section 404 of the CWA (EPA and USACE 2020) – Provides information including terms and definitions as well as guidance for how both agencies will work together to apply these exemptions. This memorandum refers to citations 404(f)(1)(C) and 404(f)(2) of the CWA as well as 33 CFR 323.4(c).

### 5.1.2 State

- Environmental mitigation in highway construction projects (RCW 47.01.305): Clarifies highway construction should use public land first, if it meets requirements, then other sites with minimal environmental and commercial impact.
- Environmental mitigation – Exchange agreements (RCW 47.12.370): Allows exchange agreements with local, state, or federal agencies, tribal governments, or private nonprofit nature conservancy corporations to convey properties that serve as environmental mitigation sites.
- Governor's EO 89-10 Protection of Wetlands: Raises awareness of the importance and protection of wetlands.
- WSDOT Secretary's EO E 1102 Wetlands Protection and Preservation: Directs WSDOT employees to protect and preserve wetlands and manage environmental mitigation sites for long-term stewardship.
- Shoreline Management Act RCW 90.58 and WAC Title 173: Protects the state's shoreline by preventing the inherent harm in uncoordinated and piecemeal development.

### 5.1.3 Local

#### 5.1.3.1 City of Everett

- EMC – Chapter 19.37 Critical Areas: Identifies City of Everett's critical areas and requirements to protect, enhance, and restore them where possible.
- City of Everett Shoreline Master Program – Effective October 18, 2019: Establishes policies and regulations for the development and use of the City of Everett's shoreline.

#### 5.1.3.2 City of Lake Stevens

- LMSC Chapter 14.88 Critical Areas: Identifies City of Lake Stevens critical areas and requirements to protect, enhance, and restore them where possible.

#### 5.1.3.3 City of Marysville

- City of Marysville Municipal Code – Chapter 22E.010 Critical Areas Management: Identifies City of Marysville's critical areas and requirements to protect, enhance, and restore them where possible.
- City of Marysville Shoreline Master Plan – Chapter 22E.050 Shoreline Management Master Program, (Ordinance No. 3146, effective March 20, 2020): Establishes policies and regulations for the development and use of the City of Marysville's shoreline.

#### 5.1.3.4 City of Snohomish

- City of Snohomish Municipal Code - Chapter 14.250 Shoreline Management (Ordinance 2336, dated May 15, 2018): Establishes policies and regulations for the development and use of the City of Snohomish's Shoreline.
- City of Snohomish Municipal Code – Title 14, Land Use Development Code Chapter 14.255 Critical Areas – General, Chapter 14.260 Wetlands, and Chapter 14.280 Habitat Conservation Areas, (Ordinance 2083, dated May 3, 2005).

- Chapter 14.255: Identifies City of Snohomish's critical areas and requirements to protect, enhance, and restore them where possible.
- Chapter 14.260: Intended to protect the beneficial functions performed by wetlands, consistent with relevant policies of the City of Snohomish Comprehensive Plan and the Washington State Growth Management Act.
- Chapter 14.280: Designates and protects habitat conservation areas of local, state, and federal importance within the City of Snohomish.

#### 5.1.3.5 Snohomish County

- SCC – Chapter 30.67 Shoreline Management Program (Ordinance No. 12-025, effective July 27, 2012): Establishes policies and regulations for the development and use of Snohomish County's shoreline.
- SCC – Chapter 30.62A Wetlands and Fish & Wildlife Habitat Conservation Areas (Last amended by ordinance 19-020 on July 3, 2019): Provides critical area regulations for the designation and protection of wetlands and fish and wildlife habitats within Snohomish County.

### 5.1.4 Tribal

- TTC – Chapter 7.24 Sensitive Areas: Identifies, preserves, and protects unique, fragile, and valuable elements of the Tulalip Reservation, including culturally significant species and their habitats; ground and surface waters and their sources; fish and wildlife important to the Tulalip Tribe and their habitats; and to protect the public health, safety, and general welfare from potential hazards resulting from development on environmentally sensitive lands.

## 5.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for wetlands and other waters in the preliminary study area. Data collected from these sources was documented and presented on maps and in tables.

- Wetlands and environmental mitigation sites:
  - National Wetlands Inventory (NWI) - USFWS data set (USFWS 2024a)
  - Priority Habitats and Species (PHS) Washington Department of Fish and Wildlife (WDFW) data set (WDFW 2024)
  - WSDOT Environmental Mitigation Sites Web Map (WSDOT 2024c)
  - Snohomish County Planning and Development Services Map (Snohomish County 2024a)
  - City of Lake Stevens Critical Area GIS data (City of Lake Stevens 2024)
  - City of Marysville Critical Areas Map (City of Marysville 2024)
  - City of Everett GIS Data Portal – Wetlands (City of Everett 2024)
- Streams, lakes, ponds, and navigable waters:
  - NWI – USFWS data set (USFWS 2024a)

- National Hydrography Dataset (WSDOT 2024d) – Contained within WSDOT's fish passage database
- WDNR Hydrography Dataset (WDNR 2024)
- Statewide Integrated Fish Distribution Mapping (Northwest Indian Fisheries Commission [NWIFC] 2024)
- PHS WDFW data set (WDFW 2024)
- City of Marysville Critical Areas Map (City of Marysville 2024)
- City of Everett GIS Data Portal – Stream Centerlines (City of Everett 2024)
- City of Lake Stevens Critical Areas GIS data (City of Lake Stevens 2024)
- List of Navigable Waters in Washington State (USACE 2020)

## 5.3 Existing Conditions

### 5.3.1 Wetlands

The preliminary study area contains freshwater forested/shrub, freshwater emergent, riverine, freshwater pond, estuarine and marine wetlands identified by federal (NWI), state, and local jurisdictions, as described in Table 5-1. The largest wetland systems include the Snohomish River and its associated sloughs (Union, Ebey and Steamboat), which connect many of these wetland systems to Possession Sound to create a tidally influenced network of streams and wetlands. Other additional common wetland types near the US 2 trestle include freshwater forested/shrub and freshwater emergent wetlands (USFWS 2024a).

**Table 5-1. Descriptions of Mapped NWI Wetland Types Within the Preliminary Study Area**

| Wetland Type | Descriptions |
|---|---|
| Estuarine and Marine Deepwater Habitat | Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines, there is appreciable dilution of sea water. Offshore areas with typical estuarine plants and animals, such as red mangroves (*Rhizophora mangle*) and eastern oysters (*Crassostrea virginica*), are also included in the estuarine system. Substrates are continuously covered by tidal salt water. |
| Estuarine and Marine Wetland Habitat | An estuarine system, as described above, where the substrate is flooded and exposed by tides; includes the associated splash zone. This habitat Includes wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. |
| Freshwater Forested/Shrub Wetland | Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand (ppt). It also includes wetlands lacking such vegetation, but with all the following four characteristics: (1) area less than 8 hectares (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 meters (8.2 feet) at low |

| Wetland Type | Descriptions |
|---|---|
| | water; and (4) salinity due to ocean-derived salts less than 0.5 ppt. The forested wetland component characteristics include woody vegetation that is 6 meters tall or taller. The scrub shrub component includes areas dominated by woody vegetation less than 6 meters (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions. |
| Freshwater Emergent Wetland | Similar to freshwater forested/shrub wetland, as described above, with the exception that the vegetation is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. |
| Freshwater Pond | Includes wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. The water regime in these systems can include areas that are permanently flooded, where water exists at all times above the substrate, or in the preliminary study area it can also include areas where tidal fresh surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface. |
| Lake | Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, and emergent mosses or lichens with 30 percent or greater areal coverage; and (3) total area of at least 8 hectares (20 acres). Similar wetlands and deepwater habitats totaling less than 8 ha are also included if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin equals or exceeds 2.5 meters (8.2 feet) at low water. Lake waters may be tidal or nontidal, but ocean-derived salinity is always less than 0.5 parts per thousand (ppt). |
| Riverine | Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. |

Source: USFWS 2024a

Table 5-2 summarizes the number of wetlands mapped by the NWI, Snohomish County, City of Everett and City of Lake Stevens within the preliminary study area (City of Everett 2024, City of Lake Stevens 2024, City of Marysville 2024, Snohomish County 2024a, USFWS 2024a, WDFW 2024). WDFW's PHS data and the City of Marysville Critical Areas Map are based on information found in the NWI database. Therefore, this data is grouped with the NWI wetland count. The City of Everett, City of Lake Stevens, and Snohomish County mapped wetlands may include areas also mapped by NWI. Wetlands mapped by NWI provide a preliminary overview of wetland areas; however, its accuracy is limited as it may not reflect recent changes in land use, site-specific hydrology, or smaller wetlands. Due to the large number of wetlands present throughout the preliminary study area, Table 5-2 reports the number of wetlands by their size range (in square feet) as mapped by each jurisdiction.

Most wetlands mapped by each jurisdiction in the preliminary study area are less than 5,000 square feet. The largest wetlands (greater than 20,000 square feet) are present in the northern and central

portion of the preliminary study area; these are identified as riverine systems that include the Snohomish River and associated sloughs and forested/shrub and emergent wetlands.

**Table 5-2. Mapped Wetlands within Preliminary Study Area by Size and Jurisdiction**

| Wetland Size (square feet) | Number of NWI Wetlands[1] | Number of Snohomish County Wetlands | Number of City of Everett Wetlands | Number of City of Lake Stevens Wetlands |
|---|---|---|---|---|
| <5,000 | 172 | 215 | 131 | 36 |
| 5,000-20,000 | 74 | 23 | 40 | 13 |
| >20,000 | 84 | 16 | 15 | 8 |

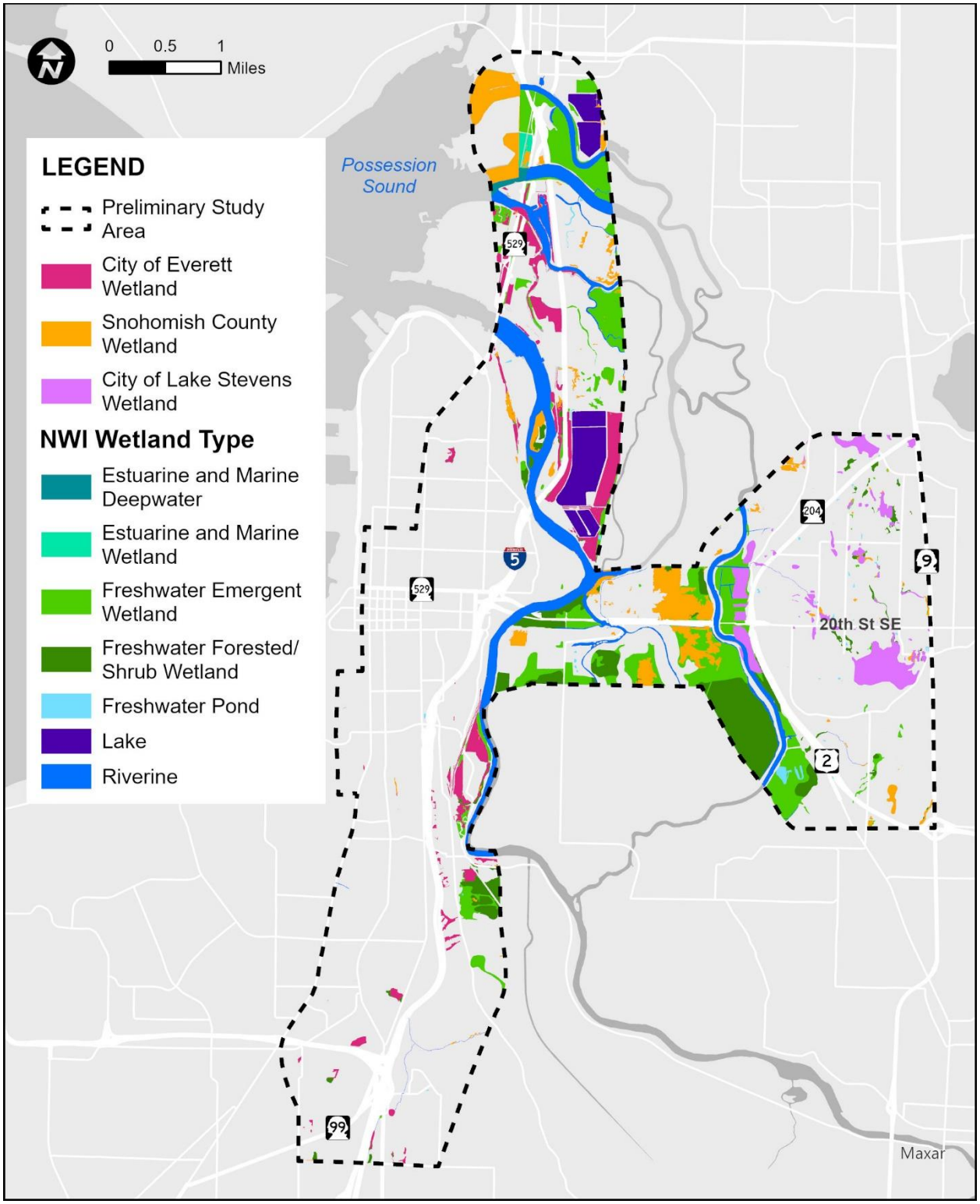
Source: City of Everett 2024, City of Lake Stevens 2024, City of Marysville 2024, Snohomish County 2024a, USFWS 2024a, WDFW 2024

Notes:[1] PHS and the City of Marysville wetland data is sourced from the NWI database.

In addition to protecting the wetlands themselves, each jurisdiction establishes regulatory buffers around the wetlands to protect the function and value of wetland habitat. The width of the buffers will vary depending upon how the wetland is rated (Category I through Category IV) using Washington State Department of Ecology's Washington State Wetland Rating System for Western Washington (Hruby and Yahnke 2023). Across the applicable jurisdictions, Category I wetland buffers range from 75 to 300 feet in width depending upon the habitat score associated with the wetland rating. Category II wetland buffers similarly range from 75 to 300 feet in width depending upon the habitat score associated with the wetland rating. Category III wetland buffer widths range from 50 to 300 feet depending upon the habitat score associated with the wetland rating. Category IV wetland buffers range from 25 to 50 feet in width.

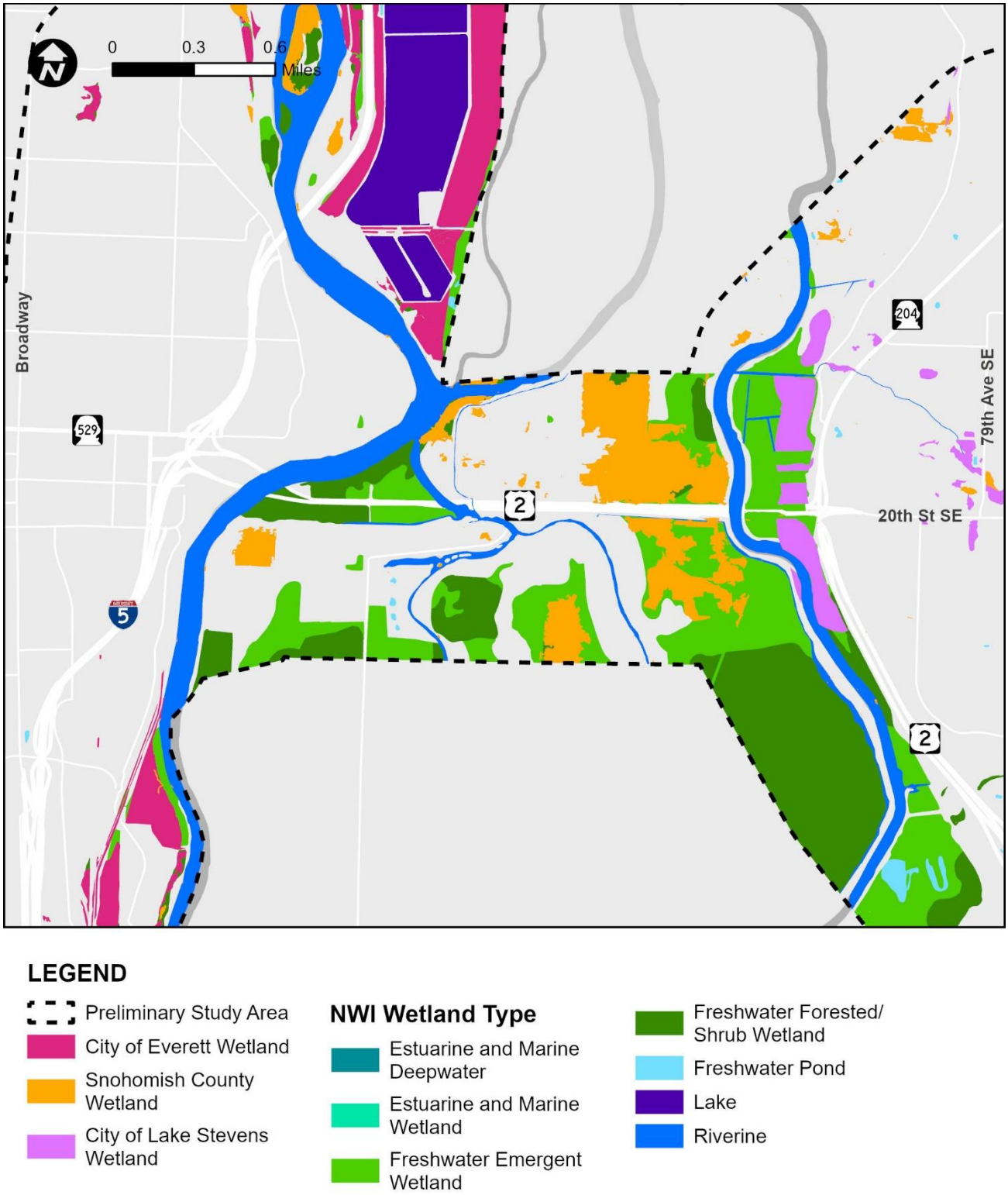
Figure 5-1 shows the location of the mapped wetlands, by jurisdiction and NWI wetland type. Figure 5-2 provides a detailed view of the types of mapped wetlands identified along the US 2 trestle.

**Figure 5-1. Mapped Wetlands within Preliminary Study Area**




Source: City of Everett 2024, City of Lake Stevens 2024, City of Marysville 2024, Snohomish County 2024a, USFWS 2024a, WDFW 2024

**Figure 5-2. Mapped Wetlands within US 2 Trestle Corridor**




Source: City of Everett 2024, City of Lake Stevens 2024, City of Marysville 2024, Snohomish County 2024a, USFWS 2024a, WDFW 2024

#### 5.3.1.1 WSDOT Environmental Mitigation Sites

WSDOT has established several environmental mitigation sites within the preliminary study area. These WSDOT-owned environmental mitigation sites compensate for a variety of unavoidable impacts to wetlands, streams, and their associated wetland and riparian buffers that previously occurred as part of WSDOT project implementation and maintenance activities.

Table 5-3 identifies the six WSDOT environmental mitigation sites within the preliminary study area, the size of the mitigation site, what category of ecosystem the mitigation covers, what agency is responsible for the mitigation, the status of monitoring, and the location of the sites within the preliminary study area.

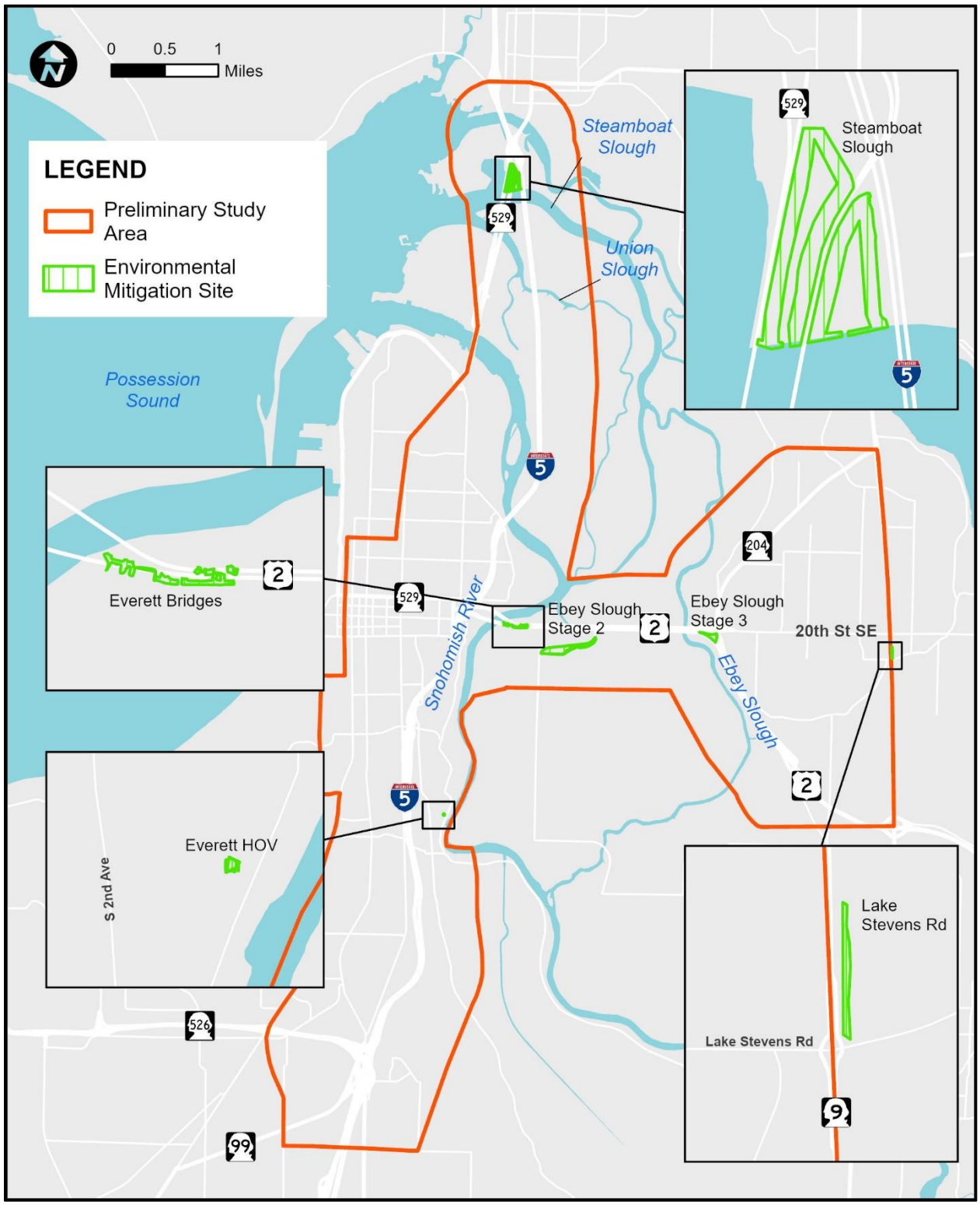
**Table 5-3. WSDOT Environmental Mitigation Sites in Preliminary Study Area**

| Site Name | Size (acres) | Mitigation Category | Mitigation Responsibility | Monitoring Status | Location |
|---|---|---|---|---|---|
| Everett HOV | 0.08 | Wetland | WSDOT Maintenance Responsible[2] | Closed | East of I-5 |
| Everett Bridges | 1.50 | Wetland | WSDOT | Active | At US 2 |
| Ebey Slough Stage 2 | 13.26 | Wetland | WDFW | Closed | South of US 2 |
| Ebey Slough Stage 3 | 2.89 | Wetland | WDFW | Closed | Near US 2 and SR 202 interchange |
| Lake Stevens Road | 0.32 | Riparian Buffer | WSDOT Maintenance Responsible[1] | Closed | Intersection of SR 9 and South Lake Stevens Road |
| Steamboat Slough | 10.42 | Wetland | WSDOT Maintenance Responsible[2] | Active | On SR 529 |

Source: WSDOT 2024c, WSDOT 2025e
Notes: [1] = Site is in long term management phase and responsibility has been turned over to WSDOT maintenance division; [2] = Site is actively being monitored by the WSDOT Headquarters wetlands group.

Figure 5-3 shows the location of the WSDOT-owned environmental mitigation sites within the preliminary study area.

**Figure 5-3. WSDOT Environmental Mitigation Sites within Preliminary Study Area**




Source: WSDOT 2024c

### 5.3.2 Streams and Rivers

Thirteen named streams and rivers, and additional unnamed streams, are mapped as passing through the preliminary study area (USFWS 2024a, NWIFC 2024). Table 5-4 lists these streams and the length of the stream reach within the preliminary study area. Figure 5-4 shows the locations of these mapped streams. The Snohomish River, Ebey Slough, and the combined length of unnamed streams account for the longest stream lengths in the preliminary study area.

The Snohomish River, Ebey Slough, Union Slough, and Steamboat Slough all flow directly into Possession Sound and are tidally influenced. The tidal limit of the Snohomish River extends 23 miles upstream from its outlet. Ebey Slough's tidal limit is 11 miles upstream; Steamboat Slough's is 5 miles upstream; and Union Slough's is 4 miles upstream of their connections to the Snohomish River. As noted in Chapter 4, all streams that flow through the preliminary study area are located in the Snohomish watershed (Water Resources Inventory Area 7).

Like wetlands, all streams and rivers in the preliminary study area have regulatory buffers meant to protect the function and values of these resources. Buffers are applied based upon the stream's associated typing as established in WAC 222-16-031. Stream types are largely applied based on whether the stream or river is a shoreline of the state (Type S), whether it has the potential to support fish use (Type F), and, if no fish use is documented, whether the stream has flow or not: non-fish bearing and perennial flow (Type Np) and non-fish bearing with seasonal flow (Type Ns). Within the preliminary study area, all stream types are likely present. Regulatory buffer widths as applied by each applicable jurisdiction are 150 feet for Type S streams, 100 to 150 feet for Type F streams, and 50 feet for Type Ns and Np streams.

**Table 5-4. Mapped Streams and Rivers in Preliminary Study Area**

| Stream/River Name | Length within Preliminary Study Area (miles) |
|---|---|
| Snohomish River | 5.58 |
| Ebey Slough | 4.22 |
| Wood Creek | 1.76 |
| Steamboat Slough | 1.08 |
| Burri Creek | 0.84 |
| Weiser Creek | 0.90 |
| Union Slough | 0.67 |
| Deadman Slough | 0.32 |
| Deadwater Slough | 1.90 |
| Allen Creek | 0.07 |

| Stream/River Name | Length within Preliminary Study Area (miles) |
|---|---|
| Bunk Foss Creek | 0.50 |
| Cemetery Creek | 0.40 |
| Mosier Creek | 2.10 |
| Unnamed Streams | 20.86 |

Source: USFWS 2024a, NWIFC 2024

**Figure 5-4. Mapped Streams and Rivers within Preliminary Study Area**


Source: USFWS 2024a

### 5.3.3 Navigable Waterways

Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity, per 33 CFR 329.4. There are four navigable waterways within the preliminary study area: the mainstem Snohomish River and three associated sloughs, Ebey, Steamboat, and Union. Table 5-5 lists these navigable waterways and provides a description of their navigable length and location. The table also specifies the length of the waterway "under a federally authorized project," which includes levees, dams, and federal navigation channels. A portion of the lower Snohomish River is also part of a federally authorized project and thus is subject to Section 10 and Section 408 of the Rivers and Harbors Act, respectively. Figure 5-5 shows the locations of these waterways, which are entirely identified as navigable waterways within the preliminary study area.

**Table 5-5. Summary of Navigable Waterways within Preliminary Study Area**

| Navigable Waterway Name | Navigable Length (miles) | Miles Under Federally Authorized Project | Notes |
|---|---|---|---|
| Snohomish River | 23 | 6 | Formed by confluence of Skykomish and Snoqualmie Rivers near Monroe. Flows into Port Gardner at Everett. Navigable throughout. Mileage shown is from south end of training dike in Everett Harbor. |
| Ebey Slough | 11 | None | Flows out of Snohomish River at approximate river mile 10 into Port Gardner Bay. Mileage shown is from head to I-5 near mouth. |
| Steamboat Slough | 5 | None | Flows out of Snohomish River near river mile 6 into Port Gardner Bay. Mileage is from head to railway bridge near mouth. |
| Union Slough | 4 | None | Flows out of Snohomish River near river mile 6 into Port Gardner Bay. Mileage is from head to railway bridge near mouth. |

Source: USACE 2020; USDOT 2024

**Figure 5-5. Navigable Waterways Within Preliminary Study Area**


Source: USACE 2020; USDOT 2024

### 5.3.4 Key Points

Much of the land area on either side of the US 2 trestle and on either side of I-5 north of the I-5/US 2 interchange is within or adjacent to numerous mapped wetlands within the Lower Snohomish River estuary. Most wetlands are freshwater emergent wetlands with smaller amounts of freshwater forested/scrub shrub wetland habitat types.

Additional water bodies in the preliminary study area include the lower Snohomish River and three major sloughs, including Ebey Slough, Steamboat Slough, and Union Slough. Numerous small tributary streams drain into the lower Snohomish River estuary within the preliminary study area. There are three WSDOT environmental mitigation sites adjacent to the trestle and its west and east end connections and three additional WSDOT mitigation sites in the broader preliminary study area.

The lower Snohomish River and all major sloughs in the preliminary study area are considered navigable. A portion of the lower Snohomish River is also part of a federally authorized project and thus subject to Section 10 and Section 408 of the Rivers and Harbors Act, respectively.

Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 6 Chronic Environmental Deficiencies

This chapter summarizes Chronic Environmental Deficiencies (CED) in the preliminary study area. A CED site is a stream-adjacent location along a state highway where recent, frequent repairs or maintenance to WSDOT infrastructure cause adverse impacts to fish habitat.

## 6.1 Relevant Laws, Regulations, and Guidance

The following state guidance informs the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for CEDs. Because this is a state designation, a complete assessment of compliance with these requirements would be conducted in a subsequent SEPA process.

- WDFW-WSDOT Hydraulic Code Memorandum of Agreement (MOA): WSDOT and WDFW have agreed on Hydraulic Project Approval (HPA) application and review procedures through a MOA *Concerning Implementation of the Fish and Wildlife Hydraulic Code for Transportation Activities* (henceforth referred to as the WDFW-WSDOT Hydraulic Code MOA). The WDFW-WSDOT Hydraulic Code MOA includes information on the CED program and deferred mitigation for maintenance and emergency activities.

## 6.2 Data Sources and Data Collection Methods

The following data source was reviewed for information on existing conditions for CEDs in the preliminary study area.

- WSDOT CED Web Map (WSDOT 2024e)

## 6.3 Existing Conditions/Key Points

Currently no active CED sites are located within the preliminary study area (WSDOT 2024e). A former CED site, referred to as Steamboat Dike, was located at the SR 529 and I-5 interchange at approximately MP 5.8 of SR 529 that included flooding and failing levees (WSDOT 2024e). The CED site was repaired in 2019 and is considered resolved (WSDOT 2024e). Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 7 Special Flood Hazard Areas

This chapter summarizes existing conditions for special flood hazard areas in the preliminary study area, including FEMA flood zones and flood control structures.

## 7.1 Relevant Laws, Regulations, and Guidance

The following federal, state, local, and tribal laws, regulations, and guidance inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for special flood hazard areas. A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 7.1.1 Federal

- National Flood Insurance Act of 1968 and Flood Disaster Protection Act of 1973, 42 U.S.C. 4001 et seq.: Provides flood insurance to owners of improved real estate located in special flood hazard areas of communities participating in the National Flood Insurance Program.
- 23 CFR 650 – FHWA, Bridges, Structures, and Hydraulics (which outlines FHWA procedures for compliance with Floodplain Management Presidential EO 11988): Describes FHWA's policies and procedures for the location and hydraulic design of highway encroachments on floodplains.
- National Flood Insurance Program (NFIP) Regulations at 44 CFR 59 through 80, including:
  - 44 CFR Part 60 – Criteria for Land Management and Use (including floodplains): Regulates floodplain management practices such that flood insurance shall not be sold or renewed under the program within a community unless the community has adopted adequate floodplain management regulations consistent with federal criteria.
  - 44 CFR Part 65 – Identification and Mapping of Special Hazard Areas: Provides engineering standards for mapping flood hazard areas, analyzing proposed changes to flood hazard mapping, and design of flood management control structures like levees and dikes.
- Floodplain Management Presidential EO 11988 of May 24, 1977, and its subsequent updates (EO 13690): Intended to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains by delegating responsibilities on floodplain management to agencies.
- Federal Emergency Management Agency (FEMA) Flood Insurance Study for Snohomish County, Washington, and Incorporated Areas (FEMA 2020a): Generates flood risk data for various parts of the county, shows flood hazard areas in the county, and provides information to supplement the Flood Hazard Management Issues.
- FEMA Flood Insurance Rate Map (FIRM) for Snohomish County, Washington, and Incorporated Areas (FEMA 2020b): Official maps on which FEMA has delineated flood hazard areas and risk zones.
- Coastal Zone Management Act, 16 U.S.C. 1451 et seq.: Protects the coastal environment from the growing demands of residential, commercial, recreational, and industrial uses.

- USDOT Order 5650.2 – Floodplain Management and Protection: Prescribes policies and procedures for ensuring that proper consideration is given to the avoidance and mitigation of adverse floodplain impacts in agency actions, planning programs, and budget requests.
- Endangered Species Act Biological Opinion for the Implementation of the National Flood Insurance Program in the State of Washington (NMFS 2008): Identified required changes to the implementation of the NFIP to meet the requirements of the ESA in the Puget Sound watershed.

### 7.1.2 State

- Flood Control Management Act of 1935, RCW 86.16: Regulates the planning, construction, operation, and maintenance of works, structures, and improvements that could negatively impact a body of water or stream.
- Flood Plain Management, WAC 173-158: Establishes statewide authority for floodplain management through the adoption and administration by local governments of regulatory programs that are compliant with the minimum standards of the NFIP.
- State Shoreline Management Act, RCW 90.58, WAC 173-26: Intended to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.

### 7.1.3 Local

#### 7.1.3.1 City of Everett

- Land Use and Project Review Procedures – Shoreline Permit Procedures, EMC Chapter 15.02
- General Administration of Building Codes, EMC Chapter 16.005
- Unified Development Code – Watershed Resource Management Zone, EMC 19.05.200
- Flood Damage Prevention, EMC Chapter 19.30
- Critical Areas, EMC Chapter 19.37

#### 7.1.3.2 City of Lake Stevens

- Land Use Code Basic Definitions and Interpretations, LSMC Chapter 14.08
- Special Flood Hazard Areas, LSMC Chapter 14.64
- Critical Areas, LSMC Chapter 14.88
- Shoreline Management, LSMC Chapter 14.92

#### 7.1.3.3 City of Marysville

- Unified Development Code, Title 22E, including Critical Areas, Chapter 22E.010
- Floodplain Management, Chapter 22E.020
- Shoreline Management Master Program, Chapter 22E.050

#### 7.1.3.4 Snohomish County

The following code requirements regulate development within floodplain areas in Snohomish County:

- Unified Development Code, Title 30 SCC, including:
  - Flood Hazard Permits, Chapter 30.43C
  - Flood Hazard Area Variances, Chapter 30.43D
  - Shoreline Permits, Chapter 30.44
  - Critical Areas Regulations: Wetlands and Fish & Wildlife Habitat Conservation Areas, Chapter 30.62A; Geologically Hazardous Areas, Chapter 30.62B; Critical Aquifer Recharge Areas, Chapter 30.62C
  - Drainage, Chapter 30.63A
  - Land Disturbing Activity, Chapter 30.63B
  - Special Flood Hazard Areas, Chapter 30.65
  - Shoreline Management Program, Chapter 30.67 (including Flood Protection Measures, 30.67.540)
  - Definitions, Chapter 30.91
- Snohomish County Hazard Mitigation Plan (Snohomish County 2020): Guides and coordinates mitigation activities throughout Snohomish Count by identifying resources, information, and strategies for reducing risk from natural hazards.

### 7.1.4 Tribal

- Environmental Infractions – Waters/Wetlands/Tidelands, TTC Chapter 8.20.100: Protects tribal waters by stating that any person who excavates, dredges, fills, or alters the wetlands, tidelands, or water of the Tribes, or any water of the United States that lies within the exterior boundaries of the Reservation, without a permit or in violation of the terms of a permit from the Tribes or the appropriate federal authority has committed a Class A infraction.
- Environmental Infractions – Use of Fill Material, TTC Chapter 8.20.130: Determines that any person who uses fill material to accommodate any development activity without certification from a licensed professional engineer that such fill will not alter or prohibit the natural flow of surface or ground water has committed a Class A infraction.
- Tidelands Management Policies, TTC Chapter 8.30: Establishes management requirements for the development regulation and leasing of the portion of Tribally owned tidelands.

## 7.2 Data Sources and Data Collection Methods

The following data sources have been reviewed for information on existing conditions for special flood hazard areas in the preliminary study area, which includes the FEMA-mapped flood zones associated with the Snohomish River, Ebey Slough, and other surface waters. Using the following sources the existing conditions data have been identified for the 100-year and 500-year floodplain (floodways), special flood hazard areas, local floodplain permit requirements, frequency of flooding, the effect of existing highway (US 2 and I-5) structures on flood flows and sea level rise and the extent and depth of inundation:

- Available data, reports, and studies regarding geology, river channel, floodplains, channel migration zones, and sediment regimes and transport will be reviewed. These materials included soil and

geological surveys; analysis from environmental and engineering studies by WSDOT and/or local agencies; historical maps and photos from federal, state, and local sources; and GIS data (FEMA 2020a; FEMA 2020b; Snohomish County 2020; Snohomish County n.d.-a).

- USGS National Water Information System (USGS 2024).
- Snohomish County GIS water resources data (Snohomish County 2024b).
- Stream inventories from Snohomish County, City of Everett, and City of Lake Stevens.

## 7.3 Existing Conditions

### 7.3.1 FEMA Flood Zones

Figure 7-1 shows the locations of FEMA regulatory floodplains and floodways in the preliminary study area (FEMA 2020b). The NFIP uses FIRMs for floodplain management, insurance purposes, and flood mitigation. These maps help identify designations of flood zones as geographic areas with different levels of flood risk. Descriptions of mapped flood zones in the preliminary study area are as follows:

- Floodway: The main watercourse channel and adjacent lands that must be kept free of fill or development to avoid increasing flood elevations. Floodways are defined through detailed hydraulic analysis, and updated analyses are required for projects that might encroach on the floodway. In the preliminary study area, regulatory floodways have been identified and mapped for the Snohomish River, Ebey Slough, Steamboat Slough, and Union Slough.
- Floodway Density Fringe Area: An area of high flood damage potential where conventional floodway boundaries cannot be established. Floodway density fringe areas are often only allowed limited uses such as prime farmland agriculture. In the preliminary study area and surrounding the US 2 trestle, floodway density fringe areas exist behind a Snohomish River levee that FEMA has found not to comply with the levee certification requirements of 44 CFR Part 65.10 (FEMA 2020a; FEMA 2020b). Therefore, FEMA has stated that the floodway in this area will be remapped at a later date once certification of the levee has been revisited (this process can take up to 10 years or longer). Almost the entire span of the US 2 trestle is located across the Snohomish River regulatory floodway and floodway density fringe.
- 100-Year Floodplain: Areas with a 1 percent annual chance of flood, also known as a 100-year floodplain, are considered high-risk flood areas and are labeled on the FIRM as zones beginning with the letters A or V. Areas with this designation in the preliminary study area surround much of the US 2 trestle and are also present east of I-5 north of the US 2 trestle. These areas are associated with the Snohomish River, Ebey Slough, Steamboat Slough and Union Slough. Where identified through hydraulic analysis, the regulatory elevation associated with the 100-year floodplain is known as the Base Flood Elevation (BFE).
- 500-Year Floodplain: Areas with a 0.2 percent annual chance of flood, also known as a 500-year floodplain, are considered moderate-risk flood hazard areas and are labeled as Zone B or Zone X on the FIRM. The preliminary study area includes Zone X areas along the Snohomish River and Ebey Slough levee systems, which are designed to protect these areas from the 1 percent annual chance flood.

Based on these FIRMs, the Snohomish River regulatory BFE is 13.0 feet at the north end of the preliminary study area and 20.9 feet at the south end (NAVD88). East to west in the preliminary study

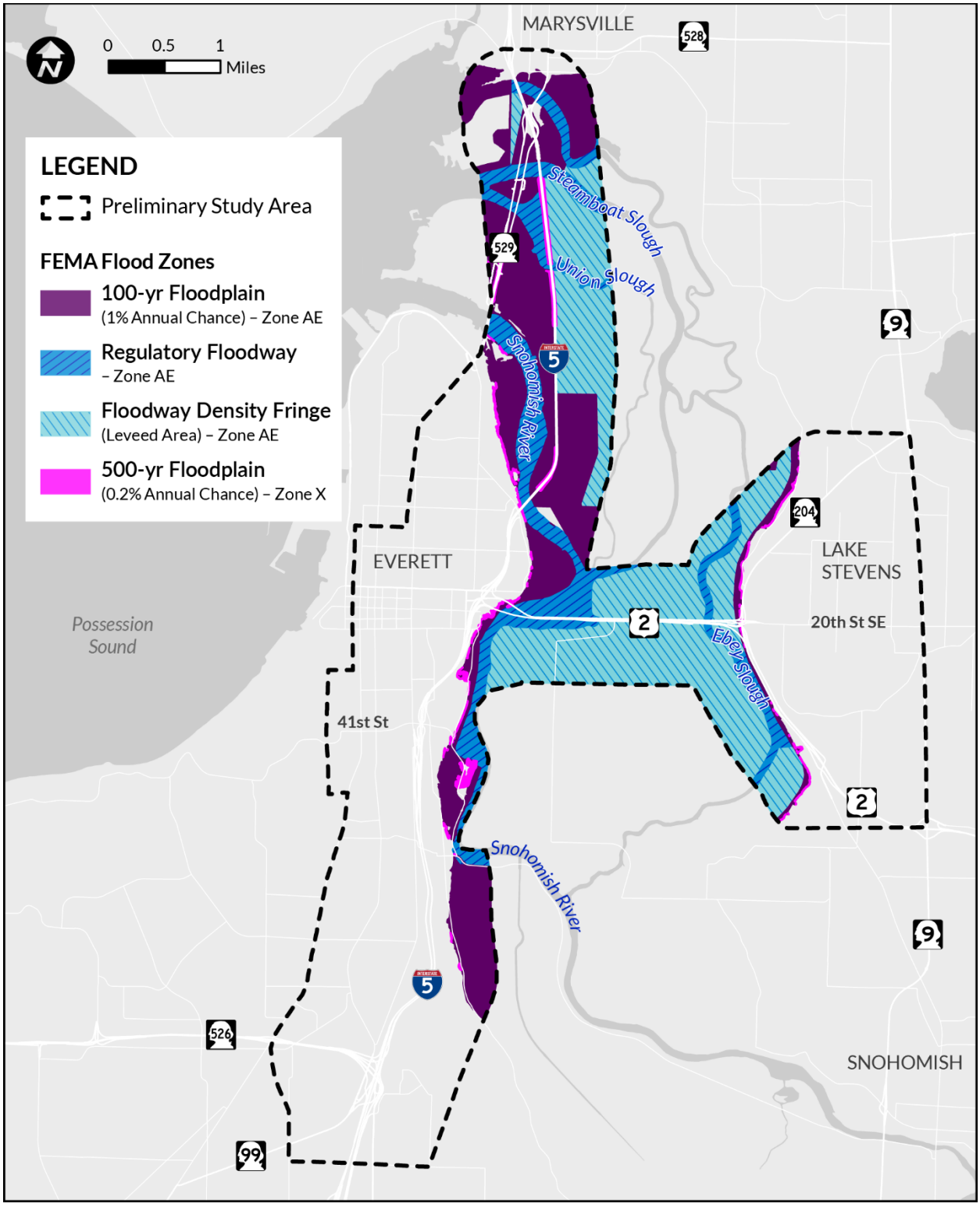
area, the Snohomish River BFE is 17.0 feet at the intersection of US 2 with I-5, and the Ebey Slough BFE is 16.9 feet at the intersection of US 2 with SR 204.

### 7.3.2 Flood Control Structures

The Snohomish River, including within the preliminary study area, is bordered almost entirely by levees designed to overtop during flood events that exceed a 5-year return interval. More than 45 miles of levees protect about 20,000 acres of primarily agricultural lands. Also, as previously noted, FEMA has determined that the Snohomish River levee located adjacent to and beneath the US 2 trestle does not comply with the levee certification requirements of 44 CFR Part 65.10 (FEMA 2020a; FEMA 2020b). Therefore, FEMA has stated that the flood hazard areas in this vicinity will be remapped at a later date once certification of the levee has been revisited (this process can take up to 10 years or longer).

Most of the existing levees in the preliminary study area are maintained by diking and flood control districts. Snohomish County fully or partly assists in maintenance where county roads run along levees. Damage along the Snohomish River is primarily from inundation and levee breaches. Costs to repair breaches is typically in the range of millions of dollars, and federal funding for such repairs has become much harder to secure. In the lower delta, deep weak soils have led to levee subsidence (Snohomish County Public Works 2010). Failures may occur even during non-flood times. Recorded flooding has been observed at the Ebey Slough close to US 2 around Fobes Road (Snohomish County 2024c).

**Figure 7-1. FEMA Flood Zones within Preliminary Study Area**




Source: FEMA 2020b

### 7.3.3 Key Points

Almost the entire span of the existing US 2 trestle crosses the Snohomish River regulatory floodway and leveed floodway density fringe areas. FEMA has determined that levees adjacent to and beneath the US 2 trestle do not meet current certifications and FEMA may remap flood areas in the preliminary study area once levee recertification can be evaluated over the next several years or more. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 8 Habitat Connectivity

This chapter summarizes existing conditions for habitat connectivity in the preliminary study area, including WSDOT priority roadway segments for ecological stewardship and wildlife-related safety, as well as pollinator habitat rankings.

## 8.1 Relevant Laws, Regulations, and Guidance

The following state guidance informs the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for habitat connectivity:

- WSDOT Secretary's EO 1031.02 on Protections and Connections for High Quality Natural Habitat: Ensures that road and highway programs recognize the importance of protecting ecosystem health and the preservation of biodiversity, including promoting and supporting PEL as a process that identifies potentially affected fish and wildlife habitats as early as possible during the planning process.

## 8.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for habitat connectivity in the preliminary study area. Data collected from these sources are documented and presented on maps and in tables.

- Habitat Connectivity Databases
  - WSDOT Habitat Connectivity Investment Priorities Web Map (WSDOT 2024f)
  - Washington State GIS Workbench Pollinator Habitat Rankings data layer (Washington State GIS Workbench 2024)
- Subject Matter Expert (SME) coordination
  - Coordination will occur, as necessary, with the State's Habitat Connectivity SME if medium or high priority segments for Ecological Stewardship are documented in the preliminary study area.

## 8.3 Existing Conditions

The following subsections describe roadway segments with the potential for ecological stewardship opportunities, wildlife-related safety improvements, and pollinator habitat enhancement in the preliminary study area.

### 8.3.1 WSDOT Priority Segments for Ecological Stewardship and Wildlife-related Safety

WSDOT's habitat connectivity investment priorities data establishes high, medium, and low priority ranks for ecological stewardship for the entire state highway system by 1-mile segments (WSDOT 2024f). Ecological stewardship rankings reflect the extent that a highway segment overlaps with the habitat ranges of select endangered or threatened wildlife, as well as its proximity to connected networks of habitat identified by the Washington Wildlife Habitat Connectivity Working Group. Other factors are also considered, such as traffic volume and nearby blocks of protected land.

WSDOT also uses reports of carcass removals by WSDOT Maintenance staff, WDFW deer and elk salvage data, and verified wildlife carcass removals reported by other external sources to rank state highway segments as low, medium, and high for wildlife-related safety (WSDOT 2024f). Areas with higher carcass removal and wildlife collision rates receive higher priority rankings. These wildlife-related safety rankings help WSDOT identify where actions to reduce collisions between wildlife and vehicles are warranted.

Table 8-1 identifies ecological stewardship and wildlife-related safety priority rankings along roadways within the preliminary study area, listed approximately south to north and west to east by roadway, and Figure 8-1 illustrates these rankings. The ecological stewardship and wildlife-related safety priority rankings are the same for each roadway segment evaluated in the preliminary study area and are thus presented in a single table and figure.

Overall, there are no high priority segments, 3 medium priority segments, 9 low priority segments, and 9 segments with no priority rankings for ecological stewardship and wildlife-related safety. The three medium-priority segments are as follows for ecological stewardship and wildlife-related safety:

- US 2, MP 2.5 to 3.5
- SR 9, MP 12.5 to 13.5
- SR 529, MP 5.5 to 7.88

Coordination with WSDOT's habitat connectivity SME will be required for actions undertaken along the segments with medium or high rankings.

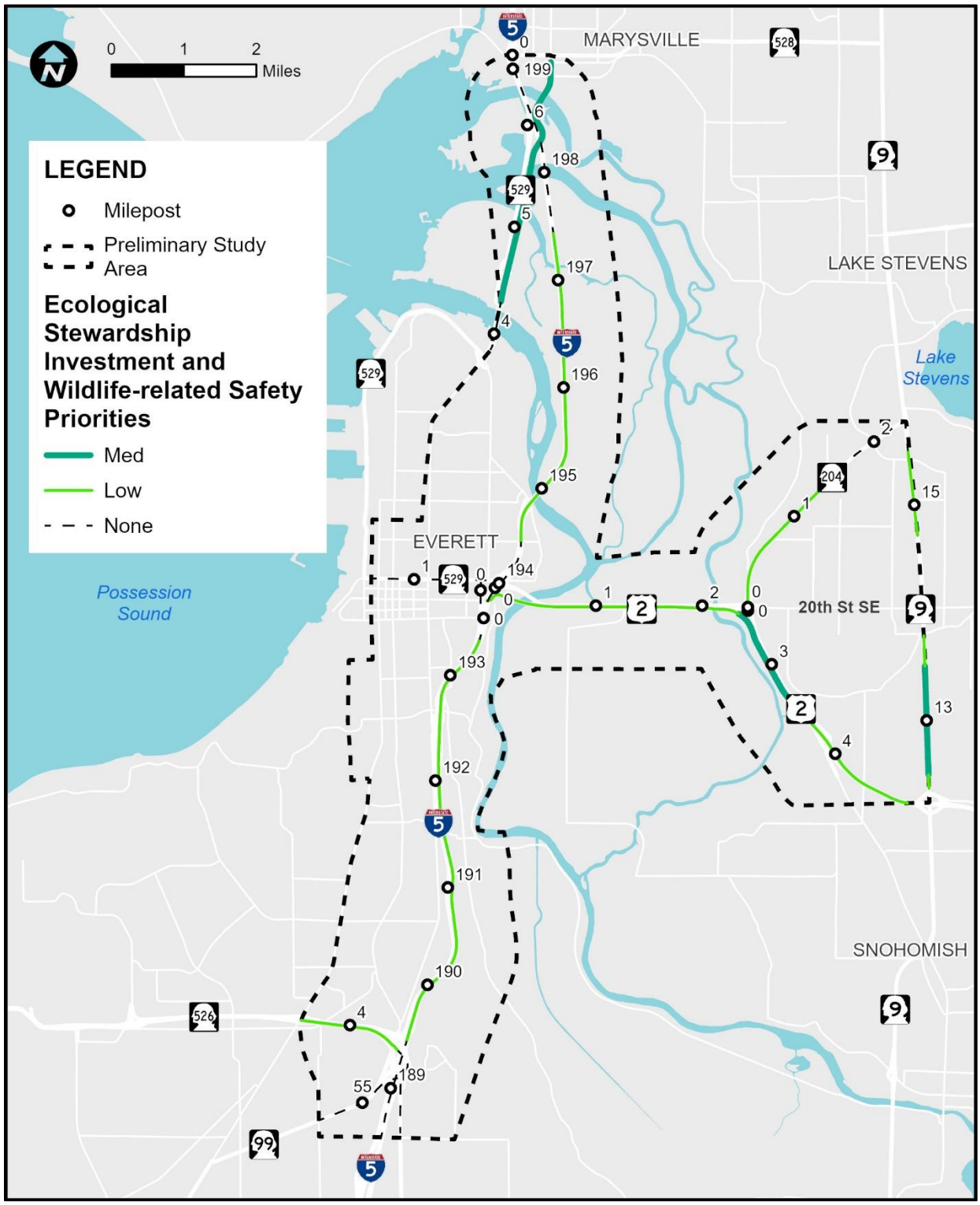
**Table 8-1. Ecological Stewardship and Wildlife-related Safety Priorities within Preliminary Study Area**

| State/Interstate | Mile Post Segment | Overall Priority Ranking |
|---|---|---|
| SR 99 | 46.5 – 49.13 | No Rank |
| SR 526 | 3.5 – 4.52 | Low |
| SR 527 | 7.5 – 9.29 | No Rank |
| I 5 | 187.5 – 188.5 | Low |
| I-5 | 188.5 – 189.5 | No Rank |
| I-5 | 189.5 -193.5 | Low |
| I-5 | 193.5 – 194.5 | No Rank |
| I-5 | 194.5 – 197.5 | Low |
| I-5 | 197.5 – 199.5 | No Rank |
| SR 204 | 0 - 1.5 | Low |

| State/Interstate | Mile Post Segment | Overall Priority Ranking |
|---|---|---|
| US 2 | 0 – 2.5 | Low |
| US 2 | 2.5 – 3.5 | Medium |
| US 2 | 3.5 – 5.5 | Low |
| SR 204 | 1.5 – 2.38 | No Rank |
| SR 9 | 11.5 – 12.5 | Low |
| SR 9 | 12.5 – 13.5 | Medium |
| SR 9 | 13.5 – 15.5 | Low |
| SR 9 | 15.5-16.5 | No Rank |
| SR 529 | 0 - 5.5 | No Rank |
| SR 529 | 5.5 – 7.88 | Medium |
| SR 528 | 0 – 1.5 | No Rank |

Source: WSDOT 2024f

**Figure 8-1. Priority Segments for Ecological Stewardship and Wildlife-related Safety within Preliminary Study Area**




Source: WSDOT 2024f

### 8.3.2 Pollinator Habitat Rankings

WSDOT ranked the entire Washington state highway system by half-mile segments for the potential value of maintaining or improving roadside pollinator habitat based on a wide range of conditions, including the road segment's proximity to crops and natural areas (Washington State GIS Workbench 2024). WSDOT developed three separate models that ranked state routes on a low/medium/high scale for three categories:

- General pollinator rank: Based on the proximity of highway segments to pollinator-dependent crops, protected public and private lands, wetland and riparian habitats, native and natural vegetation cover, oak/grassland habitat, and rare and imperiled animal pollinated plant species.
- Monarch rank: Based on the proximity of highway segments to suitable monarch and milkweed habitat as identified by the USFWS's habitat suitability index model. Intended to benefit a declining butterfly population.
- Urban gateway rank: Applied to highway segments that intersect with urban areas and the proximity of the highway segment to protected public and private lands, wetland and riparian habitats, native and natural vegetation cover, oak/grassland habitat, and rare and imperiled animal pollinated plant species. Intended to identify areas where local partnerships could be pursued to enhance conditions for pollinators for the appreciation of urban dwellers and their gardens.

In general, low rankings for these categories indicates that habitat quality for pollinators is low along the specified roadway segments. Medium and high rankings indicate that there is higher quality pollinator habitat or potential to improve pollinator habitat quality due to presence of important croplands next to the specified roadway segments. Table 8-2 summarizes the pollinator habitat rankings within the preliminary study area for the three categories, listed approximately south to north and west to east by roadway. Figure 8-2 shows the locations of the general pollinator rankings for the state highway system in the preliminary study area. Figure 8-3 shows the locations of the urban gateway rankings in the preliminary study area.

One high-priority general pollinator segment has been identified within the preliminary study area on I-5 between MP 196.94 and 197.94. No priority monarch segments have been identified in the preliminary study area. There are five high-priority segments in the preliminary study area based on the urban gateway rankings:

- I-5, MP 191.94 to 192.94
- SR 204, MP 0.00 to 0.47
- US 2, MP 0.00 to 0.87
- US 2, MP 1.87 to 2.87
- I-5, MP 191.94 to 192.94
- I-5, MP 194.44 to 195.44
- SR 204, MP 0.00 to 0.47

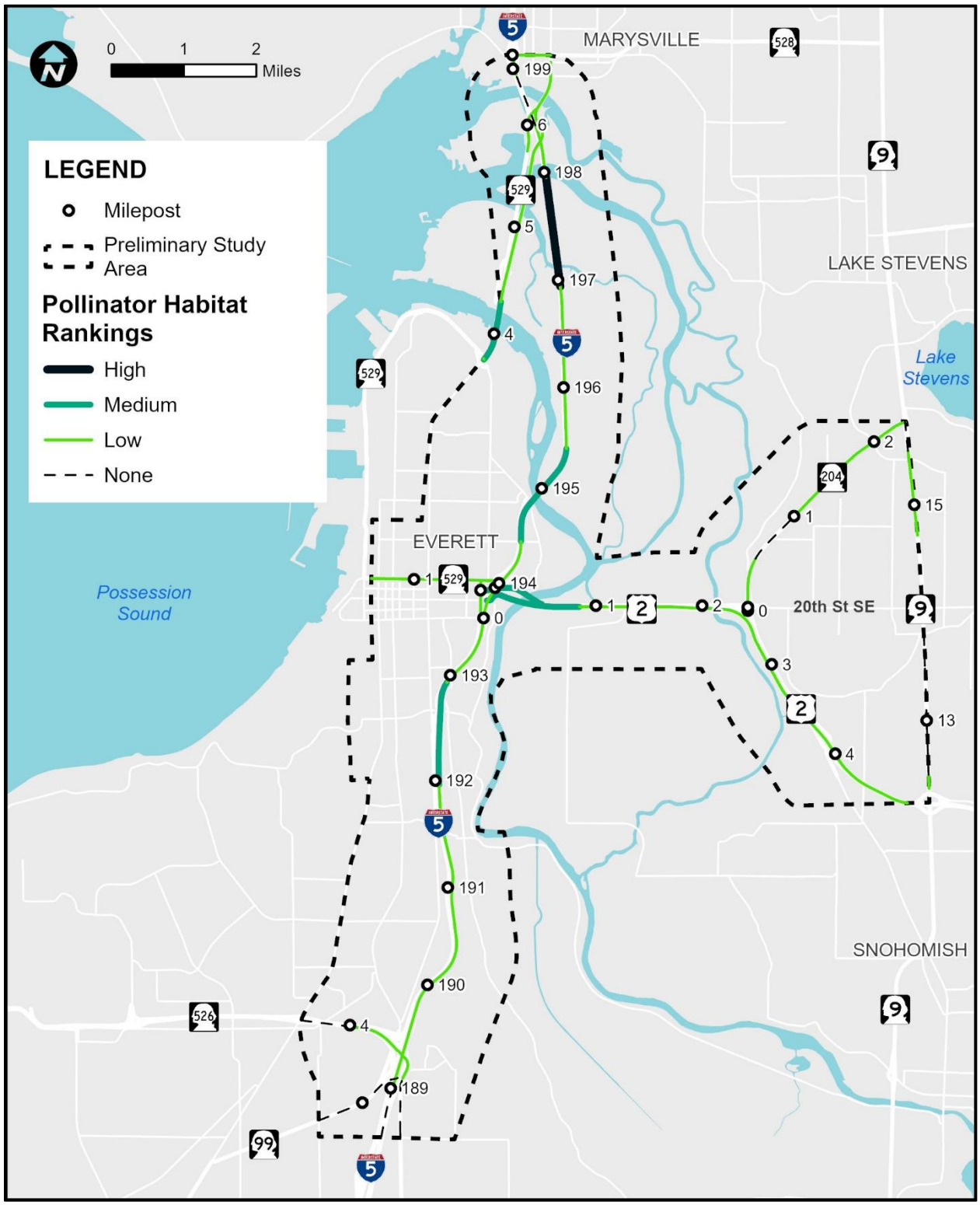
**Table 8-2. Pollinator Habitat Rankings within Preliminary Study Area**

| State/Interstate | Mile Post Segment | General Pollinator Rank/Score | Monarch Rank | Urban Gateway Rank/Score |
|---|---|---|---|---|
| SR 526 | 4 – 4.52 | Low/1 | None | Low/1 |
| SR 527 | 11.63 – 11.92 | Low/1 | None | Low/1 |
| I 5 | 188.94 – 190.94 | Low/1 | None | Low/1 |
| I-5 | 190.94 – 191.94 | Low/2 | None | Medium/2 |
| I-5 | 191.94 – 192.94 | Medium/3 | None | High/3 |
| I-5 | 192.94 – 193.94 | Low/2 | None | Medium/2 |
| I-5 | 193.94 – 194.44 | Low/1 | None | Low/1 |
| I-5 | 194.44 – 195.44 | Medium/3 | None | High/3 |
| I-5 | 195.44 – 196.94 | Low/1 | None | Low/1 |
| I-5 | 196.94 – 197.94 | High/6 | None | Medium/2 |
| I-5 | 197.94 – 198.44 | Low/1 | None | Medium/2 |
| I-5 | 198.44 – 198.94 | No Rank/0 | None | Low/1 |
| I-5 | 198.94 – 199.94 | Low/2 | None | Medium/2 |
| US 2 | 0 – 0.87 | Medium/3 | None | High/3 |
| US 2 | 0.87 – 1.37 | Low/2 | None | No Rank/0 |
| US 2 | 1.37 – 1.87 | Low/1 | None | No Rank/0 |
| US 2 | 1.87 – 2.87 | Low/2 | None | High/3 |
| US 2 | 2.87 – 3.87 | Low/1 | None | Medium/2 |
| US 2 | 3.87 – 5.87 | Low/1 | None | Low/1 |
| SR 204 | 0 – 0.47 | Low/2 | None | High/3 |
| SR 204 | 0.47 – 0.97 | No Rank/0 | None | Low/1 |
| SR 204 | 0.97 – 2.35 | Low/1 | None | Low/1 |

| State/Interstate | Mile Post Segment | General Pollinator Rank/Score | Monarch Rank | Urban Gateway Rank/Score |
|---|---|---|---|---|
| SR 9 | 12 – 12.5 | Low/1 | None | Low/1 |
| SR 9 | 12.5 – 14.0 | No Rank/0 | None | Low/1 |
| SR 9 | 14.0 – 14.5 | Low/1 | None | Low/1 |
| SR 9 | 14.5 –15.5 | Low/1 | None | Low/1 |
| SR 9 | 15.5 – 16 | No Rank/0 | None | No Rank/0 |
| SR 528 | 0 – 0.5 | Low/2 | None | Medium/2 |
| SR 529 | 0 – 0.5 | Low/2 | None | Medium/2 |
| SR 529 | 0.5 – 1.5 | Low/1 | None | No Rank/0 |
| SR 529 | 1.5 – 3.74 | N/A | N/A | N/A |
| SR 529 | 3.74 – 4.31 | Medium/3 | None | High/3 |
| SR 529 | 4.31 – 5.81 | Low/2 | None | Medium/2 |
| SR 529 | 5.81 – 6.69 | Low/1 | None | Low/1 |

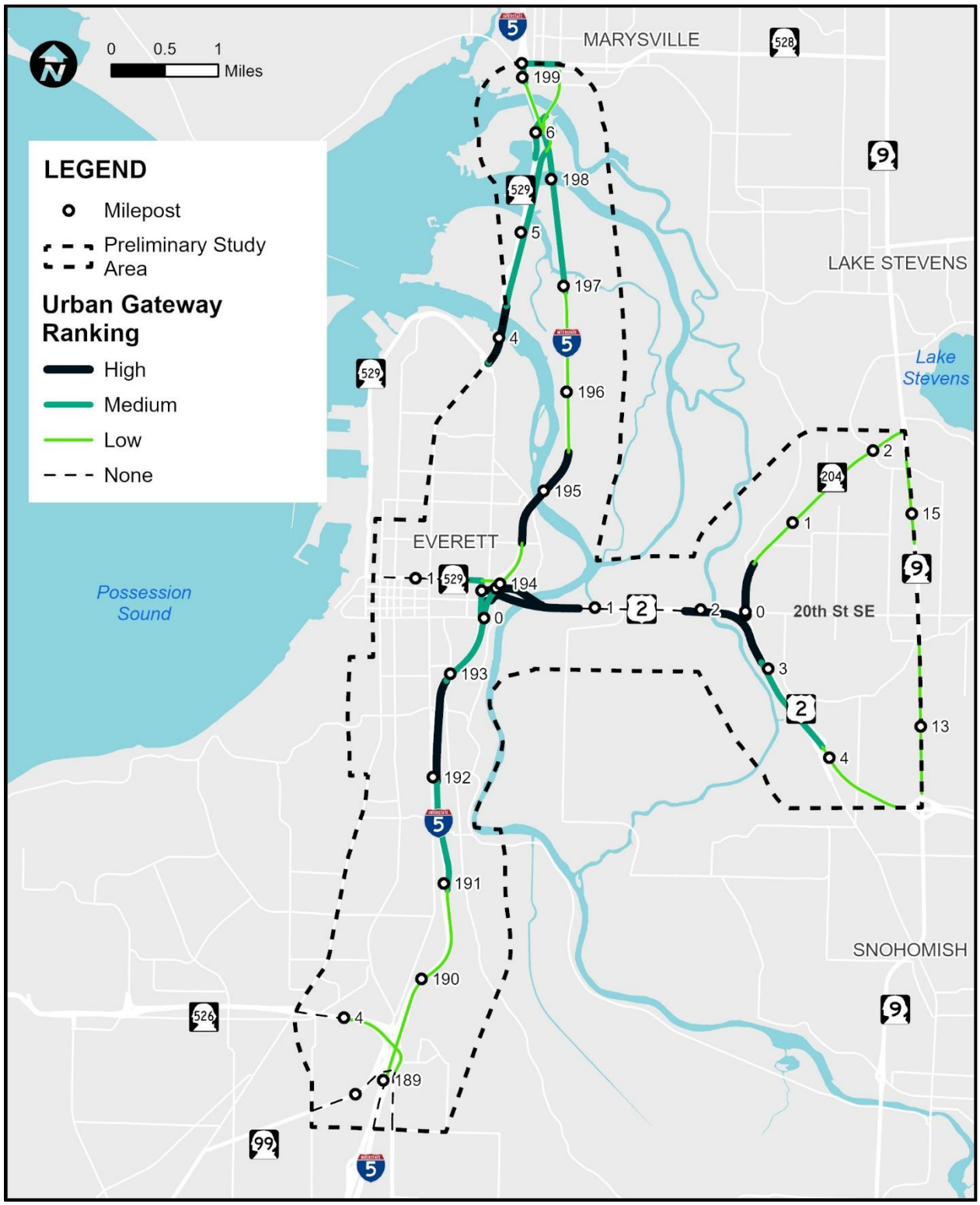
Source: Washington State GIS Workbench 2024

**Figure 8-2. General Pollinator Habitat Rankings within Preliminary Study Area**




Source: Washington State GIS Workbench 2024

**Figure 8-3. Urban Gateway Habitat Rankings within Preliminary Study Area**




Source: Washington State GIS Workbench 2024

### 8.3.3 Key Points

Roadway systems, including state and federal highway systems, present challenges to the movement of wildlife. Within the preliminary study area, WSDOT has ranked three roadway segments on US 2, SR 9, and SR 529 as medium-priority segments for ecological stewardship and wildlife-related safety. Only the segment on US 2, located just east of the trestle, is near where improvements would likely be proposed. Further consultation with WSDOT SMEs will be required if roadway improvements are proposed in these areas.

One high-priority general pollinator segment was identified on I-5; however, it is north of the US 2 trestle and likely outside the area of proposed improvements for the trestle and its connections. There are five high-priority roadway segments for pollinator habitat based on the urban gateway rankings: two on I-5, two on US 2 (at either end of the US 2 trestle, including its east and west connections), and one on SR 204. The US 2 and SR 204 segments would likely have proposed improvements. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 9 Fish Passage Barriers

This chapter summarizes existing conditions for fish passage barriers in the preliminary study area, including the types and locations of fish passage barriers on WSDOT-owned and local roadways and barriers that have been corrected.

## 9.1 Relevant Laws, Regulations, and Guidance

The following federal and state laws, regulations, policies, and guidance inform the approach for the US 2 Trestle PEL Study's desktop analysis to identifying the existing conditions for fish passage barriers.

### 9.1.1 Federal

- 2013 U.S. v. WA Culvert Injunction: A federal court injunction requiring WSDOT to replace state-owned culverts in western Washington that pose barriers to fish passage with fish-passable structures by 2030. This includes approximately 817 WSDOT culverts that are currently blocking access to approximately 937 miles of salmonid habitat. Of the 817 culverts, 232 are considered a lower priority for replacement because they provide less than 200 lineal meters of habitat upstream of the barrier, extending upstream to the first natural barrier. The lower priority culverts are not bound to the 2030 deadline but rather must be replaced at the end of their useful life or if there is an independent road project in that area.

### 9.1.2 State

- RCW: Chapter 47.85.020 Multiagency Permit Streamlining Process: A streamlining process that requires WSDOT to maintain programmatic agreements and permits, including the Programmatic Biological Assessment and General HPA. Also implements a multiagency effort with WDFW to streamline the HPA permit process for fish passage barrier correction projects.
- WDFW-WSDOT Hydraulic Code MOA: MOA between WSDOT and WDFW on HPA application and review procedures. The WDFW-WSDOT Hydraulic Code MOA includes information on the Fish Passage Retrofit Program and deferred mitigation for maintenance and emergency activities.
- RCW 77.55 – WDFW Construction Projects in State Waters – WDFW laws for fish screens, fishways, and fish passage.

## 9.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for fish passage barriers in the preliminary study area. Data collected from these sources was documented and presented in maps and tables.

- Fish Passage Inventory Databases
  - WDFW's Washington State Fish Passage Web Map (WDFW 2022)
  - WSDOT's Fish Passage Inventory Web Map (WSDOT 2024d)

## 9.3 Existing Conditions

Streams and rivers across the state are conveyed beneath roadways in culverts or under bridge systems. Many of these features are known to obstruct the upstream migration of fish, with the primary concern in Washington state being the blockage of Pacific salmon and steelhead, many of which have a federal listing status under the ESA or have a state listing status. (Refer to Chapter 10 for a description of the potential use of the preliminary study area by threatened and endangered species.)

WSDOT and WDFW have assessed most roadway crossings of streams for fish passage, with WSDOT's focus on the state highway system and WDFW accounting for all stream crossings owned by any entity and their barriers, including roadways, railways, and natural barriers (waterfalls). The assessments typically assign a percent passable status to a stream crossing, such as a culvert or dam. A structure that is 0 percent passable indicates that the feature is a total barrier to some adult salmonids during a period within a range of fish passage flows. A structure that presents either a severe or moderate barrier to some adult salmonids during a period within the range of fish passage flows would be considered a partial fish passage barrier. Unknown barrier status typically means the barrier may not have been assessed or additional information is needed before a determination of the feature's passability can be made. A non-barrier would be 100 percent passable under the range of fish passage flows (WDFW 2022).

### 9.3.1 Fish Passage Barriers

Table 9-1 lists fish passage barriers on WSDOT facilities within the preliminary study area approximately from south to north and west to east, including barriers that are currently on the state-owned culvert injunction list and injunction culverts currently in design to be replaced. The table does not include features that are 100 percent passable. Table 9-1 identifies where the current WSDOT fish passage barriers are located within the preliminary study area as well as their current fish passage status (total, partial, or unknown). There are currently seven total fish passage barriers, four partial fish passage barriers, and two locations with unknown status on WSDOT facilities in the preliminary study area.

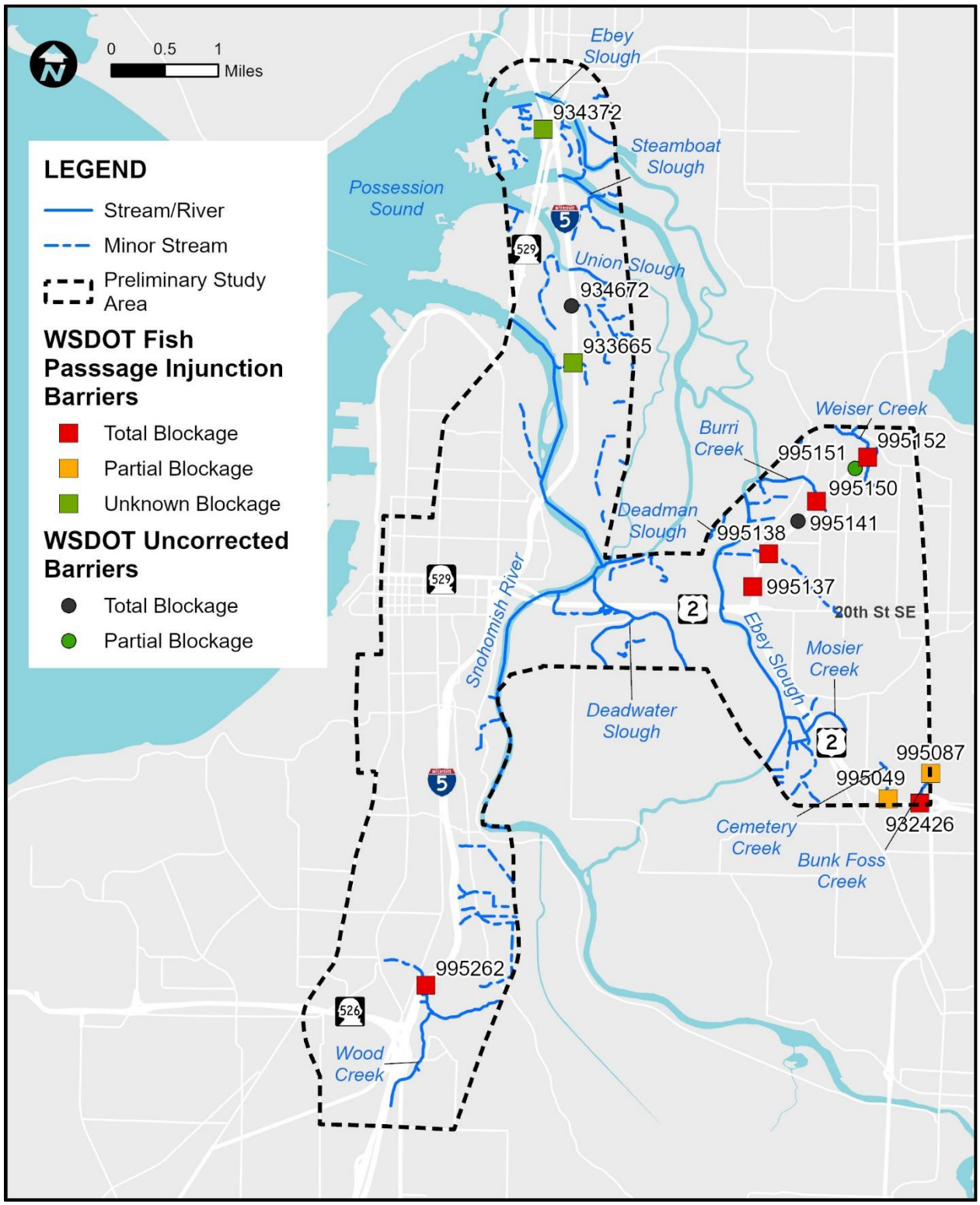
**Table 9-1. WSDOT Fish Passage Barriers within Preliminary Study Area**

| State/Interstate Route ID | Barrier ID | Waterbody | Barrier Type | Injunction Barrier (Yes/No) |
|---|---|---|---|---|
| I-5 | 995262 | Wood Creek Tributary | Total | Yes |
| US 2 | 995049 | Cemetery Creek | Partial | Yes |
| US 2 | 932426* | Bunk Foss Creek | Total | Yes |
| SR 9 | 995087* | Bunk Foss Creek | Partial | Yes |
| SR 204 | 995137 | Unnamed Tributary to Ebey Slough | Total | Yes |
| SR 204 | 995138* | Unnamed Tributary to Ebey Slough | Total | Yes |

| State/Interstate Route ID | Barrier ID | Waterbody | Barrier Type | Injunction Barrier (Yes/No) |
|---|---|---|---|---|
| SR 204 | 995141 | Unnamed Tributary to Ebey Slough | Partial | No |
| SR 204 | 995150 | Burri Creek | Total | Yes |
| SR 204 | 995151 | Unnamed Tributary to Ebey Slough | Partial | No |
| SR 204 | 995152 | Weiser Creek | Total | Yes |
| I-5 | 933665 | Unnamed Tributary to Snohomish River | Unknown | Yes |
| I-5 | 934672 | Unnamed Tributary to Union Slough | Total | No |
| SR 529 | 934372 | Unnamed Tributary to Steamboat Slough | Unknown | Yes |

Source: WSDOT 2024d
Notes: * = Culvert replacement is currently in design

**Figure 9-1. Fish Passage Barriers on WSDOT Facilities within Preliminary Study Area**




Source: WSDOT 2024d

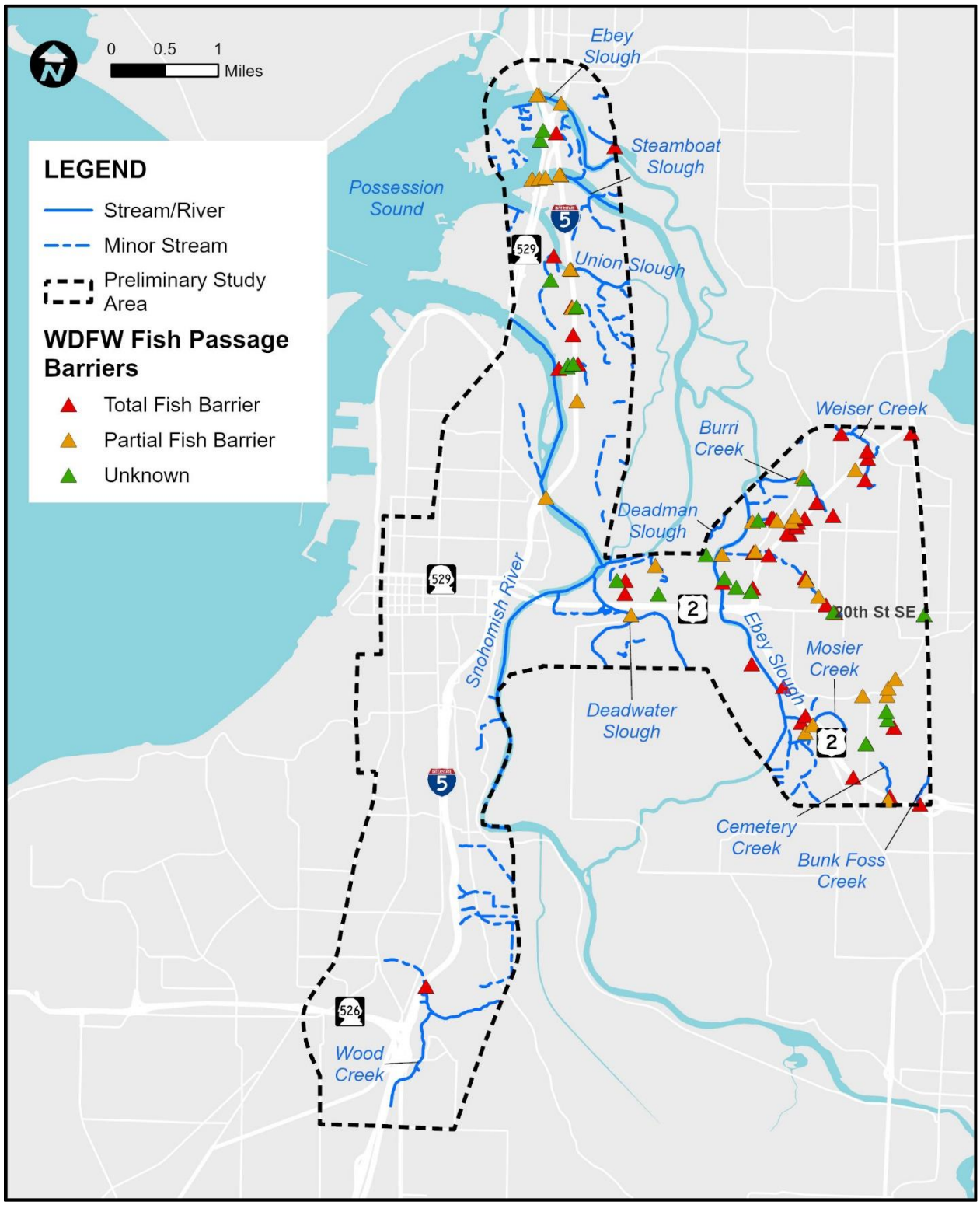
Table 9-2 lists fish passage barriers identified by WDFW by waterbody within the preliminary study area, approximately from south to north and west to east, and outside the WSDOT right of way. These barriers, shown in Figure 9-2, include total, partial, unknown, and natural barrier classifications. Overall, there are 16 fish passage barriers with unknown barrier status, 10 with a partial barrier status, 13 with a total barrier status, and 1 natural barrier within the preliminary study area.

**Table 9-2. WDFW Identified Fish Passage Barriers within Preliminary Study Area**

| Waterbody | # of Barriers and Barrier Type | Ownership |
|---|---|---|
| Unnamed Tributaries to Ebey Slough | 5 – Unknown | Private/City |
| Unnamed Tributaries to Ebey Slough | 5 – Partial | Private/City |
| Unnamed Tributaries to Ebey Slough | 8 – Total | Private/City |
| Unnamed Tributaries to Ebey Slough | 1 – Natural | N/A |
| Burri Creek | 1 – Unknown | County |
| Unnamed Tributary to Pilchuck Creek | 1 – Unknown | County |
| Mosier Creek | 3 – Unknown | County/Private |
| Mosier Creek | 3 – Partial | County/Private |
| Mosier Creek | 1 – Total | County |
| Cemetery Creek | 1 – Partial | County |
| Cemetery Creek | 1 – Total | County |
| Unnamed Tributary to Union Slough | 2 – Unknown | Private/City |
| Unnamed Tributary to Union Slough | 1 –Total | Private |
| Unnamed Tributaries to Steamboat Slough | 4 – Unknown | City/County |
| Unnamed Tributaries to Steamboat Slough | 1 – Partial | County |
| Unnamed Tributaries to Steamboat Slough | 2 – Total | County |

Source: WDFW 2022

**Figure 9-2. WDFW Identified Fish Passage Barriers within Preliminary Study Area**




Source: WDFW 2022

### 9.3.2 Corrected Fish Passage Barriers

Currently, there are no corrected fish passage barriers within the preliminary study area on WSDOT facilities.

### 9.3.3 Key Points

Within the preliminary study area, there are a total of 13 fish passage barriers on the state roadway system; 10 barriers on the current injunction list and 3 that are not on the injunction barrier list but still present barriers to fish passage. Of the 10 injunction barriers, three are currently in design, including two culverts on Bunk Foss Creek (tributary to the Pilchuck River) and one on a tributary to Ebey Slough near SR 204. Outside the state roadway system (city, county, and private roads) within the preliminary study area, there are an additional 39 fish passage barriers with barrier statuses ranging from unknown to total fish passage barriers, including 11 barriers on local roads just north and south of the US 2 trestle and near the trestle's east end trestle connections. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 10 Threatened and Endangered Species (Fish, Wildlife, and Plants)

This chapter summarizes federal- and state-listed species in the preliminary study area, including ESA-listed fish, marine mammals, wildlife, and plant species and associated designated critical habitats that occur or may occur; aquatic resources with designated Essential Fish Habitat (EFH); and marine mammals afforded protection under the Marine Mammal Protection Act (MMPA).

## 10.1 Relevant Laws, Regulations, and Guidance

The following federal, state, and local laws, regulations, plans, policies, and guidance inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for threatened and endangered species (plants, fish, and wildlife). A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 10.1.1 Federal

- ESA: Provides a framework to conserve and protect endangered and threatened species and their habitats both domestically and abroad.
- Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act): Intended to prevent overfishing, rebuilding overfished stocks, and increasing long-term economic and social benefits.
- Migratory Bird Treaty Act: Prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.
- Bald and Golden Eagle Protection Act: Prohibits anyone, without a permit issued by the USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs.
- Marine Mammal Protection Act: Prohibits the "take" of marine mammals—including harassment, hunting, capturing, collecting, or killing—in U.S. waters and by U.S. citizens on the high seas.

### 10.1.2 State

- RCW 77.12.240: Authority to take wildlife (WDFW): Authorizes the state to take animals that are destroying property or for management or research.
- RCW: Chapter 47.85.020 Multiagency Permit Streamlining Process Projects Delivery and Review: A streamlining process that requires WSDOT to maintain programmatic agreements and permits, including the Programmatic Biological Assessment and General HPAs. Also implements a multiagency effort with WDFW to streamline the HPA permit process for fish passage barrier correction projects: Multiagency framework for assessing impacts to threatened and endangered species and streamlining the permit process.
- RCW 77.15.130: Protected fish or wildlife—Unauthorized taking—Penalty—Criminal wildlife penalty assessment.

### 10.1.3 Local

#### 10.1.3.1 City of Everett

- City of Everett Municipal Code – Ch. 19.37 Critical Areas | Everett Municipal Code: Identifies City of Everett's critical areas and requirements to protect, enhance, and restore them where possible.
- City of Everett Shoreline Master Program – Effective October 18, 2019: Establishes policies and regulations for the development and use of the City of Everett's shoreline.

#### 10.1.3.2 City of Lake Stevens

- City of Lake Stevens Municipal Code Chapter 14.88 Critical Areas: Identifies City of Lake Steven's critical areas and requirements to protect, enhance, and restore them where possible.

#### 10.1.3.3 City of Marysville

- City of Marysville Municipal Code – Chapter 22E.010 Critical Areas Management: Identifies City of Marysville's critical areas and requirements to protect, enhance, and restore them where possible.
- City of Marysville Shoreline Master Plan – Chapter 22E.050 Shoreline Management Master Program (Ordinance No. 3146, effective March 20, 2020): Establishes policies and regulations for the development and use of the City of Marysville's shoreline.

#### 10.1.3.4 City of Snohomish

- City of Snohomish Municipal Code – Title 14, Land Use Development Code Ch. 14.255 Critical Areas – General and Ch. 14.280 Habitat Conservation Areas (Ordinance 2083, dated May 3, 2005)
  - Ch. 14.255: Identifies City of Snohomish's critical areas and requirements to protect, enhance, and restore them where possible.
  - Ch.14.260: Intended to protect the beneficial functions performed by wetlands, consistent with relevant policies of the City of Snohomish Comprehensive Plan and the Washington State Growth Management Act.

#### 10.1.3.5 Snohomish County

- Snohomish County Code – Chapter 30.67 Shoreline Management Program (Ordinance No. 12-025, effective July 27, 2012): Establishes policies and regulations for the development and use of Snohomish County's shoreline.
- Snohomish County Code – Chapter 30.62A Wetlands and Fish & Wildlife Habitat Conservation Areas (Last amended by ordinance 19-020 on July 3, 2019): Provides critical area regulations for the designation and protection of wetlands and fish and wildlife habitats within Snohomish County.

## 10.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for threatened and endangered species (plants, fish, and wildlife) in the preliminary study area. Data collected from these sources was documented and presented on maps and in tables.

- NMFS West Coast Region species and habitat web map (NMFS 2024a)
- NMFS Essential Fish Habitat web map (NMFS 2024b)

- NOAA Fisheries ESA critical habitat web map (NOAA Fisheries 2024)
- USFWS Information for Planning and Consultation (IPaC) project planning tool (USFWS 2024b)
- USFWS critical habitat mapping tool (USFWS 2024c)
- WDFW Washington's State Wildlife Action Plan (WDFW 2015)
- WDFW Priority Habitat and Species List (WDFW 2023)
- WDFW Priority Habitat and Species web application (WDFW 2024a)
- WDFW State threatened and endangered species (WDFW 2024b)
- WDFW Priority Habitats and Species Statewide List Distribution by County (WDFW 2024c)
- WDNR list of surveyed sections containing natural heritage features (WDNR 2024a)
- WDNR Natural Heritage Program Rare Plants List (WDNR 2024b)
- WDNR Natural Heritage Program Data Explorer (WDNR 2024 n.d.-d)
- Statewide Integrated Fish Distribution web map (NWIFC 2024)

## 10.3 Existing Conditions

### 10.3.1 Federal Listed Species

#### 10.3.1.1 Fish

Five ESA-listed fish species are identified as potentially occurring in the preliminary study area. Three ESA-listed salmonid species are documented within the preliminary study area: The Puget Sound Evolutionarily Significant Unit (ESU) Chinook salmon (*Oncorhynchus tshawytscha*), Puget Sound Distinct Population Segment (DPS) steelhead trout (*O. mykiss*), and bull trout (*Salvelinus confluentus*). Two additional fish species, Puget Sound/Strait of Georgia DPS of marine rockfish including bocaccio (*Sebastes paucispinis*) and yelloweye rockfish (*S. ruberrimus*) occur in the marine environment of Possession Sound. An ESU is primarily an ESA term and can be defined as a population of organisms that is considered distinct for purposes of conservation. Delineating ESUs is important when considering conservation actions to restore populations. Similarly, a DPS is the smallest division of a taxonomic species permitted to be protected under the ESA.

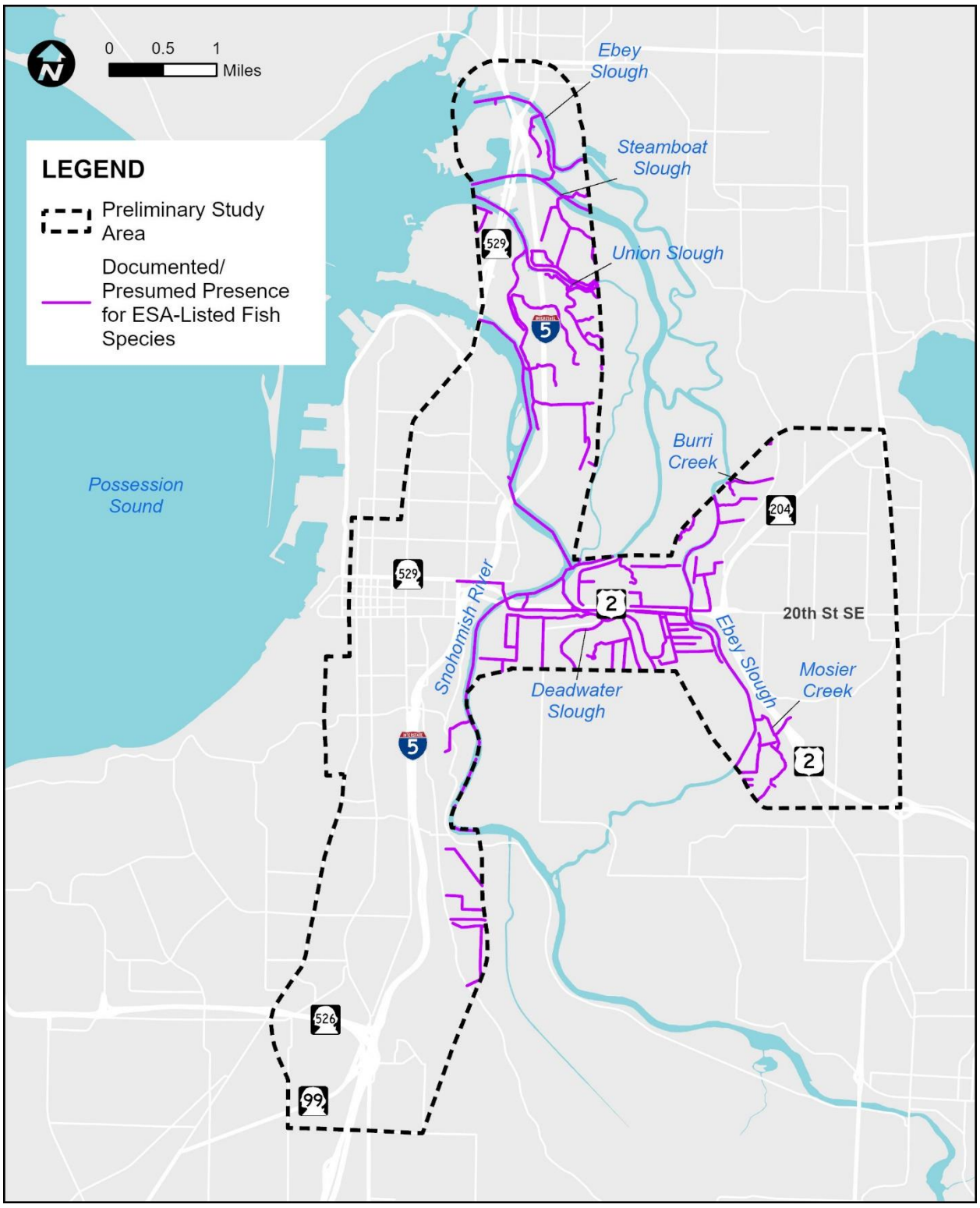
Table 10-1 presents ESA-listed fish species, agency jurisdiction, listing status, potential presence in the preliminary study area, and whether critical habitat has been designated or proposed within the preliminary study area for the species. Aquatic resources in the preliminary study area with documented and/or presumed ESA-listed fish species use are shown on Figure 10-1. Critical habitat for listed species within the preliminary study area is shown on Figure 12-2.

**Table 10-1. ESA-Listed Fish Species and Critical Habitat that Occur or May Occur in Preliminary Study Area**

| Species | Lead Agency | Federal Status | Presence in Preliminary Study Area | Critical Habitat Present Yes/No |
|---|---|---|---|---|
| Puget Sound ESU Chinook salmon (*Oncorhynchus tshawytscha*) | NMFS | Threatened | Documented: Possession Sound, Snohomish River, Allen Creek, Ebey Slough, Steamboat Slough, Union Slough<br>Presumed: Unnamed Streams<br>Gradient Accessible: Wood Creek, Unnamed Streams | Yes |
| Puget Sound DPS Steelhead (*O. Mykiss*) | NMFS | Threatened | Documented: Possession Sound, Snohomish River, Ebey Slough, Steamboat Slough, Union Slough<br>Presumed: Various Unnamed Streams<br>Gradient Accessible: Allen Creek, Wood Creek, Various Unnamed Streams | Yes |
| Bull trout (*Salvelinus confluentus*) | USFWS | Threatened | Documented: Possession Sound, Snohomish River, Allen Creek, Deadwater Slough, Various Unnamed Streams<br>Presumed: Ebey Slough, Steamboat Slough, Union Slough, Various Unnamed Streams | Yes |
| Puget Sound/Georgia Basin DPS Bocaccio rockfish (*Sebastes paucispinis*) | NMFS | Threatened | Adult rockfish habitat is not present in the preliminary study area. Rockfish eggs and planktonic larvae could be transported into Possession Sound marine nearshore and river and slough estuarine habitat by tidal inflows. | No |
| Puget Sound/Georgia Basin DPS Yelloweye rockfish (*S. ruberrimus*) | NMFS | Threatened | Rockfish habitat is not present in the preliminary study area. Rockfish eggs and planktonic larvae could be transported into Possession Sound marine nearshore and river and slough estuarine habitat by tidal inflows. | No |

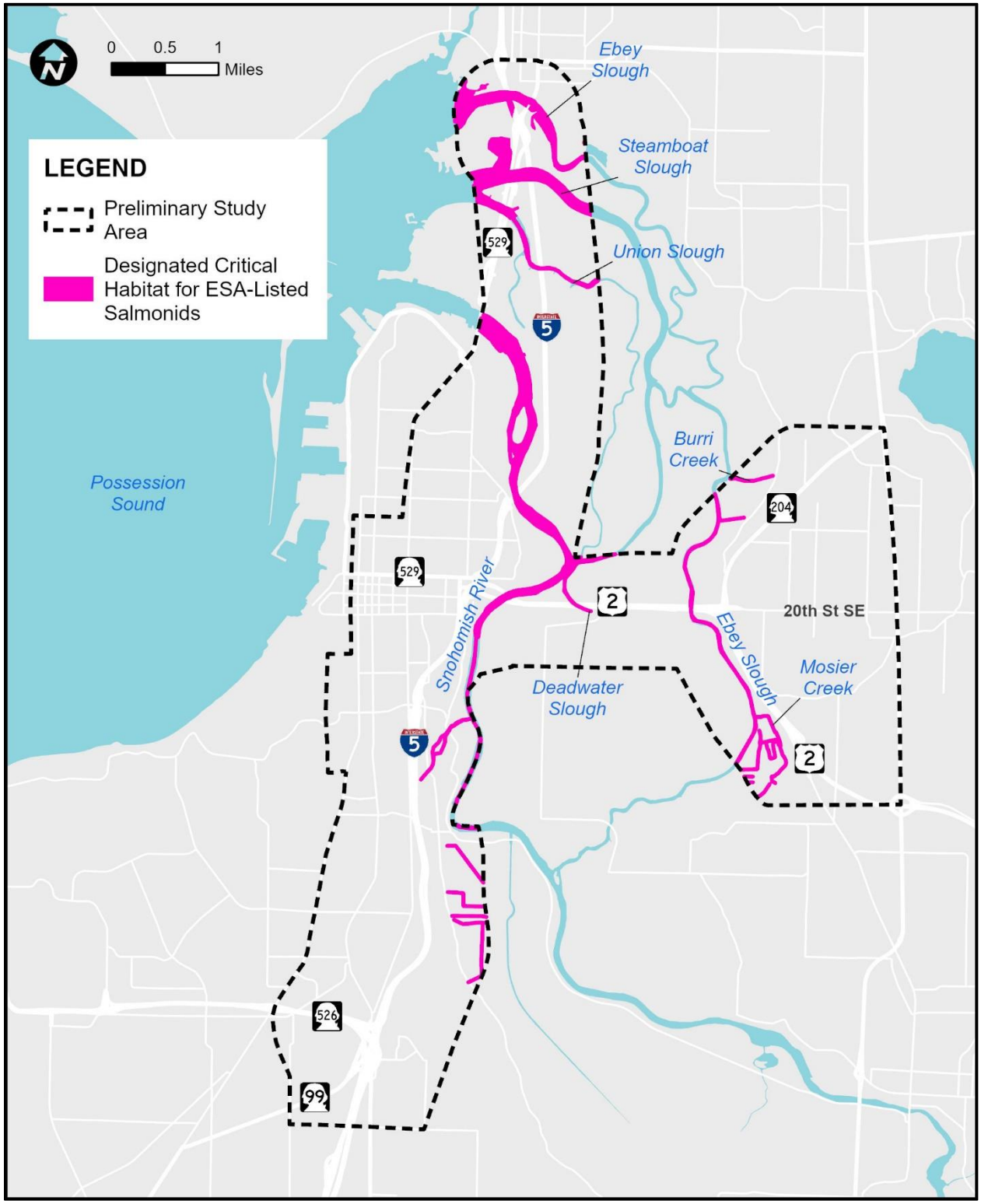
Source: NMFS 2024a, USFWS 2024b, NWIFC 2024, NOAA Fisheries 2024, USFWS 2024c
Notes: DPS – Distinct population segment, ESU – Evolutionarily significant unit

**Figure 10-1. ESA-Listed Fish Species (Chinook Salmon, Steelhead Trout, and Bull Trout) Documented/Presumed Presence within Preliminary Study Area**




Source: NWIFC 2024

**Figure 10-2. Designated Critical Habitat for ESA-Listed Salmonids within the Preliminary Study Area**




Source: NWIFC 2024, NOAA Fisheries 2024

## Essential Fish Habitat

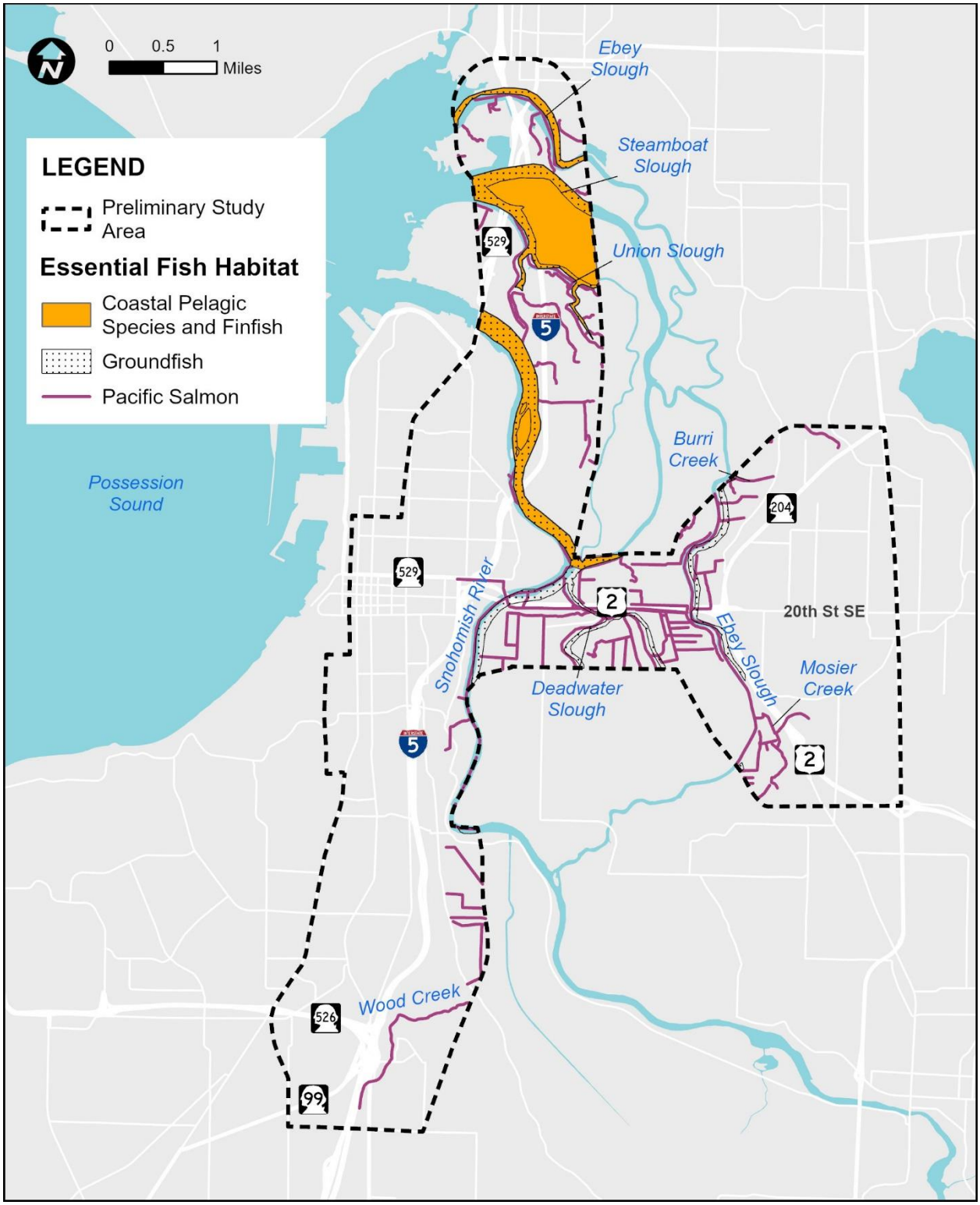
EFH, regulated under the Magnuson-Stevens Fishery Conservation and Management Act and administered by NMFS, is located within the preliminary study area. EFH is defined as, “Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (NMFS 1999). Due to tidal inflows, the Snohomish River and sloughs in the preliminary study area that flow into Possession Sound are estuarine systems with saltwater intrusion extending upstream of the preliminary study area. The aquatic resources in the preliminary study area with designated EFH for groundfish, coastal pelagic, and Pacific salmon fish species are presented in Table 10-2 and shown on Figure 10-3.

**Table 10-2. Aquatic Resources in Preliminary Study Area with Designated EFH**

| Aquatic Resource | Groundfish | Coastal Pelagic | Pacific Salmon |
|---|---|---|---|
| Puget Sound Possession Sound | Yes | No | No |
| Allen Creek | No | No | Yes |
| Ebey Slough | Yes | Yes | Yes |
| Steamboat Slough | Yes | Yes | Yes |
| Union Slough | Yes | Yes | Yes |
| Deadwater Slough | Yes | No | Yes |
| Snohomish River | Yes | Yes | Yes |
| Wood Creek | No | No | Yes |
| Unnamed Streams (various) | No | No | Yes |

Source: NMFS 2024b

**Figure 10-3. Essential Fish Habitat within Preliminary Study Area**




Source: NMFS 2024b

#### 10.3.1.2 Marine Mammals

Two ESA-listed marine mammal species are identified as potentially occurring in the preliminary study area: Southern Resident DPS killer whale (*Orcinus orca*) and Central America DPS and Mexico DPS humpback whale (*Megaptera novaeangliae*) (NMFS 2024a). Designated critical habitat for Southern Resident killer whale is also located within the preliminary study area (NOAA Fisheries 2024). Marine mammal species are identified as potentially occurring in the preliminary study area due to the portion of Possession Sound that extends within the preliminary study area. ESA-listed marine mammal species and critical habitats, agency jurisdiction, listing status, potential presence in the preliminary study area, and presence of critical habitat are presented in Table 10-3. Southern Resident killer whale designated critical habitat is shown on Figure 10-4.

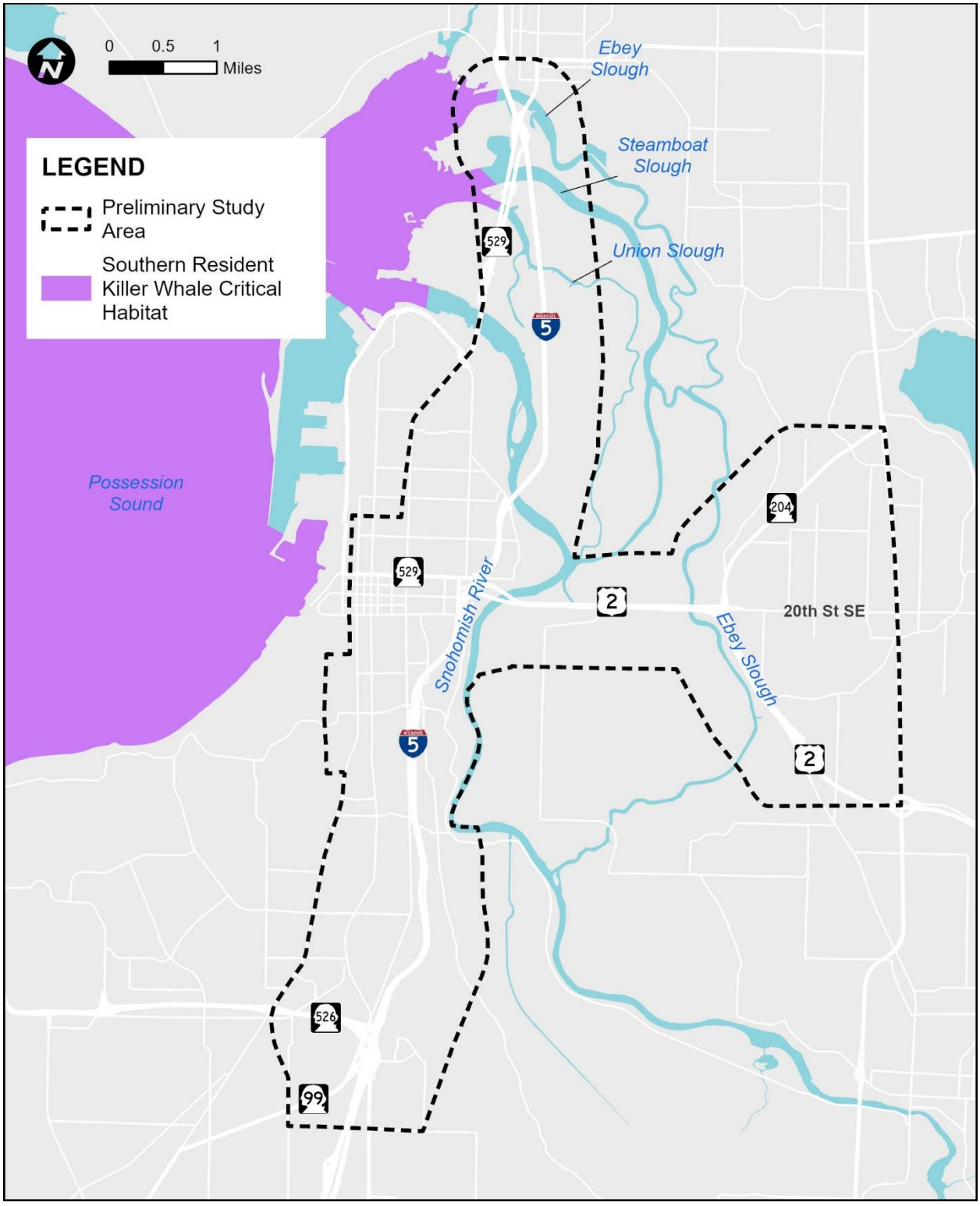
**Table 10-3. ESA-listed Marine Mammal Species and Critical Habitats that Occur or May Occur in Preliminary Study Area**

| Species | Lead Agency | Federal Status | Presence in Preliminary Study Area | Critical Habitat Present? Yes/No |
|---|---|---|---|---|
| Southern Resident DPS Killer Whale (*Orcinus orca*) | NMFS | Threatened | Documented within Possession Sound, unlikely to occur in marine nearshore and river and slough estuarine habitat. | Yes |
| Central America DPS and Mexico DPS Humpback whale (*Megaptera novaeangliae*) | NMFS | Endangered | Documented within Possession Sound, unlikely to occur in marine nearshore and river and slough estuarine habitat. | No |

DPS – Distinct population segment
Source: NMFS 2024a, NOAA Fisheries 2024

The Marine Mammal Protection Act (MMPA) was enacted on October 21, 1972. The MMPA established a national policy to prevent marine mammal species and population stocks from declining beyond the point where they cease to be significant functioning elements of the ecosystems of which they are a part. The responsibility of MMPA implementation lies with three federal entities including NOAA Fisheries, USFWS, and the Marine Mammal Commission. Affected species include the federally listed marine mammal species mentioned in Table 10-3 and five other species with the potential for distribution within the preliminary study area including the harbor porpoise (*Phocoena phocoena*), gray whale (*Eschrichtius robustus*), harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*) and the Steller sea lion (*Eumetopias jubatus*).

**Figure 10-4. Southern Resident DPS Killer Whale Critical Habitat within Preliminary Study Area**




Source: NMFS 2024a, NOAA Fisheries 2024

#### 10.3.1.3 Wildlife

Five ESA-listed wildlife species are identified as potentially occurring in the preliminary study area: marbled murrelet, western DPS yellow-billed cuckoo, North American wolverine, northwestern pond turtle, and monarch butterfly (USFWS 2024b). No designated critical habitat for ESA-listed wildlife species is present within the preliminary study area. ESA-listed wildlife species, agency jurisdiction, listing status, and potential presence in the preliminary study area are presented in Table 10-4.

**Table 10-4. ESA-listed or Candidate Wildlife Species that Occur or May Occur in Preliminary Study Area**

| Species | Lead Agency | Federal Status | Presence in Preliminary Study Area |
|---|---|---|---|
| Marbled murrelet (*Brachyramphus marmoratus*) | USFWS | Threatened | Old-growth forest nesting habitat associated with the species is not present within the preliminary study area. Marbled murrelet may forage in the Possession Sound marine nearshore and river and slough estuarine habitat. |
| Western DPS Yellow-billed cuckoo (*Coccyzus americanus*) | USFWS | Threatened | No documented occurrences and habitat associated with the species is not present within the preliminary study area. |
| North American wolverine (*Gulo gulo luscus*) | USFWS | Threatened | No documented occurrences and habitat associated with the species is not present within the preliminary study area. |
| Northwestern pond turtle (*Actinemys marmorata*) | USFWS | Proposed Threatened | No documented occurrences within the preliminary study area. Freshwater aquatic resources with habitat features preferred by the species is lacking within the preliminary study area. |
| Monarch butterfly (*Danaus Plexippus*) | USFWS | Proposed Threatened | Can occur within a variety of habitats present within the preliminary study area. Breeding habitat is limited to the presence of the milkweed host plant. Pollinator rankings are also discussed in Chapter 10. |

DPS – Distinct population segment
Source: USFWS 2024b

#### 10.3.1.4 Plants

The USFWS does not identify the potential presence of any ESA-listed plant species or designated critical habitats within the preliminary study area (USFWS 2024b, 2024c).

### 10.3.2 State Listed Species

As of September 2024, WDFW has classified 47 state listed species as endangered, threatened, or sensitive and 70 species as candidates for state listing (WDFW 2023, 2024a, 2024b, and 2024c). WDFW identifies the distribution of state-listed species in Washington by county. The following subsections discuss the potential presence of state-listed and candidate species in the preliminary study area based on the WDFW species distribution lists for Snohomish County.

#### 10.3.2.1 Fish

Four state-listed and candidate fish species are identified by WDFW with distribution in Snohomish County (WDFW 2023, 2024b, and 2024c). The fish species' state listing status and habitat descriptions are presented in Table 10-5.

**Table 10-5. State-listed and Candidate Fish Species with Distribution in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| Bull trout (*Salvelinus confluentus*) | Candidate | Marine, estuarine, and freshwater habitats. |
| Olympic mudminnow (*Novumbra hubbsi*) | Sensitive | Water with little to no flow, several inches of soft mud substrate, and abundant aquatic vegetation. Intolerant of saltwater. |
| River lamprey (*Lampetra ayresi*) | Candidate | Stream areas of low velocity and silt and mud substrates. Juveniles migrate downstream through freshwater and estuarine areas to enter the ocean. |
| Steelhead (*O. mykiss*) | Candidate | Marine, estuarine, and freshwater habitats. |

Source: WDFW 2015, 2023, 2024a, 2024b, 2024c

#### 10.3.2.2 Marine Mammals

Three state-listed and candidate marine mammal species are identified by WDFW with distribution in Snohomish County (WDFW 2023, 2024b, and 2024c). The marine mammal species' state listing status and habitat descriptions are presented in Table 10-6.

**Table 10-6. State-listed and Candidate Marine Mammal Species with Distribution in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| Gray whale (*Eschrichtius robustus*) | Sensitive | Forage and migrate mostly in the continental shelf and coastal waters. Young are born in lagoons and bays. |
| Harbor porpoise (*Phocoena phocoena*) | Candidate | Coastal waters, including bays and estuaries. |
| Killer whale (*Orcinus orca*) | Endangered | Coastal areas and inland marine waters where their preferred prey is typically found. |

Source: WDFW 2023, 2024a, 2024b, 2024c

#### 10.3.2.3 Terrestrial and Semi-Aquatic Wildlife

State-listed and candidate wildlife species identified by WDFW with distribution in Snohomish County include amphibians, reptiles, birds, mammals, and invertebrates.

### Amphibian and Reptiles

One state-listed and candidate amphibian species and one reptile species are identified by WDFW with distribution in Snohomish County (WDFW 2023, 2024b, and 2024c). The amphibian and reptile species' state listing status and habitat descriptions are presented in Table 10-7.

**Table 10-7. State-listed and Candidate Amphibian and Reptile Species with Distribution in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| **Amphibians** | | |
| Western toad (*Anaxyrus boreas*) | Candidate | Occurs in a wide variety of habitats around ponds, lakes, reservoirs, and slow-moving rivers and streams. |
| **Reptiles** | | |
| Northwestern pond turtle (*Actinemys marmorata*) | Endangered | Marshes, ponds, sloughs, and small lakes in permanent and intermittent bodies of water. Adults require emergent logs or boulders, or floating vegetation for basking during sunny hours. |

Source: WDFW 2015, 2023, 2024a, 2024b, 2024c

### Birds

Nine state-listed and candidate bird species are identified by WDFW with distribution in Snohomish County (WDFW 2023, 2024b, and 2024c). The bird species state listing status and habitat descriptions are presented in Table 10-8.

**Table 10-8. State-listed and Candidate Bird Species with Distribution in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| Black-backed Woodpecker (*Picoides arcticus*) | Candidate | Boreal and montane coniferous forests, especially in areas with standing dead trees. |
| Common loon (*Gavia immer*) | Sensitive | Breeding habitat includes clear lakes with shallow and deepwater areas. In winter and during migration, use inland lakes and rivers and marine and estuarine coastal waters. |
| Golden eagle (*Aquila chrysaetos*) | Candidate | Open, arid plateaus deeply cut by streams and canyons. Shrub-steppe and grassland communities and transition zones between shrub, grassland, and forested habitat. Nests located on cliffs and occasionally in trees. |

| Species | State Status | Habitat Description |
|---|---|---|
| Marbled murrelet (*Brachyramphus marmoratus*) | Endangered | Mature, old-growth forests for nesting, roosting. Forage in marine and estuarine waters. |
| Northern goshawk (*Accipiter gentilis*) | Candidate | Forested regions with >50 percent closed canopy with multiple layers. |
| Northern spotted owl (*Strix occidentalis*) | Endangered | Mature, old-growth forests (nesting, roosting, foraging). Second-growth used for dispersal. |
| Oregon vesper sparrow (*Pooecetes gramineus affinis*) | Endangered | Various open habitats with grass, including prairie, sagebrush steppe, meadows, pastures, and roadsides. |
| Western grebe (*Aechmophorus occidentalis*) | Candidate | Marshes, lakes, and bays. Nests anchored to living vegetation on large inland bodies of water very close to deep water to allow bird to swim submerged. |
| Yellow-billed cuckoo (*Coccyzus americanus*) | Endangered | Breed in very large open woodlands, parks, deciduous, and riparian woodlands. |

Source: WDFW 2015, 2023, 2024a, 2024b, 2024c

### Mammals

Seven state-listed and candidate mammal species are identified by WDFW with distribution in Snohomish County (WDFW 2023, 2024b, and 2024c). The mammal species' state listing status and habitat descriptions are presented in Table 10-9.

**Table 10-9. State-listed and Candidate Mammal Species with Distribution in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| Cascade red fox (*Vulpes vulpes cascadens*) | Endangered | Subalpine meadows, parklands, and open forests. They avoid wet, dense forests of the westside Cascades and tend to prefer drier mid-elevation forests. |
| Fisher (*Pekania pennanti*) | Endangered | Mature, uneven stands of coniferous and mixed coniferous/deciduous with extensive continuous canopy for optimal winter habitat. |
| Grizzly bear (*Ursus arctos*) | Endangered | Found mostly in arctic tundra, alpine tundra, and subalpine mountain forests. Require huge areas of habitat remote from most human activity. |
| Lynx (*Lynx canadensis*) | Threatened | Mature forests with dense undercover and downed wood for denning. |

| Species | State Status | Habitat Description |
|---|---|---|
| North American wolverine (*Gulo gulo luscus*) | Candidate | Rugged, remote country in high elevations near or above timberline. |
| Keen's myotis (*Myotis keenii*) | Candidate | Forest habitat, tree cavities, bark crevices, caves, rock crevices, and building structures. |
| Townsend's big-eared bat (*Corynorhinus townsendii*) | Candidate | Forest habitat, tree cavities, bark crevices, caves, rock crevices, and building structures. |

Source: WDFW 2015, 2023, 2024a, 2024b, 2024c

### Invertebrates

Three state-listed and candidate invertebrate species—beetle, butterfly, and bumble bee—are identified by WDFW with distribution in Snohomish County (WDFW 2023, 2024b, and 2024c). The invertebrate species' state listing status and habitat descriptions are presented in Table 10-10.

**Table 10-10. State Candidate Invertebrate Species with Distribution in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| Beller's ground beetle (*Agonum belleri*) | Candidate | Occurs in low-elevation Puget Trough *Sphagnum* bogs. Small peat-forming wetlands situated in geographically isolated, closed depressions within small watersheds. |
| Johnson's hairstreak (*Callophrys johnsoni*) | Candidate | Depends on western dwarf mistletoe (*Arceuthobium* spp.), a plant that parasitizes old-growth western hemlock (*Tsuga heterophylla*). Grows high up in its host tree. |
| Western bumble bee (*Bombus occidentalis*) | Candidate | Depends on habitats with rich floral resources throughout the nesting season. Require above and below ground micro-sites for overwintering and nesting, including logs, stumps, and abandoned rodent and ground-nesting bird nests. Their habitats must also be protected from insecticides. |

Source: WDFW 2023, 2024a, 2024b, 2024c

#### 10.3.2.4 Plants

WDNR's Natural Heritage Program identifies specific counties in Washington where rare plant species have been documented (WDNR 2024b). Three state plant species with threatened and endangered status are identified by WDNR within Snohomish County. The plant species state listing status and habitat descriptions are presented in Table 10-11.

**Table 10-11. State-listed Plant Species Documented in Snohomish County that May Occur in Preliminary Study Area**

| Species | State Status | Habitat Description |
|---|---|---|
| Salish daisy (*Erigeron salishii*) | Threatened | Alpine bedrock. |

| Species | State Status | Habitat Description |
|---|---|---|
| Scouler's monkeyflower (*Erythranthe scouleri*) | Endangered | Intertidal freshwater wetland. |
| Stalked moonwort (*Botrychium pedunculosum*) | Threatened | Alpine and subalpine grassland, meadow, and riparian. |

Source: WDNR 2024b

### 10.3.3 Key Points

Several federal- and/or state-listed fish, wildlife, and plant species have documented occurrence or the potential to occur in the preliminary study area.

The Snohomish River and majority of sloughs and tributaries in the preliminary study area support ESA-listed fish species including Puget Sound ESU Chinook salmon, Puget Sound steelhead, and bull trout, and their associated designated critical habitat. In addition, the tidally influenced portions of the Snohomish River and sloughs could potentially support larval stages of two ESA-listed marine fish species, including yelloweye rockfish and bocaccio rockfish. All freshwater rivers and streams in the preliminary study area are considered essential fish habitat (EFH) for Chinook salmon, coho, and pink salmon. Tidally influenced portions of the Snohomish River and associated sloughs also contain EFH for federally managed coastal pelagic and groundfish species. Other ESA listed species that would require consideration for projects receiving federal funding or requiring federal approvals would include the Southern Resident DPS killer whale and associated critical habitat, marbled murrelet, yellow-billed cuckoo, North American wolverine, and northwestern pond turtle.

No federal-listed plant species are identified in the preliminary study area. Three state plant species with threatened and endangered status are identified within Snohomish County. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 11 Noise

This chapter summarizes existing conditions for noise in the preliminary study area, including the locations of existing noise walls and potential noise-sensitive receptors.

## 11.1 Relevant Laws, Regulations, and Guidance

The following federal, state, and local laws, regulations, plans, policies, and guidance documents inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify existing conditions for noise. An assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 11.1.1 Federal

- FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR Part 772): Establishes procedures for noise studies and noise abatement measures, noise abatement criteria, and requirements for information to be given to local officials for use in the planning and design of highways.
- FHWA Highway Traffic Noise: Analysis and Abatement Guidance, December 2010 (FHWA 2010): Establishes that traffic noise impacts occur when predicted $L_{eq}(h)$ noise levels approach or exceed established Noise Abatement Criteria (NAC) for various land use activity categories. Table 13-1 identifies the FHWA NAC exterior $L_{eq}(h)$ noise levels, in A-weighted decibels (dBA), for the different activity categories, which are described based on the type of land use activity.

**Table 11-1. Federal Highway Administration Noise Abatement Criteria by Activity Category**

| Activity Category | $L_{eq}(h)$ at Evaluation Location (dBA) | Description of Activity Category |
|---|---|---|
| A | 57 (exterior) | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose |
| B | 67 (exterior) | Residential (single- and multi-family units) |
| C | 67 (exterior) | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings |
| D | 52 (interior) | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios |
| E | 72 (exterior) | Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. Includes undeveloped land permitted for these activities |
| F | N/A | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing |
| G | N/A | Undeveloped lands that are not permitted |

Source: FHWA 2010; Note: N/A = Not Applicable

### 11.1.2 State

- State Noise Legislation (RCW 70A.20) and implementing regulations: Provides authority for statewide abatement and control of noise.
- WAC 173-60: Establishes statewide residential, commercial, and industrial noise limits, along with construction noise limits, while exempting traffic noise from public roadways. Future NEPA analysis would include the evaluation of construction noise generated by the project.
- WSDOT Traffic Noise Policies and Procedures, March 2020 (WSDOT 2020): Provides criteria for conducting traffic noise analysis and determining the need for abatement consistent with federal highway traffic noise standards. WSDOT considers a noise impact to occur if predicted $L_{eq}(h)$ noise levels approach within 1 dBA of the NAC. WSDOT also considers an increase of 10 dBA or more to be a substantial increase and a traffic noise impact.
- WSDOT Environmental Manual Chapter 446 (WSDOT 2024a): Outlines environmental review requirements related to noise from project planning through construction.

### 11.1.3 Local

- Local (Snohomish County, City of Everett, City of Lake Stevens, and City of Marysville) noise ordinances as applicable during future construction.

## 11.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for noise in the preliminary study area. Data collected from these sources was documented and presented in maps and tables.

- WSDOT's GIS Workbench "Noise Walls, Built" and "Noise Walls, Proposed" data layers: Noise walls are a critical part of the transportation infrastructure that WSDOT maintains in perpetuity. Existing noise walls are designed to reduce traffic noise to adjacent uses in compliance with FHWA and WSDOT requirements. WSDOT may also propose retrofit noise walls in priority areas if funding is available. Existing and proposed noise walls managed by WSDOT were identified using these GIS datasets (Washington State GIS Workbench 2024).
- Snohomish County Assessor's Office data (Snohomish County 2024d): To identify potential noise-sensitive receptors, existing land uses were identified using Snohomish County Assessor's Office data. Once the existing land uses were identified, they were assigned to one of the FHWA Noise Abatement Activity Categories, as identified in Table 11-1, and displayed on a map.

## 11.3 Existing Conditions

### 11.3.1 Noise Walls

#### 11.3.1.1 Existing Noise Walls

The preliminary study area has 12 existing noise walls (Washington State GIS Workbench 2024). They are primarily located along I-5 in Everett between the I-5/SR 526/SR 99 interchange and the I-5 connections to East Marine View Drive and East Grand Avenue. Noise walls in the preliminary study area are summarized in Table 13-2 and shown in Figure 11-1.

**Table 11-2. Summary of Existing Noise Walls in Preliminary Study Area**

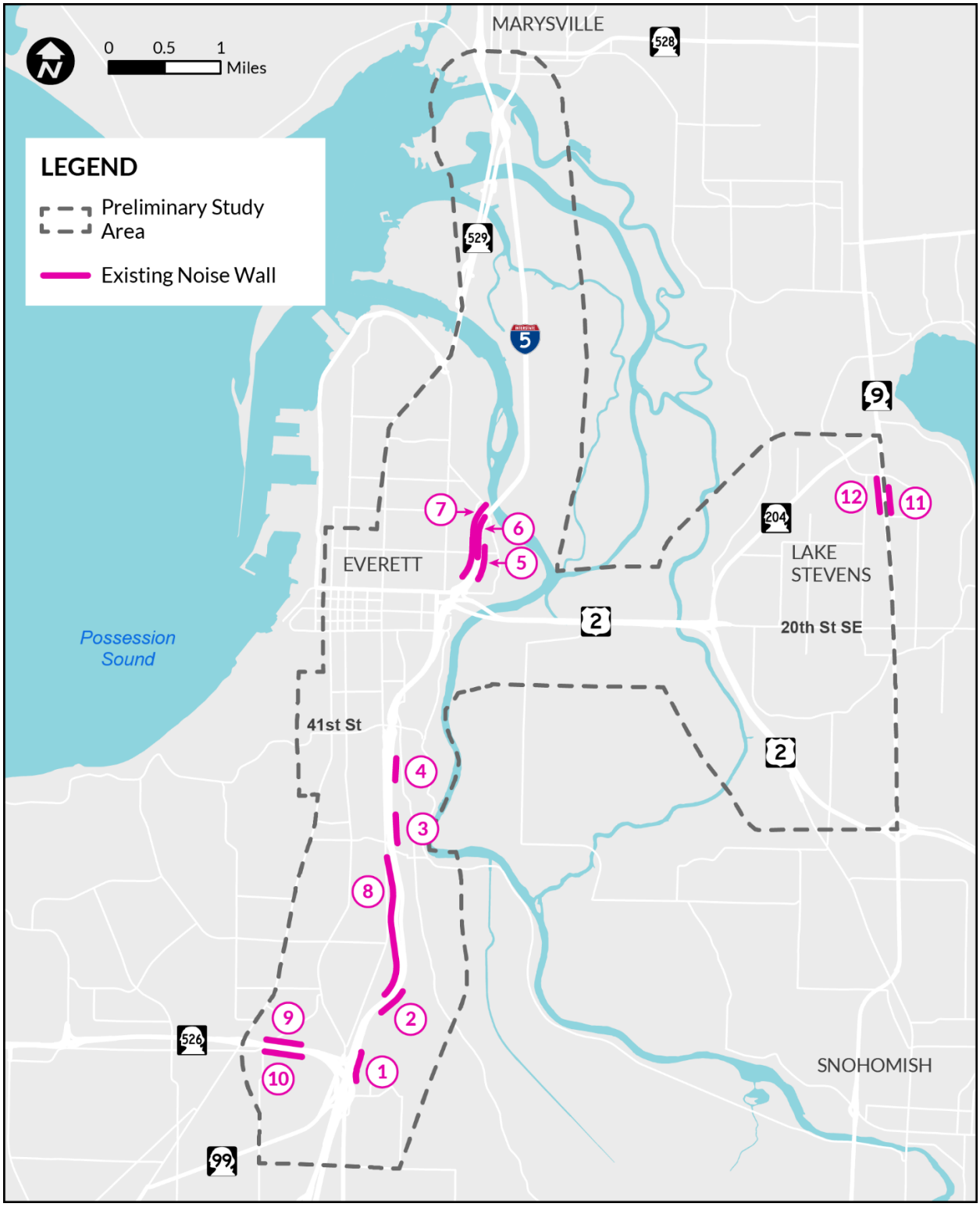
| Map Identification Number | Noise Wall Location | Direction | Noise Wall Length (feet) | Noise Wall Height (feet) |
|---|---|---|---|---|
| 1 | I-5 at SR 526/SR 9 interchange – 164th to SR 526 HOV Lanes | Northbound | 1,748 | 10 to 12 |
| 2 | I-5 75th Street SE Vicinity | Northbound | 1,273 | 12 to 16 |
| 3 | I-5 north of Lowell Road | Northbound | 1,500 | 6 to 14 |
| 4 | I-5 south of 41st Street | Northbound | 1,152 | 6 to 14 |
| 5 | I-5 north of US 2 | Northbound | 1,800 | 10 to 18 |
| 6 | I-5 south of E Marine View Drive | Northbound | 1,584 | 11 to 23 |
| 7 | I-5 south of E Marine View Drive – berm only | Southbound | 2,260 | Up to 15 |
| 8 | I-5 Lowell Road to 75th Street SE | Southbound | 6,845 | 12.5 to 24 |
| 9 | SR 526 west of I-5 | Westbound | 1,118 | 14 |
| 10 | SR 526 east of I-5 | Eastbound | 1,653 | 13 |
| 11 | SR 9 south of SR 204 | Northbound | 1,306 | 13 |
| 12 | SR 9 south of SR 204 | Southbound | 1,640 | 10 |

Source: Washington State GIS Workbench 2024

#### 11.3.1.2 Planned Noise Walls

Within the preliminary study area, no noise walls are planned as part of an ongoing project or for construction as part of WSDOT's list of retrofit noise walls (Washington State GIS Workbench 2024).

**Figure 11-1. Existing Noise Walls in Preliminary Study Area**




Source: Washington State GIS Workbench 2024

### 11.3.2 Potential Noise Sensitive Receptors

Noise levels within the preliminary study area are primarily influenced by highway and interstate traffic noise throughout the day. Major roadways located within the preliminary study area include US 2, I-5, SR 204, 20th Street Southeast, SR 9, SR 529, SR 526, and SR 99. The existing noise environment also includes periodic noise from local industry, aircraft flyovers, boat operations, railroad operations, agricultural practices, and traffic noise from local roadways.

According to Snohomish County Assessor's Office data, the preliminary study area includes a variety of land uses, particularly on lands located near US 2, I-5, SR 204, 20th Street Southeast, SR 9, SR 529, SR 526, and SR 99 (Snohomish County 2024d). Table 11-3 summarizes the number of parcels in the preliminary study area with land uses within an FHWA Noise Abatement Activity Category. Figure 11-2 shows the locations of these parcels within the preliminary study area.

Overall, the largest number of parcels in the preliminary study area have a land use that is classified as Category B (residential). There are no parcels, and land uses, in the preliminary study area that are within FHWA's Noise Abatement Activity Category A. Category A lands, where serenity and quiet serve an important public need, are typically reserved for sites such as the Pearl Harbor Memorial. Activities within FHWA's Noise Abatement Activity Category D cannot be identified with a desktop review of land uses identified by the Snohomish County Assessor because they are a subset of Activity Category C. Land uses in Activity Category D would be identified during the future NEPA phase, when field visits can verify existing uses on individual parcels.

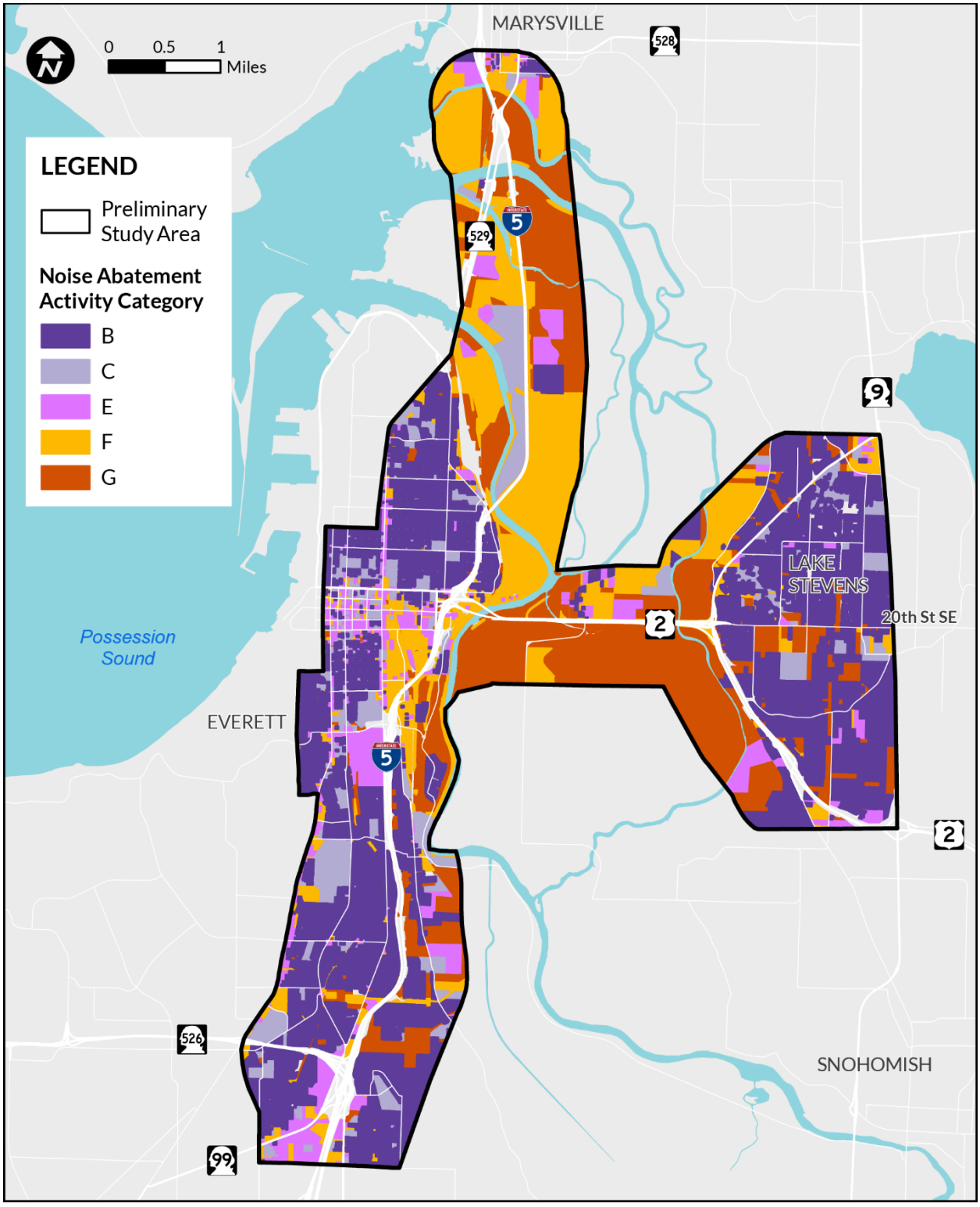
Directly adjacent to the US 2 trestle, most of the land uses are classified as Category G (undeveloped lands that are not permitted for a future development), with some areas classified as Category B (residential) and Category F (agriculture). As indicated in Table 11-1 above, FHWA has not established noise abatement criteria for Categories F and G.

**Table 11-3. Land Uses by FHWA NAC by Activity Category in Preliminary Study Area**

| FHWA Noise Abatement Criteria Activity Category | Number of Parcels |
|---|---|
| A | 0 |
| B | 17,262 |
| C | 511 |
| D | N/A |
| E | 1,002 |
| F | 1,216 |
| G | 1,132 |

Source: Snohomish County 2024d
Notes: N/A = Not applicable

**Figure 11-2. Land Uses by FHWA Noise Abatement Activity Category in Preliminary Study Area**




Source: Snohomish County 2024d

### 11.3.3 Key Points

None of the 12 existing noise walls in the preliminary study area are immediately adjacent to the US 2 trestle or its east and west end connections. The closest existing noise walls to the US 2 trestle and its connections are along northbound and southbound I-5 just north of the US 2/I-5 interchange (identified as noise walls 5, 6, and 7). No additional noise walls are currently planned within the preliminary study area.

According to a desktop survey, most of the land area immediately adjacent to the US 2 trestle falls into categories that are not regulated by FHWA for noise abatement, including agriculture (Category F) and undeveloped lands that are not permitted (Category G). North of the US 2 trestle, in unincorporated Snohomish County, there are limited areas with residential land uses (Category B) and other developed or undeveloped lands (Category E) that would be considered noise sensitive. North of the US 2 trestle's west end connections in Everett and east of the east end connections in Lake Stevens, there are large areas of residential land uses.

Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 12 Hazardous Materials Contamination Sites

This chapter summarizes existing conditions for hazardous materials contamination sites in the preliminary study area, including sites identified by Ecology and WSDOT-owned properties.

## 12.1 Relevant Laws, Regulations, and Guidance

The following federal, state, local, and other laws, regulations, plans, policies, and guidance documents inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify existing conditions for hazardous materials contamination sites. An assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 12.1.1 Federal

- EPA 42 U.S.C. 9601 et seq., Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 1980 Amended 1986: Provides requirements to qualify for the innocent purchaser/landowner defense to liability exclusion.
- EPA 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries, Final Rule (70 FR 66070), Revised August 1, 2024: Establishes standards and practices for conducting All Appropriate Inquiries, which is the process of evaluating a property's environmental conditions and may be relevant to assessing potential liability for any contamination.

### 12.1.2 State

- WSDOT Environmental Manual Chapter 447 (July 2024): Provides guidance designed to increase safety, reduce likelihood of delays and costs, and identify possible contamination issues from projects by addressing known or unknown hazardous and regulated materials.
- Ecology, The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC: Olympia, Washington, Revised August 23, 2023: Provides requirements for the investigation and cleanup of sites in Washington state contaminated by the release of hazardous substances.
- Ecology, Dangerous Waste Regulations, Chapter 173-303 WAC: Olympia, Washington, October 2020: Designates solid wastes that are dangerous to the public health and environment and provides guidance on how entities should properly handle and dispose of it.

### 12.1.3 Local

- None at this time.

### 12.1.4 Other

- ASTM International 2021, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process: West Conshohocken, Penn., ASTM E 1527 21: Intended to identify the confirmed presence, likely presence or a material threat of the presence of hazardous substances or petroleum products at a real property, also known as a "Recognized Environmental Condition," and to define practices for conducting Environmental Site Assessments.

## 12.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for hazardous materials contamination sites in the preliminary study area. Data collected from these sources was documented and presented in maps and tables.

- Ecology's Toxics Cleanup Map: Data for sites with the following statuses: Awaiting cleanup, Cleanup started, and Monitoring cleanup progress (Ecology 2024e).
- Coordination with WSDOT's Hazardous Materials Program Manager to verify the hazardous materials contamination sites and their status.

## 12.3 Existing Conditions

### 12.3.1 Identified Contaminated Sites

Figure 12-1, Figure 12-2, and Figure 12-3 show the locations of identified hazardous materials contamination sites as documented by Ecology's Toxics Cleanup Map (Ecology 2024e). Most of the identified sites are located west of the Snohomish River in Everett and north of the US 2 trestle in Marysville. There are no identified hazardous materials contamination sites immediately adjacent to the existing US 2 trestle structures between the Snohomish River and Ebey Slough.

Table 12-1 provides information on the 100 sites within the preliminary study area identified within the preliminary study area in Ecology's Toxics Cleanup Map with a status of "awaiting cleanup," "cleanup started," or "monitoring cleanup progress" (Ecology 2024e).

**Table 12-1. Contaminated Sites Awaiting Cleanup within Preliminary Study Area**

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 1 | Arco 4390 | 1124 4th Street, Marysville | 11170 | 94796189 | Awaiting Cleanup |
| 2 | Geddes Marina | 1326 1st Street, Marysville | 12515 | 22103 | Awaiting Cleanup |
| 3 | WA DOT Ebey Slough Bridge Replacement Project | 65 State Avenue, Marysville | 12040 | 23670 | Awaiting Cleanup |
| 4 | Regional Localized Arsenic Plume Steamboat Slough | SR 529, Marysville | 16673 | 46440 | Awaiting Cleanup |
| 5 | Spencer Island Moser Property | Frontage Road and I-5, Everett | 3830 | 2785 | Awaiting Cleanup |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 6 | WA DOT I-5 milepost 197 Marysville | I-5 at MP 197 SB, Marysville | 308 | 513712 | Awaiting Cleanup |
| 7 | Everett Laundry | 1130 N Broadway, Everett | 4577 | 45998439 | Awaiting Cleanup |
| 8 | Alley Shop | 1321 Broadway, Everett | 4822 | 2730 | Awaiting Cleanup |
| 9 | LTA Holdings | 1931 Broadway, Everett | 16793 | 99999313 | Awaiting Cleanup |
| 10 | Chapman Truck Repair Ditch | 3821 Railway, Everett | 3656 | 2801 | Awaiting Cleanup |
| 11 | Rubatinos Truck Care | 2730 Harrison Avenue, Everett | 3409 | 2781 | Awaiting Cleanup |
| 12 | Narrow Way Refinish & Collision | 2110 25th Street, Everett | 16634 | 73784126 | Awaiting Cleanup |
| 13 | Crescent Service Tire | 1919 Everett Avenue, Everett | 12347 | 61927273 | Awaiting Cleanup |
| 14 | Pacific Plating Aero Fancy Stamps | 2421 Hewitt Avenue, Everett | 2468 | 20511 | Awaiting Cleanup |
| 15 | American Auto Service | 2936 Cedar Street, Everett | 12220 | 22933 | Awaiting Cleanup |
| 16 | Nelson Distributing 2 | 3102 Hill Avenue, Everett | 3804 | 2808 | Awaiting Cleanup |
| 17 | Everett City Morgan Bros | 3225 Cedar Street, Everett | 3562 | 2807 | Awaiting Cleanup |
| 18 | Everett Steel Co Quantum Wood | 2720 34th Street, Everett | 3775 | 2806 | Awaiting Cleanup |
| 19 | All Night Air Sweep | 3326 Smith Avenue, Everett | 1839 | 67541366 | Awaiting Cleanup |
| 20 | Sea Dog Corporation | Smith Avenue and 33rd Street, Everett | 2617 | 35112631 | Awaiting Cleanup |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 21 | Millennium Enterprises | 3102 Rucker Avenue, Everett | 14505 | 94312252 | Awaiting Cleanup |
| 22 | Express Storage | 3001 3007 Rucker Avenue, Everett | 16647 | 99997544 | Awaiting Cleanup |
| 23 | Unocal 3604 ROW | 4101 Rucker Avenue, Everett | 16894 | 2881226 | Awaiting Cleanup |
| 24 | Mid City Towing | 4035 Smith Avenue Everett | 3242 | 89398652 | Awaiting Cleanup |
| 25 | Rotary Park | Lowell Snohomish River Road and S 1st Street, Everett | 4345 | 2852 | Awaiting Cleanup |
| 26 | Pawn Pros | 5329 Evergreen Way, Everett | 12776 | 24429 | Awaiting Cleanup |
| 27 | Chevron 99609 | 1206 4th Street, Marysville | 6353 | 59561644 | Cleanup Started |
| 28 | Systems III Detailing | 420 N State Avenue, Marysville | 8461 | 25229195 | Cleanup Started |
| 29 | Heartsong Holdings | 306 State Avenue, Marysville | 11718 | 5791 | Cleanup Started |
| 30 | Marysville Waterfront Park | SW of 1st Street and State Avenue, Marysville | 1040 | 43566392 | Cleanup Started |
| 31 | Interior Pacific Inc | 60 State Avenue, Marysville | 4281 | 85223839 | Cleanup Started |
| 32 | Washington Trucking | 5219 SR 529, Marysville | 11427 | 21238 | Cleanup Started |
| 33 | Tulalip Landfill | US HWY 99, Marysville | 565 | 191 (Tracked by EPA) | Cleanup Started |
| 34 | Blue Heron Slough | 4325 40th Place NE, Marysville | 16637 | 6101737 | Cleanup Started |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 35 | Buse Timber & Sales | 3812 28th Place NE, Everett | 4340 | 2786 | Cleanup Started |
| 36 | Dagmars Marina | 1871 Ross Avenue, Everett | 4698 | 8070274 | Cleanup Started |
| 37 | Weyerhaeuser Everett Mill E | 515 E Marine View Drive, Everett | 2903 | 12 (within ESP) | Cleanup Started |
| 38 | Everett Smelter (Historic Smelter Site) | SR 529 and E Marine View Drive, Everett | 4298 | 2744 (within ESP) | Cleanup Started |
| 39 | Northpoint Apartments | 1001 E Marine View Drive, Everett | 432 | 43112633 (within ESP) | Cleanup Started |
| 40 | Welcome Motor Inn | 1205 Broadway, Everett | 12642 | 17942 | Cleanup Started |
| 41 | Benson Property | 501 E Marine View Drive, Everett | 3105 | 49839758 | Cleanup Started |
| 42 | BNSF RR Delta Yard | 3429 15th Street, Everett | 6203 | 51784829 | Cleanup Started |
| 43 | Burlington Northern RR Everett | MP .37 2nd Sub Pacific Div, Everett | 8335 | 22683171 | Cleanup Started |
| 44 | Shaffer Crane | 1616 E Marine View Drive, Everett | 5345 | 4660626 | Cleanup Started |
| 45 | WSP Old Everett Detachment | 3202 20th Street, Everett | 10468 | 77181216 | Cleanup Started |
| 46 | Everett Public Works Service Center | 4027 4th Street SE, Everett | 8544 | 27491233 | Cleanup Started |
| 47 | 2202 Broadway | 2202 Broadway, Everett | 339 | 5661282 | Cleanup Started |
| 48 | Canyon Lumber | 3821 26th Place, Everett | 10337 | 73655877 | Cleanup Started |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 49 | PSE Everett Operating Facility | 3630 Railway Avenue, Everett | 5181 | 2774 | Cleanup Started |
| 50 | Rental Service Corporation 562 | 2810 Highland Avenue, Everett | 4526 | 11536592 | Cleanup Started |
| 51 | Nelson Distributing Everett | 2815 Highland Avenue, Everett | 5186 | 2782 | Cleanup Started |
| 52 | WA DOT Parcel 1-911 Ebey Slough | Immediately S of 2814 Highland Avenue, Everett | 3375 | 8626812 | Cleanup Started |
| 53 | Eclipse Mill | 3300 Chestnut Street, Everett | 1998 | 16248 | Cleanup Started |
| 54 | Alfys Pizza Container | 2317 Broadway, Everett | 16656 | 75334599 | Cleanup Started |
| 55 | Broadway Used Car Lot | 2332 Broadway, Everett | 12570 | 15774319 | Cleanup Started |
| 56 | Exxon 77135 | 3015 Everett Avenue, Everett | 10529 | 78599184 | Cleanup Started |
| 57 | Downtown Dennis | 2207 Everett Avenue, Everett | 11881 | 20004 | Cleanup Started |
| 58 | Chevron 90963 | 2620 Broadway, Everett | 9105 | 41949635 | Cleanup Started |
| 59 | Everett Fire Station HQ | 2811 Oakes Avenue, Everett | 7743 | 7442676 | Cleanup Started |
| 60 | Anderson Project Old Bulk | 2805 Broadway, Everett | 7681 | 6112412 | Cleanup Started |
| 61 | Siskun Power Equipment | 2805 Broadway, Everett | 1711 | 58597718 | Cleanup Started |
| 62 | Snohomish County PUD 1 Everett | 2320 California Avenue, Everett | 9707 | 55663959 | Cleanup Started |
| 63 | Sound Tractor | 2815 Virginia Avenue, Everett | 8020 | 14122931 | Cleanup Started |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 64 | Everett Platin | 2413 2415 Hewitt Avenue, Everett | 4601 | 2798 | Cleanup Started |
| 65 | Hertz Everett Rucker HLE | 2901 Rucker Avenue, Everett | 12503 | 24683 | Cleanup Started |
| 66 | Everett Landfill Tire Fire | 2900 36th Street, Everett | 3862 | 2696 | Cleanup Started |
| 67 | Dur Nel Property | SW Intersection of Hill Avenue and Pacific Avenue, Everett | 4445 | 32799931 | Cleanup Started |
| 68 | Everett Steel Scrapyard | 33rd Street 34th Street and BNRR ROW, Everett | 3561 | 71351 | Cleanup Started |
| 69 | Sather Manufacturing | 3330 McDougal Avenue, Everett | 4734 | 75732461 | Cleanup Started |
| 70 | Grand Building Valetor Cleaners | 3011 Grand Avenue, Everett | 6814 | 88593256 | Cleanup Started |
| 71 | Skotdal Property | 1501 1503 Pacific Avenue, Everett | 12874 | 21867 | Cleanup Started |
| 72 | Snohomish County Courthouse | 1810 Wall Street, Everett | 11133 | 94114483 | Cleanup Started |
| 73 | Snohomish County Construction Site | 3000 Rockefeller Avenue MS 507, Everett | 2890 | 82414464 | Cleanup Started |
| 74 | Snohomish County Jail | 3025 Oakes Avenue, Everett | 1550 | 7061078 | Cleanup Started |
| 75 | Broadway 76 | 3027 Broadway, Everett | 5198 | 2847 | Cleanup Started |
| 76 | Hogland Transfer 3128 Paine | 3128 Paine Avenue, Everett | 7860 | 9878244 | Cleanup Started |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 77 | Hogland Transfer Co | 3221 Paine Avenue, Everett | 4249 | 8811371 | Cleanup Started |
| 78 | Penske Truck Leasing Co LP Everett | 3225 McDougall Avenue, Everett | 1698 | 29548842 | Cleanup Started |
| 79 | Car Wash Enterprises Everett | 3523 Broadway, Everett | 9828 | 59139328 | Cleanup Started |
| 80 | Quaker State Minit Lube 1504 | 3601 Broadway, Everett | 6516 | 68725182 | Cleanup Started |
| 81 | Diversified Industries | 2915 2931 36th Street, Everett | 11595 | 2055672 | Cleanup Started |
| 82 | GTS Drywall UST 11222 | 2731 36th Street, Everett | 4730 | 65596692 | Cleanup Started |
| 83 | Pacific Pride Card Lock O'Day Heating | 3729 Smith Street, Everett | 9330 | 46673112 | Cleanup Started |
| 84 | Hansens Towing | 3813 and 3827 Rucker Avenue, Everett | 2744 | 35391945 | Cleanup Started |
| 85 | 76 Food Mart of Everett | 4031 Colby Avenue, Everett | 7750 | 7538653 | Cleanup Started |
| 86 | ARCO 0921 | 4030 Rucker Avenue, Everett | 10684 | 83427814 | Cleanup Started |
| 87 | Acrowood Corp | 4425 S 3rd Avenue, Everett | 4703 | 22755667 | Cleanup Started |
| 88 | Claremont Village Shopping Center | 4925 Evergreen Way, Everett | 12634 | 3183 | Cleanup Started |
| 89 | Simpson Paper Co Pulp Plant | 48th Street SE and 2nd Avenue W, Everett | 4771 | 2718 | Cleanup Started |
| 90 | Simpson Main Area | 48th Street SE, Everett | 1837 | 1758558 | Cleanup Started |

| Map Identification Number | Site Name | Site Address or Location | Cleanup Site Identification (CSID) | Facility Site Identification (FSID) | Cleanup Site Status |
|---|---|---|---|---|---|
| 91 | Morse Construction Group | 5500 S 1st Avenue, Everett | 10165 | 68495272 | Cleanup Started |
| 92 | Lakeshore Investments Beverly Blvd | 6722 Beverly Boulevard, Everett | 9246 | 44753269 | Cleanup Started |
| 93 | Everett Fire Station 5 | 6801 Beverly Boulevard, Everett | 10236 | 71395196 | Cleanup Started |
| 94 | Evergreen Way Cleaners | 6801 Evergreen Way, Everett | 1523 | 19565476 | Cleanup Started |
| 95 | Suns Mini Mart & Gas | 9506 19th Avenue SE, Everett | 12382 | 56571915 | Cleanup Started |
| 96 | Goodyear 8851 | 1502 Everett Mall Way, Everett | 13228 | 68451728 | Cleanup Started |
| 97 | Harmon & Associates | 800 Block Everett Mall Way, Everett | 10513 | 78246378 | Cleanup Started |
| 98 | First West Development | 303 91st Avenue NE, Lake Stevens | 10538 | 78824195 | Cleanup Started |
| 99 | Lake Stevens Cleaners | 303 91st Avenue NE C302, Lake Stevens | 13076 | 11757 | Cleanup Started |
| 100 | Weyerhaeuser Everett East | 101 E Marine View Dr, Everett | 2495 | 11 (within ESP) | Monitoring Cleanup Progress |

Source: Ecology 2024e

#### 12.3.1.1 WSDOT-owned Properties

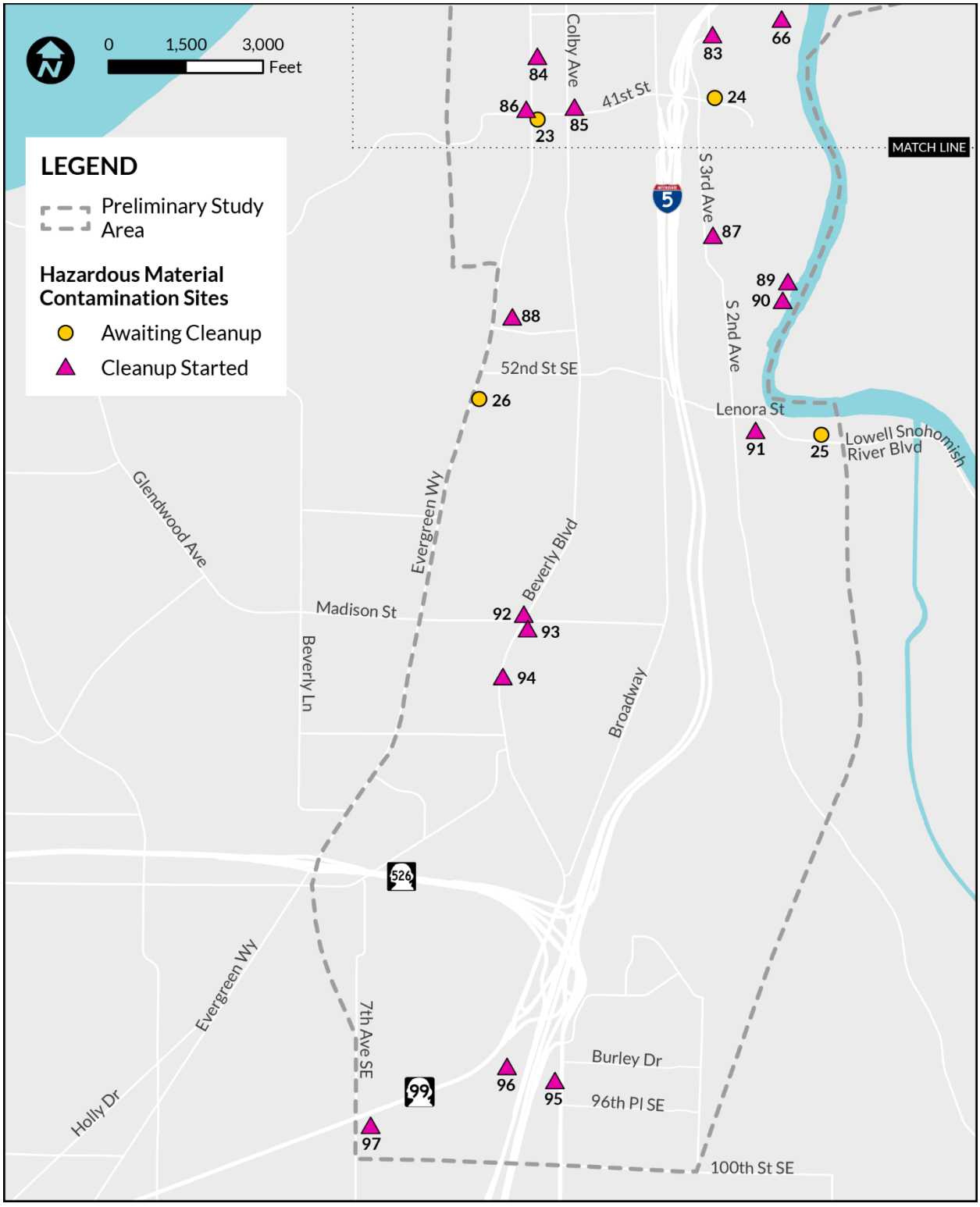
One WSDOT-owned property is listed as a Contaminated Site Awaiting Cleanup: Map Identification Number 3, WA DOT Ebey Slough Bridge Replacement Project. Online Ecology records indicate an underground storage tank was discovered while digging a ditch along the shoulder of State Avenue in June 2012. The summary of the current site status states the site should be listed as a Confirmed and Suspected Contaminated Site because benzene and gasoline were confirmed above the applicable cleanup level in soil. However, no additional records were available.

One WSDOT-owned property is listed as a Contaminated Site with Cleanup Started: Map Identification Number 52, WA DOT Parcel 1-911 Ebey Slough. This site is located west of the Snohomish River along Hewitt Avenue under US 2. Online Ecology records indicate this parcel was the location of Nelson Distributing, Inc. (Map Identification Number 51) and Wick Towing. A 1995 Preliminary Site Investigation indicated sediment contamination was not present at this location. However, soils on the Nelson Distributing, Inc., the northern portion of the site, contain concentrations of diesel-range organics that are above the applicable cleanup level. This investigation did not recommend the acquisition of this property due to liability risks. Online Ecology records related to Nelson Distributing Everett indicate although some work has been done at this site and improvements have been made on the surface, the most recent sampling data from 2008 shows elevated diesel range hydrocarbons in soils at a depth of 8 feet below the ground surface and lead in the ground water near the property line.

### 12.3.2 Everett Smelter Plume Site

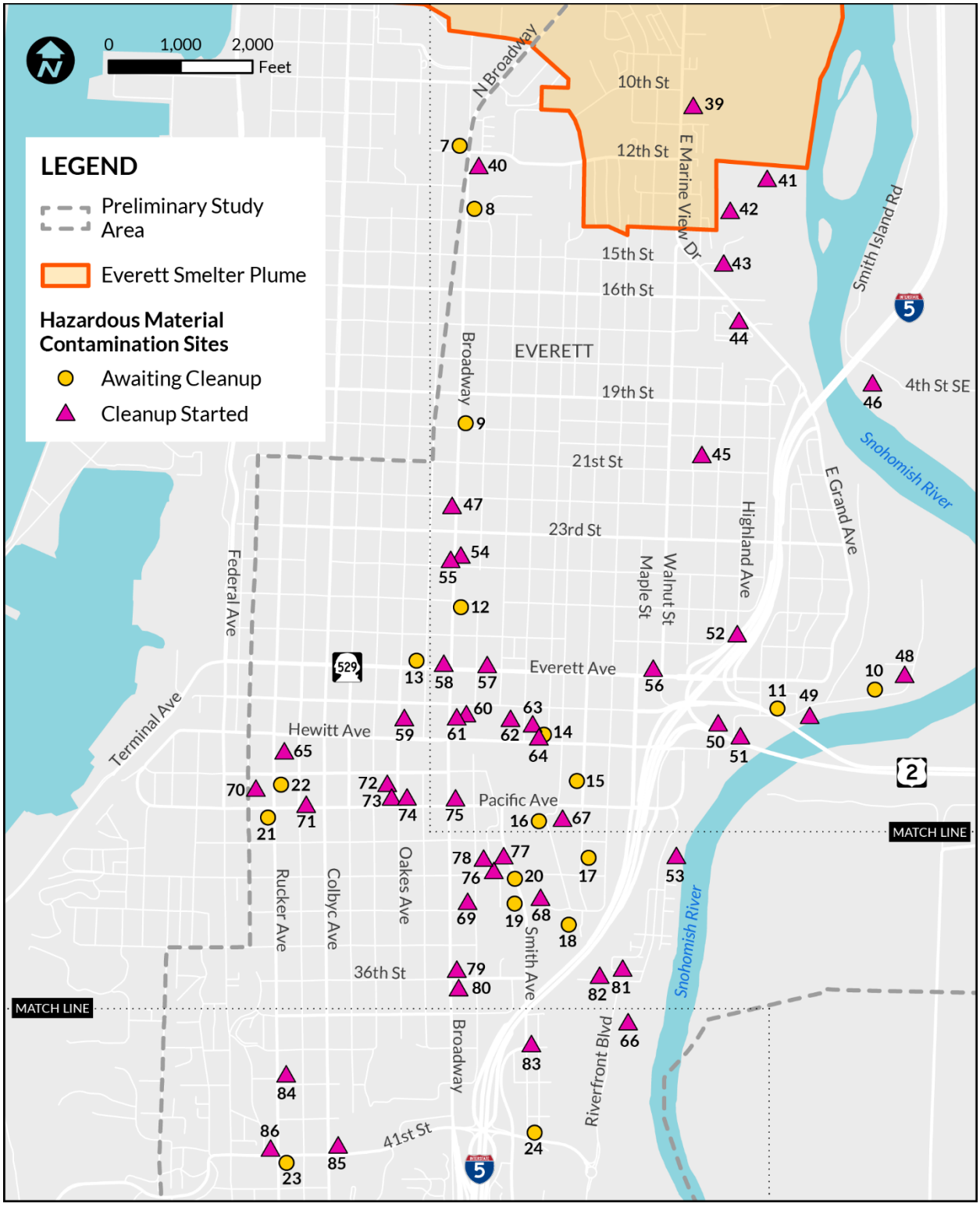
A major site of potential concern is the Everett Smelter Plume (ESP) site. A portion of the ESP is located within the preliminary study area, about 1.5 miles northwest of the US 2 trestle, as shown in Figure 12-2 and Figure 12-3. Asarco operated the Everett Smelter (Map Identification Number 38) from 1894 to 1912. Emissions from the former smelter are known to have caused lead and/or arsenic contamination in shallow soils located within this plume area. Ecology is working to clean up the impacted area, using funds from a legal settlement with Asarco.

**Figure 12-1. Hazardous Materials Contamination Sites in South End of Preliminary Study Area**



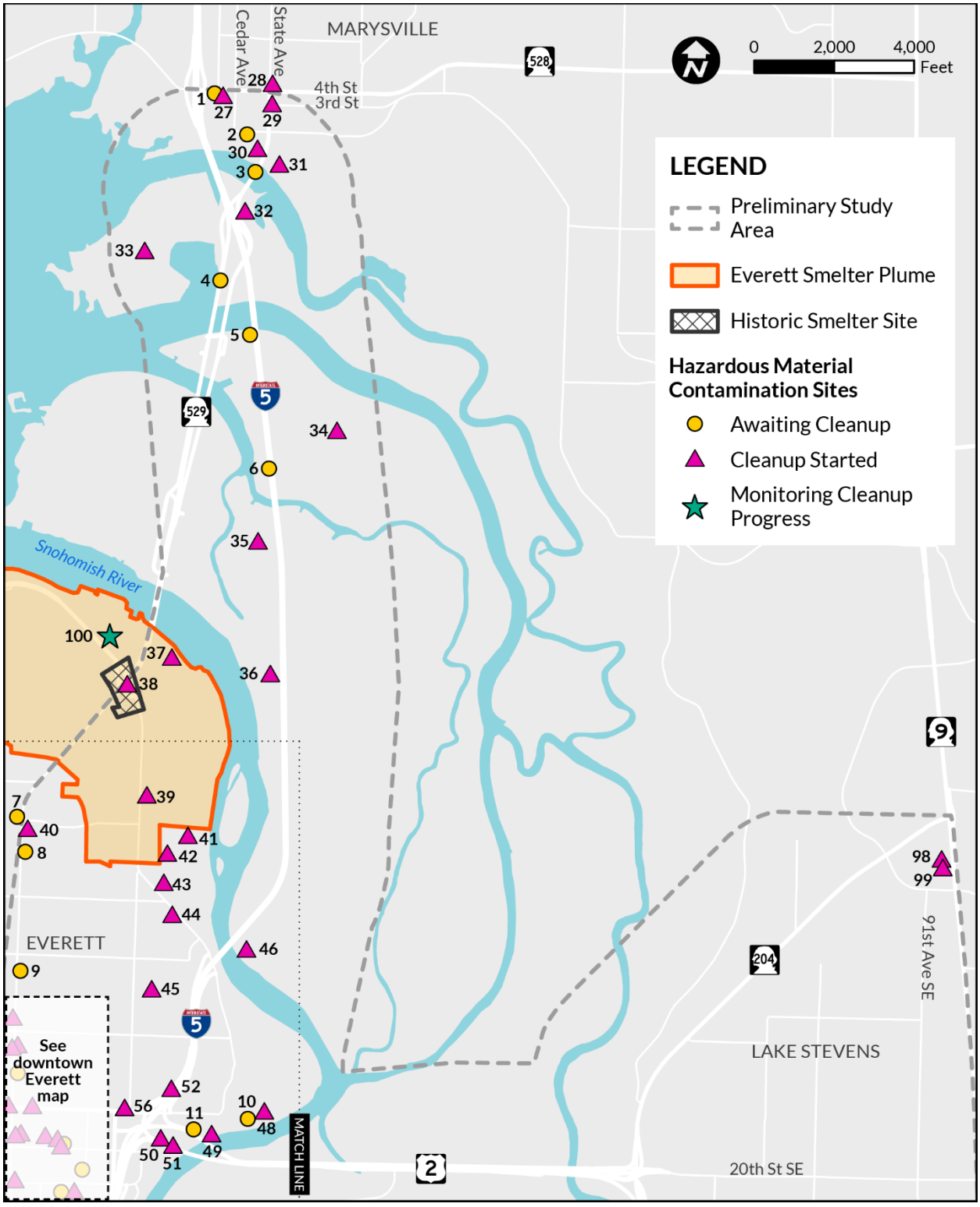

Source: Ecology 2024f

**Figure 12-2. Hazardous Materials Contamination Sites in Downtown Everett in Preliminary Study Area**




Source: Ecology 2024f

**Figure 12-3. Hazardous Materials Contamination Sites in North End of Preliminary Study Area**




Source: Ecology 2024f

### 12.3.3 Key Points

Based on a review of Ecology's Toxics Cleanup Map, there are 100 identified hazardous materials contamination sites in the preliminary study area. Six sites are located near the US 2 trestle's west end connections with I-5. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 13 Publicly Owned Parks, Recreational Areas, and Refuges

This chapter summarizes the types and locations of existing publicly owned parks, recreational areas, and refuges in the preliminary study area.

## 13.1 Relevant Laws, Regulations, and Guidance

The following federal and state laws, regulations, plans, policies, and guidance documents will inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for publicly owned parks, recreational areas, and refuges. A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process.

### 13.1.1 Federal

- 23 U.S.C. 138 Preservation of Parkland: Establishes a national policy to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.
- 49 U.S.C. 303 Policy on lands, wildlife and waterfowl refuges, and historic sites: Intended to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.
- Section 4(f) of the Department of Transportation Act 1966 (49 U.S.C. 303, implemented by 23 CFR 774): Intended to protect publicly owned parks and recreation areas, waterfowl and wildlife refuges, and historic sites considered to have national, state, or local significance from a conversion to a transportation use unless avoidance is not feasible and prudent.
- Section 6(f) of the Land and Water Conservation Fund (LWCF) Act 1965: Requires that the conversion of lands or facilities acquired with Land and Water Conservation Act funds under the State Assistance program be coordinated with the National Park Service.
- Federal Lands to Parks (FLP) Program of the Federal Property and Administrative Act of 1949: Public conveyance program intended to help increase close to home recreation opportunities while reducing the federal government's property inventory. In coordination with the National Park Service, equivalent replacement land is required for the conversion of land conveyed through this program.

### 13.1.2 State

- WSDOT Environmental Manual, Chapter 455 and 457 (WSDOT 2024a): Provides guidance for Section 6(f) and Section 4(f) compliance.

## 13.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for publicly owned parks, recreational areas, and refuges in the preliminary study area. This effort focused on resources whose major purpose is for park, recreation, or refuge activities and are open to the public in order to help identify potential Section 4(f) resources to consider in the alternatives screening and evaluation

process and the future NEPA analysis. Data from these sources was documented and presented in narrative descriptions with supplemental maps and tables.

- Mapped data from the following local, state, and federal sources within the preliminary study area were gathered to identify the names, locations, and brief description of major features of existing parks, recreation areas, and wildlife/waterfowl refuges:
  - City of Everett (City of Everett 2022)
  - City of Lake Stevens (City of Lake Stevens 2015)
  - City of Marysville (City of Marysville 2015)
  - City of Snohomish (City of Snohomish 2023)
  - Snohomish County (Snohomish County n.d.-c, Snohomish County Parks and Recreation 2024)
  - Washington State Parks (Washington State Parks n.d.)
  - Washington Department of Fish and Wildlife (WDFW n.d.)
  - U.S. Fish and Wildlife Service (USFWS n.d.)
- Local agency land use plans were reviewed to identify planned parks and recreation resources for the cities and county listed above.
- National Park Service data identifying resources within the preliminary study area that have received LWCF funding, which would categorize them as Section 6(f) resources, and land acquired through the FLP program (NPS 2024a and 2024b).
- Washington State Recreation and Conservation Office (RCO) data identifying resources within the preliminary study area that have or will use RCO grant funds, which would categorize them as Section 6(f) resources (RCO 2024).

## 13.3 Existing Conditions

Table 13-1, Figure 13-1 and Figure 13-2 describe and show the existing park, recreational areas, and refuges within the preliminary study area. No additional planned parks were identified in the preliminary study area, although one park (City of Lake Stevens West Lake Park) is noted as currently under development.

All resources are assumed to be Section 4(f) resources for this analysis, based on FHWA guidance, and three resources are identified as Section 6(f) resources. No resources have been identified as having been acquired through the FLP program. For resources identified as Section 4(f) and Section 6(f), additional research and coordination will be conducted in future NEPA processes to confirm their status and boundaries. Section 4(f) also applies to historic bridges, buildings, and archaeological sites, which are identified for the preliminary study area in Chapter 14.

**Table 13-1. Existing Publicly Owned Parks, Recreational Areas, and Refuges in Preliminary Study Area**

| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 1 | City of Everett | Interurban Trail and Park | Linear Park and Trail | Madison Street and Commercial Avenue | Hiking and biking trail with green space. | Yes | No |
| 2 | City of Everett | Cascade View Park | Neighborhood Park | 88th Street and 7th Street | Small neighborhood park with benches. | Yes | No |
| 3 | City of Everett | Lions Park | Neighborhood Park | 7530 Cascade Drive | 3.35-acre park with paved trail, playground, and basketball court. | Yes | Yes |
| 4 | City of Everett | Century Park | Garden/ Gateway | East Berkshire Drive | Pocket park with picnic tables and benches. | Yes | No |
| 5 | City of Everett | Rotary Park | Special Use | 3505 Lowell-Snohomish River Road | 11.3-acre park adopted by Everett Rotary with an off-leash area, boat launch and trails. | Yes | No |

| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 6 | City of Everett | Emma Yule Park | Neighborhood Park | 4817 Rucker Avenue | 1.4-acre park with playground, picnic, and game tables, and a walking path. | Yes | No |
| 7 | City of Everett | Lowell Park | Neighborhood Park | 4605 South Third Avenue | 10-acre park with off-leash area, basketball and pickleball courts, and playground. | Yes | No |
| 8 | City of Everett | Forest Park | Regional Park | 802 East Mukilteo Boulevard | Largest park in Everett at 197 acres. Offers hiking, basketball and pickleball courts, sports fields, playgrounds, and picnic areas. | Yes | No |
| 9 | City of Everett | Gateway No. 5 | Unknown | Broadway and 41st St | 0.1-acre freeway green space. | Yes | No |
| 10 | City of Everett | Kiwanis Park | Neighborhood Park | 36th Street and Rockefeller Avenue | 0.6-acre park with basketball court and playground. | Yes | No |

| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 11 | City of Everett | Angel of the Winds Arena | Stadium/Arena | 2000 Hewitt Avenue | Publicly owned arena (Everett Public Facilities District) and property with a public skating rink. | Yes | Yes |
| 12 | City of Everett | J.J. Hill Park | Garden/ Gateway | Broadway and Hewitt Avenue | 0.4-acre shaded green space. | Yes | No |
| 13 | City of Everett | Judd and Black Park | Garden/ Gateway | 2800 Maple Street | 0.4-acre green space along I-5. | Yes | No |
| 14 | City of Everett | Wetmore Theater Plaza | Urban/ Downtown Park | 2710 Wetmore Avenue | Urban park with seating and landscaping. | Yes | No |
| 15 | City of Everett | Clark Park | Neighborhood Park | 2400 Lombard Avenue | 2.4-acre city park with gazebo, playground, and tennis courts. | Yes | No |

| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 16 | City of Everett | Garfield Park | Neighborhood Park | 2300 Walnut Street | 5.6-acre park with a baseball field; basketball, tennis, and pickleball courts; playground; and softball field. | Yes | No |
| 17 | City of Everett | Summit Park | Linear Park and Trail | Summit Avenue | 3-acre green space with viewpoint along I-5 corridor. | Yes | No |
| 18 | City of Everett | Senator Henry M. Jackson Park | Community Park | 3302 18th Street | 14.3-acre park with baseball and soccer fields, basketball court, community garden plots, and a playground. | Yes | No |
| 19 | City of Everett | Langus Riverfront Park | Regional Park | 400 Smith Island Road | 96-acre park adjacent to the Snohomish River with a paved trail, boat launch, and picnic area. | Yes | Yes |

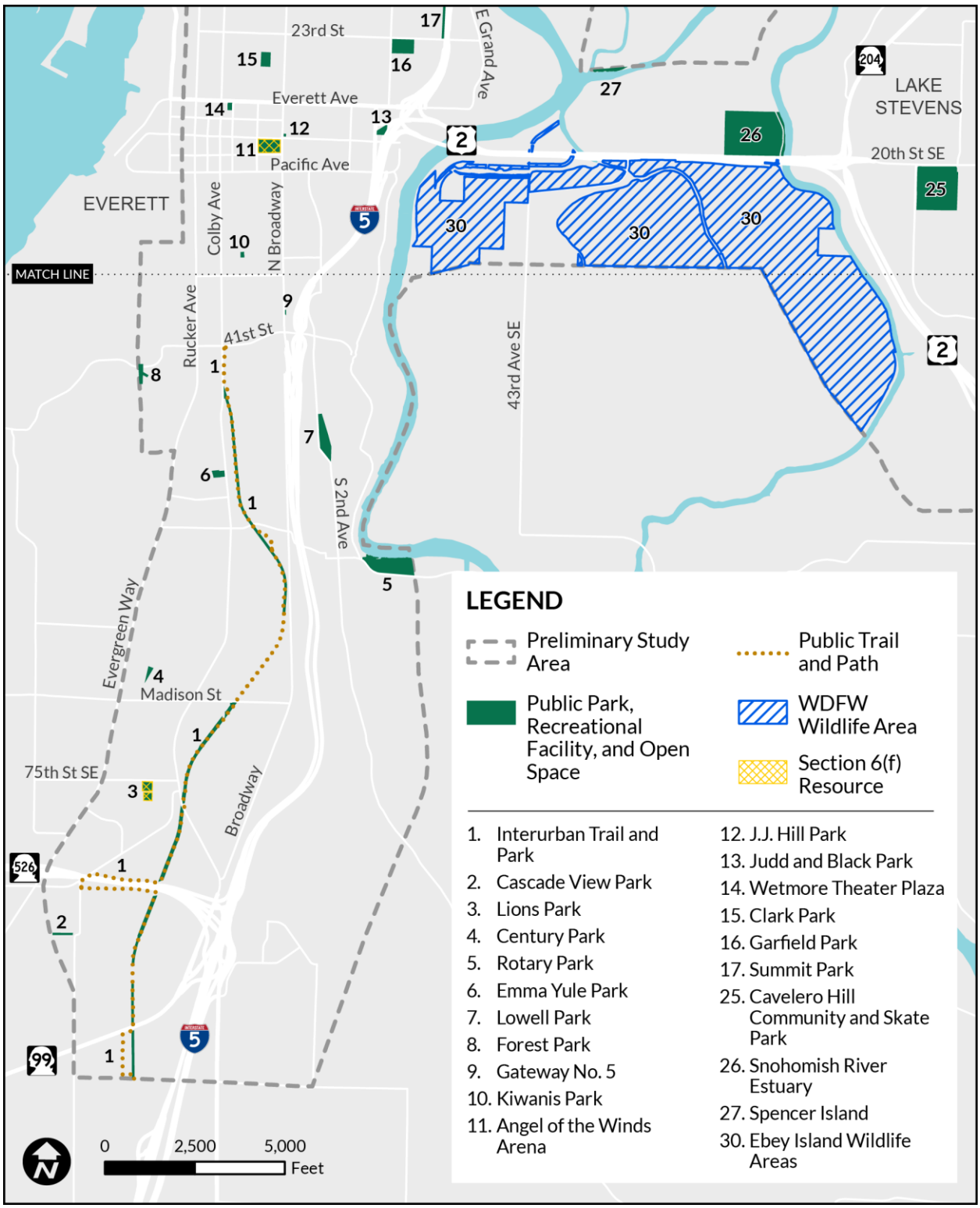
| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 20 | City of Everett | Wiggums Hollow Park | Neighborhood Park | 2808 10th Street | 10-acre park with a playground, basketball court, and skate park. | Yes | No |
| 21 | City of Everett | Viola Oursler Park | Neighborhood Park | 721 East Marine View Drive | 025-acre park with viewpoint along Marine View Drive corridor. | Yes | No |
| 22 | City of Marysville | Qwuloolt Wetland Reserve | Estuary Restoration Project | N/A (approximate center coordinates: N 48.042491, W -122.159750) | A 370-acre wetland restoration project along the Ebey Slough. | Yes | No |
| 23 | City of Marysville | Ebey Waterfront Park and Marina | Park and Marina | 1404 First Street | Intertidal marine park with playground and boat launch allowing users access to Snohomish River Delta and Port Garner Bay. | Yes | No |
| 24 | City of Marysville | Freeway Park | Park | Marine Drive North and Ash Street | Green space along I-5 corridor. | Yes | No |

| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 25 | Snohomish County | Cavalero Hill Community and Skate Park | Community Park | 7708 20th Street SE | 35-acre park with off-leash dog area, sport court, picnic amenities, trials, a skate park, and open play areas. | Yes | No |
| 26 | Snohomish County | Snohomish River Estuary | Open Space/ Preserve | East of I-5, near Everett | 9-mile-long and nearly 4.5-mile-broad estuary encompassing six major islands within 19.5 square miles. | Yes | No |
| 27 | Snohomish County and WDFW | Spencer Island Wildlife Areas | Wildlife Area | East of the City of Everett, north of US 2 | Wildlife area within the Snohomish River Estuary with unmaintained trails. Southern half is owned by the county; northern half is owned by WDFW. | Yes | No |

| Map ID | Jurisdiction | Resource Name | Resource Type | Address | Resource Description | Potential Section 4(f) Resource (Yes/No) | Section 6(f) Special Protections (Yes/No) |
|---|---|---|---|---|---|---|---|
| 28 | City of Marysville | Ebey Trail, Ebey Overlook Trail, and Ebey Waterfront Park Trail | Trail | 1404 First Street | Paved loop trail providing user access to the Qwuloolt Estuary, the Ebey Slough waterfront, and various parks. | Yes | No |
| 29 | City of Marysville | First Street By-Pass Trail | Trail | First Street Bypass | Shared-use path on the south side of First Street. | Yes | No |
| 30 | WDFW | Ebey Island Wildlife Areas | Wildlife Area | Between City of Everett and City of Snohomish | Approximately 63 acres of land providing wetland habitat and recreation, including hunting and hiking. | Yes | No |
| 31 | City of Lake Stevens | West Lake Park (formerly 20th Street Ballfields) | City Park | 8629 20th Street SE | Currently under development to improve existing amenities, including the practice field, trailhead, and dog park. | Yes | No |

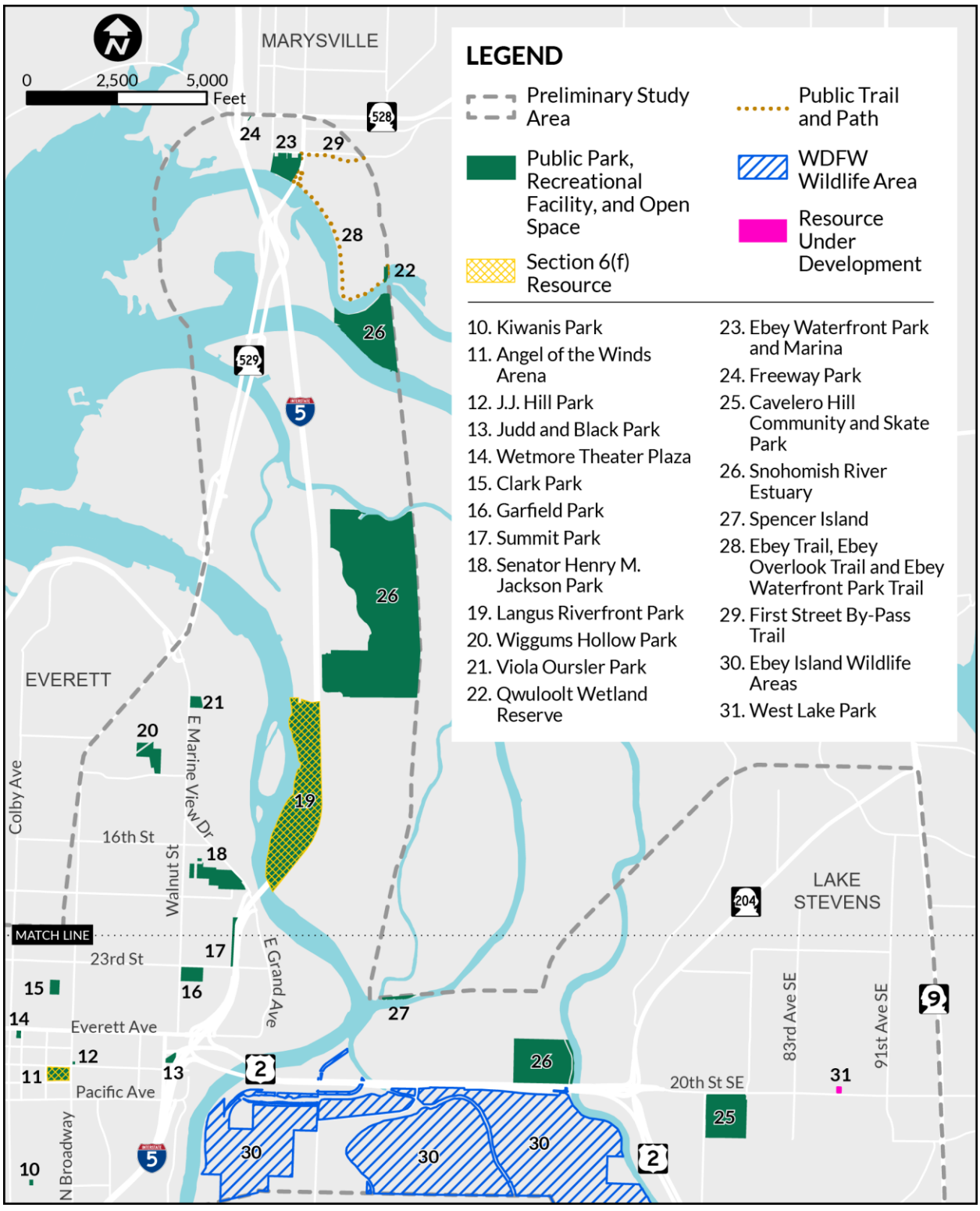
Source: City of Everett 2022, City of Lake Stevens 2015, City of Marysville 2015, City of Snohomish 2023, Snohomish County n.d.-c; Snohomish County Parks and Recreation 2024; Washington State Parks n.d.; WDFW n.d., USFWS n.d.
WDFW = Washington Department of Fish and Wildlife

**Figure 13-1. Existing Public Parks, Wildlife Refuges, and Recreation Facilities in Preliminary Study Area (South)**




Source: City of Everett 2022, City of Lake Stevens 2015, City of Marysville 2015, City of Snohomish 2023, Snohomish County n.d.-c; Snohomish County Parks and Recreation 2024; Washington State Parks n.d.; WDFW n.d., USFWS n.d.

**Figure 13-2. Existing Public Parks, Wildlife Refuges, and Recreation Facilities in Preliminary Study Area (North)**




Source: City of Everett 2022, City of Lake Stevens 2015, City of Marysville 2015, City of Snohomish 2023, Snohomish County n.d.-c; Snohomish County Parks and Recreation 2024; Washington State Parks n.d.; WDFW n.d., USFWS n.d.

### 13.3.1 Key Points

Of the 31 publicly owned parks, recreational areas, and refuges identified in the preliminary study area, there are two potential Section 4(f) properties in the immediate vicinity of the US 2 trestle and its connections: WDFW wildlife areas and Snohomish River Estuary open space. There are three Section 6(f) properties in the preliminary study area and no Section 6(f) properties in the immediate vicinity of the US 2 trestle and its connections. Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 14 Cultural Resources

This chapter summarizes the existing conditions for cultural resources in the preliminary study area, including historic bridges, built historic resources, and archaeological resources.

## 14.1 Relevant Laws, Regulations, and Guidance

The following federal, state, and local laws, regulations, plans, policies, and guidance documents inform the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for cultural resources (including historic bridges, built historic resources, and archaeological resources). A complete assessment of compliance with these requirements would be conducted in a subsequent NEPA process. Under a future NEPA process, additional federal and state laws may apply to the treatment and handling of resources identified in the existing conditions report.

### 14.1.1 Federal

- Section 106 of the National Historic Preservation Act of 1966, as amended and its implementing regulations 36 CFR 800: Requires federal agencies to identify and assess the effects their actions may have on historic properties and receive public input. Historic properties are defined as buildings, districts, sites, structures, or objects, typically more than 50 years old, that are deemed eligible for listing in the National Register of Historic Places (NRHP).
- Section 4(f) of the Department of Transportation Act (49 U.S.C. 303, implemented by 23 CFR 774): Intended to protect publicly owned parks and recreation areas, waterfowl and wildlife refuges, and historic sites considered to have national, state, or local significance from a transportation use unless avoidance is not feasible and prudent.
- Historic Bridge Program 23 U.S.C. 144(g): Encourages the inventory, retention, rehabilitation, or adaptive reuse of bridges that are determined significant according to NRHP criteria and are identified for replacement.

### 14.1.2 State

- WSDOT Environmental Manual Chapter 456.03 (WSDOT 2024a): Outlines environmental review requirements related to cultural resources from project planning through construction.
- Centennial Accord: Provides a framework to better achieve mutual goals through improved government-to-government relationships between the state and tribes.
- Archaeology and Historic Preservation RCW 27.34.200: Intended to designate, preserve, protect, enhance, and perpetuate structures, sites, districts, buildings, and objects that reflect outstanding elements of the state's historic, archaeological, architectural, or cultural heritage.
- Washington State Standards for Cultural Resources Reporting (updated April 2023): Conveys general guidelines, specific requirements, and useful tips about the survey and inventory process for thousands of records documenting both archaeological and historic resources across the state.

### 14.1.3 Local

#### 14.1.3.1 City of Everett

- Everett Municipal Code 19.28, Historic Resources: Regulates and preserves historic neighborhoods by designating certain areas as historic overlay zones.

#### 14.1.3.2 Snohomish County

- Snohomish County Code 30.67.340, Cultural, archaeological, and historical resources: Prioritizes preserving the county's archaeological resources over development when excavation work conflicts with archaeological preservation.

## 14.2 Data Sources and Data Collection Methods

The following data sources were reviewed for information on existing conditions for cultural resources (including historic bridges, built historic resources, and archaeological resources) in the preliminary study area. Data collected from these sources is documented and presented in maps and tables.

- Washington Inventory System for Architectural and Archaeological Records Data (WISAARD) portal maintained by Washington State Department of Archaeology and Historic Preservation (DAHP n.d.).
  - Built historic resources/properties listed in the NRHP or previously identified as eligible for listing within the preliminary study area.
  - Areas that have a high probability for encountering archaeological resources based on archaeological site files and previous reports of archaeological research within the preliminary study area.
  - WISAARD's Predictive Model GIS layer showing probability rankings for unknown and significant cultural resources.
- WSDOT's GIS Workbench "WSDOT Historic Bridges" data layer (Washington State GIS Workbench 2024) to identify historic bridges within the preliminary study area.

## 14.3 Existing Conditions

The following subsections summarize the many archaeological and built historic resources, including historic bridges, within the preliminary study area. WSDOT has identified four historic bridges within the preliminary study area. Forty-two built historic resources have been listed or determined eligible for listing in historic registers within the preliminary study area. None of the archaeological sites recorded within the preliminary study area on WISAARD have been listed or determined eligible for listing in historic registers.

### 14.3.1 Historic Bridges

WSDOT's GIS Workbench "WSDOT Historic Bridges" data layer displays four historic bridges within the preliminary study area (Washington State GIS Workbench 2024). Refer to Table 14-1 and Figure 14-1. All four are located on SR 529 in the northern portion of the preliminary study area spanning the Snohomish River and nearby sloughs. Three of the four bridges have also been identified on WISAARD as listed or determined eligible for listing in historic registers.

**Table 14-1. WSDOT Historic Bridges within Preliminary Study Area**

| Map Identification Number | Bridge Number | Name | Inventory Status |
|---|---|---|---|
| 1 | 529/10W | Snohomish River | Determined eligible for NRHP |
| 2 | 529/15W | Union Slough | No determination |
| 3 | 529/20W | Steamboat Slough | Recommended eligible for NRHP |
| 4 | 529/20E | Steamboat Slough | Nominated for NRHP |

Source: Washington State GIS Workbench 2024
NRHP = National Register of Historic Places

**Figure 14-1. WSDOT Historic Bridges within Preliminary Study Area**


Source: Washington State GIS Workbench 2024

### 14.3.2 Built Historic Resources

Within the preliminary study area, 42 built historic resources have been listed or determined eligible for listing on state and/or federal historic registers (DAHP n.d.). Table 14-2 lists the names, addresses, and status of the historic resources, Figure 14-2 and Figure 14-3 show their locations. Most of these properties are located in downtown Everett. Others are in the vicinity of Marysville to the north, the Snohomish River valley to the east, and southwestern Everett. Six of these properties are located within 0.5 mile of the US 2/I-5 interchange.

Many more (approximately 1,900) built historic resources have been inventoried within the preliminary study area but have not been evaluated for historic register eligibility. Of these properties, 310 are located within 0.5 mile of the US 2/I-5 interchange.

Additionally, WISAARD includes thousands of additional built historic resources identified from Snohomish County Assessor records that have not been fully inventoried or evaluated for historic register eligibility. Of these properties, approximately 690 are within 0.5 mile of the US 2/I-5 interchange. During a future NEPA process, built historic resources would be evaluated for historic register eligibility.

**Table 14-2. Register Eligible and/or Listed Historic Properties in Preliminary Study Area**

| Map Identification Number | Name | Address | Historic Register Status |
|---|---|---|---|
| 1 | Wold Farm | 4716 Fobes Road, Snohomish County, WA | Listed on WHBR. |
| 2 | Hewitt Avenue Historic District | 1620 – 1915 Hewitt Avenue and portions of Wetmore, Rockefeller, Oakes, and Lombard Avenues, Everett, WA | Listed on NRHP and WHR. |
| 3 | Swalwell Block and Adjoining Commercial Buildings | 2901 Hewitt Avenue, Everett, WA | Listed on NRHP and WHR. |
| 4 | Everett High School | 2400 Colby Avenue, Everett, WA | Listed on NRHP and WHR. |
| 5 | Everett Theatre | 2911 Colby Avenue, Everett, WA | Listed on WHR. |
| 6 | Knights of Columbus Community Center and War Memorial Building – Everett | 1611 Everett Avenue, Everett, WA | Listed on NRHP and WHR. |

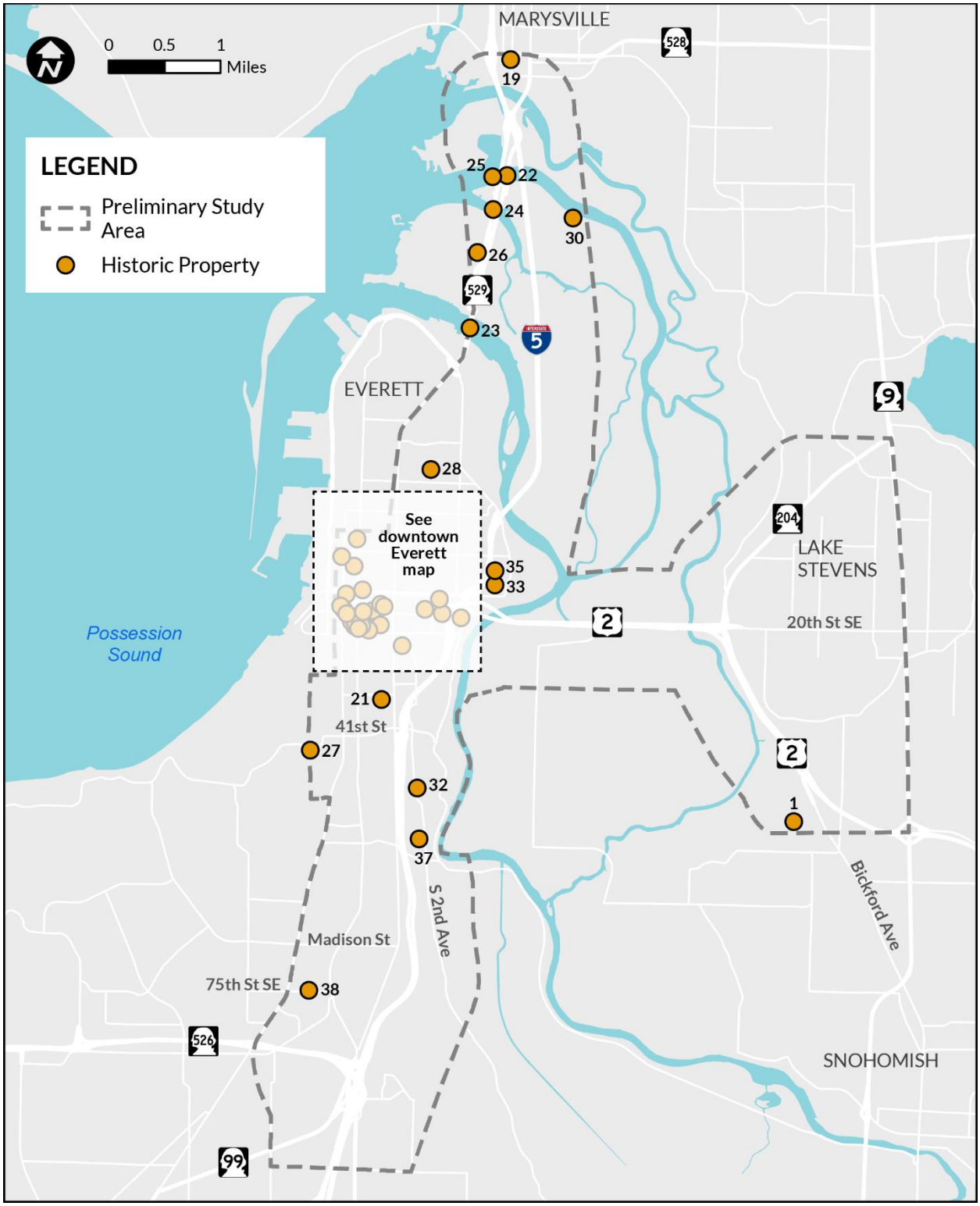
| Map Identification Number | Name | Address | Historic Register Status |
|---|---|---|---|
| 7 | U.S. Post Office and Customs House – Everett | 3006 Colby Avenue, Everett, WA | Listed on NRHP and WHR. |
| 8 | Marion Building, Hotel Marion, Tontine Saloon | 1401 Hewitt Avenue, Everett, WA | Listed on WHR. |
| 9 | Commerce Building | 1801 Hewitt Avenue, Everett, WA | Listed on NRHP and WHR. |
| 10 | Everett Public Library | 2702 Hoyt Avenue, Everett, WA | Determined eligible for NRHP. Listed on WHR. |
| 11 | Everett Fire Station No. 2 | 2801 Oakes Avenue, Everett, WA | Listed on NRHP and WHR. |
| 12 | Everett Carnegie Library | 3001 Oakes Avenue, Everett, WA | Listed on NRHP and WHR. |
| 13 | Swalwell Cottage | 2712 Pine Street, Everett, WA | Listed on NRHP and WHR. |
| 14 | Hartley, Roland & Nina, House | 2320 Rucker Avenue, Everett, WA | Listed on NRHP and WHR. |
| 15 | Pioneer Block – Everett | 2814-2816 Rucker, Everett, WA | Listed on WHR. |
| 16 | Monte Cristo Hotel | 1507 Wall Street, Everett, WA | Listed on NRHP and WHR. |
| 17 | Snohomish County Courthouse | 3000 Rockefeller Avenue, Everett, WA | Listed on NRHP and WHR. |
| 18 | Everett City Hall | 3002 Wetmore Avenue, Everett, WA | Listed on NRHP and WHR. |
| 19 | Marysville Opera House | 1225 Third Street, Marysville, WA | Listed on NRHP and WHR. |
| 20 | McCabe Building | 3120 Hewitt Avenue, Everett, WA | Listed on NRHP and WHR. |
| 21 | Longfellow Elementary School | 3715 Oakes Avenue, Everett, WA 98201 | Listed on NRHP and WHR. |

| Map Identification Number | Name | Address | Historic Register Status |
|---|---|---|---|
| 22 | Steamboat Slough Bridge (529/20E) | State Route 529 over Steamboat Slough, Marysville, WA | Determined eligible for NRHP. Listed on WHR. |
| 23 | Snohomish River Bridge (529/10W) | State Route 529 over the Snohomish River, Everett, WA | Listed on WHR. |
| 24 | Union Slough Bridge (529/15W) | State Route 529 over Union Slough, Everett, WA | Determined eligible for NRHP. |
| 25 | Great Northern Railroad Bridge #11 – Steamboat Slough | Everett, WA | Determined eligible for NRHP. |
| 26 | Seattle and Montana Railway/Great Northern Railway Coast Line | BNSF Railroad, Blaine to Everett, WA | Determined eligible for NRHP. |
| 27 | Forest Park | 802 E Mukilteo Blvd, Everett, WA, 98203 | Determined eligible for NRHP. |
| 28 | Bakerview Apartments | 2605 15th Street, Everett, WA 98201 | Determined eligible for NRHP. |
| 29 | Commercial building (no name provided on WISAARD) | 2940-42 Colby, Everett, WA 98201 | Determined eligible for NRHP. |
| 30 | Herbert S. Conner Farm – House | 4625 40th Place NE, vicinity of Marysville, WA 98270 | Determined eligible for NRHP. |
| 31 | Van Valey Home | 2130 Colby Avenue Everett, WA 98201 | Determined eligible for NRHP. |
| 32 | Sumner Iron Works | 4425 S 3rd Avenue, Everett, WA 98204 | Determined eligible for NRHP. |
| 33 | Melvin Swartout House | 3609 26th Street, Everett, WA 98201 | Determined eligible for NRHP. |
| 34 | Sound Casket Company Building | 2815 Baker Avenue, Everett, WA, 98201 | Determined eligible for NRHP. |

| Map Identification Number | Name | Address | Historic Register Status |
|---|---|---|---|
| 35 | Young, Homer H., House | 2413 Harrison Avenue, Everett, WA, 98201 | Determined eligible for NRHP. |
| 36 | Daulph Delicatessen | 1416 Hewitt Avenue, Everett, WA 98201 | Determined eligible for NRHP. |
| 37 | Residence | 5207 S 3rd Avenue, Everett, WA, 98203 | Determined eligible for NRHP. |
| 38 | Olympic Water Tank | 7410 Olympic Drive, Everett, WA | Determined eligible for NRHP. |
| 39 | Labor Temple | 2812 Lombard Avenue, Everett, WA, 98201 | Determined eligible for NRHP. |
| 40 | Culmback Building | 3013-15 Colby, Everett, WA 98201 | Determined eligible for NRHP. |
| 41 | Milwaukee Road – Everett Depot | 3201 McDougall Avenue, Everett, WA, 98201 | Determined eligible for NRHP. |
| 42 | Speakers' Corner | Hewitt Avenue, Everett, WA, 98201 | Determined eligible for NRHP. |

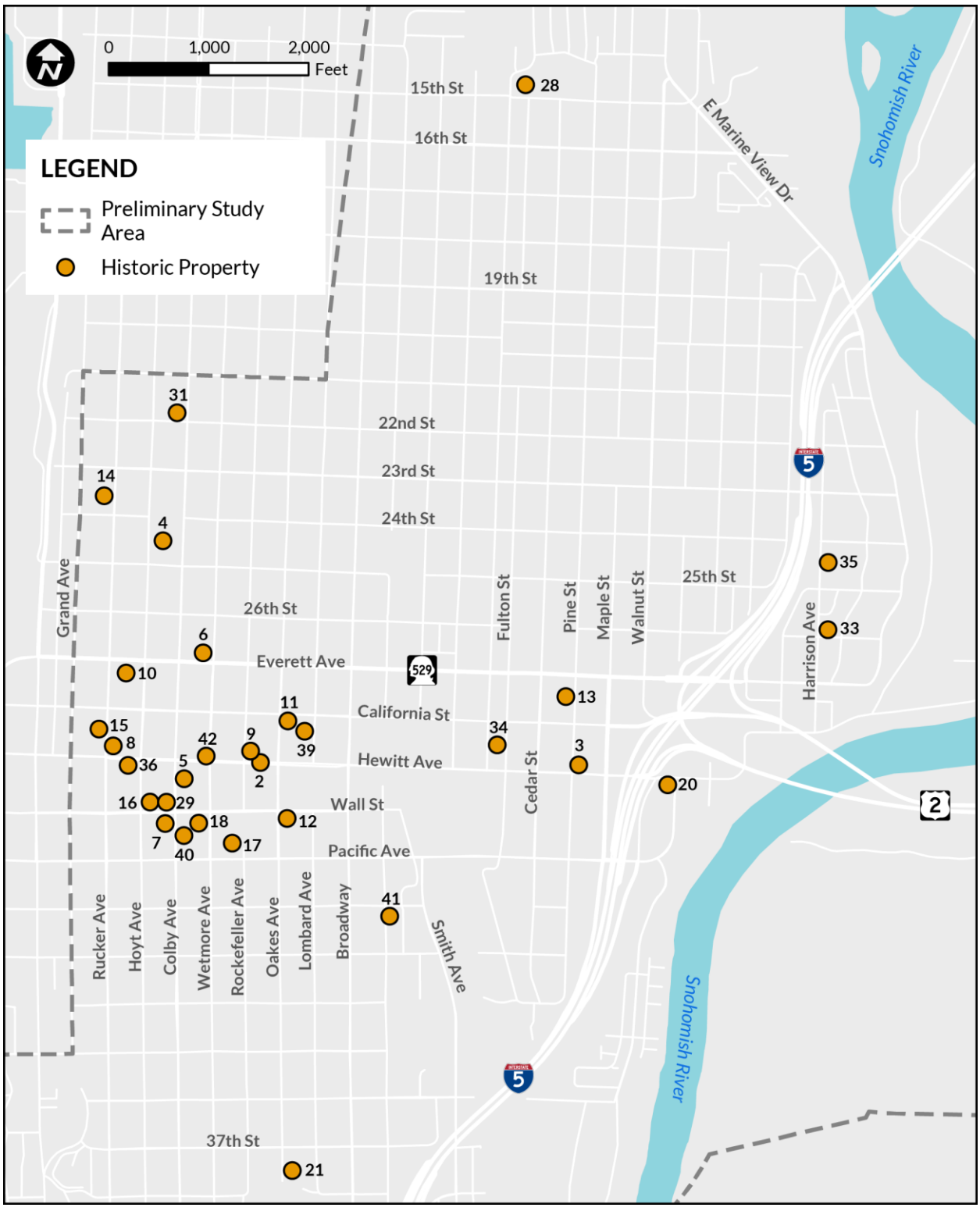
Source: DAHP n.d.
NRHP=National Register of Historic Places; WHR=Washington Heritage Register; WHBR=Washington Heritage Barn Register

**Figure 14-2. Locations of Register Eligible and Listed Historic Properties in Preliminary Study Area**




Source: DAHP n.d.

**Figure 14-3. Locations of Register Eligible and Listed Historic Properties in Preliminary Study Area: Downtown Everett Detail**




Source: DAHP n.d.

### 14.3.3 Archaeological Resources

Within the preliminary study area, 28 archaeological sites and isolates have been recorded on WISAARD (DAHP n.d.). Table 14-3. lists the site numbers, types, and register status for the preliminary study area. The locations of these sites are not included in this report to protect the resources. Furthermore, information about archaeological site locations is exempt from public disclosure under Washington state law.

The recorded archaeological resources represent a variety of time periods and activities in environments ranging from the Snohomish River floodplain to urbanized uplands. None of the recorded archaeological sites within the preliminary study area has been listed or determined eligible for listing in the state or federal historic registers. However, only a few of these sites have been formally evaluated for historic-register eligibility. Five of the sites within the preliminary study area have been determined not eligible for listing in the National Register. The other 23 sites have not been formally evaluated. Furthermore, most of the preliminary study area has not been surveyed for cultural resources. WISAARD maps 160 archaeological surveys as completed within the preliminary study area since 1995, but these surveys cover less than 15 percent of the preliminary study area.

**Table 14-3. Archaeological Sites Recorded within Preliminary Study Area**

| Site Number | Site Type | Register Status |
|---|---|---|
| SN00043 | Pre Contact Feature<br>Pre Contact Lithic Material<br>Pre Contact Shell Midden | No determination. |
| SN00085 | Pre Contact Isolate | No determination. |
| SN00088 | Pre Contact Isolate | No determination. |
| SN00387 | Historic Residential Structures | No determination. |
| SN00397 | Historic Commercial Properties<br>Historic Debris Scatter/Concentration<br>Historic Logging Properties<br>Historic Structures Not Specified<br>Historic Water Structures | No determination. |
| SN00410 | Historic Debris Scatter/Concentration | No determination. |
| SN00414 | Historic Debris Scatter/Concentration<br>Historic Isolate | No determination. |
| SN00466 | Historic Isolate | No determination. |
| SN00469 | Historic Isolate | No determination. |

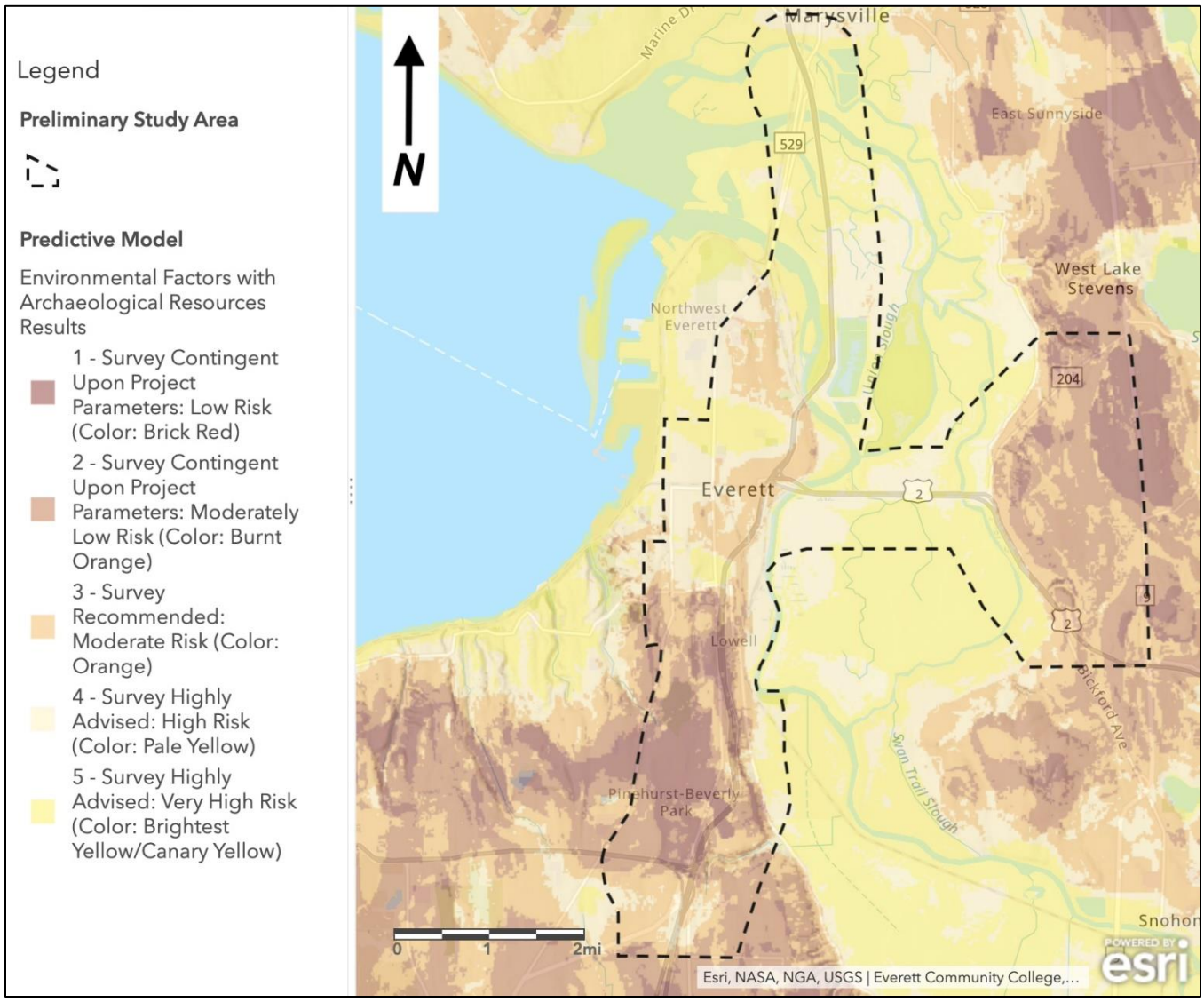
| Site Number | Site Type | Register Status |
|---|---|---|
| SN00470 | Historic Isolate | No determination. |
| SN00473 | Historic Isolate | No determination. |
| SN00474 | Historic Isolate | No determination. |
| SN00475 | Historic Isolate | No determination. |
| SN00476 | Historic Isolate | No determination. |
| SN00477 | Historic Isolate | No determination. |
| SN00478 | Historic Isolate | No determination. |
| SN00479 | Historic Isolate | No determination. |
| SN00480 | Historic Isolate | No determination. |
| SN00482 | Historic Agriculture<br>Historic Federal Properties | No determination. |
| SN00485 | Historic Debris Scatter/Concentration | No determination. |
| SN00554 | Historic Debris Scatter/Concentration<br>Historic Residential Structures | Determined not eligible for NRHP. |
| SN00598 | Pre Contact Lithic Material | No determination. |
| SN00656 | Historic Debris Scatter/Concentration | No determination. |
| SN00692 | Historic Logging Properties | Determined not eligible for NRHP. |
| SN00702 | Historic Maritime Properties | Determined not eligible for NRHP. |
| SN00885 | Site Type not Specified | No determination. |
| SN00894 | Historic Debris Scatter/Concentration | Determined not eligible for NRHP. |
| SN00912 | Historic Residential Structures | Determined not eligible for NRHP. |

Source: DAHP n.d.
NRHP=National Register of Historic Places

Within the preliminary study area, the WISAARD's Predictive Model GIS layer shows probability rankings ranging from Survey Contingent Upon Project Parameters: Low Risk (the model's lowest ranking) to Survey Highly Advised: Very High Risk (the model's highest ranking), as shown in Figure 14-4. The lower-risk areas tend to be located in the uplands in the eastern and southwestern portions of the preliminary study area. The higher-risk areas are concentrated on the Snohomish River floodplain and downtown Everett.

The review of archaeological site files and previous reports of archaeological research within the preliminary study area generally supports the probability rankings in the predictive model. In general, the Snohomish River floodplain is considered to have a high probability for as-yet unknown archaeological sites to be present due to its depositional setting, proximity to waterways and natural resources, and proximity to ethnographically reported place names. Existing developed highways in upland environments are generally considered to have low potential for as-yet unrecorded archaeological sites due to the extent of prior disturbance on glacial landforms with minimal soil development. Portions of the preliminary study area that are in alluvial and deltaic environments are generally considered to have a high potential for as-yet unrecorded archaeological sites due to thick alluvial deposits that could preserve archaeological deposits beneath the extent of prior disturbance. Locations in proximity to shorelines or streams are also typically considered high probability due to their proximity to natural resources that would have attracted people to those environments.

**Figure 14-4. WISAARD Predictive Model Rankings for Preliminary Study Area**




Source: DAHP n.d.

### 14.3.4 Key Points

The US 2 trestle, its east and west end connections, and the immediate vicinity does not contain any historic bridges.

Six built historic resources that have been listed or determined eligible for listing on state and/or federal historic registers are in the immediate vicinity of the US 2 trestle's west end connection. WISAARD shows 24 historic-aged resources have been inventoried but not evaluated for historic register eligibility in the immediate vicinity of the US 2 trestle's west connection, one in the immediate vicinity of the trestle, and none in the immediate vicinity of its east connection. WISAARD also shows approximately 20 more built historic-aged resources, identified from Snohomish County Assessor records, that have not been fully inventoried or evaluated for historic register eligibility in the immediate vicinity of the

trestle's west connection, four in the immediate vicinity of the US 2 trestle, and none in the immediate vicinity of the trestle's east connection.

The immediate vicinity of the US 2 trestle contains one recorded archaeological site, SN00043. Archaeological sites have not been recorded in the immediate vicinity of the US 2 trestle's east or west connections. WISAARD's Predictive Model GIS layer shows the immediate vicinity of the US 2 trestle and its east and west end connections as high-risk for archaeological resources.

Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 15 Social and Community Resources

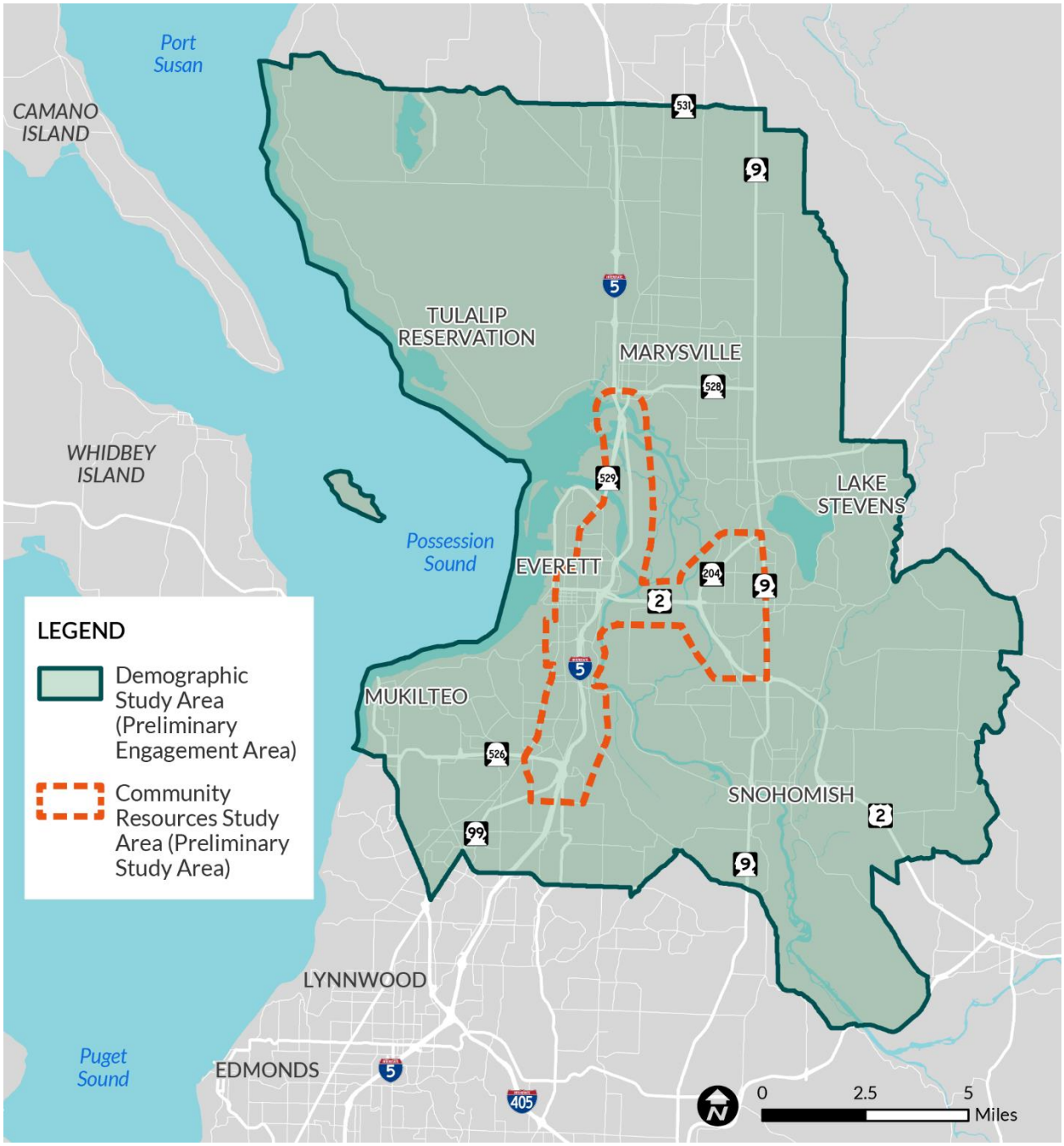
This chapter provides a demographic community profile and summarizes the types and locations of community resources.

## 15.1 Social and Community Resources Study Areas

The study area for the social and community resources existing conditions analysis consists of two different geographic areas, as shown in Figure 15-1.

- The study area for completing the demographic analysis is the preliminary engagement area identified for the US 2 Trestle PEL Study's communications plan. The preliminary engagement area includes all census tracts that may be affected by changes to the US 2 trestle..
- The study area for identifying community resources is the smaller US 2 Trestle PEL Study preliminary study area. As described in Section 1.4, the preliminary study area includes areas of direct impacts (where infrastructure changes to the US 2 trestle and its connections could occur) and areas of traffic pattern influence (where traffic changes are expected to be prominent as a result of modifications to the US 2 trestle).

**Figure 15-1. Social and Community Resources Study Areas**




## 15.2 Relevant Laws, Regulations, and Guidance

### 15.2.1 Federal

The following federal laws, regulations, and guidance informed the approach for the US 2 Trestle PEL Study's desktop analysis to identify the existing conditions for social and community resources. A complete assessment of compliance with applicable requirements would be conducted in a subsequent NEPA process.

- Title VI of the Civil Rights Act of 1964 as amended in 1987.
- Title II of the Americans with Disabilities Act of 1990.
- Consultation and Coordination with Indian Tribal Governments Presidential Executive Order 13175.

### 15.2.2 State

#### 15.2.2.1 HEAL Act Requirements

The HEAL Act (RCW 70A.02) provides the state legal basis for identifying existing health factors and considerations for the social and community resources desktop analysis. Key requirements include:

- Identifying and addressing environmental and health impacts on overburdened communities and vulnerable populations (RCW 70A.02.060).
- Conducting meaningful engagement with these communities throughout the project process (RCW 70A.02.050).
- Considering cumulative environmental and health impacts in decision-making (RCW 70A.02.060).
- Focusing on equitable distribution of resources and benefits to these communities (RCW 70A.02.080).

#### 15.2.2.2 Other State Guidance

- WSDOT Environmental Manual Chapter 458 (WSDOT 2024a): Provides specific guidance on assessing social and community considerations for transportation projects.
- WSDOT Secretary's Policy P 1018 – Environmental Policy Statement: Commits WSDOT to integrating environmental considerations and community, agency, and tribal engagement in the transportation decision-making process.

## 15.3 Data Sources and Data Collection Methods

The following data sources and collection methods were used in 2024 to conduct the desktop assessment of existing conditions related to social and community resources.

### 15.3.1 U.S. Census American Community Survey (ACS)

The 2018-2022 ACS 5-year estimates at the census tract level were used for the following demographic indicators (U.S. Census Bureau, 2022):

- Race and ethnicity (including Hispanic/Latino).
- Poverty status (including low-income populations, single-parent households, and low-income single parents).
- Educational attainment.
- Limited English Proficiency (LEP).
- Households without vehicle access.
- Households without internet access.

- Persons with disabilities.
- Veterans.
- Youth and elderly populations.
- Tribal entities.

Snohomish County demographics were used as the reference community for comparative analysis for the ACS data, where county-level data was available.

### 15.3.2 Washington Department of Health

The Washington Department of Health's Environmental Health Disparities (EHD) Information by Location (IBL) Mapping Tool was used to analyze both overall environmental health risk rankings and their component measures for each census tract in the demographic study area. The EHD map generates a score (ranked 1-10) based on four major themes (DOH 2023):

- Environmental Exposures (including indicators such as NOx-diesel emissions, ozone concentration, PM2.5 concentration, and proximity to heavy traffic roadways)
- Environmental Effects (including indicators such as toxic releases from facilities, proximity to hazardous waste sites, lead risk from housing, and wastewater discharge)
- Socioeconomic Factors (including indicators such as limited English, no high school diploma, unemployment rate, and transportation expense)
- Sensitive Populations (including indicators such as death from cardiovascular disease and low birth weight)

For each census tract, both the overall EHD rank (1-10) and the individual theme ranks were recorded and analyzed. This layered analysis helps identify not only which communities face the highest overall environmental health disparities, but also which specific environmental and socioeconomic factors contribute most significantly to those disparities.

The Washington DOH data were further validated through analysis of the Washington State Office of Financial Management (OFM) Overburdened Communities dataset and the Ecology Overburdened Communities dataset, which provide additional state-level confirmation of identified overburdened communities using complementary demographic and environmental indicators (OFM 2024; Ecology 2024f).

### 15.3.3 Community Resources and Input

#### 15.3.3.1 Community Resource Mapping

Community resources were identified and mapped to the extent feasible given the availability of desktop data. These resources include schools and educational facilities, healthcare facilities and hospitals, places of worship, food resources (e.g., grocery stores, food banks, farmers market), parks, play areas, and human service providers. All data was gleaned from OpenStreetMap (OpenStreetMap n.d.).

#### 15.3.3.2 Community Engagement

The results of completed engagement efforts, including interviews with community-based organizations, online open house comments, and PEL committee meeting summaries were reviewed and incorporated, as relevant, to the existing conditions description.

### 15.3.4 Data Collection and Analysis Process

As previously noted, demographic data for the demographic study area was collected at the census tract level. All data sources and collection dates were clearly documented. The PEL Study's ArcGIS online database was used to store and analyze spatial data, including community resource mapping.

## 15.4 Methodology for Identifying Overburdened Communities and Vulnerable Populations

Identifying overburdened communities and vulnerable populations within the demographic study area follows the June 2024 Governor's Office guidance on identifying overburdened communities and vulnerable populations.

Following this guidance, census tracts were identified as overburdened communities if they had a Washington DOH Environmental Health Disparities (EHD) risk ranking of 9 or 10 for the categories described in Section 15.3.2 because these scores indicate the highest levels of environmental health risk according to DOH methodology, placing these communities among the most environmentally burdened in Washington State.

For each demographic indicator with available ACS data, as discussed in Section 15.3.1, the percentages for both the demographic study area census tracts and Snohomish County were calculated. Census tracts were identified as potentially overburdened if they exceed the Snohomish County average by a meaningful margin (typically 10 percentage points or 1.5 times the county average, whichever is lower).

This analysis approach helps to identify areas where multiple indicators of disadvantage overlap, suggesting compounded vulnerability.

To provide additional verification of identified overburdened communities, findings were cross-referenced with the OFM Overburdened Communities dataset and the Ecology Overburdened Communities dataset, which offer complementary state-level indicators of disadvantaged and overburdened communities (OFM 2024; Ecology 2024f).

Qualitative information from community engagement was used to refine and validate these determinations. A brief narrative description was prepared for each identified overburdened community, highlighting key demographic characteristics, health concerns, and community assets.

## 15.5 Methodology for Identifying Community Resources

Where GIS data was available, the spatial relationship between the identified community resources and potentially overburdened communities was assessed. For community resources without precise location data, a qualitative description of their relationship to the potentially overburdened communities was provided.

## 15.6 Existing Conditions

### 15.6.1 Demographic Profile

Table 15-1, Table 15-2, and Table 15-3 summarize major population characteristics for the 71 census tracts in the demographic study area as compared to Snohomish County as a whole using the categories identified in Section 15.3.1 (U.S. Census Bureau, 2022).

Most of the demographic indicators are similar for the demographic study area and Snohomish County. However, the demographic study area has higher percentages of Hispanic or Latino residents (about 13 percent compared to about 11 percent) and poverty rates (about 8.4 percent compared to about 7.5 percent).

**Table 15-1. Key Population Indicators for the Demographic Study Area and Snohomish County**

| Indicator | Preliminary Engagement Area (71 Census tracts) | Snohomish County |
|---|---|---|
| **Total Population** | **332,195** | **828,337** |
| **Total Households** | 123,542 | 307,643 |
| **Total Households with Children** | 71,742 | 180,917 |
| **Total Families** | 68,841 | 177,643 |
| **Total Single Parent Families** | 20,634 | 42,417 |
| Youth (Under 5 Years Old) | 6.2% (20,701) | 6.1% (50,413) |
| Youth (Under 18 Years Old) | 22.1% (73,283) | 22.3% (184,523) |
| Older Adults (65 Years or Older) | 14.0% (46,530) | 14.1% (116,864) |
| Tribal Affiliation | 1.6% (4,362) | 1.0% (8,374) |
| Income <200 percent Poverty Level (Total Population) | 20.7% (68,624) | 17.7% (146,294) |
| Income <200 percent Poverty Level (Total Families) | 25.8% (18,066) | 21.1% (37,547) |
| Income <200 percent Poverty Level (Single Parent Families) | 14.3% (10,000) | 10.4% (18,515) |
| Income <100 percent Poverty Level (Total Population) | 8.4% (27,975) | 7.5% (62,171) |
| Income <100 percent Poverty Level (Total Families) | 8.9% (6,245) | 8.1% (14,447) |
| Income <100 percent Poverty Level (Single Parent Families) | 6.7% (4,669) | 5.3% (9,502) |

| Indicator | Preliminary Engagement Area (71 Census tracts) | Snohomish County |
|---|---|---|
| Population 5 Years and Over with English spoken less than "very well" at home | 8.8% (27,465) | 8.8% (68,145) |
| Zero Vehicle Households | 5.1% (6,264) | 4.6% (14,205) |
| Less than High School Diploma over age 25 | 8.4% (19,379) | 7.2% (41,868) |
| Living with a Disability age 18-64 | 15.5% (23,760) | 13.4% (49,864) |
| No Internet Access (Households) | 3.8% (12,385) | 3.1% (25,201) |
| Veterans | 8.3% (13,185) | 7.6% (48,569) |

Source: US Census Bureau 2022 Tables B01001, B09019, B09005, B02005, C17002, B05010, C16001, B08201, B15003, B18101, B28008, B21001

**Table 15-2. Race/Ethnicity for Demographic Study Area and Snohomish County**

| Race/Ethnicity | Preliminary Engagement Area (71 Census tracts) | Snohomish County |
|---|---|---|
| **Total Population** | 332,195 | 828,337 |
| White alone | 70.0% (232,672) | 68.9% (570,661) |
| Minority polulation | 43.2% (143,635) | 42.2% (349,542) |
| Black or African American alone | 3.8% (12,704) | 3.5% (28,662) |
| American Indian and Alask Native alone | 1.4% (4,526) | 0.9% (7,819) |
| Asian alone | 8.8% (29,178) | 12.3% (101,576) |
| Native Hawaiian and Other Pacific Islander alone | 0.6% (1,964) | 0.5% (3,906) |
| Some other race alone | 4.7% (15,721) | 4.2% (35,079) |
| Two or more races | 10.7% (35,430) | 9.7% (80,634) |
| Hispanic or Latino | 13.3% (44,112) | 11.1% (91,866) |

Source: US Census Bureau 2022 Table B02001, B03002

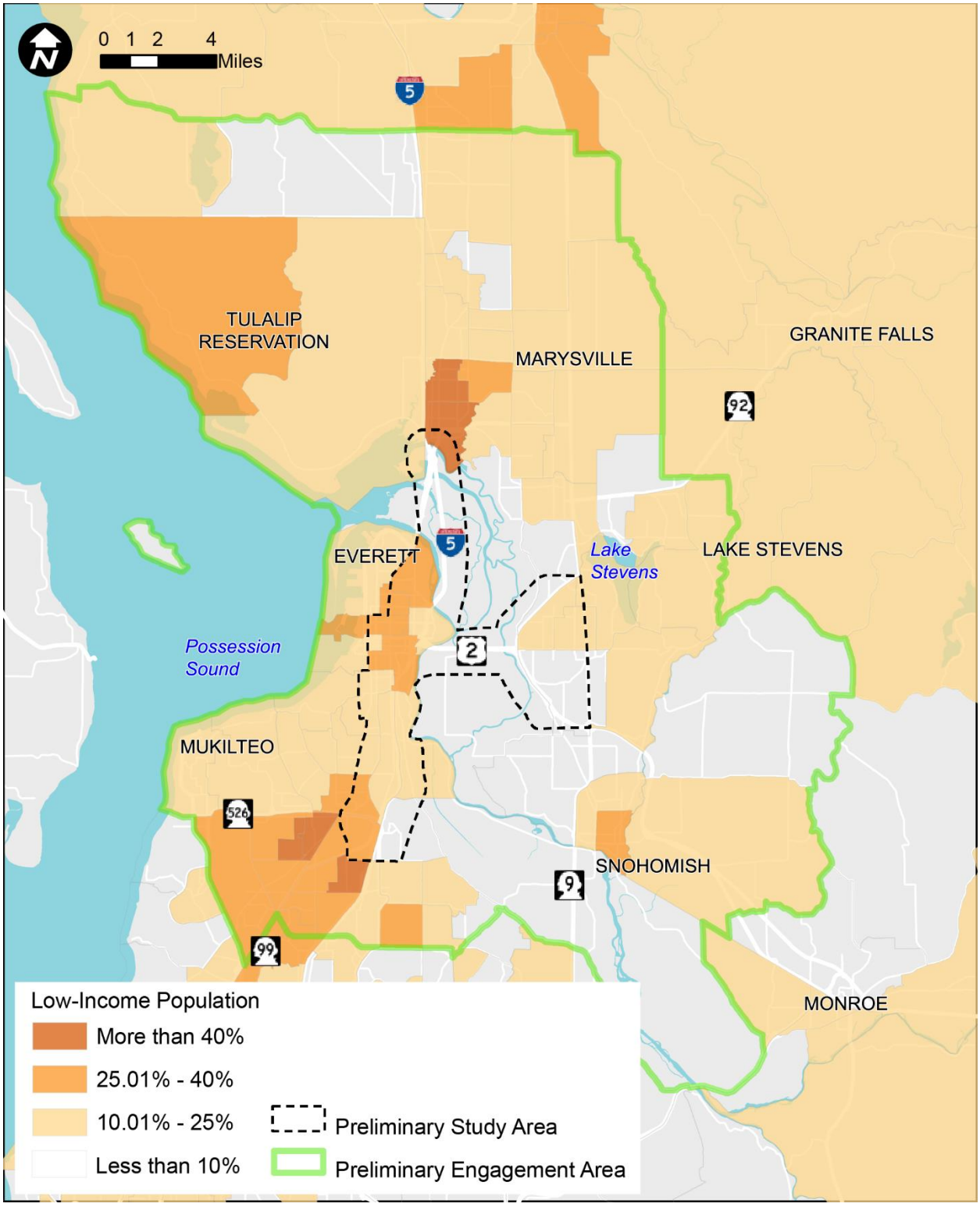
**Table 15-3. Limited English Proficiency Indicators for Demographic Study Area and Snohomish County**

| Population 5 Years and Over with English spoken less than "very well" at home by Language Spoken | Preliminary Engagement Area (71 Census tracts) | Snohomish County |
|---|---|---|
| Population 5 Years and Over with English spoken less than "very well" at home | 8.8% (27,465) | 8.8% (68,145) |
| Spanish | 2.7% (10,268) | 3.3% (21,223) |
| French, Haitian, or Cajun | 0.0% (178) | 0.1% (300) |
| German or other West Germanic | 0.0% (69) | 0.0% (178) |
| Russian, Polish, or Other Slavic | 0.8% (3,255) | 1.0% (6,512) |
| Other Indo-European | 0.8% (1,876) | 0.6% (6,171) |
| Korean | 0.9% (1,622) | 0.5% (7,048) |
| Chinese (including Mandarin, Cantonese) | 0.6% (724) | 0.2% (5,015) |
| Vietnamese | 0.9% (4,189) | 1.3% (6,887) |
| Tagalog (including Filipino) | 0.4% (1,339) | 0.4% (3,211) |
| Other Asian and Pacific Island | 0.8% (2,005) | 0.6% (6,424) |
| Arabic | 0.3% (728) | 0.2% (1,951) |
| Other and Unspecified | 0.4% (1,212) | 0.4% (3,225) |

Source: US Census Bureau 2022 Table C16001

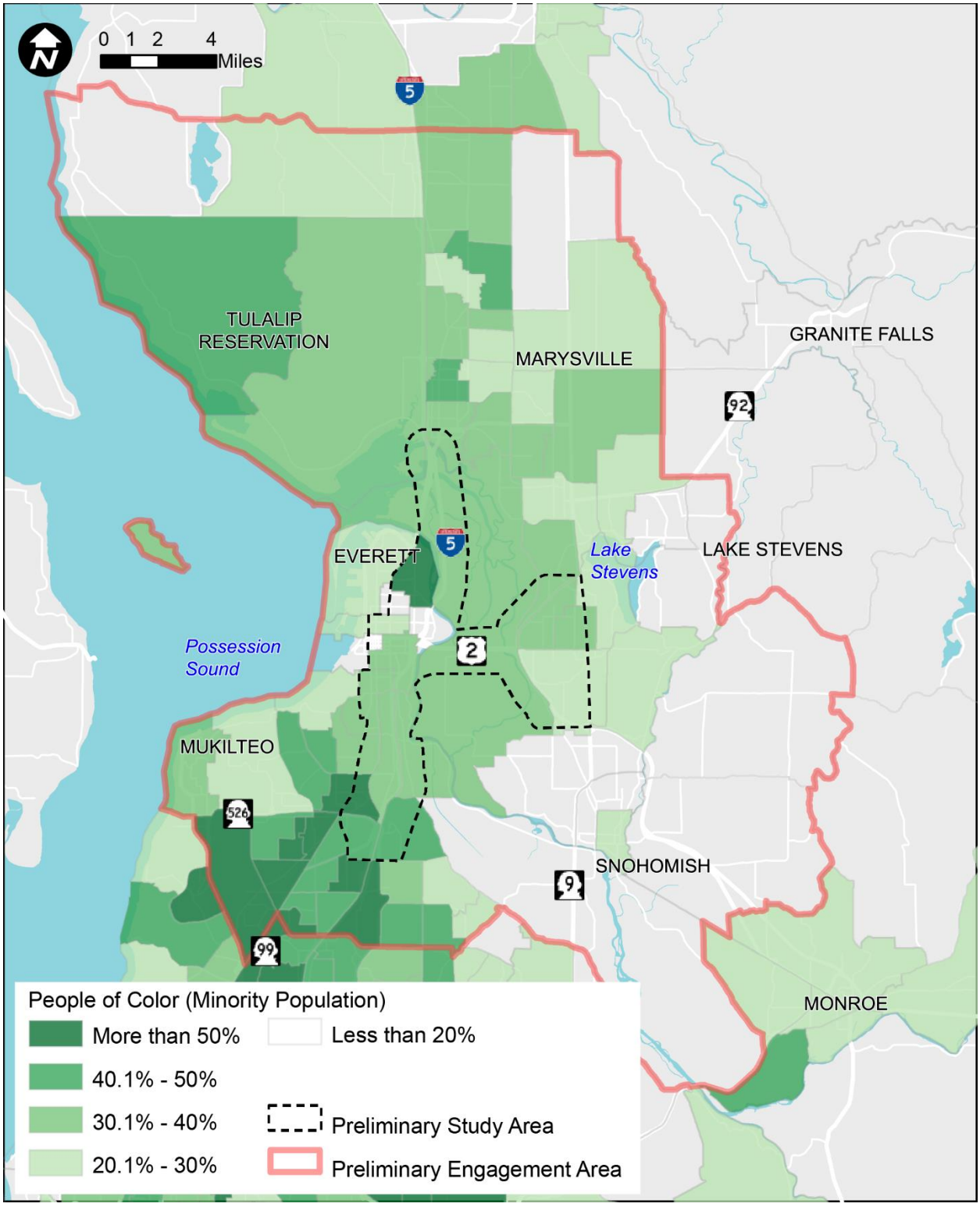
Figure 15-2, Figure 15-3, and Figure 15-4 show the geographic distribution of low-income, people of color, and Limited English Proficiency (LEP) populations in the study areas. The preliminary study area has relatively low concentrations of people of color, low-income populations, and LEP populations compared to the larger preliminary engagement area.

**Figure 15-2. Low-Income Population in the Study Areas**



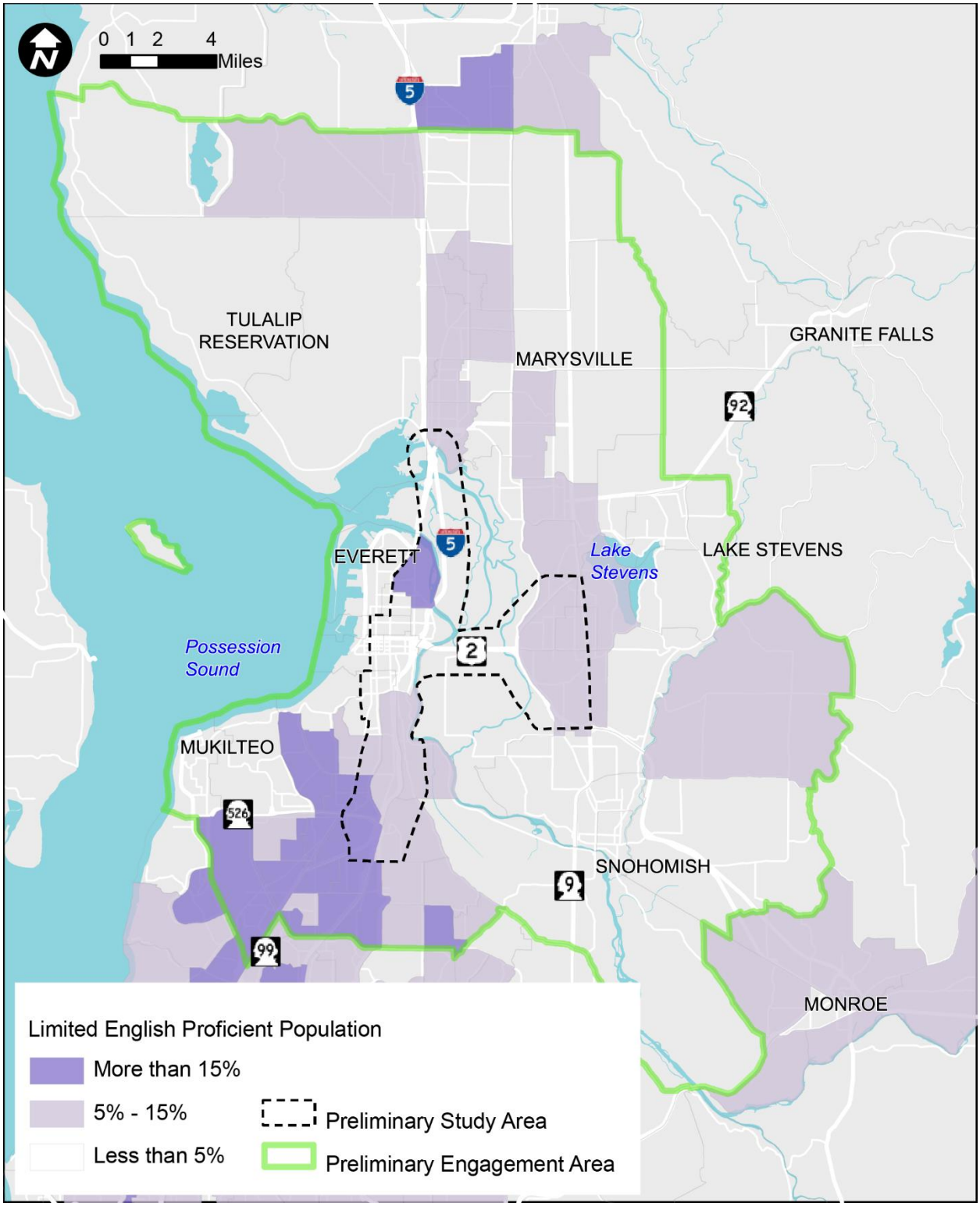

Source: US Census Bureau 2022

**Figure 15-3. People of Color in the Study Areas**




Source: US Census Bureau 2022

**Figure 15-4. Population with Limited English Proficiency in the Study Areas**




Source: US Census Bureau 2022

### 15.6.2 Washington DOH Environmental Health Risks

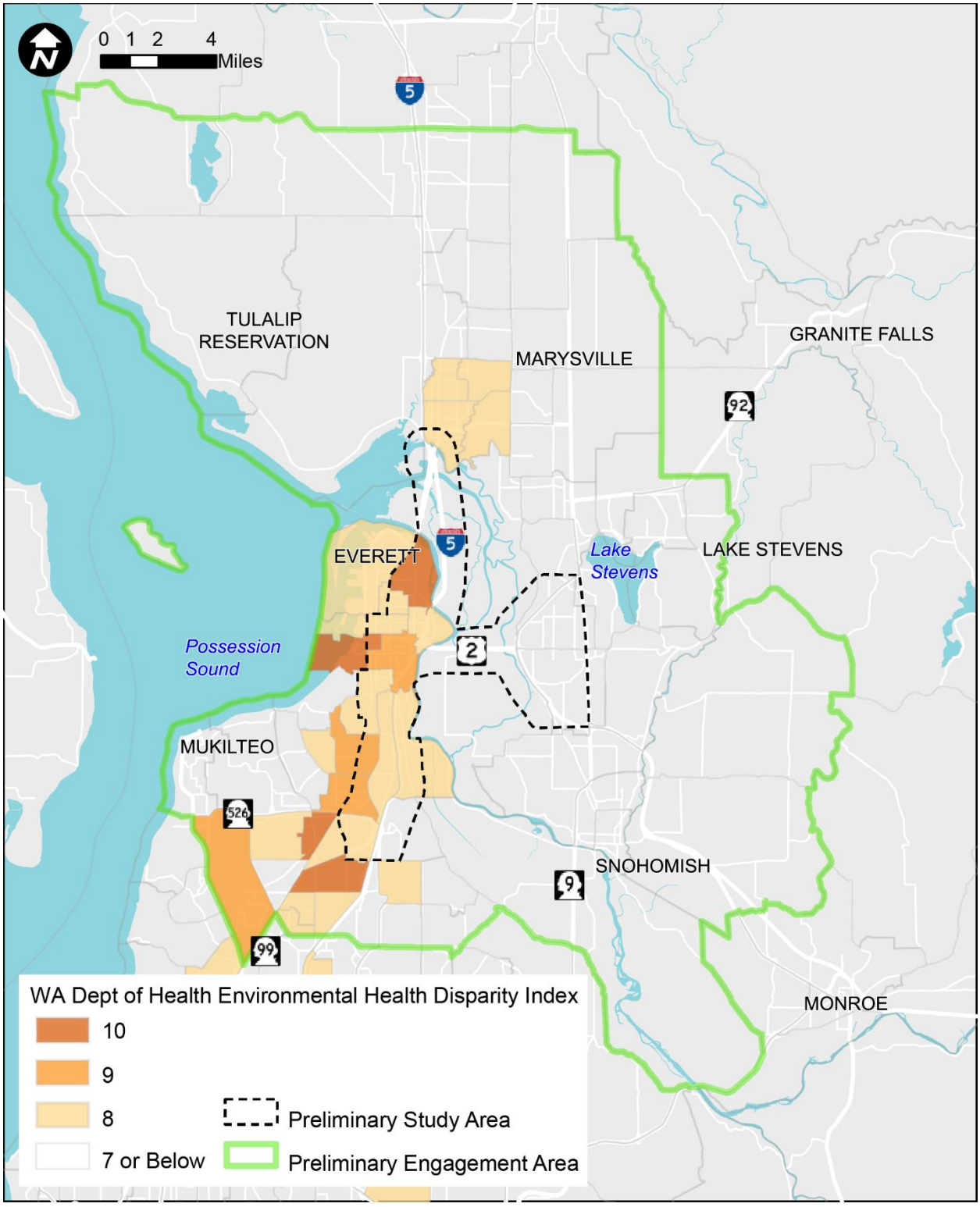
Figure 15-5 illustrates both current environmental burdens and risks to future health outcomes at the census tract level based on Washington DOH data (DOH 2023). The figure shows a ranking of each census tract's overall environmental health risk relative to all other tracts in Washington State on a scale of 1 to 10, where 10 represents the highest risk of overall environmental health burden.

The overall risk ranking combines data from four major themes:

- Environmental Exposures Theme: measures pollutant exposure and environmental risk factors like NOx-diesel emissions, ozone concentration, and PM2.5 concentration
- Environmental Effects Theme: measures proximity to toxic sites, wastewater discharge, and lead risk from housing
- Socioeconomic Factors Theme: measures social and economic barriers that can affect health outcomes
- Sensitive Populations Theme: measures existing health conditions that increase vulnerability to environmental hazards

In the preliminary engagement area, 28 census tracts have the highest environmental health risk (ranks 9 or 10); they are located in and around Everett and along I-5. These high-ranking areas indicate communities that may face both current environmental health burdens and increased risk of adverse health outcomes in the future. These areas also tend to have higher concentrations of minority and low-income populations, suggesting patterns of disproportionate environmental burden on vulnerable communities.

**Figure 15-5. Washington DOH Health Risk Ranking for Study Areas**

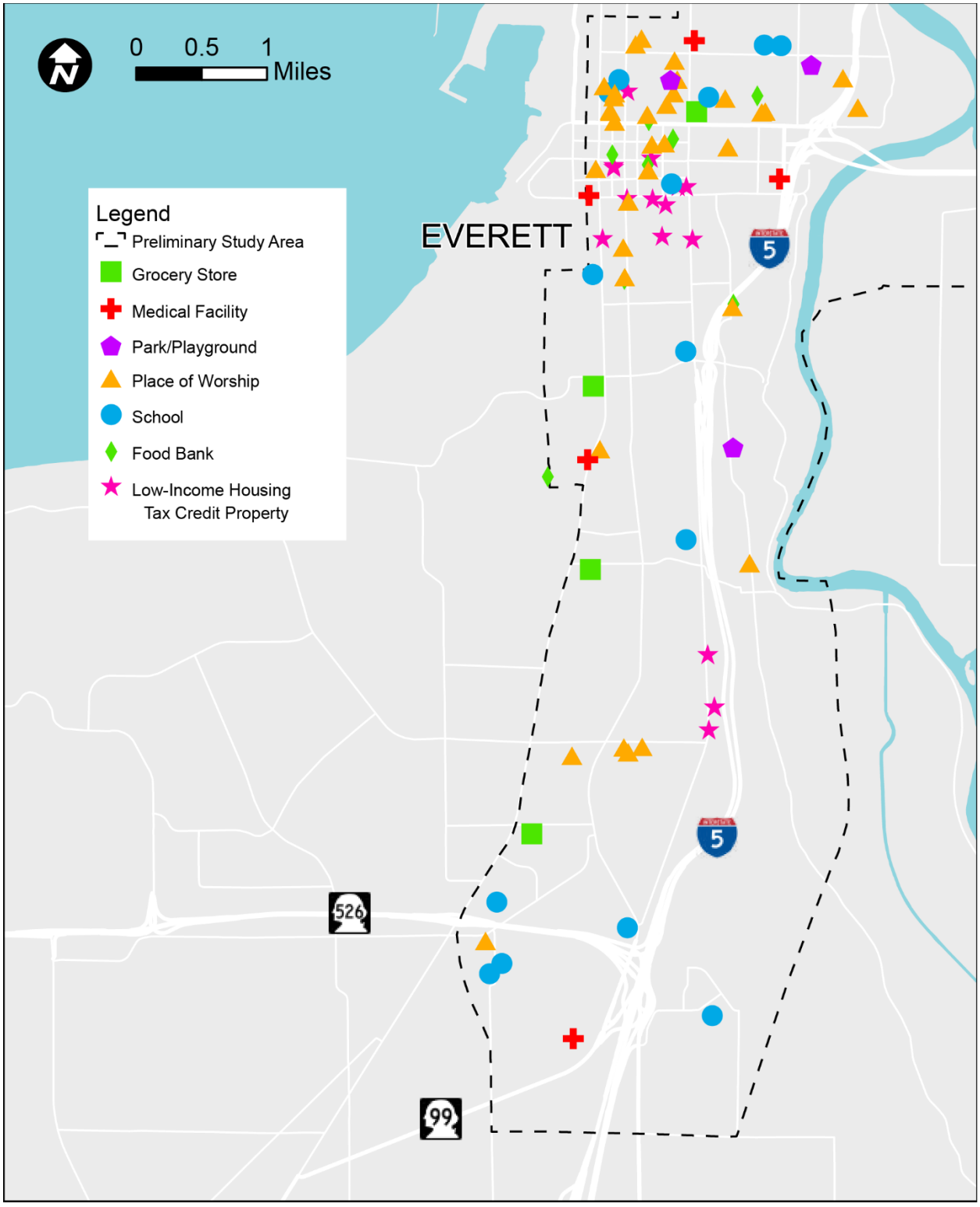



Source: DOH 2023

### 15.6.3 Community Resources

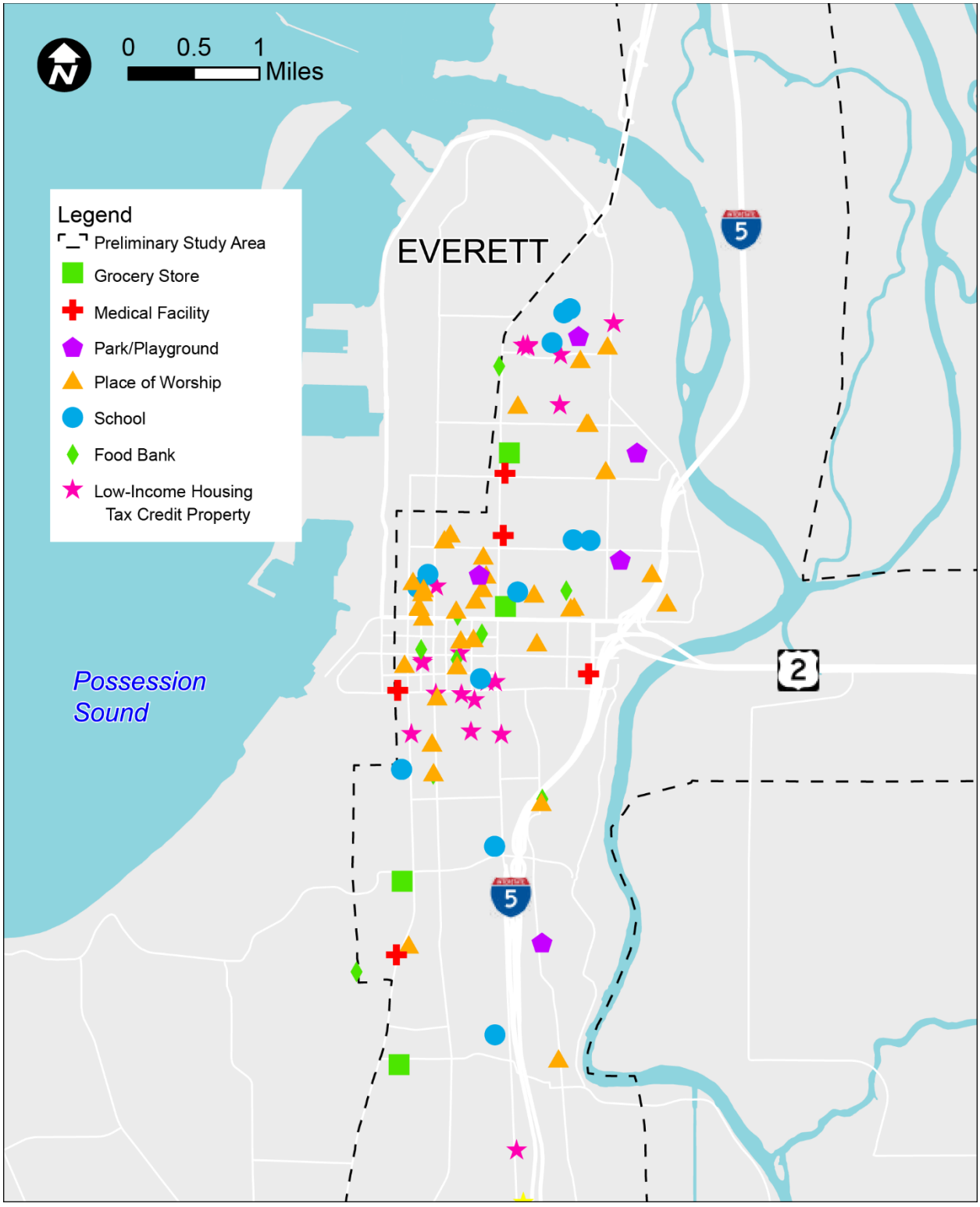
Figure 15-6, Figure 15-7, and Figure 15-8 show community resources such as grocery stores, medical facilities, parks/playgrounds, places of worship, food banks, low-income housing tax credit properties, and schools within the southern, central, and northern portions of the preliminary study area (OpenStreetMap n.d.). Most community resources in the preliminary study area are located in downtown and south Everett, with a smaller number in Lake Stevens.

**Figure 15-6. Community Resources in Southern Portion of Preliminary Study Area**



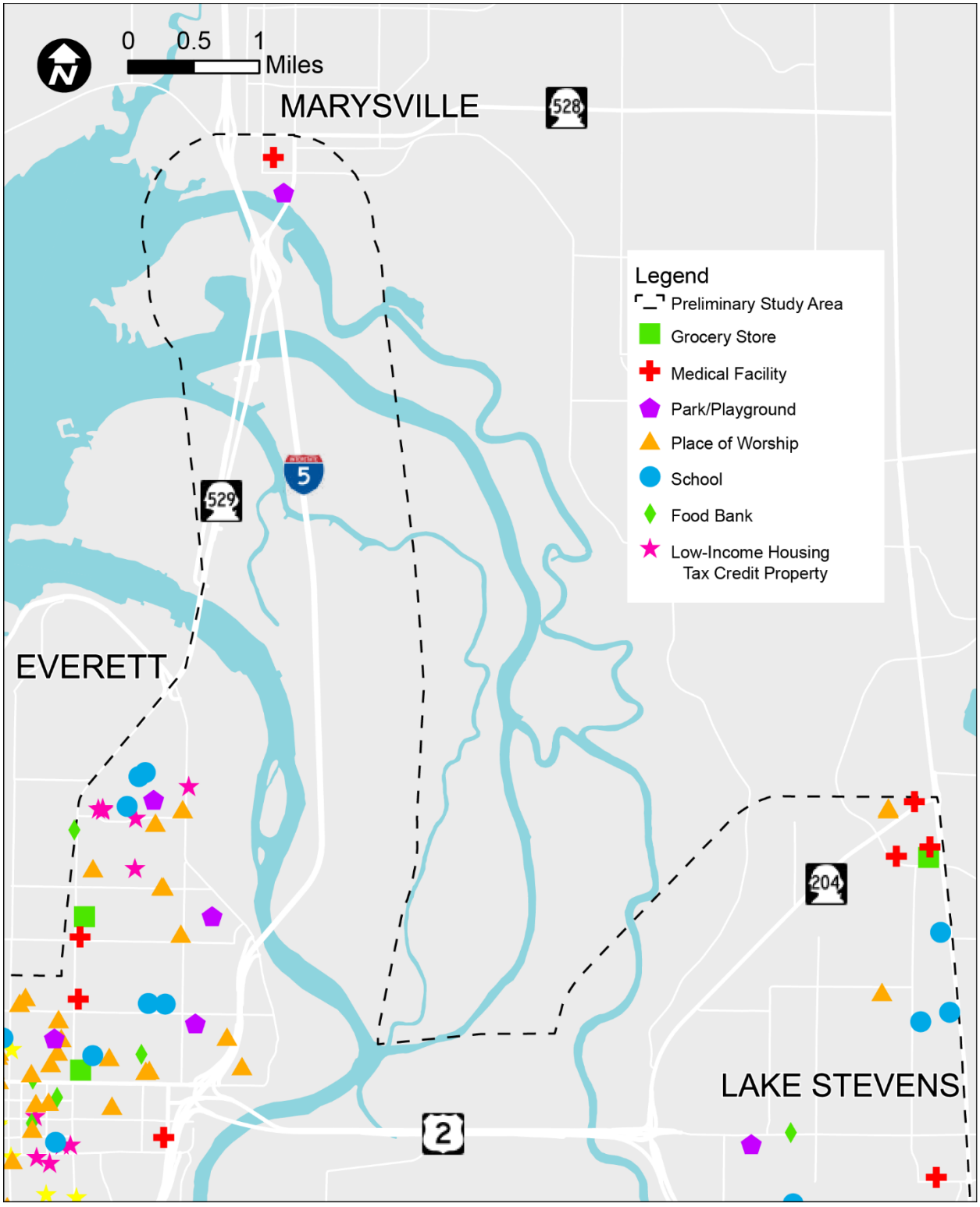

Source: OpenStreetMap n.d.

**Figure 15-7. Community Resources in Central Portion of Preliminary Study Area**




Source: OpenStreetMap n.d.

**Figure 15-8. Community Resources in Northern Portion of Preliminary Study Area**




Source: OpenStreetMap n.d.

### 15.6.4 Community Engagement Summary

Community engagement findings to date were used to validate the geographic distribution and characteristics of overburdened communities identified through the quantitative analysis described in the previous subsections. Through listening sessions with 15 community-based organizations serving populations including Black, Indigenous, and People of Color communities, low-income households, people with disabilities, seniors, youth, active transportation users, immigrants, and LEP individuals, the engagement process confirmed and enriched our understanding of how environmental and transportation burdens affect these communities.

Notably, listening sessions revealed a limited appetite for participation in a formal advisory committee, as many community leaders and organizations were already heavily engaged in other regional transportation initiatives (such as Sound Transit's Everett Link extension) and community work. In response, WSDOT modified its engagement approach to focus on:

- Meeting people where they are through outreach booths, mailers, and public meetings in areas with concentrations of priority populations.
- Continuing to provide materials in Korean, Russian, Spanish, Tagalog, and Vietnamese.
- Providing compensation to community partners for their time and expertise in sharing information and engaging with their communities.
- Community engagement discussions validated the initial assessment of overburdened communities and provided additional context about their experiences. Key findings from community engagement include:
- Transportation Access and Barriers:
  - Communities living east of the US 2 trestle report being reliant on the US 2 trestle to access jobs, medical care, retail, and other services/amenities to the west.
  - Language barriers affect access to project information and engagement opportunities for LEP communities, particularly Korean, Russian, Spanish, Tagalog, and Vietnamese speakers.
  - People with disabilities and seniors face unique challenges navigating the corridor.
  - Limited transportation options particularly affect those without vehicle access (about 6,000 households in the demographic study area).
- Economic Concerns:
  - Strong concerns about potential tolling impacts on low-income families, especially those commuting from east of I-5 for work.
  - Transportation costs already burden many households, with nearly 26 percent of the demographic study area’s families living below 200 percent of the federal poverty level.
- Multimodal Priorities:
  - Strong interest in increased transit service between Lake Stevens and Everett.
  - Support for bus rapid transit, micro-transit, and/or HOV/transit-only lanes.
  - Need for improved active transportation connections, particularly across Ebey Island.
  - Current active transportation routes described as challenging to navigate.

These findings highlight the importance of considering community impacts in project planning and maintaining ongoing engagement with vulnerable populations and overburdened communities throughout the project lifecycle.

## 15.7 Key Points

The demographic study area generally has a similar makeup to Snohomish County as a whole, but it has higher concentrations of Hispanic/Latino residents (13 percent vs 11 percent); poverty rates (8.4% vs 7.5%); and people living with disabilities (15.5 percent vs 13.4 percent) compared to the county.

About 6,000 households (5 percent) in the demographic study area have no vehicle available. Limited transit options affect mobility, particularly for overburdened communities, in the demographic study area. Participants in community-based organization listening sessions described challenges with navigating active transportation connections. Transportation costs burden many households, with nearly 26 percent of the demographic study area's families living below 200 percent of the federal poverty level.

Of 71 census tracts in the study area, 28 tracts (39 percent) located in and around Everett and along I-5 show high environmental health risks (ranks 9 or 10) in Washington DOH's assessment).

Most community resources are concentrated in downtown and south Everett. The eastern and northern clusters show limited community resources. Growing populations east of the US 2 trestle are increasing pressure on existing infrastructure. Communities living east of the US 2 trestle report being reliant on the US 2 trestle to access services and amenities to the west.

Refer to Table 1-1 for a summary of key points for all resources.

# Chapter 16 References

City of Everett. 2022. Parks, Recreation & Open Space Plan. https://www.everettwa.gov/DocumentCenter/View/34706/Everett-PROS-2022_02_Council-Final

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