



# ***Everett Link Extension***

**Draft** Environmental Impact Statement

## ECOSYSTEMS TECHNICAL REPORT

Appendix G.10

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## **Attachments**

Attachment A Ecosystems Photographs

Attachment B Best Management Practices for Ecosystem Resources



## Acronyms

|         |                                                    |
|---------|----------------------------------------------------|
| AHJ     | authority having jurisdiction                      |
| AIR     | SR 99/Airport Road                                 |
| ALD     | West Alderwood                                     |
| ASH     | Ash Way                                            |
| BA      | Biological Assessment                              |
| BI      | Broadway/I-5                                       |
| B-IBI   | Benthic Index of Biotic Integrity                  |
| BMP     | best management practice                           |
| BNSF    | Burlington Northern Santa Fe (Railway Corporation) |
| Corps   | U.S. Army Corps of Engineers                       |
| CWA     | Clean Water Act                                    |
| DNR     | Washington Department of Natural Resources         |
| DPS     | Distinct Population Segment                        |
| Ecology | Washington State Department of Ecology             |
| EFH     | Essential Fish Habitat                             |
| EGN     | SR 526/Evergreen                                   |
| EIS     | Environmental Impact Statement                     |
| EMC     | Everett Municipal Code                             |
| EO      | Executive Order                                    |
| ESA     | Endangered Species Act                             |
| ESU     | Evolutionarily Significant Unit                    |
| EVLE    | Everett Link Extension                             |
| EVT     | Everett Station                                    |
| FAA     | Federal Aviation Administration                    |
| FGDC    | Federal Geographic Data Committee                  |
| FMP     | Fisheries Management Plan                          |
| FTA     | Federal Transit Administration                     |

|       |                                                          |
|-------|----------------------------------------------------------|
| GIS   | geographic information systems                           |
| HDPE  | high-density polyethylene                                |
| HGM   | Hydrogeomorphic                                          |
| HUC   | hydrologic unit code                                     |
| I     | Interstate                                               |
| IPaC  | Information for Planning and Consultation                |
| LMC   | Lynnwood Municipal Code                                  |
| MAR   | Mariner                                                  |
| MBTA  | Migratory Bird Treaty Act                                |
| MSA   | Magnuson-Stevens Fishery Conservation and Management Act |
| NEPA  | National Environmental Policy Act                        |
| NMFS  | National Marine Fisheries Services                       |
| NOAA  | National Oceanic and Atmospheric Administration          |
| NPDES | National Pollution Discharge Elimination System          |
| NRCS  | Natural Resources Conservation Service                   |
| NWI   | National Wetlands Inventory                              |
| NWIFC | Northwest Indian Fisheries Commission                    |
| OHWM  | ordinary high water mark                                 |
| OMF   | operations and maintenance facility                      |
| PAB   | palustrine aquatic bed                                   |
| PDS   | Planning and Development Services                        |
| PEM   | palustrine emergent                                      |
| PFMC  | Pacific Fishery Management Council                       |
| PFO   | palustrine forested                                      |
| PGIS  | pollution generating impervious surfaces                 |
| PHS   | Priority Habitats and Species                            |
| PSS   | palustrine scrub-shrub                                   |
| RCA   | Resource Conservation Area                               |

|         |                                                         |
|---------|---------------------------------------------------------|
| RCW     | Revised Code of Washington                              |
| RIVPACS | River Invertebrate Prediction and Classification System |
| SCC     | Snohomish County Code                                   |
| SEPA    | State Environmental Policy Act                          |
| SMA     | Shoreline Management Act                                |
| SnoPUD  | Snohomish County Public Utility District                |
| SR      | State Route                                             |
| ST3     | Sound Transit 3                                         |
| SWI     | SW Everett Industrial Center                            |
| T&E     | Threatened and Endangered                               |
| TMDL    | Total Maximum Daily Load                                |
| TPSS    | traction power substation                               |
| USFWS   | U.S. Fish and Wildlife Service                          |
| USGS    | U.S. Geological Survey                                  |
| WAC     | Washington Administrative Code                          |
| WBD     | Watershed Boundary Dataset                              |
| WDFW    | Washington Department of Fish and Wildlife              |
| WNPS    | Washington Native Plant Society                         |
| WRIA    | Water Resource Inventory Areas                          |
| WSDOT   | Washington State Department of Transportation           |

# 1 INTRODUCTION

## 1.1 Overview

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to expand Link light rail transit service northward from the Lynnwood City Center Station to the Everett Station area in Snohomish County, Washington (Figure 1-1). The Everett Link Extension (EVLE) Project would provide fast, reliable light rail service to regional residential and job centers in Snohomish County's growing urban areas. The proposed project is part of the Sound Transit 3 (ST3) Plan of regional transit system investments, funding for which was approved by voters in the region in 2016.

For this analysis, the EVLE Project consists of approximately 16 miles of light rail guideway, seven light rail stations, two parking facilities, and an operations and maintenance facility (OMF North). Sound Transit proposes to begin construction of the project in 2030. The current schedule for opening light rail service from the Lynnwood City Center Station to Everett Station is 2041. A shorter route connecting Lynnwood City Center to the SW Everett Industrial Center Station would open first in 2037 as the initial phase. OMF North would open by 2034, prior to opening of the light rail extension, as the facility is necessary for storing rail cars and supporting service for not only the extension to Everett, but also other parts of the regional system.<sup>1</sup> Parking facilities at the Mariner and Everett Stations would open by 2046.

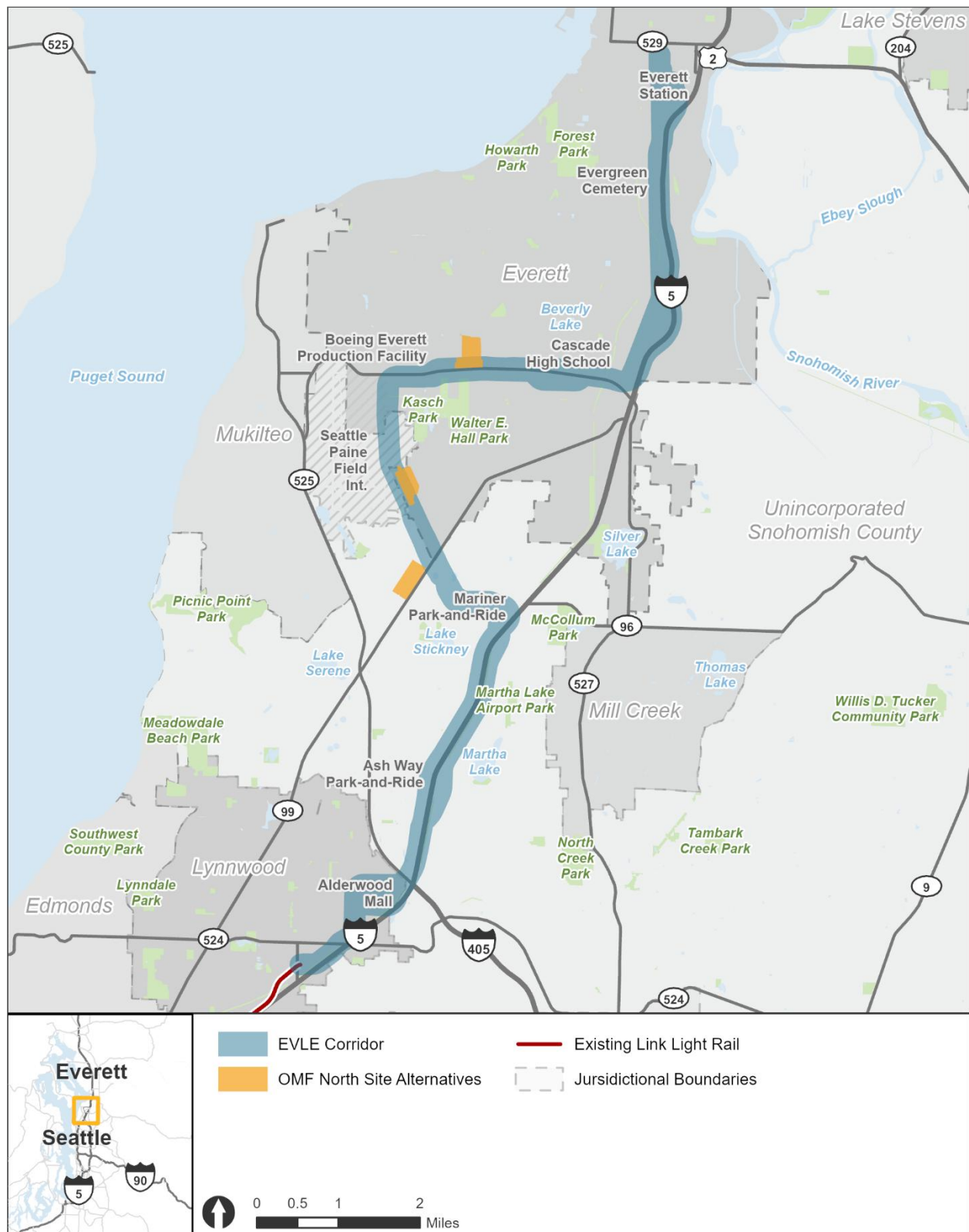
One station, State Route (SR) 99/Airport Road Station, is currently considered provisional since planning, preliminary engineering, and environmental review are funded, but final design and construction are not. However, for purposes of this evaluation, all seven stations are assumed to be funded and open according to the schedule described above to capture all locations where impacts could occur. The station would be fully constructed and open for service when additional funding is identified.

The initial phase is not discussed in this analysis because it would not have additional potential impacts when compared with the fully built alternatives (i.e., the impacts would be the same in the West Alderwood, Ash Way, Mariner, SR 99/Airport Road, and SW Everett Industrial Center Segments, and for the OMF sites, but the impacts in the SR 526/Evergreen, Broadway/I-5, and Everett Station Segments would not occur until construction on those segments begins). All potential impacts are described in Section 4.

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<sup>1</sup> Construction of light rail projects is typically divided into sections, and construction would occur across different parts of the corridor between 2030 and 2046. For more information on the construction approach, see Draft EIS Appendix B.

Figure 1-1 EVLE Project Corridor



For planning and engineering purposes, the project is organized into eight geographic segments, discussed in this document from south to north. Within those segments, a total of 17 alignment alternatives and 18 station location alternatives are under consideration. These alignment and station alternatives are combined into Build Alternatives for analysis as shown in Table 1-1 and Figure 1-2.

Table 1-1 describes the alignment and station alternatives as follows:

- **Segments:** The eight alignment segments and corresponding abbreviations are:
  - West Alderwood (ALD).
  - Ash Way (ASH).
  - Mariner (MAR).
  - SR 99/Airport Road (AIR).
  - SW Everett Industrial Center (SWI).
  - SR 526/Evergreen (EGN).
  - Broadway/I-5 (BI).
  - Everett Station (EVT).
- **Alignment alternatives:** Alignment alternatives in each segment are identified with numbers (e.g., ALD-1).
- **Station alternatives:** Station alternatives in each segment are identified with letters (e.g., ALD-B).<sup>2</sup>
- **Build Alternatives:** Alignments and stations are combined to create the Build Alternative name (e.g., Station ALD-B is located on Alignment ALD-1, so this pairing is referred to as Alternative ALD-1B). If a preferred Build Alternative has been identified by the Sound Transit Board of Directors, it is indicated with an asterisk.
- **Design options:** A design option is an alternate design for a portion of a Build Alternative. It could be a different route or profile along a portion of an alignment, a different station configuration, or a different parking location. For example, in the West Alderwood Segment the Alderwood Mall Boulevard Design Option is being considered for all three Build Alternatives.

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<sup>2</sup> Letters identifying station alternatives are non-sequential in some segments; missing letters denote alternatives that did not perform as well as alternatives considered in the Draft EIS. For more information on the Alternatives Development process, see Draft EIS Chapter 2.

**Table 1-1 Alignment and Station Build Alternatives by Segment**

| Segment                             | Alignment Alternatives | Station Alternatives | Build Alternatives (Combined Alignment and Station) | Build Alternative Design Options Also Considered |
|-------------------------------------|------------------------|----------------------|-----------------------------------------------------|--------------------------------------------------|
| <b>West Alderwood</b>               | ALD-1                  | ALD-B                | ALD-1B                                              | Alderwood Mall Boulevard                         |
|                                     | ALD-2                  | ALD-D                | ALD-2D*                                             | Alderwood Mall Boulevard                         |
|                                     |                        | ALD-F                | ALD-2F                                              | Alderwood Mall Boulevard                         |
| <b>Ash Way</b>                      | ASH-1                  | ASH-A                | ASH-1A                                              | None                                             |
|                                     | ASH-2                  | ASH-D                | ASH-2D                                              | None                                             |
| <b>Mariner</b>                      | MAR-1                  | MAR-B                | MAR-1B                                              | Surface Parking                                  |
|                                     | MAR-2                  | MAR-D                | MAR-2D                                              | Surface Parking                                  |
| <b>SR 99/Airport Road</b>           | AIR-1                  | AIR-A                | AIR-1A                                              | None                                             |
|                                     | AIR-2                  | AIR-B                | AIR-2B                                              | None                                             |
| <b>SW Everett Industrial Center</b> | SWI-1                  | SWI-A                | SWI-1A*                                             | Lower                                            |
|                                     |                        | SWI-B                | SWI-1B                                              | None                                             |
|                                     |                        | SWI-C                | SWI-1C                                              | None                                             |
| <b>SR 526/ Evergreen</b>            | EGN-1                  | EGN-A                | EGN-1A                                              | None                                             |
|                                     | EGN-2                  | EGN-B                | EGN-2B                                              | North Side of SR 526                             |
|                                     | EGN-3                  | EGN-E                | EGN-3E                                              | North Side of SR 526                             |
| <b>Broadway/I-5</b>                 | BI-1                   | None                 | BI-1*                                               | None                                             |
|                                     | BI-2                   | None                 | BI-2                                                | None                                             |
| <b>Everett Station</b>              | EVT-1                  | EVT-A                | EVT-1A                                              | None                                             |
|                                     | EVT-2                  | EVT-C                | EVT-2C*                                             | None                                             |
|                                     | EVT-3                  | EVT-D                | EVT-3D*                                             | None                                             |

\* Denotes preferred alternative

There are also three OMF North site alternatives under consideration as shown in Table 1-2 and Figure 1-2.

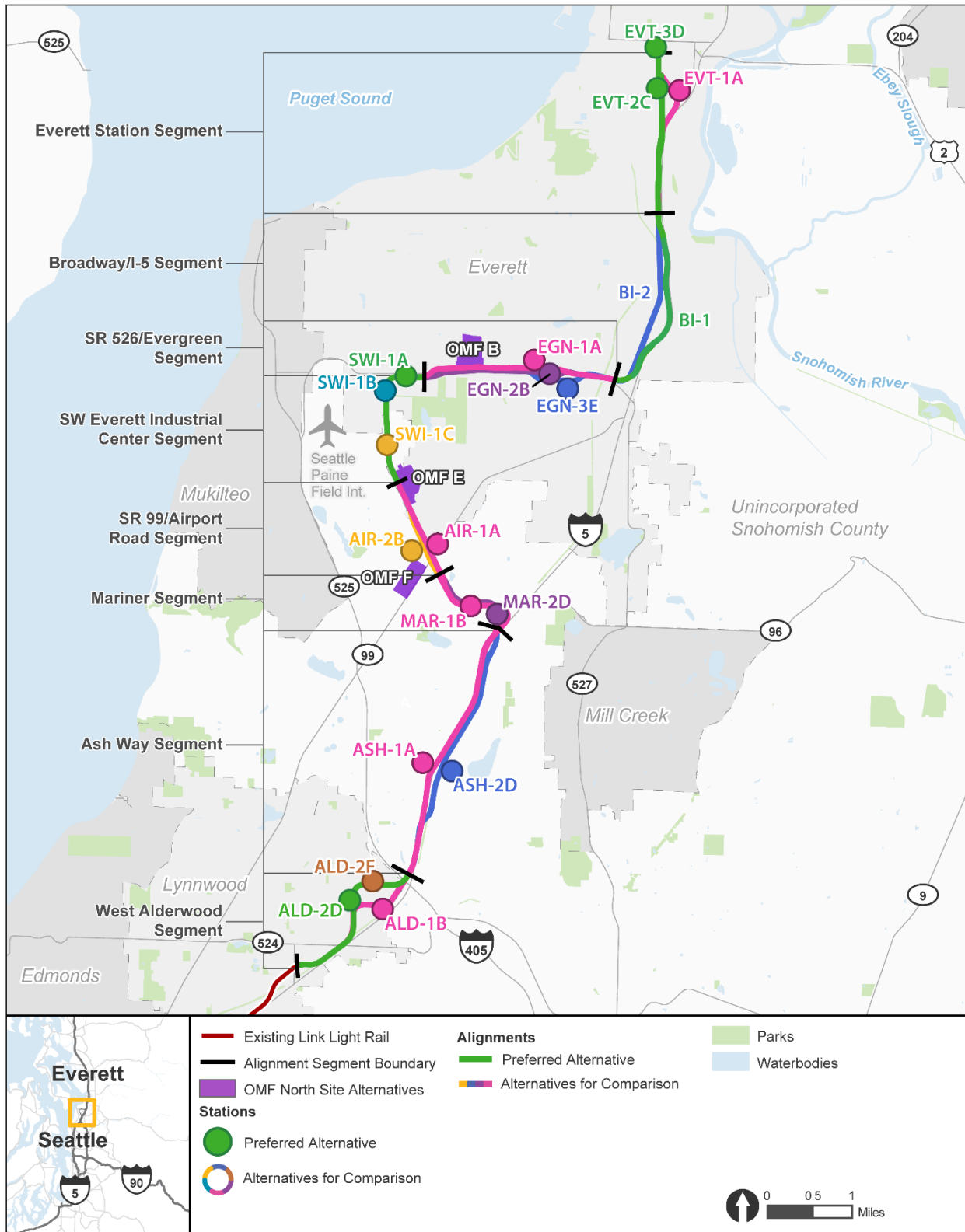
**Table 1-2 OMF North Site Alternatives**

| Build Alternative | Build Alternative Design Options Also Considered |
|-------------------|--------------------------------------------------|
| OMF Site F        | Lead Tracks to West Side of Airport Road         |
| OMF Site E        | None                                             |
| OMF Site B        | Lead Tracks to South Side of SR 526              |

Analysis of the Build Alternatives was based on the conceptual design drawings included in Draft Environmental Impact Statement (EIS) Appendix F.

The No Build Alternative describes the environment, including the transportation system, as it would exist in 2046 without the proposed project. The No Build Alternative uses 2046 as the year of analysis to align with the target date for completion of all EVLE Project components and the full buildout of the light rail capital projects included in the ST3 Plan.

Figure 1-2 EVLE Project Alternatives





## 1.2 Potential Design Refinements

In addition to the alternatives described above, the Draft EIS provides a qualitative evaluation of potential design refinements that could reduce overall project cost if applied to the alignment and station alternatives (for more information, see Draft EIS Chapter 2). The potential design refinements identified to date that could be considered in each segment, along with potential changes in impacts, are described in Draft EIS Chapter 4. Potential changes to ecosystem impacts are also described in Section 4.1.10 below. If Sound Transit decides to include these refinements as part of the project prior to the Final EIS, they would be reflected in the conceptual design plans and evaluated in the Final EIS.

## 1.3 Purpose of Report

The purpose of this report is to describe the ecosystems and species present within the study area (defined in Section 2.2) and evaluate the potential impacts associated with the EVLE Project alternatives. This technical report describes the terrestrial and aquatic ecosystems, including wetland resources, present within the study area and those wildlife species supported by the identified habitats. Study area limits are defined in Section 2.

This report further describes the environmental consequences associated with each alternative, including the impacts during construction of the transit infrastructure and impacts associated with transit operations. Finally, this report describes mitigation measures intended to avoid and minimize impacts to the described ecosystems and species, including compensatory mitigation measures for unavoidable impacts.

# 2 REGULATORY CONTEXT AND METHODOLOGY

## 2.1 Applicable Laws, Regulations, and Guidelines

Federal, state, and local regulations, policies, and guidance apply to aquatic and terrestrial ecosystems and their associated vegetation and wildlife species. The following list of regulations applies to the ecosystems and species present within the study area.

### 2.1.1 Federal

- Sections 404, 402, and 401 of the Clean Water Act (CWA).
- Section 7 of the Endangered Species Act (ESA).
- Magnuson-Stevens Fishery Conservation and Management Act (MSA).
- Bald and Golden Eagle Protection Act.
- Migratory Bird Treaty Act (MBTA).
- Executive Order (EO) 11990: Protection of Wetlands.
- Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (2008 or as revised).

- *Corps of Engineers Wetlands Delineation Manual* (U.S. Army Corps of Engineers [Corps] 1987).
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (Corps 2010).
- Coastal Zone Management Act.
- Standard Operating Procedure No. 22, Water Resources (Federal Transit Administration [FTA] 2019).
- Standard Operating Procedure No. 23, Biological Resources (FTA 2019).
- Federal Aviation Administration (FAA) Advisory Circular No. 150/5200-33C *Hazardous Wildlife Attractants on or near Airports* (FAA 2020).

### 2.1.2 State

- Hydraulic Code (Washington Administrative Code [WAC] Chapter 220-110).
- Shoreline Management Act (SMA), 90.58 Revised Code of Washington (RCW).
- EO 89-10: Protection of Wetlands.
- EO 90-04: Protection of Wetlands.
- Water Pollution Control Act, 90.48 RCW.
- *Wetland Mitigation in Washington State* (Washington State Department of Ecology [Ecology] et al. 2021).
- *Roadside Policy Manual* (Washington State Department of Transportation [WSDOT] 2022a).

### 2.1.3 Local

- Critical areas ordinances:
  - City of Everett Municipal Code Chapter 19.37, Critical Areas.
  - City of Lynnwood Municipal Code Chapter 17.10, Environmentally Critical Areas.
  - Snohomish County Code Chapter 30.62A, Wetlands and Fish & Wildlife Habitat Conservation Areas.
- Shoreline master programs:
  - City of Everett Shoreline Master Program (2019).
  - City of Lynnwood Municipal Code Chapter 17.20, Shoreline Master Program.
  - Snohomish County Code Chapter 30.67, Shoreline Management Program.
- Tree protection ordinances:
  - City of Everett Municipal Code Chapter 8.40, Tree Management.
  - City of Lynnwood Municipal Code Chapter 17.15, Tree Regulations.
  - Tree Preservation and Protection Guidelines for the City of Lynnwood.
  - Snohomish County Code Chapter 30.25.016, Tree Canopy Requirements.

- Sound Transit Stream Habitat Assessment Guidelines (2016).

## 2.2 Methodology

This analysis evaluated the potential ecosystem impacts of the Build Alternatives and the No Build Alternative in support of Sound Transit's National Environmental Policy Act (NEPA) analysis. NEPA regulations require that an EIS disclose impacts (i.e., effects) of a proposed action on the environment. NEPA requires an EIS to evaluate and disclose the "reasonably foreseeable environmental effects of the proposed agency action" (42 USC Section 4332). Reasonably foreseeable environmental effects are those that are sufficiently likely to occur during operation (long-term) or construction (short-term). Reasonably foreseeable environmental effects do not include effects that are speculative in nature or remote in time or place, or that are the result of a lengthy causal chain. For this analysis, reasonably foreseeable effects include all effects that are considered likely to result from the project over its operational lifetime within the study area of each resource.

Impacts associated with the project may be either adverse (e.g., wetland or stream fill, shading of aquatic habitats, loss of mature forest canopy) or beneficial (e.g., stream daylighting, wetland enhancement, upland restoration). The project limits include permanent project improvements and areas needed for project construction.

The ecosystems evaluated were divided into three categories: aquatic habitats and species, wetlands, and upland habitats and species. The methods used to collect ecosystem and species data within the ecosystem category and the subsequent analysis of impacts are outlined below.

### 2.2.1 Aquatic Habitats and Species

#### 2.2.1.1 Study Objectives

The discussion and analysis included on aquatic habitats and species within this technical report is intended to describe the aquatic habitats and species within the study area, evaluate potential impacts associated with the Build Alternatives, and describe the measures taken to avoid, minimize, and compensate for impacts.

#### 2.2.1.2 Study Area

For the aquatic habitats and species evaluation, the study area was defined as:

- 100 feet upstream and 300 feet downstream of each stream crossing (i.e., locations where the project crosses an identified stream) within the project limits. In some cases, the study area extended 300 feet upstream of crossings (e.g., where a proposed channel configuration would result in stream buffers overlapping the project limits).
- Streams that parallel and are located within 200 feet of the project limits.
- For aquatic habitats where species protected under the federal ESA may be present, the study area included the segment of stream or water body through which underwater sound associated with construction or operation may travel (i.e., to first bend in the channel or where sound levels would dissipate to background levels).

### 2.2.1.3 Methods

The aquatic habitats and species evaluation was conducted to describe aquatic habitats and species that occur (or may occur) within the study area through a review of publicly available resources, field surveys, and coordination with local, state, federal regulatory agencies and Tribes. In general, aquatic habitats in the study area include streams, ponds, associated wetlands, and deepwater habitats. No marine or estuarine systems occur within the study area.

WAC 222-16-030 provides an interim water typing system that is adopted by reference within the Lynnwood, Everett, and Snohomish County critical areas ordinances. Under this stream typing system, streams and other waterbodies identified as a “shoreline of the state” are considered a Type S Water. No shorelines of the state occur within the study area. All other streams are distinguished between whether they are fish bearing (Type F) or non-fish bearing (Type N). Subcategories of Type N waters are further distinguished by their duration of flow, with perennial flowing non-fish bearing streams identified as Type Np and non-fish bearing streams where surface flow is absent for some portion of the year identified as Type Ns.

Streams were further evaluated for their suitability of habitat for resident or anadromous fish based on those conditions defined in WAC 222-16-031, which assumes fish presence within streams under the following conditions:

- Stream segments that have a defined channel greater than or equal to 2 feet and a gradient less than or equal to 16%.
- Stream segments that have a defined channel greater than or equal to 2 feet, a gradient between 16% and 20%, and a contributing basin greater than or equal to 50 acres.

Where suitable fish habitat was observed or assumed, these stream segments were considered Type F streams.

Finally, Sound Transit engaged the Washington Department of Fish and Wildlife (WDFW) to review multiple stream crossings within the study area. As part of WDFW’s review, they identified the upper limits of fish habitat for several streams within the study area. Stream segments downstream of WDFW’s upper limit of fish habitat were considered Type F streams. Stream segments upstream of this upper limit of fish habitat were considered Type N streams, as modified based on their presumed duration of flow.

Streams were given a preliminary stream typing in accordance with the WAC and local regulations based on site reconnaissance and other supporting resources. The objective was to consistently characterize the aquatic habitats and species within the study area, calculate the potential impacts to aquatic habitats for each alternative, and estimate impacts to those species that may utilize those habitats.

#### ***Review of Existing Map Data and Documentation***

A desktop evaluation was performed to review geospatial data of aquatic habitats and species mapped within the study area, including a review of the following sources:

- Information for Planning and Consultation (IPaC) Mapper and generated species letter (U.S. Fish and Wildlife Service [USFWS] 2025).
- National Wetlands Inventory (NWI) Mapper (USFWS 2024).

- Essential Fish Habitat (EFH) Mapper (National Oceanic and Atmospheric Administration [NOAA] 2024a).
- West Coast Region, Species and Habitat App (NOAA 2024b).
- Statewide Washington Integrated Fish Distribution (Northwest Indian Fisheries Commission [NWIFC] 2025).
- WDFW Fish Passage Web App (WDFW 2024a).
- WDFW Priority Habitats and Species (PHS) (WDFW 2024b).
- WSDOT Fish Passage Inventory Mapper (WSDOT 2024).
- Water Quality Permitted Outfalls (Ecology 2024a).
- 303(d) impaired waterbodies (Ecology 2024a).
- 305(b) impaired sediment (Ecology 2024a).
- Map Everett Online Mapper (City of Everett 2024).
- Critical Areas Map (City of Everett 2022b).
- Streams, Wetlands, & Recharge Sites, Critical Areas Map (City of Everett 2022b).
- Fish and Wildlife Habitat Conservation Areas, Critical Areas Map 6 (City of Everett 2006).
- Environmentally Critical Areas Inventory, Native Growth Protection Areas Map (City of Lynnwood *n.d.a*).
- Environmentally Critical Areas Inventory, Streams Map (City of Lynnwood *n.d.b*).
- Snohomish County Planning and Development Services (PDS) PDS Map Portal (Snohomish County 2024a).
- Snohomish County Watercourses (Snohomish County 2024b).
- Snohomish County Waterbodies (Snohomish County 2024b).
- Aerial photographs.
- Ecosystems reports prepared for properties within the study area that were provided to Sound Transit by a local jurisdiction or agency.

The analysis of the affected environment also relied on the Watershed Boundary Dataset (WBD) that is used broadly by state and federal regulatory agencies, including Ecology. The WBD is divided and subdivided into separate hydrologic units, each with a unique hydrologic unit code (HUC). Hydrologic units within the WBD are arranged in a nested and progressive hierarchical system, with the 12-digit hydrologic unit (aka the “HUC-12 basins”) being the smallest complete dataset (U.S. Geological Survey [USGS] 2024).

Ecology also uses Water Resource Inventory Areas (WRIAs), which are based on natural watersheds and further defined as “...areas defined by higher elevation that capture precipitation and funnel rain and snowmelt through smaller subbasins into streams, tributaries, and rivers. Due to Washington’s varied terrain and precipitation levels, water availability is different in each location” (Ecology 2024b). The drainage basins of the study area are identified in Section 3.

### ***Tribal and Agency Coordination***

Sound Transit is coordinating with federal, state, and local regulatory and resource agencies, along with federally recognized Tribes who have usual and accustomed fishing areas within the study area, to compile background information on aquatic habitats and species. Coordination with these agencies is ongoing, as described below:

- Sound Transit hosted an initial project meeting with the Corps, Ecology, WDFW, and representatives with the Muckleshoot Indian Tribe and the Tulalip Tribes of Washington to provide an overview of the EVLE Project and provide conceptual design-level information on alternatives under evaluation.
- Sound Transit has been regularly meeting with the City of Lynnwood, City of Everett, and Snohomish County to share design and project-related information, including coordination around impacts on aquatic resources.
- Sound Transit met with WSDOT to discuss general design parameters for the EVLE guideway in proximity to known fish-passage barriers along Merrill & Ring Creek and Wood Creek.
- Sound Transit has been coordinating with WDFW to provide evaluation of multiple stream crossings and whether they are barriers to fish passage.
- Sound Transit will coordinate with the Seattle Paine Field International Airport (Paine Field) Environmental Project Manager and Airport Wildlife Manager to evaluate potential compensatory mitigation plans and other project elements to minimize the risk of wildlife hazards to the airport and its operations.

### ***Field Surveys***

Field surveys of aquatic habitats and species were completed for streams accessible from public rights-of-way or where right of entry was obtained. Streams and riparian habitats within the study area were evaluated in accordance with Sound Transit's stream habitat assessment guidelines (Sound Transit 2016). Data collected at each stream crossing followed the Phase 1 Project guidance for State Environmental Policy Act (SEPA)/NEPA and ESA coordination. The ordinary high water mark (OHWM) was approximated in accordance with Ecology's *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson 2016). After the Sound Transit Board identifies the project to be built, streams will be further evaluated following Phase 2 Project guidance in support of permitting, mitigation development, and final design.

Where site access could not be obtained, aerial photographs, publicly available ESA Threatened and Endangered (T&E) species information, and priority habitat maps were reviewed to better inform the evaluation.

### ***Mapping***

Each stream identified in the study area was assigned a unique identifier, digitized at its approximate centerline in ArcGIS Pro, and added to a geographic information systems (GIS) database. Data for project streams were recorded in an Excel spreadsheet that was linked to the GIS data. If a stream was given a formal name within local or state surface water documentation reviewed as part of this evaluation, that name was used. Unnamed streams were named using the following convention: the letter "S" and the next two letters based on the jurisdiction they are located in (Lynnwood = LY, Everett = EV, Snohomish County = SC)

followed by the order they were encountered in the field (1, 2, 3, etc.). For example, Stream SEV2 would be the second field-identified stream located in Everett.

## **2.2.2 Wetlands**

### **2.2.2.1 Study Objectives**

The discussion and analysis included on wetlands within this technical report is intended to describe the wetlands within the study area, evaluate potential impacts associated with the Build Alternatives, and describe the measures taken to avoid, minimize, and compensate for impacts.

### **2.2.2.2 Study Area**

The study area for this wetland analysis includes the project limits and areas within 300 feet of the project limits.

### **2.2.2.3 Methods**

Wetlands were evaluated through a review of publicly available resources, field surveys, and coordination with Tribes and local, state, and federal regulatory agencies.

Desktop evaluation and field reconnaissance were conducted to identify, map, and describe potential wetlands within the study area. Where wetlands occurred on properties where right of entry was received, specifically within OMF Site B and OMF Site E, wetlands were formally delineated using methods described below. Wetlands were classified and preliminarily rated to determine likely buffer widths, functions, and values. The objective was to calculate the potential impacts to wetlands for each Build Alternative.

#### ***Review of Existing Map Data and Documentation***

The desktop evaluation included a geospatial analysis of potential wetlands within the study area utilizing publicly available data, including the following sources:

- NWI (USFWS 2024).
- Web Soil Survey (Natural Resources Conservation Service [NRCS] 2024).
- Map Everett Online Mapper (City of Everett 2024).
- Streams, Wetlands, & Recharge Sites, Critical Areas Map (City of Everett 2022b).
- Environmentally Critical Areas Inventory, Wetlands Map (City of Lynnwood *n.d.c*).
- Snohomish County PDS Map Portal (Snohomish County 2024a).
- Snohomish County Wetland Inventory (Snohomish County 2024a).
- Aerial photographs.
- Ecosystems reports prepared for properties within the study area that were provided to Sound Transit by a local jurisdiction or agency.

#### ***Tribal and Agency Coordination***

Sound Transit is coordinating with federal, state, and local regulatory and resource agencies, along with federally recognized Tribes who have usual and accustomed fishing areas within the



study area, to compile background information on wetland ecosystems and determine the compensatory mitigation requirements. Coordination with these agencies is ongoing as described below:

- Sound Transit provided an initial overview of the EVLE Project and conceptual design-level information to the Corps, Ecology, WDFW, and representatives of the Muckleshoot Indian Tribe and the Tulalip Tribes of Washington.
- Sound Transit has been regularly meeting with the City of Lynnwood, City of Everett, and Snohomish County to share design and project-related information, including coordination around impacts to wetland ecosystems and potential opportunities for compensatory mitigation.
- Sound Transit will coordinate with the Paine Field Environmental Project Manager and Airport Wildlife Manager to evaluate compensatory mitigation plans and other project elements to minimize the risk of wildlife hazards to the airport and its operations.

### **Field Surveys**

Following the desktop evaluation, field surveys were conducted from public rights-of-way and private properties where right of entry was received. Vegetation, soils, and hydrologic conditions were documented at representative locations (sample plots) using methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (Corps 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (Corps 2010). For each accessible wetland identified, wetlands were delineated, and data were collected at paired wetland and upland sample plot locations. Sample plots were then labeled with flagging and marked with GPS. General observations, existing conditions, and wetland characteristics were also documented.

Wetlands located within the study area were classified according to the USFWS (Cowardin et al. 1979, Federal Geographic Data Committee [FGDC] 2013) and hydrogeomorphic (HGM) classification systems (Corps 1993). The *Washington State Wetland Rating System for Western Washington 2014 Update Version 2.0* (Hruby and Yanke 2023) was used to rate wetlands, per the requirements of each local jurisdiction's critical areas regulations and used to evaluate wetland functions.

### **Mapping**

In areas where right of entry could not be obtained, features thought to be wetlands were identified and mapped based on field observations from publicly-accessible areas, evaluation of existing data, and examination of aerial photographs. Potential wetlands were preliminarily rated using these same sources of information. Where specific information was not known (such as the hydrologic regime), assessments were made using best available information and best professional judgement.

Each wetland identified in the study area was digitized as a polygon in ArcGIS Pro, given a unique identifier, and incorporated into a GIS database. In addition, data was recorded in an Excel spreadsheet linked to the GIS data. Wetland names begin with the letter "W" and the next two letters are based on the jurisdiction where they are located (Lynnwood = LY, Everett = EV, Snohomish County = SC) followed by a number reflecting the order encountered in the field (1, 2, 3, etc.). For example, Wetland WEV4 would be the fourth field-identified wetland located in Everett.



## 2.2.3 Upland Habitats and Species

### 2.2.3.1 Study Objectives

The discussion and analysis included on upland habitats and species within this technical report is intended to describe the upland habitats and those species known to be present or commonly associated with the upland habitats within the study area, evaluate potential impacts associated with the Build Alternatives, and describe the measures taken to avoid, minimize, and compensate for impacts.

### 2.2.3.2 Study Area

The study area for this upland habitats and species evaluation included the project limits and the area within 200 feet of the project limits. Documented occurrences of sensitive wildlife species were also reviewed within 0.25 mile beyond the project limits and up to 0.5 mile beyond the project limits if higher noise sources, such as blasting or pile driving, are proposed. The objective was to provide a conservative estimate of the potential impacts to upland habitats and species for each alternative.

### 2.2.3.3 Methods

#### *Review of Existing Map Data and Documentation*

Upland habitats and species were evaluated through a desktop evaluation of publicly available resources, field surveys, and coordination with federal, state, and local regulatory and resource agencies, along with federally recognized Tribes who have usual and accustomed fishing areas within the study area. Upland habitats were defined as those habitats that are not aquatic or wetland resources. Upland species evaluated included federally protected ESA species, WDFW priority species, and locally important species.

The desktop evaluation of upland habitat reviewed publicly available geospatial data of land cover, wildlife habitats, and species distribution within the study area, including a review of the following sources:

- IPaC Mapper and generated species letter (USFWS 2025).
- National Land Cover Database (USGS 2021).
- WDFW Priority Habitats and Species (WDFW 2024b).
- Washington Department of Natural Resources (DNR) Natural Heritage Program Data Explorer, Rare Plant and Ecosystem Locations (DNR 2024).
- Fish and Wildlife Habitat Conservation Areas, Critical Areas Map 6 (City of Everett 2006).
- Environmentally Critical Areas Inventory, Native Growth Protection Areas Map (City of Lynnwood *n.d.a*).
- eBird (2024).
- Carnivore Spotter (Woodland Park Zoo 2024).
- WSDOT Resource Conservation Areas spatial data (WSDOT 2022b).
- Aerial photographs.

A GIS database was then created for key upland habitats and species.

### Field Surveys

Field surveys of upland habitats and species were completed in areas accessible at public rights-of-way or where right of entry was obtained. Vegetation data (e.g., dominant plant species composition and relative abundance) were gathered and classified by habitat type using field observation. Major plant communities and habitat structure types were identified and classified based on the structural categories defined in *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil 2001).

Presence of heritage and/or significant trees as defined by the City of Lynnwood and Snohomish County was assessed and included in the analysis within those jurisdictions. Invasive species were also noted during fieldwork but were not mapped.

### Mapping

In areas where right of entry could not be obtained, terrestrial habitat features (e.g., vegetation communities and nests) were identified and mapped based on observations from publicly accessible rights-of-way and digitized as points or polygons in ArcGIS Pro. Publicly available data and aerial photographs were also evaluated. Preliminary assessments were made using available information.

Throughout the project study area, upland habitats were classified into five land cover types, using the 2021 USGS National Land Cover Database, as described in Table 2-1.

**Table 2-1 Land Cover Type Descriptions**

| Land Cover Type <sup>a</sup> |                       | Description                                                                                                                         |
|------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Urban and Mixed              | High Density          | Areas developed with high intensity commercial, residential, and industrial land uses.                                              |
|                              | Moderate Density      | Areas developed with moderate density commercial and residential land uses.                                                         |
|                              | Low Density           | Areas developed with low density commercial and residential land uses.                                                              |
| Open Space                   | Grasslands/Shrublands | Areas of undeveloped lands, including grasslands and shrub lands, which may correspond with wetlands and riparian stream corridors. |
|                              | Forest                | Includes deciduous, evergreen, and mixed forested uplands, riparian corridors, and wetlands.                                        |

NOTES:

- a) Land cover types are based on the structural categories described within *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil 2001).

## 2.2.4 Impact Assessment Methods and Assumptions

The impact analysis assessed the potential reasonably foreseeable impacts of the alternatives to the ecosystems and species described herein. The impact analysis was divided into operational impacts and construction impacts, and describes the extent, magnitude, duration, and character of impacts on ecosystem resources for each alternative. The estimated impacts

associated with the Build Alternatives within this analysis are based on the conceptual project design (see Draft EIS Appendix F) and rely on conservative estimates of impacts.

#### **2.2.4.1 Reasonably Foreseeable Impacts**

##### ***Impacts to Aquatic Habitats and Species***

For each Build Alternative, impacts on aquatic habitats and species were determined by evaluating the linear feet of each stream and acreage of its riparian buffer that would be impacted – temporarily as part of construction activities or permanently as part of the long-term operation of the system. Impacts on aquatic species were assessed qualitatively by considering factors such as the regional significance of the expected resident and anadromous fish present, habitat type, degree of connectivity, and loss of habitat following project implementation.

Construction impacts are those impacts to aquatic habitats that are associated with construction activities (e.g., temporary stream bypass, grading and temporary vegetation clearing within disturbed riparian buffers, temporary construction stormwater discharges). Operational impacts are those which are permanent and persist throughout the operation of the Build Alternative (e.g., stream realignment, stream daylighting, unavoidable impacts to forested riparian buffers, permanent shading).

##### ***Impacts to Wetlands***

For each Build Alternative, impacts on wetlands and wetland buffers would include those adverse impacts associated with clearing, grading, dewatering, and placement of fill within wetlands and/or wetland buffers. As design advances and wetland and wetland buffer mitigation needs for the EVLE Project are identified, compensatory wetland and wetland buffer mitigation for the project will also be considered as beneficial impacts. These beneficial impacts to wetlands and wetland buffers may include creation of new wetland and wetland buffer areas, removing previously approved alterations or invasive species, or improving plant diversity in disturbed wetland and buffer areas.

Impacts may be temporary and associated with effects from construction-related activities, including access and staging areas, or may include permanent impacts associated with operational impacts, such as placement of structures or facilities associated with the project within wetlands or wetland buffers. If a wetland contiguous with the project alignment was partially within the project limits, best professional judgment was used to determine the project effects on the portion of the wetland outside the project limits.

It was assumed that wetlands and wetland buffers with temporary impacts would be restored at the end of construction.

##### ***Impacts to Upland Habitats and Species***

For each Build Alternative, impacts to vegetation and wildlife habitat were determined by evaluating the acreage of each dominant vegetation community that would be disturbed. Impacts were assessed qualitatively by considering factors such as:

- Regional significance of the resource.
- Wildlife habitat value (such as its role as a wildlife movement corridor).
- Degree of fragmentation and loss of the habitat following project implementation.

- Overall habitat quality.
- Potential for enhancing or restoring unique plant communities or wildlife habitat or connectivity.

Construction-related impacts and operational impacts on upland habitats and species, including disturbances from increases in human access, noise, and light, were also assessed. Moreover, the project was evaluated for its potential to cause the spread of noxious or invasive plant species. It was assumed that upland habitats with temporary impacts would be revegetated in accordance with approved landscaping and/or planting regulations and policies. However, removal of mature trees, wildlife snags, and areas of established upland forest habitat would be considered operational impact as the duration to effectively replace these habitat types is substantial.

#### **2.2.4.2 Impacts to Threatened and Endangered Species**

Potential impacts to threatened and endangered species were evaluated by assessing the extent of project impacts to ESA-listed and ESA-proposed species and their designated critical habitat. A Biological Assessment (BA) will be prepared for the preferred alternative. Consultation with NOAA Fisheries and USFWS will be coordinated through Sound Transit's Environmental Permitting Lead during the environmental review process. Information received from the existing documents, field surveys, and agency consultation would identify habitats or areas to be avoided or protected.

#### **2.2.4.3 Impact Assessment Analysis Assumptions**

##### ***Impact Avoidance and Best Management Practices***

The impact assessment analysis assumes that for all Build Alternatives, avoidance and minimization measures have been and will continue to be integrated into the design where possible to minimize the potential impacts of each Build Alternative on sensitive resources. It is assumed that best management practices (BMPs) would be implemented as part of the construction and operation of each Build Alternative to further avoid or minimize impacts. The avoidance and minimization measures anticipated at this time are described in Section 5.

##### ***Footprint of the Build Alternatives***

The impact analysis assumes that the ecosystem functions for aquatic habitats, wetlands, and upland habitats within the footprint of the Build Alternatives would be degraded or eliminated. Further, impacts of at-grade structures and hardscapes, such as station platforms and associated station facilities, segments of at-grade guideway, drainage facilities, traction power substation (TPSS) locations, and OMF facilities would be greater than impacts associated with the aerial guideway as these at-grade structures and facilities would result in a loss of ecosystem acreage. However, aerial guideways are still considered to have operational impacts as they would nevertheless result in permanent impacts to ecosystems through shading, alterations to vegetation, and other similar operational impacts.

Impacts could be less for aerial guideways because it is expected that vegetation may be reestablished under elevated sections of the project where vegetated communities occur, although this vegetation would be limited to herbaceous species, woody shrubs, or short-stature trees. Due to safety concerns, a vegetated clear zone would preclude taller woody vegetation from being reestablished below elevated sections of the project and within 15 feet from the outer edge of guideway. Further, while aerial guideways can span some wetlands, shading from the

guideway could still be an operational impact along with some necessary fill for associated columns.

For streams and wetlands within the footprint of the Build Alternatives, impacts would be minimized by constructing structures spanning these ecosystems to the greatest extent practicable along elevated sections of the mainline, lead tracks, and tail tracks. Placement of culverts and pipes would be avoided where practicable. Where culverts are unavoidable within the project to convey streams determined to support potential fish habitat, these culverts would be designed to be fish passable in accordance with the *WDFW Water Crossing Design Guidelines* (Barnard et al. 2013).

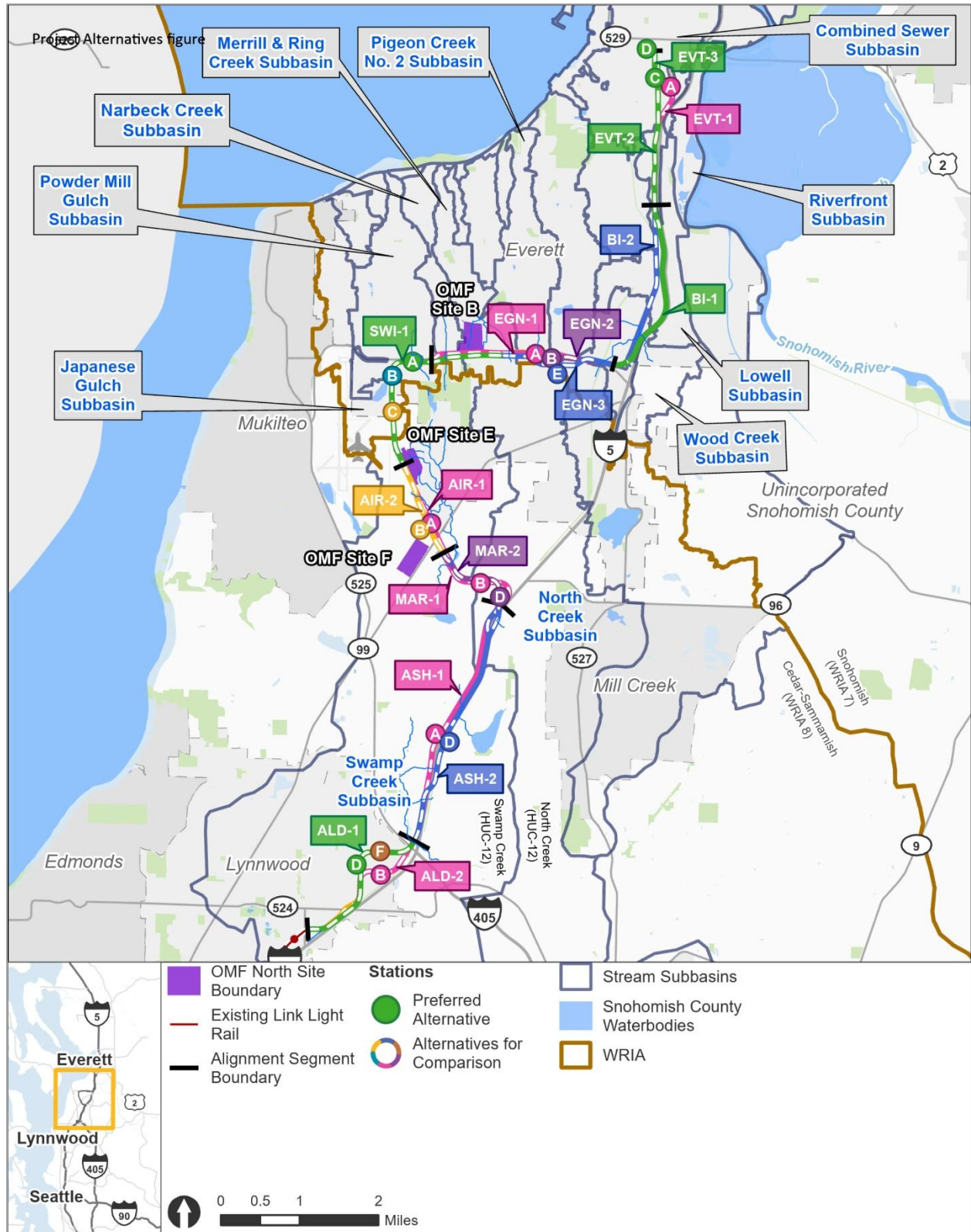
### 3 AFFECTED ENVIRONMENT

This section describes the aquatic habitats and species, wetlands, and upland habitats and species documented or assumed to be present within the study area.

The study area for the 16-mile-long corridor crosses both the Cedar-Sammamish watershed (WRIA 8) and the Snohomish watershed (WRIA 7). Further, the study area extends across 12 subbasins that span four HUC-12 basins, as shown in Figure 3-1. The affected environment is described below by WRIA with aquatic habitats and wetlands further organized by subbasin.



Figure 3-1 Drainage Basins Within the Study Area



SOURCE: City of Everett (2023), Ecology (2024c), USGS (2024).

### 3.1 Cedar-Sammamish Watershed and Subbasins

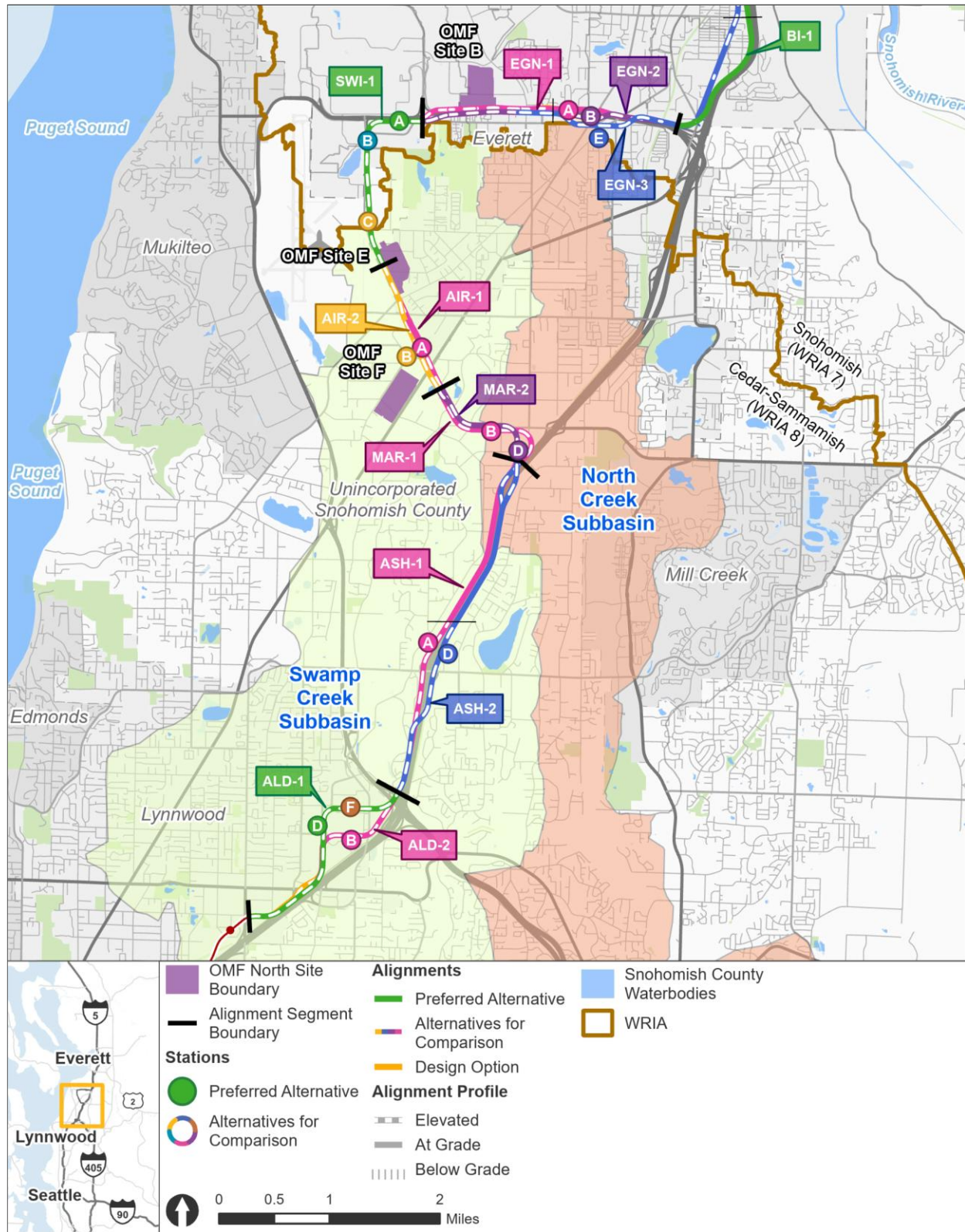
The Cedar-Sammamish watershed and subbasins make up WRIA 8, encompassing 682 square miles across parts of King and Snohomish Counties (Ecology 2022a). The West Alderwood, Ash Way, Mariner, SR 99/Airport Road, SW Everett Industrial Center, and SR 526/Evergreen Segments are entirely or partially within WRIA 8.

The study area occurs within two HUC-12 watersheds within WRIA 8 (Figure 3-2):

- Swamp Creek subbasin (HUC 171100120303).
- North Creek subbasin (HUC 171100120302).

The Cedar-Sammamish watershed includes all lands that are drained by the Cedar River, Sammamish River, Lake Washington, and nearshore areas that drain to Puget Sound (Ecology 2022a). WRIA 8 is the most populated and developed watershed in Washington. The Swamp and North Creek subbasins drain into the Sammamish River and contain a mix of urban and suburban developments (Ecology 2022a). These subbasins, including a summary of the streams and wetlands within the study area and the affected environment, are discussed below.

Figure 3-2 WRIA 8: Cedar-Sammamish Watershed Study Area



SOURCE: City of Everett (2023), Ecology (2024c), USGS (2024).



### 3.1.1 Swamp Creek Subbasin

The Swamp Creek subbasin is approximately 16,250 acres in size and is a HUC-12 watershed in the Cedar-Sammamish watershed (WRIA 8) (Figure 3-2). Swamp Creek generally flows north to south for approximately 11 miles through parts of Everett, Lynnwood, Brier, Mountlake Terrace, Bothell, Kenmore, and unincorporated Snohomish County, and ultimately joins the Sammamish River near the city of Kenmore. Scriber Creek, located south of the project, is the largest tributary to Swamp Creek. The Swamp Creek subbasin, where it occurs within the study area, has been heavily modified by residential, commercial, and industrial land uses.

The study area occurs in the upper limits of the Swamp Creek watershed, and a majority of the project footprint is located within the Swamp Creek subbasin, including all of the West Alderwood and Mariner Segments and portions of the Ash Way, SR 99/Airport, and SW Everett Industrial Center Segments. The Swamp Creek mainstem, Hollow Dale Place Tributary, York Creek Tributary, and multiple unnamed tributaries occur within the study area.

Although wetlands and aquatic habitat were once extensive within the historic Swamp Creek floodplain (King County 2001), aquatic and riparian habitat has been impacted by surrounding land uses, historic stormwater management practices, and transportation infrastructure. In some locations, the stream bed, bank, and channel of Swamp Creek and its tributaries have been replaced with a complex network of culverts and stormwater drainage infrastructure.

#### 3.1.1.1 Water Quality Within the Swamp Creek Subbasin

Pollution sources likely to adversely affect water quality in Swamp Creek include both point and non-point sources. The multiple industrial and municipal stormwater outfalls that release untreated stormwater into Swamp Creek and its tributaries are considered point sources. Non-point sources include urban runoff from streets, parking lots, and lawns, which introduce hydrocarbons, metals, tire rubber dust, fertilizers, pesticides, and fecal coliform bacteria into study area streams.

Of the 11 streams identified within the WRIA 8 study area (see Figure 3-3 through Figure 3-11), there are three stream reaches within the Swamp Creek subbasin identified as impaired under Ecology's Section 303(d) list (Ecology 2024a) as indicated in Table 3-1 and shown on Figure 3-3, Figure 3-4, Figure 3-5, Figure 3-6, and Figure 3-9.

**Table 3-1 303(d)-Listed Waters in Swamp Creek Subbasin Within Study Area**

| Stream               | Alignment Segment | Parameter                                             | Location                                                                                                 | Sampling Year(s) <sup>a</sup> |
|----------------------|-------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------|
| Swamp Creek mainstem | ASH               | Fecal coliform                                        | Wetland complex northwest of the I-5/I-405 interchange, south of I-405 in a roadside ditch               | 2017                          |
|                      |                   | Benthic macroinvertebrate bioassessments <sup>b</sup> | Swamp Creek and associated wetlands just upstream and continuing downstream of the I-5/I-405 interchange | 2015                          |
| York Creek Tributary | AIR               | Dissolved oxygen                                      | East of Airport Road, within York Creek Tributary                                                        | 2001, 2000, 1999              |

NOTES:

- Historic 303(d) listings can be carried forward from a previous assessment or administrative decision. Although sampling years occurred well before the assessment year (2018), waters are currently 303(d)-listed based on Ecology's Water Quality Assessment parameters. In 2022, the Environmental Protection Agency Region 10 issued their final approval of Ecology's 2018 Water Quality Assessment (Ecology 2024d).
- A 303(d) listing for benthic macroinvertebrate bioassessments indicates that biological integrity is degraded when a given "data point" Benthic Index of Biotic Integrity (B-IBI) score is less than 27 and a River Invertebrate Prediction and Classification System (RIVPACS) score is less than 0.73. A "data point" is the lowest bioassessment score observed for a given year (Ecology 2024a). The B-IBI scoring system is a quantitative method for determining and comparing the biological condition of streams (Puget Sound Stream Benthos 2024) and the RIVPACS statistical model is used to estimate the ecological health based on several environmental data (UK Center for Ecology and Hydrology 2024).

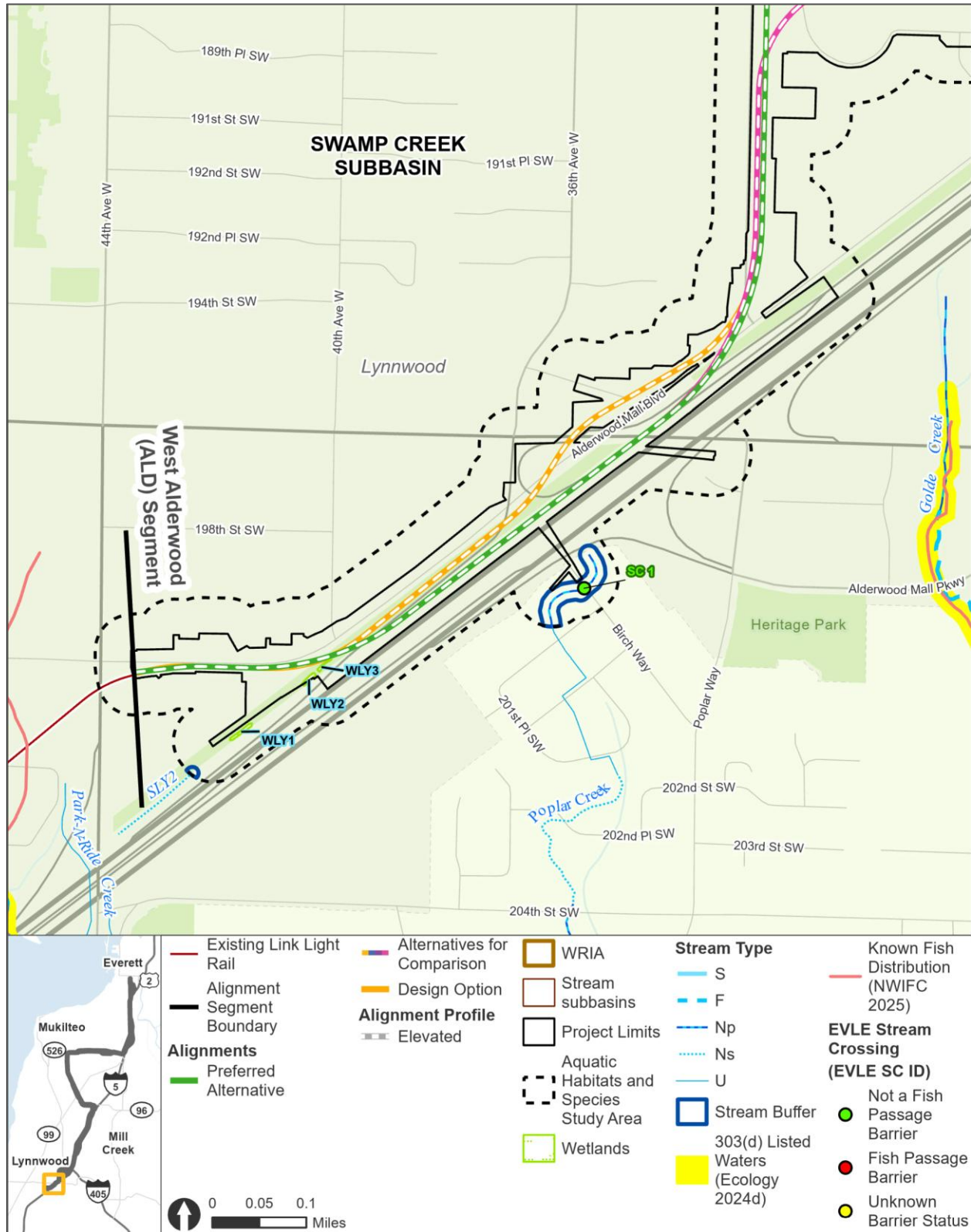
In 2006, Ecology published the Swamp Creek Fecal Coliform Bacteria Total Maximum Daily Load (TMDL) Water Quality Improvement Report and Implementation Plan (Ecology 2006). According to this 2006 TMDL plan, potential pollution sources located within the study area include problematic stormwater outfalls located around SR 99 where numerous outfalls had high bacteria levels (Ecology 2006). Additional sources of bacteria in the Swamp Creek subbasin include animal waste, primarily from pets and dog parks, as well as human waste from failing septic systems and improper waste disposal from encampments.

Efforts undertaken by the City of Everett have significantly reduced fecal coliform bacteria in Swamp Creek in response to the 2006 TMDL plan (City of Everett 2022a). The City of Everett also performs bacteria monitoring and implements other corrective actions and community education programs in response to this 2006 TMDL plan.

In 2021, King County, in cooperation with Ecology, began a targeted analysis of several salmon-bearing streams to detect chemicals of emerging concern, including chlorinated paraffins, alkylphenols and alkylphenol ethoxylate surfactants, polybrominated diphenyl ethers, PFAS, and 6PPD-quinone (6PPD-q) (King County 2024). 6PPD-q is of particular concern as it has been identified as the primary cause of Urban Runoff Mortality Syndrome in coho salmon (Tian et al. 2021). Sampling for 6PPD-q in Swamp Creek began in 2022 near its confluence with the Sammamish River (King County 2024).

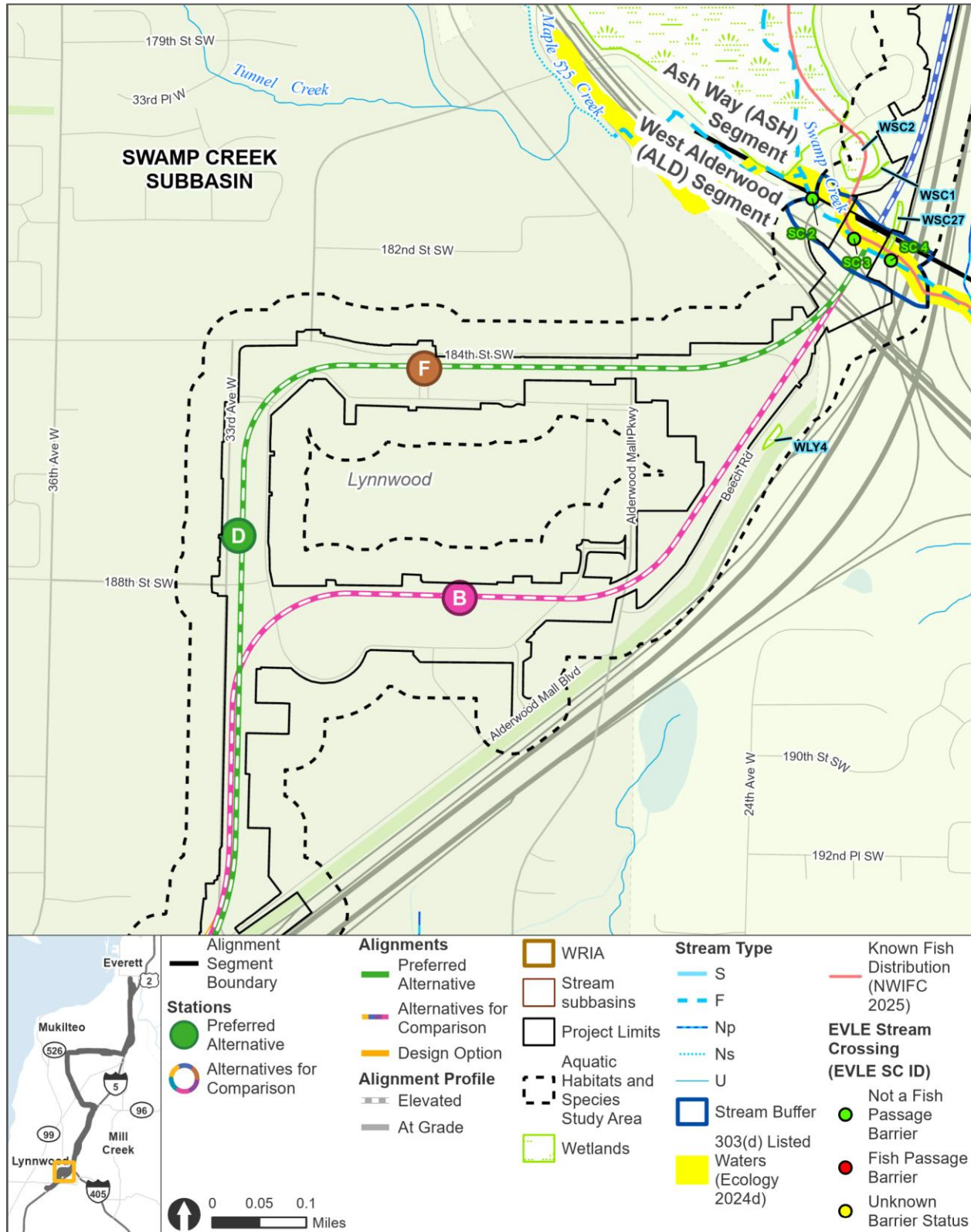
Additionally, Ecology is in the process of developing a multi-parameter TMDL for the Sammamish River and its tributaries, including Swamp Creek in the study area, which will address temperature, dissolved oxygen, and bacteria (Ecology 2024a).

Figure 3-3 Swamp Creek Study Area (Part 1 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

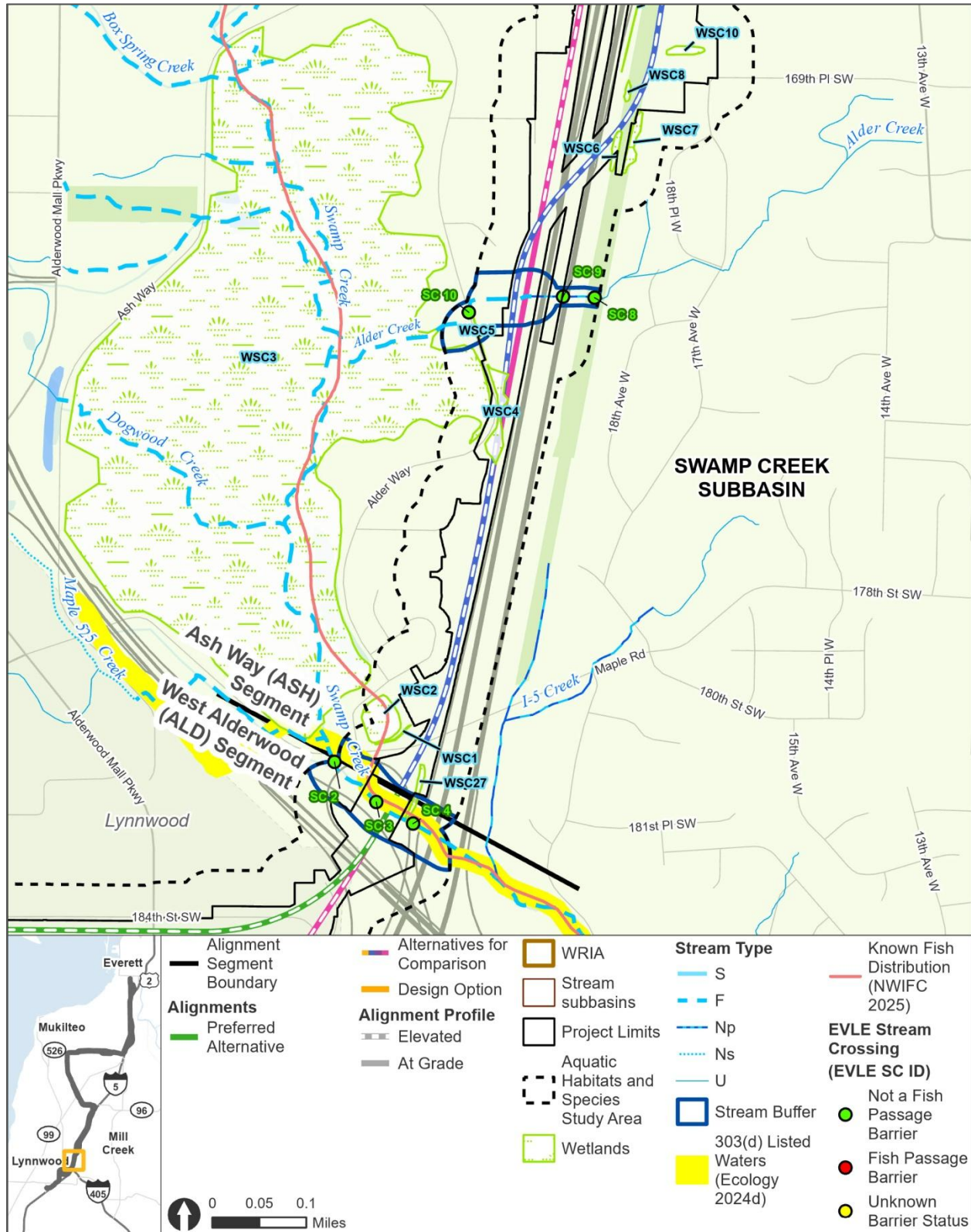
Figure 3-4 Swamp Creek Study Area (Part 2 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).



Figure 3-5 Swamp Creek Study Area (Part 3 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

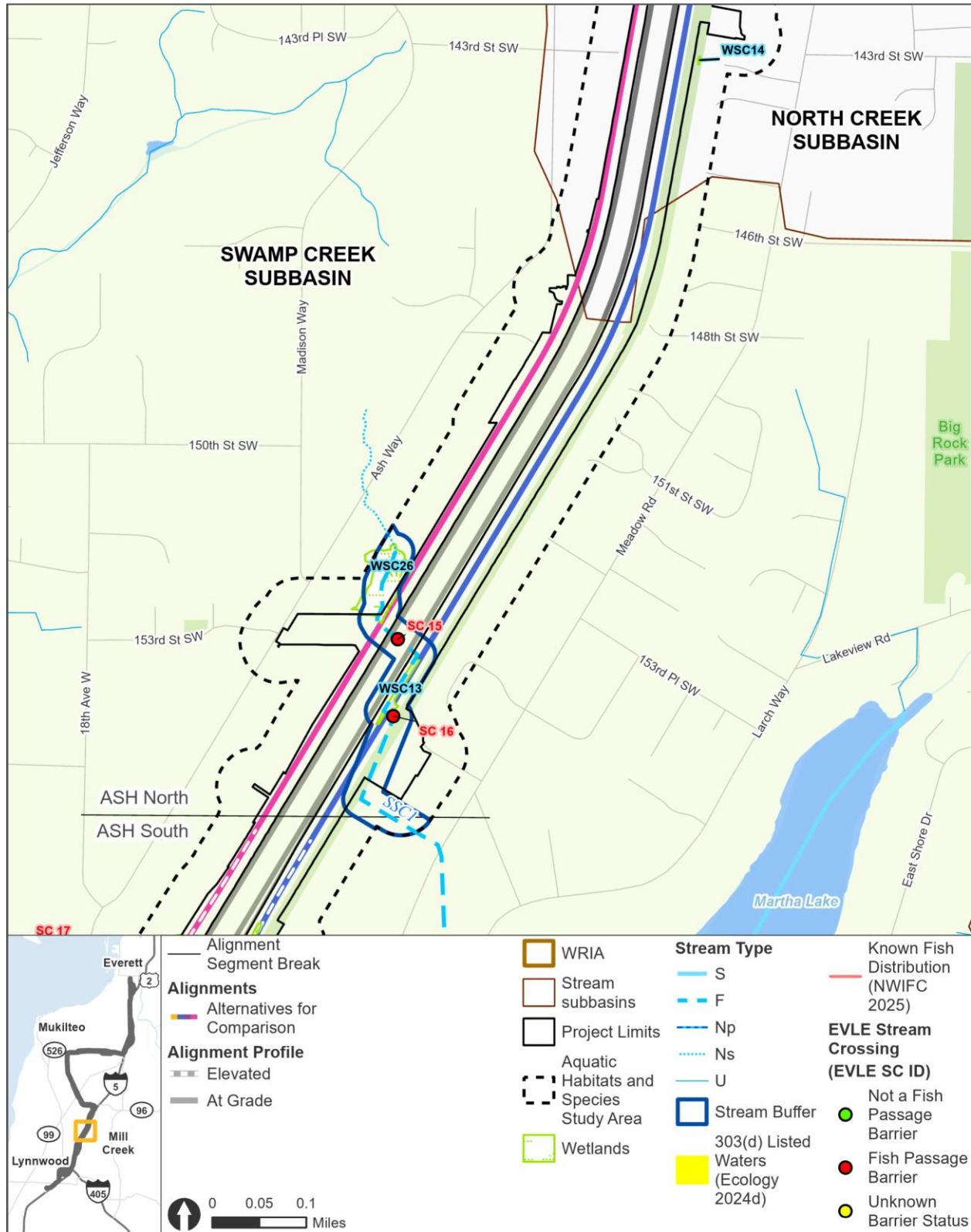
Figure 3-6 Swamp Creek Study Area (Part 4 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).



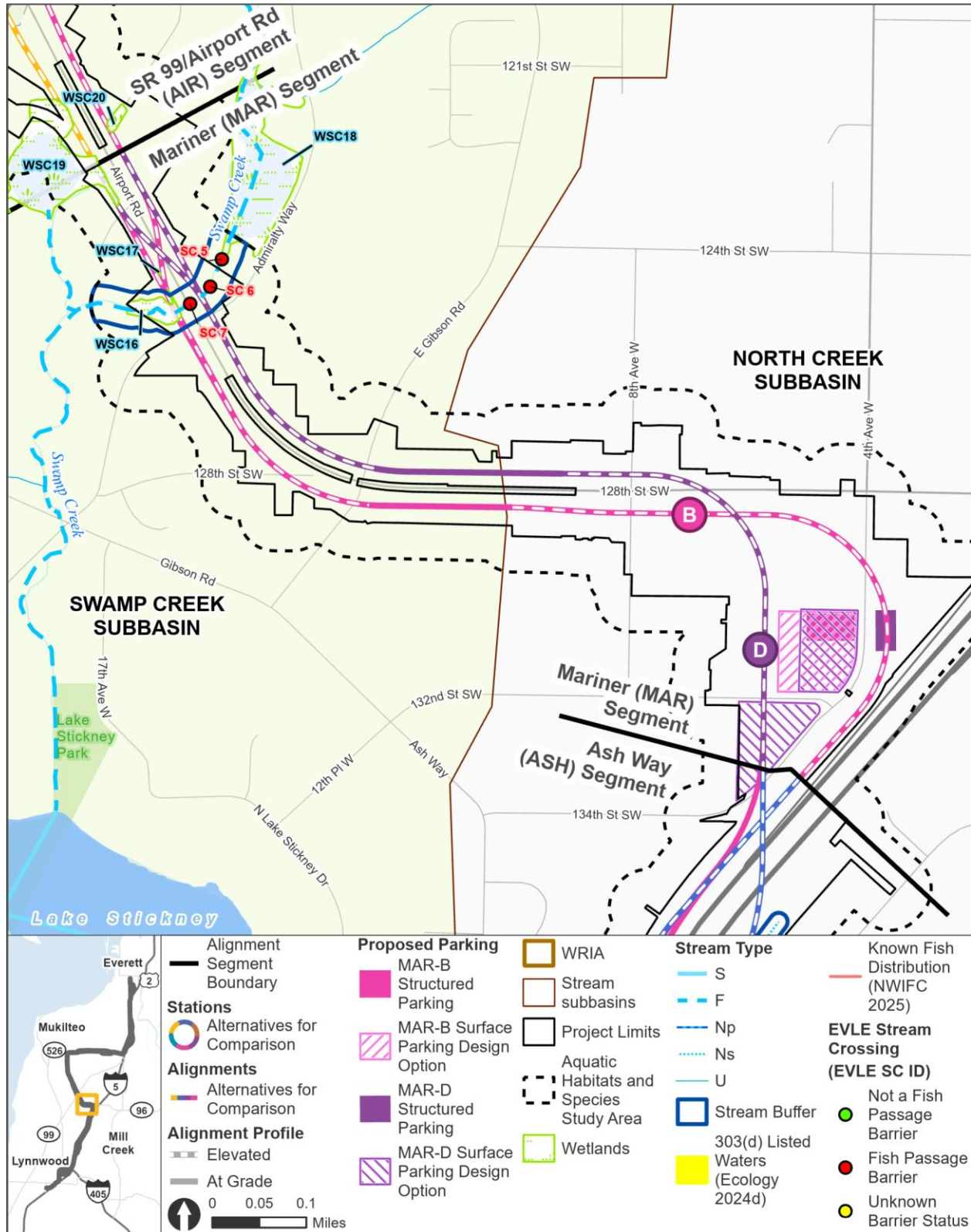
Figure 3-7 Swamp Creek Study Area (Part 5 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

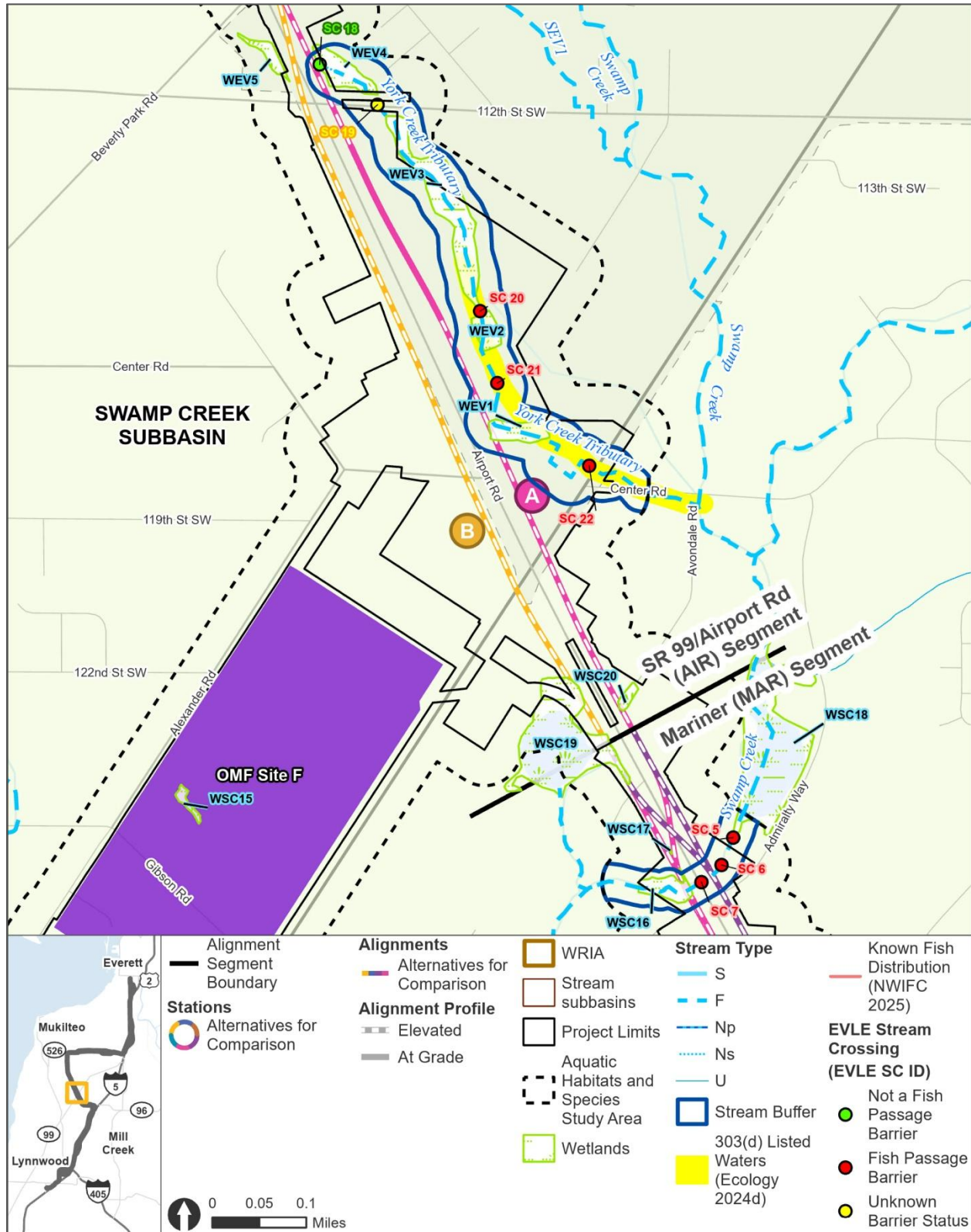


Figure 3-8 Swamp Creek Study Area (Part 6 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

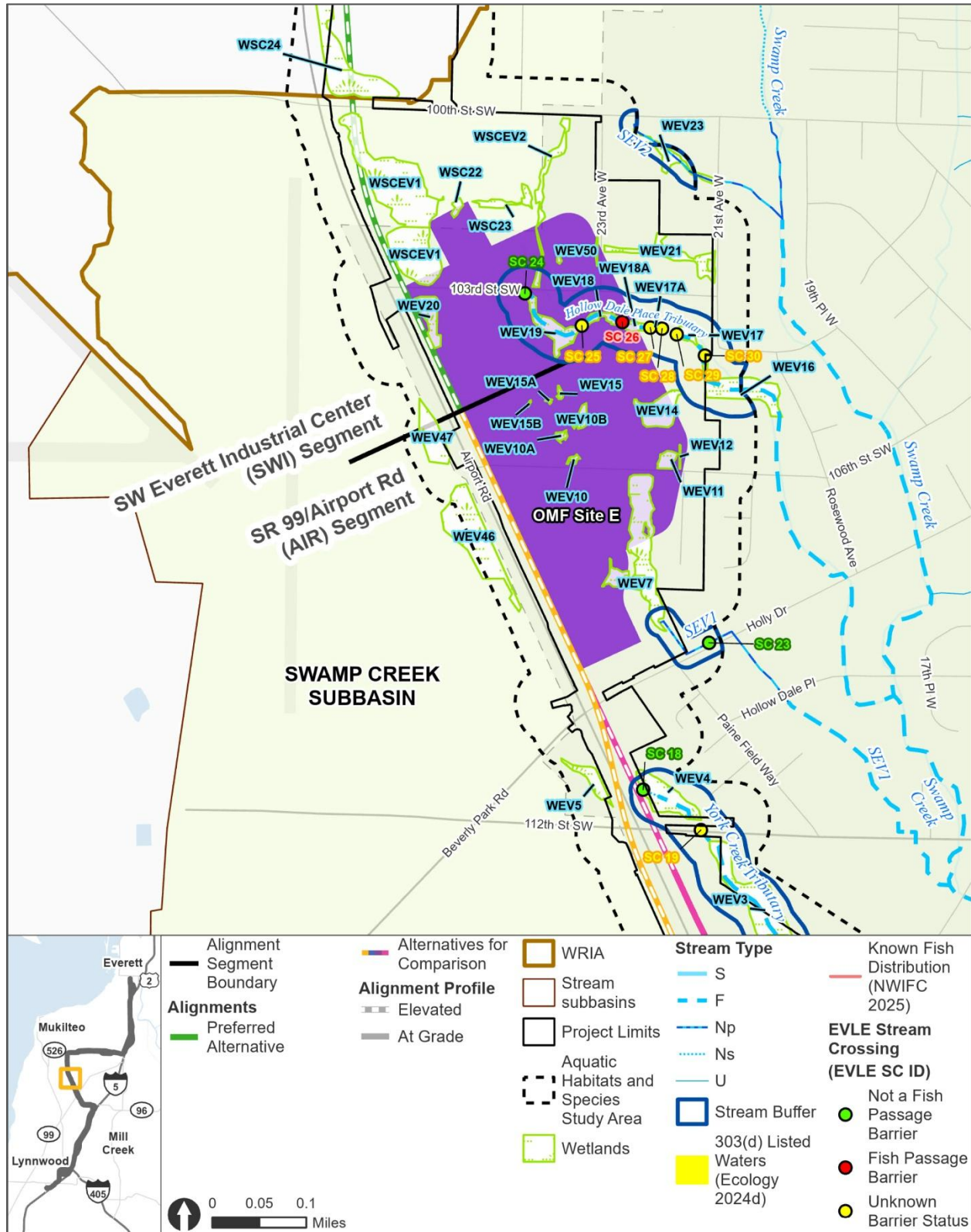
Figure 3-9 Swamp Creek Study Area (Part 7 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

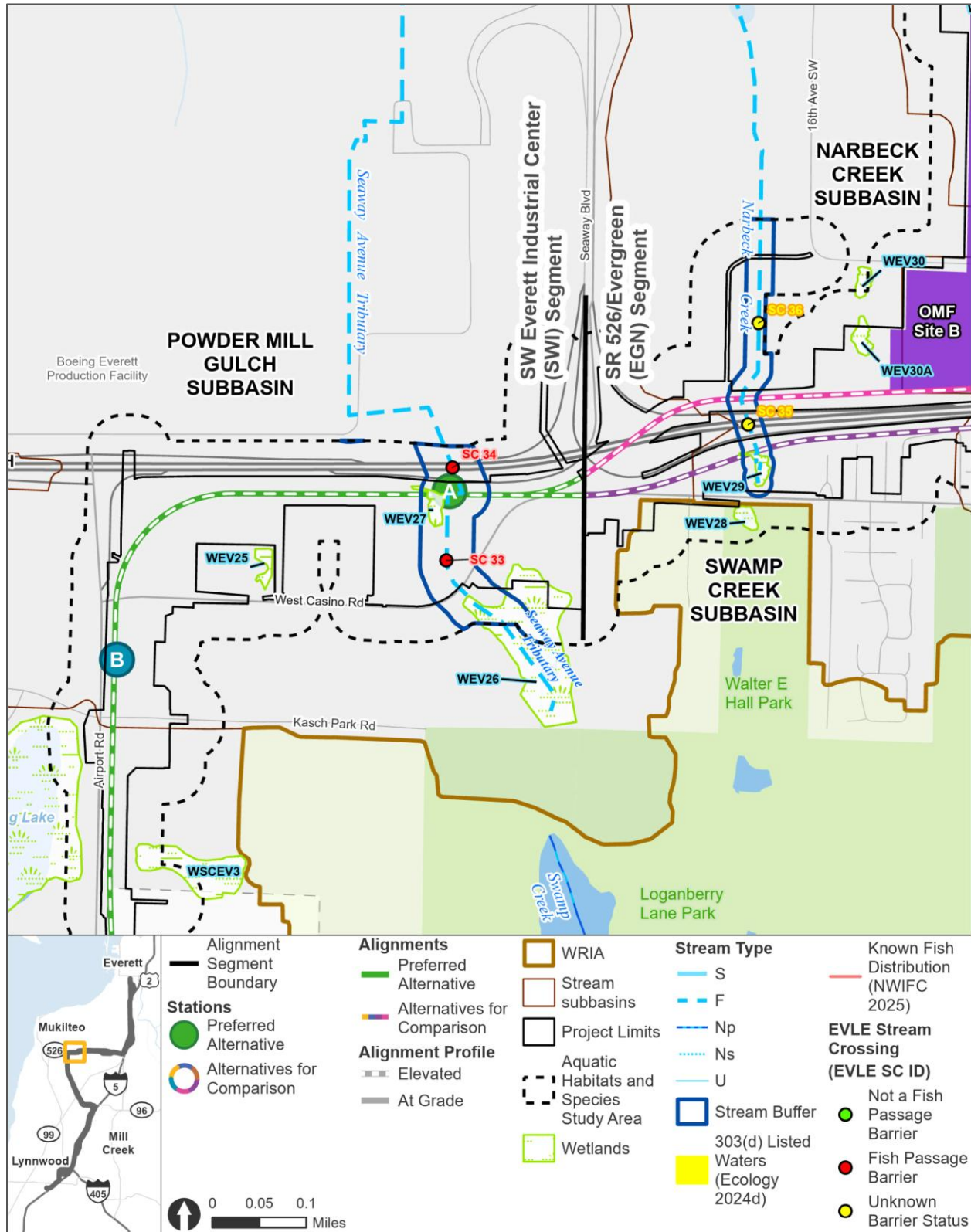


Figure 3-10 Swamp Creek Study Area (Part 8 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

Figure 3-11 Swamp Creek Study Area (Part 9 of 9)



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

### 3.1.1.2 Streams in the Swamp Creek Subbasin

Within the Swamp Creek Subbasin, there are 11 streams identified in the study area (Table 3-2). These streams are shown on Figure 3-3 through Figure 3-11 and discussed in subsequent sections in the order that the streams occur along the EVLE Project alignment from south to north.

**Table 3-2 Streams Within the Study Area and Swamp Creek Subbasin**

| Stream                   | Alignment Segment | Stream Type <sup>a</sup> | Jurisdiction     | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|--------------------------|-------------------|--------------------------|------------------|----------------------------|---------------------------------------|--------------------------------------------|
| SLY2                     | ALD               | Ns                       | Lynnwood         | 35                         | No                                    | No                                         |
| Poplar Creek             | ALD               | Np                       | Snohomish County | 50                         | No                                    | No                                         |
| Swamp Creek              | ALD/MAR           | F                        | Snohomish County | 150                        | Yes                                   | Yes                                        |
| Alder Creek              | ASH               | F                        | Snohomish County | 150                        | No                                    | Yes                                        |
|                          |                   | Np                       |                  | 50                         | No                                    | No                                         |
| Ash Way Creek            | ASH               | F                        | Snohomish County | 150                        | No                                    | Yes                                        |
|                          |                   | Np                       |                  | 50                         | No                                    | No                                         |
| SSC1                     | ASH               | Np                       | Snohomish County | 50                         | No                                    | Yes                                        |
| SSC3                     | ASH               | Np                       | Snohomish County | 50                         | No                                    | No                                         |
|                          |                   | F                        |                  | 150                        | No                                    | Yes                                        |
| York Creek Tributary     | AIR               | Ns                       | Snohomish County | 50                         | No                                    | No                                         |
|                          |                   | Np                       | Everett          | 50                         | No                                    | Yes                                        |
|                          |                   | F                        |                  | 150                        | No                                    | Yes                                        |
| SEV1                     | OMF E             | Np                       | Everett          | 75                         | No                                    | No                                         |
| Hollow Dale PI Tributary | OMF E             | F                        | Everett          | 150                        | No                                    | Yes                                        |
| SEV2                     | OMF E             | Np                       | Everett          | 50                         | No                                    | No                                         |

**NOTES:**

- Streams typing was done in accordance with Lynnwood Municipal Code (LMC) 17.10.070, Everett Municipal Code (EMC) 19.37.160, and Snohomish County Code (SCC) 30.62A.230.
- Buffers reflect those standard stream buffers based on stream typing as required under LMC 17.10.071, EMC 19.37.170, and SCC 30.62A.320.3.
- Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- Suitable fish habitat as defined by WAC 222-16-031.

#### **Stream SLY2**

Stream SLY2 is a linear channel feature that flows southwest through the study area between I-5 and the Interurban Trail within the southern end of the West Alderwood Segment (Figure 3-3). Stream SLY2 is a tributary to Scriber Creek, the largest tributary to Swamp Creek. Flow

within Stream SLY2 appears to be entirely supported by stormwater from I-5 and runoff from paved areas within Lynnwood.

#### *Stream Crossings*

No stream crossings were observed along Stream SLY2 within the study area.

#### *Aquatic Habitat and Species*

Stream SLY2 has a uniform cross sectional channel form with relatively steep sides and a wide, shallow bottom dominated by fine silts and sand. Flow appears to be ephemeral and generally follows precipitation events. No woody material or other types of aquatic habitat is present that is suitable for fish, although the drainage features may provide suitable habitat for amphibians.

#### *Riparian Habitat*

The riparian habitat present along Stream SLY2 is dominated by Himalayan blackberry and patches of native scrub-shrub vegetation.

#### **Poplar Creek**

Poplar Creek originates within the study area, east of I-5, and generally flows north to south through residential communities and along Poplar Way to its confluence with Scriber Creek, south of Larch Way (Figure 3-3 and Table 3-3).

#### *Stream Crossings*

Poplar Creek flows north to south under Birch Way (Stream Crossing 1) which provides access to an Edmonds School District property.

**Table 3-3 Stream Crossings Along Poplar Creek Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream       | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                         |
|--------------------|--------------|--------------|-----------------------------|-------------|----------------------|-----------------------------------------------|
| SC 1               | XID2245      | Poplar Creek | ALD                         | Ns          | No                   | 60-inch corrugated steel pipe under Birch Way |

#### *Aquatic Habitat and Species*

The observed portion of Poplar Creek, north of Birch Way, appeared to have minimal aquatic habitat in a narrow, uniform channel with sand and silt dominated stream substrates. No wood material was present. South of Birch Way, where Poplar Creek enters a narrow riparian forested habitat, the Poplar Creek channel could not be observed. The aquatic habitat provided in this location is unknown.

Poplar Creek does not have documented fish use in the study area, although Poplar Creek may provide suitable habitat for amphibians.



### *Riparian Habitat*

North of Birch Way, the riparian habitat is highly disturbed with maintained lawns and ornamental landscaping extending up to the stream banks. However, as the stream flows south of Birch Way, Poplar Creek flows through a deciduous forested riparian habitat dominated by a uniform-aged red alder overstory. The understory is dominated by native shrubs, including salmonberry, beaked hazelnut, and red elderberry.

### **Swamp Creek**

Swamp Creek passes through the study area at two locations:

1. Downstream location – at the north end of the West Alderwood Segment, west of I-5 and north of SR 525 (Figure 3-4 and Figure 3-5).
2. Upstream location – within the Mariner Segment where it crosses under Airport Road, west of Admiralty Road (Figure 3-8 and Figure 3-9).

Observation of these two Swamp Creek crossings within the study area have been limited to publicly accessible road crossings and from WSDOT right-of-way to date.

### *Stream Crossings*

Where Swamp Creek crosses through the study area at the downstream location, within the north end of the West Alderwood Segment, the stream flows west to east through the study area (Table 3-4). Swamp Creek initially flows out of a large wetland complex (Wetland WSC3) before crossing under Maple Road within a 10-foot diameter, squash corrugated steel pipe (Stream Crossing 2). The stream then flows through two (60-inch and 64-inch) round corrugated steel pipes below an abandoned WSDOT access road (Stream Crossing 3). Before the stream exits the study area, it enters two (64-inch and 70-inch) round corrugated steel pipes below I-5 (Stream Crossing 4). None of these existing stream crossings have been determined by WDFW to be fish passage barriers.

Further upstream, where Swamp Creek flows north to south across the study area within the Mariner Segment, it flows through three additional stream crossings. As Swamp Creek approaches the study area from the north, it drains out of a large wetland (Wetland WSC18) through a 12-foot-wide precast concrete box culvert under a private driveway (Stream Crossing 5) before flowing through a 64-inch corrugated steel pipe below an unnamed access road (Stream Crossing 6). The stream continues to flow south where it crosses through a 72-inch round structural plate steel pipe culvert under Airport Road (Stream Crossing 7). WDFW has determined all three of these crossings to be barriers to fish passage.

**Table 3-4 Stream Crossings Along Swamp Creek Within the Study Area**

| Stream Crossing ID | WDFW Site ID        | Stream      | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                               |
|--------------------|---------------------|-------------|-----------------------------|-------------|----------------------|-------------------------------------------------------------------------------------|
| SC 2               | 993127 <sup>1</sup> | Swamp Creek | ALD                         | F           | No                   | 10-foot-wide squash corrugated steel pipe under Maple Road                          |
| SC 3               | 993126              |             |                             | F           | No                   | 60-inch and 64-inch round corrugated steel pipes under an unnamed WSDOT access road |
| SC 4               | 993090 <sup>a</sup> |             |                             | F           | No                   | 64-inch and 70-inch round corrugated steel pipes under Interstate 5                 |
| SC 5               | 939003              |             | MAR                         | F           | Yes                  | 12-foot precast concrete box culvert under a private driveway                       |
| SC 6               | 993828              |             |                             | F           | Yes                  | 64-inch round corrugated steel pipe under a private driveway                        |
| SC 7               | 993827              |             |                             | F           | Yes                  | 72-inch round stainless-steel pipe under Airport Road                               |

## NOTES:

- a) The WDFW Fish Passage and Diversion Screening Inventory Database Site Description Report for this stream crossing structure is greater than 10 years old. Findings within these stream crossing assessments are assumed to still be valid.

*Aquatic Habitat and Species***Downstream Location – West Alderwood Segment**

Aquatic habitat within the open channel segments of Swamp Creek in the downstream location of the study area (beginning in Figure 3-3) is dominated by a single, relatively uniform channel with an estimated 25-foot bankfull width. The streambed materials are dominated by rounded gravel and cobbles with submerged vegetation and woody material present in the channel. Recent beaver activity was apparent, and evidence of in-stream denning was observed.

Salmonid spawning and rearing activities are documented in Swamp Creek within the West Alderwood Segment. In 2007, WSDOT corrected a partial fish barrier at the I-5/I-405 interchange (WDFW Site ID 993827), restoring fish passage across I-5 and up as far upstream (north) as Lake Stickney. Salmonids documented within the downstream location of the Swamp Creek mainstem include Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), sockeye salmon (*O. nerka*), winter steelhead (*O. mykiss*), and coastal cutthroat (*O. clarkii*) (NWIFC 2025). Chinook salmon have been documented spawning in Swamp Creek below the I-5/I-405 interchange, with coho salmon and sockeye salmon spawning up to 0.25 mile upstream of the interchange (WDFW 2024a, NWIFC 2025). Other aquatic species that may be supported within this downstream reach of Swamp Creek include amphibians and macroinvertebrates.

### Upstream Location – Mariner Segment

Swamp Creek within the upstream location of the study area (see Figure 3-8) flows through deepwater and aquatic bed habitat within Wetland WSC18 before entering a single channel. The stream channel has an estimated 20-foot bankfull width<sup>3</sup> upstream of Airport Road and stream sediments could not be observed due to limited access. As Swamp Creek exits Stream Crossing 7, the stream enters a visibly deep pool within Wetland WSC16. A beaver was observed within the mainstem at this location and large wood material in the channel – potentially a beaver dam or den – was visible from Airport Road. The bankfull width of Swamp Creek downstream of Airport Road is approximately 60 feet wide. Due to the limited access and depth of the pool downstream of Airport Road, stream sediments could not be observed.

Upstream of Lake Stickney, including at this location, there is no documented fish use (NWIFC 2025). Swamp Creek and its tributaries are reportedly subject to seasonal drying (City of Everett 2022a). Although this may occur in specific stream reaches or within parts of the headwater tributaries, seasonal drying has not been observed throughout Swamp Creek within the study area. While anadromous species may not occur within this upstream location, it is possible that resident fish occur based on the observed stream habitat and year-round hydrologic conditions of Swamp Creek. Other aquatic species that may be supported within this upstream reach of Swamp Creek include amphibians and macroinvertebrates.

#### *Riparian Habitat*

In the downstream location, riparian habitat is dominated by native deciduous trees and shrubs and Himalayan blackberry. Northwest of the I-5 and SR 525 interchange, Swamp Creek flows through a large Category I wetland, Wetland WSC3. The riparian corridor width extends between 350 feet to over 2,000 feet and is dominated by native vegetation. Where Swamp Creek crosses the I-5 and SR 525 interchange, the riparian corridor becomes degraded and dominated by Himalayan blackberry. The riparian corridor is limited to a width of 50 to 100 feet within the I-5 interchange before Swamp Creek enters a piped conveyance across I-5. Wetlands WSC27, WSC3, WSC16, and WSC18 are described in Table 3-12.

In the upstream location, Swamp Creek flows through Wetlands WSC16 and WSC18. Riparian habitat on the east side of Airport Road near WSC18 at the upstream location is dominated by native shrubs and Himalayan blackberry with deciduous trees, and the corridor extends approximately 160 feet wide and 30 feet high.

Riparian habitat near WSC16 at the upstream location is also dominated by native shrubs and deciduous trees, extending approximately 260 feet wide by 30 feet high downstream (southwest) of Airport Road and approximately 330 feet wide by 30 feet high upstream (northeast) of Airport Road. Mature conifers and standing snags are also present within the riparian habitat upstream of Airport Road.

#### *Alder Creek*

Alder Creek originates west of 13th Avenue W, between 170th Street SW and 170th Place SW, and flows southwest towards the Interurban Trail. Stormwater outfalls from surface roads and adjacent residential developments contribute to Alder Creek's surface flows. Alder Creek

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<sup>3</sup> Bankfull width of a stream is defined as “the measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth. In cases where multiple channels exist, bankfull width is the sum of the individual channel widths along the cross section” (DNR 2004).

consolidates with a tributary east of the Interurban Trail before entering a piped conveyance under the Interurban Trail and I-5 at the east edge of the study area. Alder Creek generally flows east to west across the study area towards its confluence with Swamp Creek outside of the study area (Figure 3-5). As Alder Creek exits its conveyance under I-5, it enters an open channel that flows west, downslope towards Alder Way and Swamp Creek.

### *Stream Crossings*

The Alder Creek mainstem begins west of 13th Avenue W and flows southwest to a 24-inch concrete pipe (Stream Crossing 8) under the Interurban Trail which drains east to west before flowing under I-5 within a 42-inch concrete pipe (Stream Crossing 9) (Table 3-5). As Alder Creek exits its conveyance, it enters an open channel that drops steeply towards Alder Way which it crosses under within a 44-inch corrugated metal pipe (Stream Crossing 10) before flowing west beyond the study area on its way to Swamp Creek.

**Table 3-5 Stream Crossings Along Alder Creek Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream      | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                            |
|--------------------|--------------|-------------|-----------------------------|-------------|----------------------|--------------------------------------------------|
| SC 8               | N/A          | Alder Creek | ASH                         | Np          | No                   | 24-inch concrete pipe under the Interurban Trail |
| SC 9               | 996229       |             |                             | Np          | No                   | 42-inch concrete pipe under I-5                  |
| SC 10              | 102 S105     |             |                             | F           | No                   | 44-inch corrugated metal pipe under Alder Way    |

### *Aquatic Habitat and Species*

Alder Creek flows through multiple piped stream crossings within the study area, which limits aquatic habitat to approximately 470 linear feet of open channel. West of I-5, Alder Creek flows through an open channel with streambed sediments dominated by gravel, sands, and silts with few large cobbles. Overhanging shrub vegetation and small to moderate branches from adjacent conifers and deciduous trees are present within the stream channel. At the intersection of Alder Creek and Alder Way, abundant instream vegetation is present with modified rip-rap stream banks.

Alder Creek joins with Swamp Creek upstream of the I-5/I-405/SR 525 interchange approximately 900 linear feet west of the study area. Therefore, those species associated with the Swamp Creek downstream location may occur within Alder Creek, west of I-5 within the study area. These species include Chinook salmon, coho salmon, sockeye salmon, winter steelhead, and coastal cutthroat. Other aquatic species that may be supported by Alder Creek within the study area include amphibians and macroinvertebrates.

### *Riparian Habitat*

The riparian habitat along Alder Creek east of Alder Way, where it occurs in an open channel, is dominated by western red cedar with an understory dominated by salmon berry, Himalayan blackberry, and sword fern. West of Alder Way, the riparian habitat along Alder Creek

transitions to a forested, scrub-shrub habitat within Wetland WSC3 that is dominated by red alder and willow species.

### Ash Way Creek

Ash Way Creek generally flows east to west across the study area until it joins Swamp Creek outside of the study area. Ash Way Creek is believed to originate from stormwater from I-5 and private commercial development east of I-5 that consolidates into a piped conveyance that drains west under I-5. No known open stream channels occur east of I-5 (Figure 3-6).

### Stream Crossings

Ash Way Creek flows east to west through a 24-inch precast concrete pipe (Stream Crossing 11) under I-5. Upon crossing I-5, Ash Way Creek enters a 24-inch corrugated metal pipe (Stream Crossing 12) through a private property to a manhole upstream (east) of 20th Avenue W where it then enters a 24-inch high-density polyethylene (HDPE) pipe (Stream Crossing 13) under 20th Avenue W. Ash Way Creek then enters an open channel that drops steeply from 20th Avenue W to the west. Ash Way Creek crosses under a multifamily residential property within a 72-inch corrugated metal pipe (Stream Crossing 14) before exiting the study area and continuing to join Swamp Creek (Table 3-6).

**Table 3-6 Stream Crossings Along Ash Way Creek Within the Study Area**

| Stream Crossing ID | WDFW Site ID        | Stream        | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                              |
|--------------------|---------------------|---------------|-----------------------------|-------------|----------------------|--------------------------------------------------------------------|
| SC 11              | 996230 <sup>a</sup> | Ash Way Creek | ASH                         | Np          | No                   | 24-inch concrete pipe under I-5                                    |
| SC 12              | 102 S127            |               |                             | Np          | No                   | 24-inch corrugated metal pipe under a private property             |
| SC 13              |                     |               |                             |             |                      | 24-inch HDPE pipe under 20th Avenue W                              |
| SC 14              | 939014              |               |                             | F           | No                   | 72-inch corrugated metal pipe under a private multifamily property |

**NOTES:**

- a) The WDFW Fish Passage and Diversion Screening Inventory Database Site Description Report for this stream crossing structure is greater than 10 years old. Findings within these stream crossing assessments are assumed to still be valid.

### Aquatic Habitat and Species

Ash Way Creek is largely enclosed within a network of piped conveyances within the study area. Ash Way Creek is located on private properties where it occurs within an open channel and access was not available to observe its aquatic habitat conditions. However, habitat survey summary reports prepared by WDFW for Ash Way Creek indicate that the stream channel contains some suitable spawning gravels (WDFW 2024c).

Ash Way Creek joins Swamp Creek upstream of the Alder Creek confluence and the I-5/I-405/SR 525 interchange approximately 2,000 linear feet west of the study area. Those species associated with the Swamp Creek downstream location may occur within Ash Way Creek in the



study area west of 20th Avenue W. These species include Chinook salmon, coho salmon, sockeye salmon, winter steelhead, and coastal cutthroat. Other aquatic species that may be supported by Ash Way Creek within the study area include amphibians and macroinvertebrates.

#### *Riparian Habitat*

The riparian habitat along Ash Way Creek, where it occurs in an open channel to the west of I-5, is dominated by deciduous overstory with a native shrub understory.

#### **Stream SSC1**

Stream SSC1 originates to the west of I-5 and generally flows northwest to southeast across the study area on its way to Martha Lake, which ultimately drains to Swamp Creek (Figure 3-7).

#### *Stream Crossings*

Surface flow is piped from outside the study area under residential development to a forested wetland (Wetland WSC26), west of I-5. Surface flow within this wetland consolidates just upstream of a 36-inch precast concrete pipe (Stream Crossing 15) which conveys Stream SSC1 under I-5 to the west. As Stream SSC1 exits under I-5, it turns south and flows within a linear channel parallel to I-5 where it enters a 30-inch ductile iron pipe (Stream Crossing 16) below the Interurban Trail and through a network of pipes through a residential community to the east and beyond the study area where it enters Martha Lake (Table 3-7).

**Table 3-7 Stream Crossings Along Stream SSC1 Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream      | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                           |
|--------------------|--------------|-------------|-----------------------------|-------------|----------------------|---------------------------------------------------------------------------------|
| SC 15              | 939006       | Stream SSC1 | ASH                         | F           | Yes                  | 36-inch precast concrete pipe under I-5                                         |
| SC 16              | 939005       |             |                             | F           | Yes                  | 30-inch ductile iron pipe under the Interurban Trail and residential properties |

#### *Aquatic Habitat and Species*

Aquatic habitat within Stream SSC1 is limited to a uniform, linear channel paralleling both the west and east sides of I-5 within the study area.

On the west side of I-5, Stream SSC1 drains through a forested wetland (WSC26). Within Wetland WSC26, no defined stream channel was observed, and surface water appears to be spread through multiple micro-depressions and low points with woody material present. However, as surface flow exits the wetland near the toe of the I-5 road prism, it enters a linear channel that lacks large wood or other in-water habitat complexity as it flows towards Stream Crossing 15, which conveys it southeast under I-5. Stream sediments are dominated by sand, silt, and gravel. Flow within Stream SSC1 appears to be perennial, yet depth and volume of flow appears to substantially reduce during periods of low precipitation. Given the periodic low-flow conditions, multiple downstream fish passage barriers, and the fact that this stream reach is above documented fish distribution, Stream SSC1 does not currently provide any fish habitat.

However, other aquatic species, such as amphibians, may use Stream SSC1 and its associated Wetland WSC26.

East of I-5, Stream SSC1 exits Stream Crossing 15 and turns abruptly to the south into a linear channel following the toe of the I-5 road prism. The stream channel features concrete weirs extending perpendicularly across the stream channel. Woody shrubs overhang the stream and provide some cover, but the channel itself lacks woody material and other in-water habitat complexity. Stream sediments east of I-5 are also dominated by sand, silt, and gravel, and no fish are currently present for similar reasons as noted above. Aquatic species presence is anticipated to be limited to amphibians and macroinvertebrates.

#### *Riparian Habitat*

West of I-5, riparian habitat along Stream SSC1 is a shrub strata dominated by blackberry with native woody shrubs, such as red-osier dogwood and salmonberry becoming dominant within Wetland WSC26. Wetland WSC26 also includes a mixed forest strata.

East of I-5, native shrubs also dominate the narrow riparian corridor between I-5 and the Interurban Trail with even-aged red alders abundant and a mature western red cedar present, adding a forested component.

#### **Stream SSC3**

Stream SSC3 originates from a stormwater facility within associated with a multifamily development west of I-5 (Figure 3-6). It starts as a small stream channel in a narrow riparian corridor between apartment buildings and flows west towards Ash Way. After flowing under Ash Way, Stream SSC3 continues west and exits the study area on its way to Swamp Creek.

#### *Stream Crossings*

As Stream SSC3 approaches Ash Way, the channel widens and enters a 36-inch, screened precast concrete pipe (Stream Crossing 17) under Ash Way (Table 3-8).

**Table 3-8 Stream Crossings Along Stream SSC3 Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream      | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                       |
|--------------------|--------------|-------------|-----------------------------|-------------|----------------------|---------------------------------------------|
| SC 17              | XID2165      | Stream SSC3 | ASH                         | F           | Yes                  | 36-inch precast concrete pipe under Ash Way |

#### *Aquatic Habitat and Species*

The aquatic habitat within Stream SSC3 is limited to a narrow uniform, linear channel flowing east to west. Stream sediments east of Ash Way are dominated by sands, gravels, and cobbles. West of Ash Way, the channel widens out to approximately 48-inches wide with sediments dominated by sands, gravels, and cobbles.

Stream SSC3 joins with the Swamp Creek mainstem approximately 1,500 linear feet west of the study area upstream of 164th Street SW. Species associated with Swamp Creek downstream of Lake Stickney may occur in Stream SSC3 within the study area. These species include Chinook

salmon, coho salmon, sockeye salmon, winter steelhead, and coastal cutthroat. Other aquatic species that may be supported by Stream SSC3 within the study area include amphibians and macroinvertebrates.

#### *Riparian Habitat*

The narrow, vegetated riparian habitat which Stream SSC3 flows through within the apartment complex property east of Ash Way is dominated by a mixed forested canopy with a shrub layer of beaked hazelnut, snowberry, vine maple, and Himalayan blackberry. West of Ash Way, the riparian habitat is dominated by an understory of Himalayan blackberry, evergreen blackberry, English ivy, and buttercup with red alder and Pacific willow trees present.

#### **York Creek Tributary**

York Creek Tributary originates within the study area from a municipal stormwater facility southwest of the Airport Road and Beverly Park Road intersection and north of 112th Street SW (Figure 3-9).

#### *Stream Crossings*

Surface water is released from the municipal stormwater facility located to the west of Airport Road through a 36-inch concrete pipe onto a gravel splash pad within Wetland WEV4 on the east side of Airport Road. No defined bed and bank are located downstream of this 36-inch concrete pipe and splash pad (Stream Crossing 18). However, as surface water within Wetland WEV4 approaches 112th Street SW, York Creek Tributary develops a defined channel and crosses below 112th Street SW within a 72-inch concrete pipe (Stream Crossing 19).

South of 112th Street SW, York Creek Tributary generally flows southeast through Wetland WEV3 and a forested riparian corridor prior to entering a 16-inch concrete pipe (Stream Crossing 20) below a private access road operated by the Mukilteo Water District. York Creek Tributary then enters a 30-inch concrete pipe (Stream Crossing 21) under private properties before entering Wetland WEV1 within the AIR-A station area. Wetland WEV1 and York Creek Tributary drain into a network of 30-inch diameter pipes (Stream Crossing 22) which tightlines the stream below multiple private properties, around commercial buildings, and under both SR 99 and Center Road. Downstream (south) of Center Road, York Creek Tributary returns to a narrow stream channel west of Avondale Road and outside of the study area (Table 3-9).

**Table 3-9 Stream Crossings Along Hollow Dale Place Tributary Within the Study Area**

| Stream Crossing ID | WDFW Site ID          | Stream               | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                                |
|--------------------|-----------------------|----------------------|-----------------------------|-------------|----------------------|--------------------------------------------------------------------------------------|
| SC 18              | N/A                   | York Creek Tributary | AIR                         | Ns          | No                   | 36-inch precast concrete pipe under Airport Road                                     |
| SC 19              | 102 S100 <sup>a</sup> |                      |                             | F           | Unknown              | 72-inch precast concrete pipe under 112th Street SW <sup>b</sup>                     |
| SC 20              | 939038                |                      |                             | F           | Yes                  | 16-inch precast concrete pipe under a Mukilteo Sewer District access road            |
| SC 21              | 939037                |                      |                             | F           | Yes                  | 30-inch round precast concrete pipe under private properties                         |
| SC 22              | XID3580               |                      |                             | F           | Yes                  | 30-inch round corrugated metal pipe under private properties, SR 99, and Center Road |

NOTES:

- The WDFW Fish Passage and Diversion Screening Inventory Database Site Description Report for this stream crossing structure is greater than 10 years old. Findings within these stream crossing assessments are assumed to still be valid.
- The dimension of the structure differs between WDFW documentation and City of Everett drainage data. Dimensions of this structure have not been field verified.

*Aquatic Habitat and Species*

Aquatic habitat within York Creek Tributary within the study area has not been fully evaluated due to limited access. However, York Creek Tributary appears to flow generally northwest to southeast through the study area. Where it occurs within an open stream channel, York Creek Tributary appears to generally flow through a narrow stream channel with streambed sediments dominated by gravel, sands, and silts. No large wood or other notable in-stream habitat complexity could be observed. Minimal aquatic habitat occurs within the piped sections of York Creek Tributary.

York Creek Tributary is located above Lake Stickney, which is the upper limits of documented fish distribution. Further, fish passage barriers within the study area currently limit access for aquatic species into those segments of open channel within the study area. Therefore, no anadromous or resident fish species are believed to be present within York Creek Tributary within the study area, despite suitable habitat being present. Aquatic species present within the study area are believed to be limited to amphibians and macroinvertebrates.

*Riparian Habitat*

A generally intact, native riparian corridor dominated by shrub and deciduous tree species is present along York Creek Tributary for approximately 300 linear feet north of 112th Street SW and approximately 1,200 linear feet south of 112th Street SW. York Creek Tributary flows through Wetlands WEV1, WEV2, WEV3, and WEV4. Downstream of this, York Creek Tributary

enters a network of piped conveyances. Minimal riparian habitat is present along the remainder of York Creek Tributary within the study area.

### **Stream SEV1**

Stream SEV1 originates within the study area on OMF Site E north of Holly Drive, where it appears to be a former linear ditch constructed as an outlet from a headwater wetland (WEV7) sometime between 1952 and 1969, based on a historic aerial photo review (Figure 3-10). Over time, Stream SEV1 has naturalized and developed a discernable bed and bank within the study area. Stream SEV1 generally flows northwest to southeast until it joins Swamp Creek outside of the study area.

### **Stream Crossings**

Within the study area, Stream SEV1 drains north to south within OMF Site E before entering a 12-inch concrete pipe (Stream Crossing 23) stormwater inlet into the stormwater system within Holly Drive. Stream SEV1 enters the stormwater network for approximately 300 linear feet before ultimately discharging into a natural stream channel south of Holly Drive outside of the study area (Table 3-10).

**Table 3-10 Stream Crossings Along Stream SEV1 Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream      | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                   |
|--------------------|--------------|-------------|-----------------------------|-------------|----------------------|-----------------------------------------|
| SC 23              | N/A          | Stream SEV1 | AIR / OMF Site E            | Np          | No                   | 12-inch concrete pipe under Holly Drive |

### **Aquatic Habitat and Species**

Aquatic habitat within Stream SEV1 within the study area is very limited. Stream SEV1 originates from both a piped outfall and Wetland WEV7, which flows south through a uniform, linear channel with overly steepened banks and with stream sediments comprised of cobbles, gravels, sand, and silt. Small to moderate diameter branches from deciduous trees within the riparian environment have fallen over and into the stream channel.

Stream SEV1 is above Lake Stickney, the upper limits of documented fish distribution. Further, WDFW has determined the upper limit of suitable fish habitat within Stream SEV1 occurs downstream of the study area (WDFW 2024a, WDFW 2025c). Therefore, Stream SEV1 does not provide habitat for fish species. Potential aquatic species present within Stream SEV1 are believed to be limited to amphibians and macroinvertebrates.

### **Riparian Habitat**

Stream SEV1 originates within Wetland WEV7, described in Table 3-12, before flowing into a uniform and linear channel. The riparian habitat along Stream SEV1 is dominated by mature deciduous trees, such as red alder and cottonwood, with an understory dominated by salmonberry and English ivy.



### Hollow Dale Place Tributary

Hollow Dale Place Tributary begins south of 103rd Street SW and west of 23rd Avenue W, within OMF Site E (Figure 3-10). Hollow Dale Place Tributary generally flows northwest to southeast for approximately 0.75 miles to its confluence with Swamp Creek shortly after it crosses under Hollow Dale Place, outside of the study area.

#### Stream Crossings

Hollow Dale Place Tributary originates from an 18-inch corrugated steel pipe (Stream Crossing 24) that discharges south of 103rd Street SW. As the stream flows in a generally southeast direction, it flows west to east within private, residential properties and through multiple private crossings under driveways and backyards (Stream Crossings 25 to 30, see Figure 3-10). Based on field observations, it appears that these stream crossings range from 12-inch to 36-inch round pipes comprised of various materials. WDFW has determined that the 18-inch pipe that Hollow Dale Place Tributary originates from (Stream Crossing 24) to be the upper limit of suitable fish habitat (WDFW 2024d, WDFW 2025c). The stream receives surface water from Wetlands WSCEV1, WSCEV2, WSC23, and WEV20; however, these wetlands lack any discernable channels. The multiple private stream crossings along Hollow Dale Place Tributary within private properties (Stream Crossings 25 to 30) have not been evaluated on whether they provide a barrier to fish passage due to limited access (Table 3-11).

**Table 3-11 Stream Crossings Along Hollow Dale Place Tributary Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream                      | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                           |
|--------------------|--------------|-----------------------------|-----------------------------|-------------|----------------------|---------------------------------------------------------------------------------|
| SC 24              | 420764       | Hollow Dale Place Tributary | OMF Site E                  | Np          | No                   | 18-inch corrugated steel pipe                                                   |
| SC 25              | N/A          |                             |                             | F           | Unknown              | Multiple stream crossings of variable sizes and materials on private properties |
| SC 26              |              |                             |                             |             | Yes                  | 12-inch to 36-inch pipes of unknown materials                                   |
| SC 27              |              |                             |                             |             | Unknown              |                                                                                 |
| SC 28              |              |                             |                             |             | Unknown              |                                                                                 |
| SC 29              |              |                             |                             |             | Unknown              |                                                                                 |
| SC 30              |              |                             |                             |             | Unknown              |                                                                                 |

#### Aquatic Habitat and Species

Aquatic habitat within Hollow Dale Place Tributary within the study area is a highly modified channel that varies in condition as it flows in a generally southeast direction through private residential properties. Where the stream originates south of 103rd Street SW it has a shallow channel profile with an estimated 12-foot-wide bankfull width. However, as it flows southwest through the private residences, the stream appears to be modified into a ponded condition behind a residence south of 103rd Street SW before returning to a modified channel profile. Stream sediments observed along Hollow Dale Place Tributary include individual stream

segments dominated by sands and rounded gravel to stream segments with rounded cobbles. No large wood material is present within the Hollow Dale Place Tributary within the study area.

Hollow Dale Place Tributary is located above Lake Stickney, the upper limits of documented fish distribution. Further, fish passage barriers coupled with stream segments that demonstrate seasonal flow downstream and outside of the study area are believed to limit the potential of fish presence within the study area. However, Hollow Dale Place Tributary does provide suitable fish habitat and WDFW considers the entire length of Hollow Dale Place to be a Type F stream (WDFW 2025c). Therefore, aquatic species that may occur within the study area are amphibians, macroinvertebrates, and possibly resident fish.

#### *Riparian Habitat*

The riparian habitat along Hollow Dale Place Tributary is highly fragmented and modified with vegetation dominated by landscaped private yards, invasive species, and additional culverts on private property. Hollow Dale Place Tributary flows through multiple wetlands within the study area including Wetland WEV19, WEV18, WEV18A, WEV17A, WEV17, and WEV16. These wetlands are further described in Table 3-12. Dominant vegetation along Hollow Dale Place Tributary includes red alder, willow, vine maple, Himalayan blackberry, salmonberry, and creeping buttercup. A more naturalized riparian condition, measuring approximately 180 feet wide by 30 feet and dominated by native shrubs and deciduous trees, occurs south of the intersection of 104th Street SW and 21st Avenue W within Wetland WEV16.

#### **Stream SEV2**

Stream SEV2 originates within the study area, northeast of the OMF Site E project limits, where surface water from Wetland WSC23 and WSCEV2 discharges from a conveyance south of 100th Street SW (Figure 3-10). The Stream SEV2 channel then flows southeast, exits the study area, and eventually discharges to a tributary of Swamp Creek outside of the study area. Where Stream SEV2 occurs within the study area, it is located entirely within private property.

#### *Stream Crossings*

There were no stream crossings observed along Stream SEV2 within the study area.

#### *Aquatic Habitat and Species*

The aquatic habitat within Stream SEV2 appears to be limited due to the narrow width of the channel where it could be observed. Stream sediments appear to be dominated by sands and silts, based on observations from 100th Street SW and 21st Avenue SW. Small to moderate diameter branches from deciduous trees within the riparian environment have fallen over and into the stream channel.

Stream SEV2 is above Lake Stickney, the upper limits of documented fish distribution. Therefore, Stream SEV2 does not provide habitat for fish species. Potential aquatic species present within Stream SEV2 are believed to be limited to amphibians and macroinvertebrates.

#### *Riparian Habitat*

The riparian habitat along Stream SEV2 where it occurs in an open channel is dominated by mature deciduous trees, such as red alder, with an understory dominated by salmonberry and red-osier dogwood within Wetland WEV23.

### 3.1.1.3 Wetlands in the Swamp Creek Subbasin

Within the Swamp Creek Subbasin, 60 wetlands were identified within the study area (Figure 3-12 through Figure 3-19). Of these wetlands, 31% are less than 0.01 acre in size, 23% are between 0.01 and 0.25 acre, 31% are between 0.25 and 1.0 acre, and 15% exceed 1 acre.

The majority of wetlands identified within the Swamp Creek subbasin are depressional wetlands, although a few riverine and slope wetlands are present as well. The majority of wetlands exhibited palustrine scrub-shrub vegetation (90%), palustrine forested vegetation (64%), palustrine emergent vegetation (42%), and palustrine aquatic bed vegetation (3%).

Due to extensive habitat fragmentation and their location within moderate to high intensity land uses, these wetlands generally provide low habitat function. The exceptions are those larger wetlands that provide higher quality habitat for wildlife. The largest and highest rated wetland is Wetland WSC3, a 118-acre Category I wetland. Wetland WSC3 is located partly within the study area and parallels the alignment west of the study area.

As a result of their location by high intensity land uses, the wetlands have both high potential and opportunity to provide water quality and hydrological function within the subbasin. Further, a TMDL for bacteria is enacted, a multi-parameter TMDL is in development, and multiple stream segments are listed as impaired within the Swamp Creek subbasin (Ecology 2024a). Therefore, these wetlands generally have higher water quality and hydrologic functions.

With their lower habitat score and higher water quality and hydrologic scores, many of the wetlands within the Swamp Creek subbasin were rated as Category II or III wetlands.

Table 3-12 summarizes those wetlands identified within the Swamp Creek subbasin study area.

**Table 3-12 Wetlands Within the Swamp Creek Subbasin Study Area**

| Wetland | Alignment Segment | Cowardin Class                        | HGM Class    | Size (acres) <sup>a</sup> | Rating (Category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|---------------------------------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WLY1    | ALD               | Palustrine scrub-shrub (PSS)          | Depressional | 0.05                      | III                            | 3                          | 60            |
| WLY2    | ALD               | Palustrine emergent (PEM)/PSS         | Depressional | 0.04                      | III                            | 3                          | 60            |
| WLY3    | ALD               | PEM                                   | Depressional | 0.02                      | III                            | 3                          | 60            |
| WLY4    | ALD               | PSS                                   | Depressional | 0.11                      | III                            | 3                          | 60            |
| WSC1    | ASH               | PEM/PSS                               | Depressional | 0.02                      | III                            | 3                          | 80            |
| WSC2    | ASH               | PEM/PSS/<br>Palustrine Forested (PFO) | Depressional | 0.95                      | III                            | 4                          | 80            |
| WSC3    | ASH               | PEM/PSS/PFO                           | Depressional | 118.38                    | I                              | 6                          | 150           |
| WSC4    | ASH               | PEM/PSS/PFO                           | Slope        | 0.63                      | III                            | 4                          | 80            |
| WSC5    | ASH               | PEM                                   | Slope        | 0.01                      | III                            | 5                          | 80            |
| WSC6    | ASH               | PEM/PSS                               | Depressional | 0.16                      | III                            | 3                          | 80            |
| WSC7    | ASH               | PSS                                   | Depressional | 0.30                      | III                            | 4                          | 80            |

| Wetland             | Alignment Segment | Cowardin Class                   | HGM Class    | Size (acres) <sup>a</sup> | Rating (Category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------------------|-------------------|----------------------------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WSC8                | ASH               | Palustrine Aquatic Bed (PAB)/PSS | Depressional | 0.06                      | II                             | 3                          | 100           |
| WSC9                | ASH               | PSS/PFO                          | Depressional | 0.02                      | IV                             | 3                          | 50            |
| WSC10               | ASH               | PEM/PSS                          | Depressional | 0.19                      | III                            | 3                          | 80            |
| WSC11               | ASH               | PSS/PFO                          | Depressional | 0.07                      | III                            | 4                          | 80            |
| WSC11A              | ASH               | PSS/PFO                          | Depressional | 0.28                      | III                            | 4                          | 80            |
| WSC12               | ASH               | PEM                              | Depressional | 0.15                      | III                            | 3                          | 80            |
| WSC13               | ASH               | PSS/PFO                          | Depressional | 0.25                      | III                            | 5                          | 80            |
| WSC14               | ASH               | PEM                              | Depressional | 0.01                      | IV                             | 3                          | 50            |
| WSC15               | OMF Site F        | PSS/PFO                          | Slope        | 0.17                      | III                            | 3                          | 80            |
| WSC16               | MAR               | PEM/PSS/PFO                      | Depressional | 0.71                      | II                             | 6                          | 150           |
| WSC17               | MAR               | PEM/PSS                          | Depressional | 0.01                      | III                            | 5                          | 150           |
| WSC18               | MAR               | PAB/PEM/PSS                      | Depressional | 6.14                      | III                            | 6                          | 150           |
| WSC19               | MAR/AIR           | PAB/PSS/PFO                      | Depressional | 4.92                      | III                            | 5                          | 80            |
| WSC20               | AIR / OMF Site E  | PEM/PSS/PFO                      | Depressional | 0.20                      | III                            | 5                          | 50            |
| WSC22               | OMF Site E        | PSS                              | Depressional | 0.09                      | III                            | 5                          | 80            |
| WSC23               | OMF Site E        | PSS/PFO                          | Depressional | 0.29                      | III                            | 6                          | 150           |
| WSC26               | ASH               | PSS/PFO                          | Depressional | 1.64                      | III                            | 5                          | 150           |
| WSC26A              | ASH               | PSS/PFO                          | Depressional | 0.17                      | III                            | 4                          | 80            |
| WSC27               | ALD/ASH           | PEM/PSS                          | Depressional | 0.18                      | III                            | 5                          | 150           |
| WSCEV1 <sup>c</sup> | OMF Site E        | PSS/PFO                          | Depressional | 4.60                      | II                             | 5                          | 150 / 100     |
| WSCEV2              | OMF Site E        | PSS/PFO                          | Depressional | 0.57                      | III                            | 6                          | 150           |
| WEV1                | AIR               | PSS/PFO                          | Depressional | 0.80                      | III                            | 4                          | 80            |
| WEV2                | AIR               | PSS/PFO                          | Depressional | 0.55                      | III                            | 4                          | 80            |
| WEV3                | AIR               | PSS/PFO                          | Depressional | 3.14                      | III                            | 4                          | 80            |
| WEV4                | AIR               | PSS/PFO                          | Depressional | 1.03                      | III                            | 4                          | 80            |
| WEV5                | AIR               | PSS/PFO                          | Depressional | 0.39                      | III                            | 4                          | 80            |
| WEV7                | OMF Site E        | PSS/PFO                          | Depressional | 2.39                      | II                             | 6                          | 150           |
| WEV10               | OMF Site E        | PSS/PFO                          | Depressional | 0.04                      | III                            | 3                          | 80            |
| WEV10A              | OMF Site E        | PSS/PFO                          | Depressional | 0.06                      | III                            | 3                          | 80            |
| WEV10B              | OMF Site E        | PSS/PFO                          | Depressional | 0.15                      | III                            | 3                          | 80            |
| WEV11               | OMF Site E        | PEM/PSS/PFO                      | Depressional | 0.19                      | III                            | 5                          | 80            |
| WEV12               | OMF Site E        | PEM/PSS                          | Depressional | 0.02                      | III                            | 4                          | 80            |
| WEV14               | OMF Site E        | PEM/PSS/PFO                      | Depressional | 0.74                      | II                             | 6                          | 150           |
| WEV15               | OMF Site E        | PEM/PSS/PFO                      | Depressional | 0.04                      | III                            | 5                          | 80            |
| WEV15A              | OMF Site E        | PEM/PSS                          | Depressional | 0.01                      | III                            | 4                          | 80            |

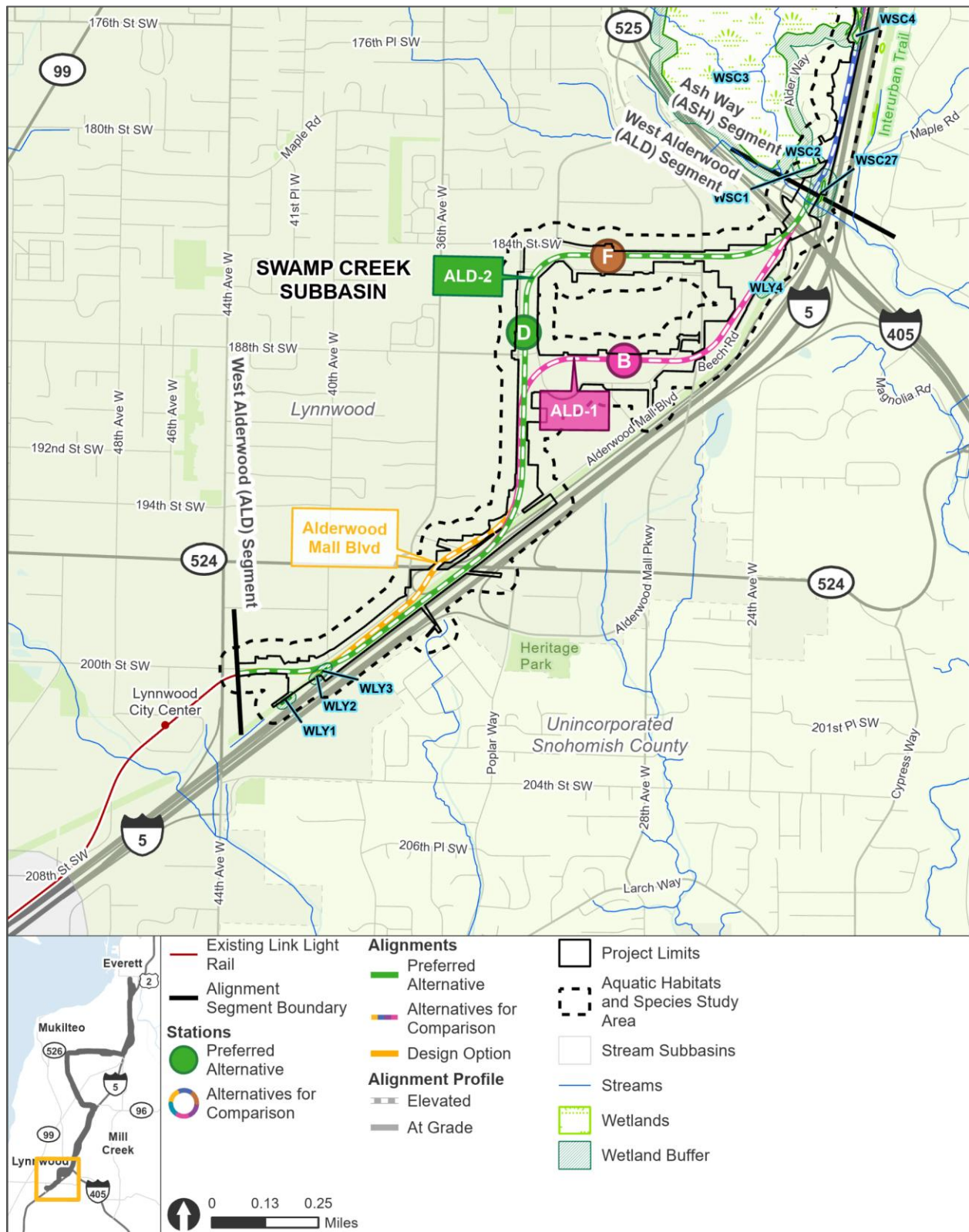
| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (Category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV15B  | OMF Site E        | PEM/PSS        | Depressional | 0.01                      | III                            | 4                          | 80            |
| WEV16   | OMF Site E        | PSS/PFO        | Riverine     | 1.24                      | II                             | 6                          | 150           |
| WEV17   | OMF Site E        | PSS/PFO        | Riverine     | 0.17                      | II                             | 5                          | 100           |
| WEV17A  | OMF Site E        | PEM            | Riverine     | 0.01                      | II                             | 5                          | 100           |
| WEV18   | OMF Site E        | PSS/PFO        | Riverine     | 0.17                      | II                             | 5                          | 100           |
| WEV18A  | OMF Site E        | PEM            | Riverine     | 0.14                      | II                             | 6                          | 150           |
| WEV19   | OMF Site E        | PSS/PFO        | Riverine     | 0.68                      | III                            | 4                          | 80            |
| WEV20   | SWI               | PSS/PFO        | Depressional | 0.48                      | III                            | 3                          | 80            |
| WEV21   | OMF Site E        | PSS/PFO        | Depressional | 0.72                      | II                             | 6                          | 150           |
| WEV23   | OMF Site E        | PSS/PFO        | Depressional | 0.49                      | II                             | 6                          | 150           |
| WEV28   | EGN               | PEM/PSS/PFO    | Depressional | 0.27                      | III                            | 4                          | 80            |
| WEV46   | OMF Site E        | PSS/PFO        | Depressional | 2.10                      | II                             | 5                          | 150           |
| WEV47   | OMF Site E        | PSS/PFO        | Depressional | 0.77                      | II                             | 4                          | 100           |
| WEV50   | OMF Site E        | PSS/PFO        | Depressional | 0.16                      | II                             | 5                          | 100           |

NOTES:

- a) Total wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.
- c) Wetland WSCEV1 occurs within Snohomish County and the City of Everett and has two different buffer widths. Wetland buffers listed in order of County and then City.

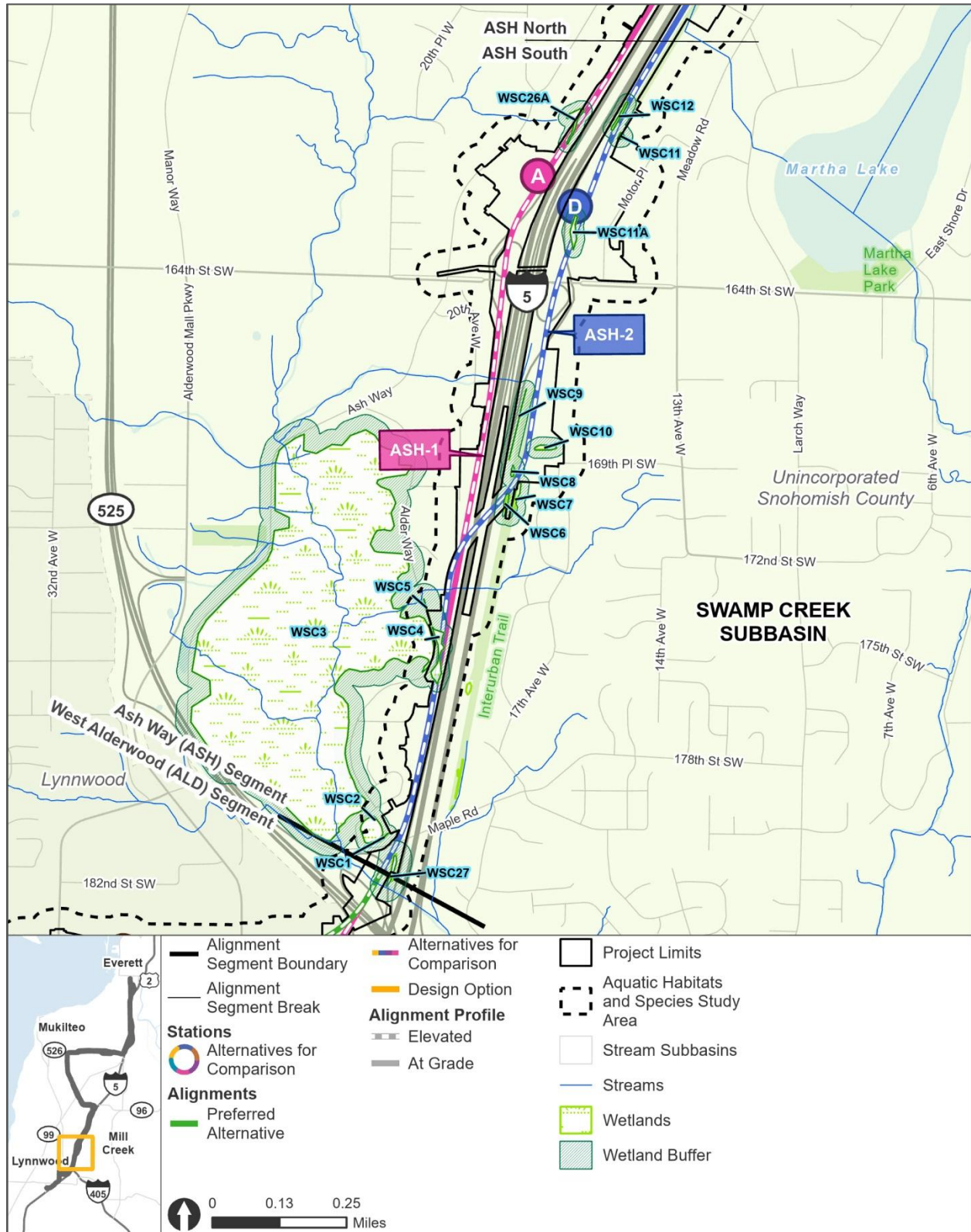


Figure 3-12 Wetlands – West Alderwood Segment



SOURCE: Snohomish County (2024b).

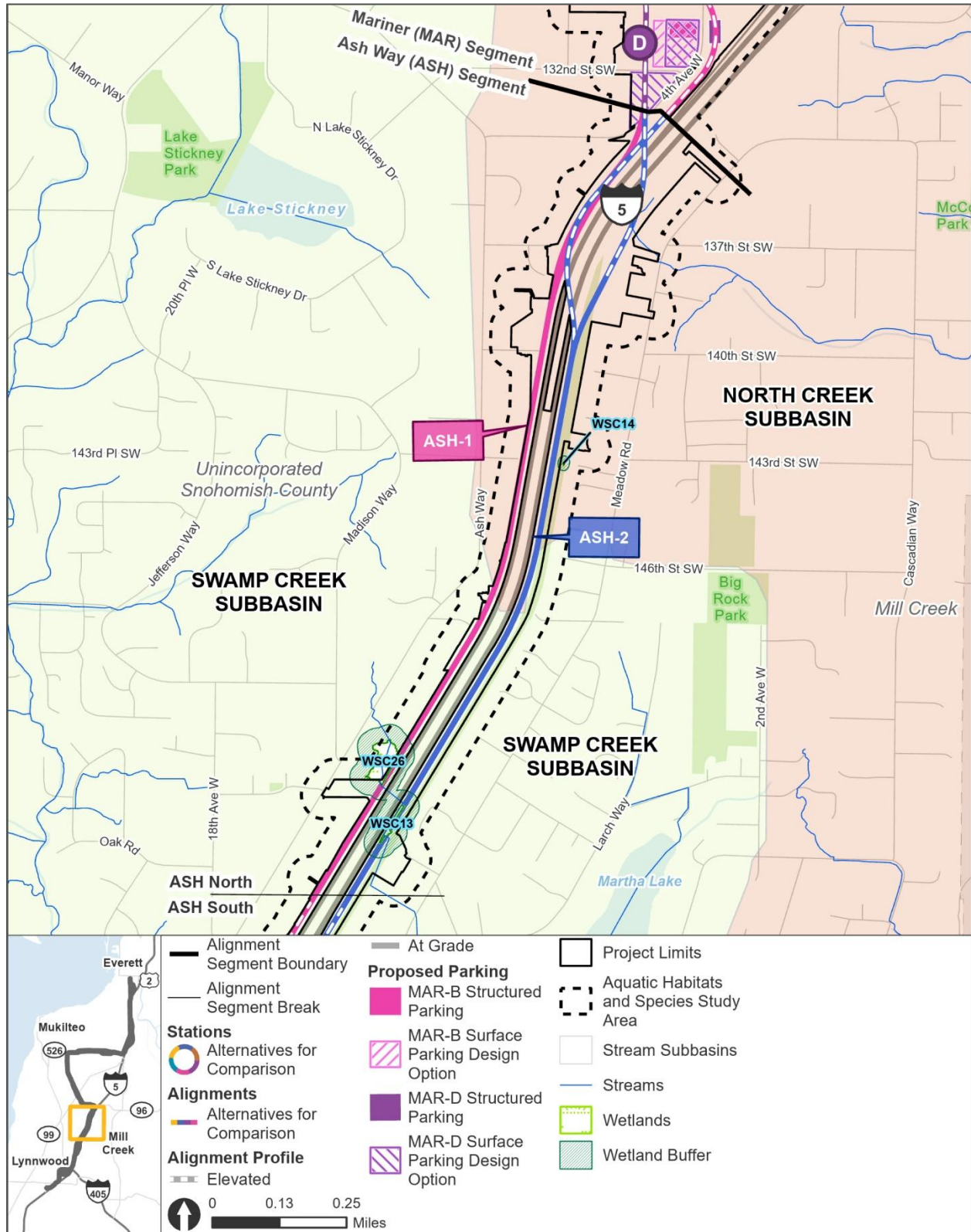
Figure 3-13 Wetlands – Ash Way Segment (South)



SOURCE: Snohomish County (2024b).

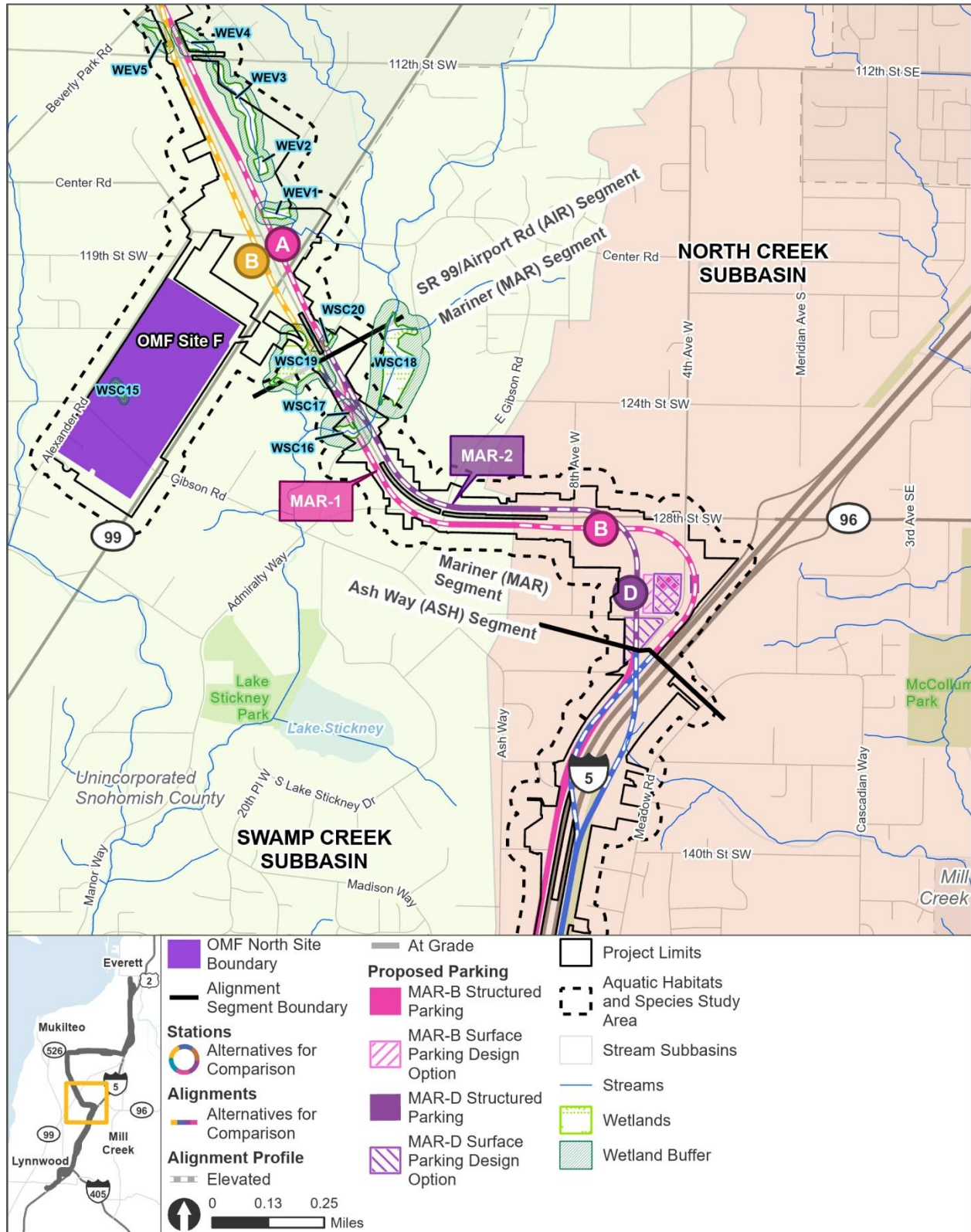


Figure 3-14 Wetlands – Ash Way Segment (North)



SOURCE: Snohomish County (2024b).

Figure 3-15 Wetlands – Mariner Segment



SOURCE: Snohomish County (2024b).







Figure 3-17 Wetlands – OMF Site F

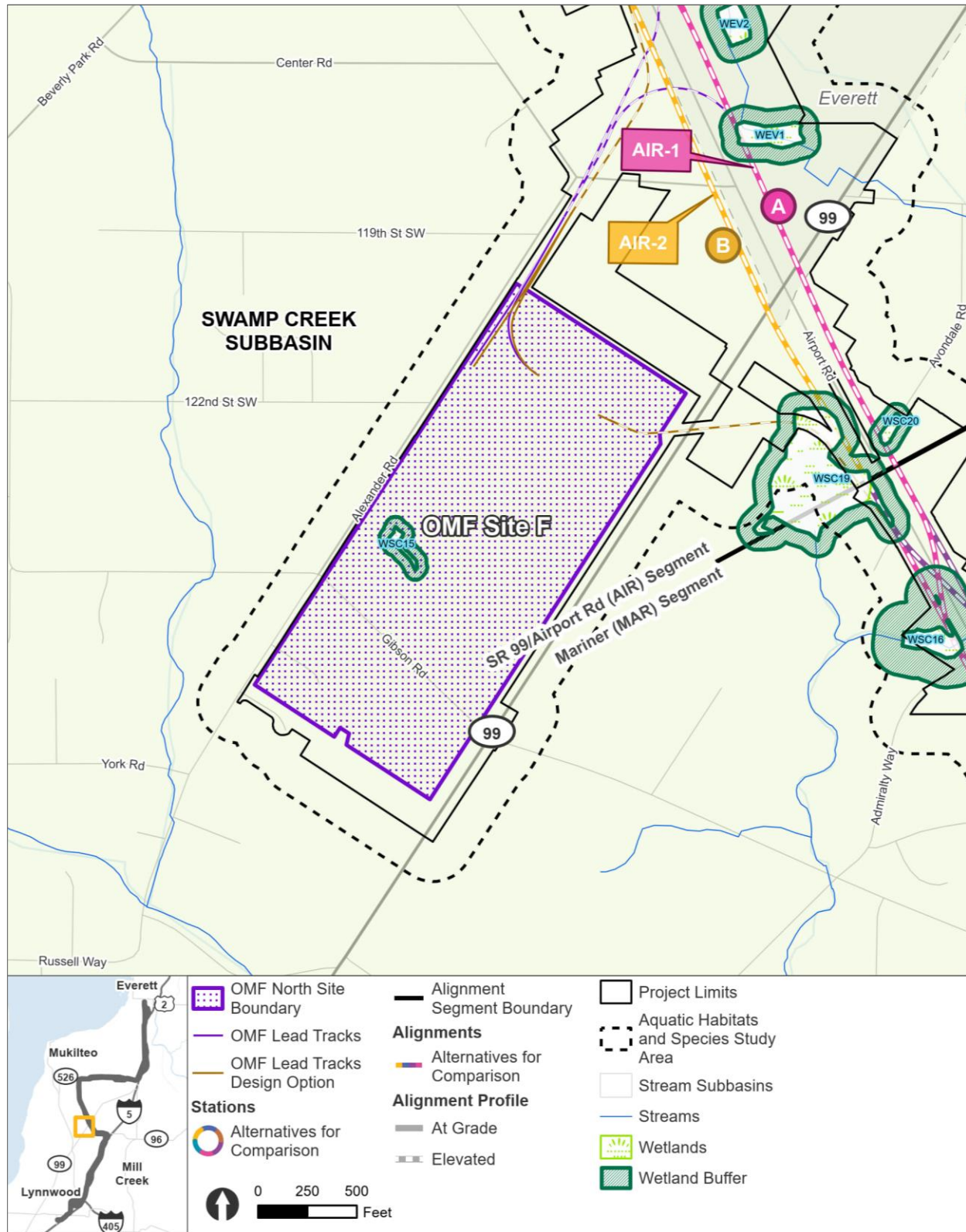
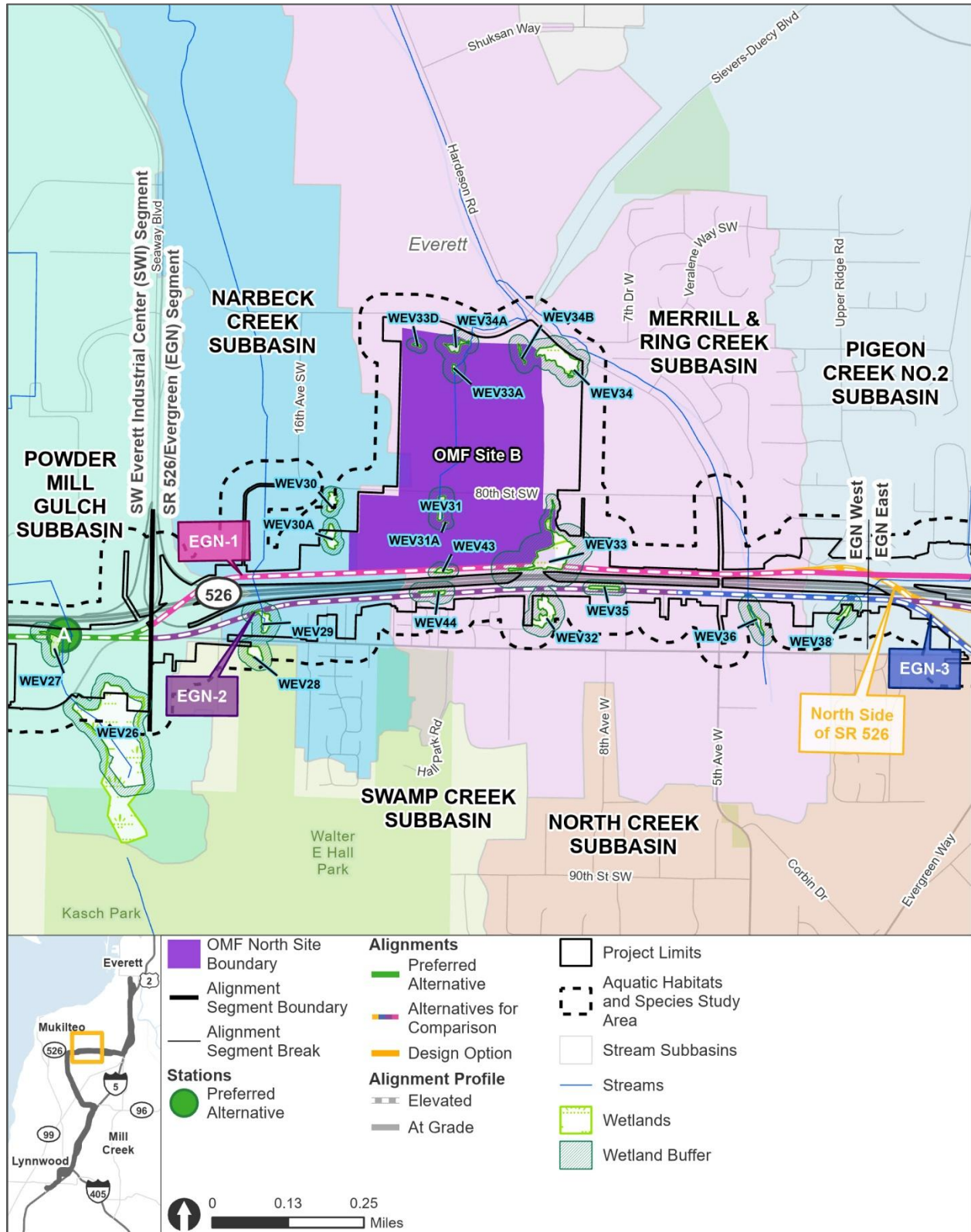






Figure 3-19 Wetlands – SR 526/Evergreen Segment



SOURCE: Snohomish County (2024b).

### 3.1.2 North Creek Subbasin

The North Creek subbasin is approximately 19,000 acres in size and is a HUC-12 watershed in the Cedar-Sammamish watershed (WRIA 8) (Figure 3-2). The North Creek subbasin extends across parts of Everett, Mill Creek, Bothell, and unincorporated Snohomish County as North Creek flows 12.6 miles from north to south to the Sammamish River in the city of Bothell.

The Ash Way, Mariner, and SR 526/Evergreen Segments extend into the North Creek subbasin (Figure 3-20 to Figure 3-23). While the study area extends into the North Creek subbasin, the North Creek mainstem does not cross within the study area. Stream SSC2 was the only tributary identified in the study area. The portion of the North Creek subbasin in the study area has been heavily modified by residential, commercial, and industrial land uses.

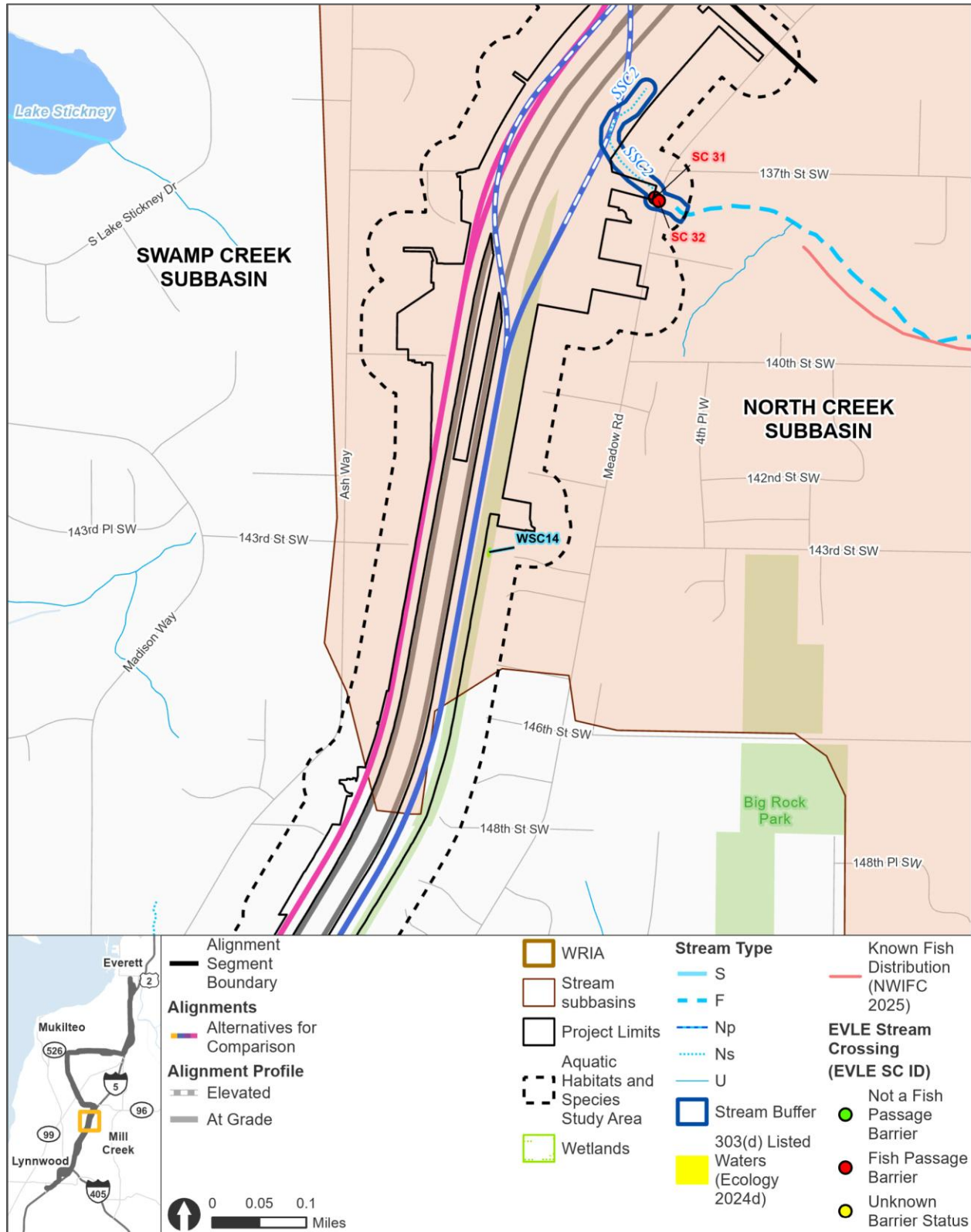
#### 3.1.2.1 Water Quality Within the North Creek Subbasin

In 2001, Ecology published the *North Creek Watershed Total Maximum Daily Load Evaluation for Fecal Coliform Bacteria* (Ecology 2001). Ecology subsequently issued the *North Creek Fecal Coliform Total Maximum Daily Load Submittal Report* (Ecology 2002) and the *North Creek Fecal Coliform Bacteria Total Maximum Daily Load Detailed Implementation Plan* (Ecology 2003). No specific pollution sources or problem areas are called out within the study area. However, the 2002 report identifies agriculture, on-site septic, stormwater, sediments, and wildlife as potential pollution sources, and the 2001 report indicates there are unsewered areas generally located east within the upper limits of the North Creek watershed, east of the study area.

In addition to the 2001 TMDL for fecal coliform, Ecology is developing a multi-parameter TMDL for the Sammamish River and its tributaries, including North Creek and the study area, which addresses temperature, dissolved oxygen, and bacteria (Ecology 2024a).

Finally, the North Creek mainstem contains impaired waters for pH, dissolved oxygen, fecal coliform, and bioassessment pursuant to Ecology's Section 303(d) list. However, Stream SSC2 is not identified as an impaired water (Ecology 2024a). As such, there are no impaired streams within the North Creek subbasin that occur within the study area. While not identified as an impaired water, pollution sources that have potential to affect water quality within the study area include point and non-point sources. Known point sources of pollution include the WSDOT stormwater pond that discharges to Stream SSC2. Non-point sources include runoff from other pollution generating impervious surfaces (PGIS) and adjacent properties, which may introduce hydrocarbons, metals, tire rubber dust, fertilizers, pesticides, and fecal coliform bacteria.

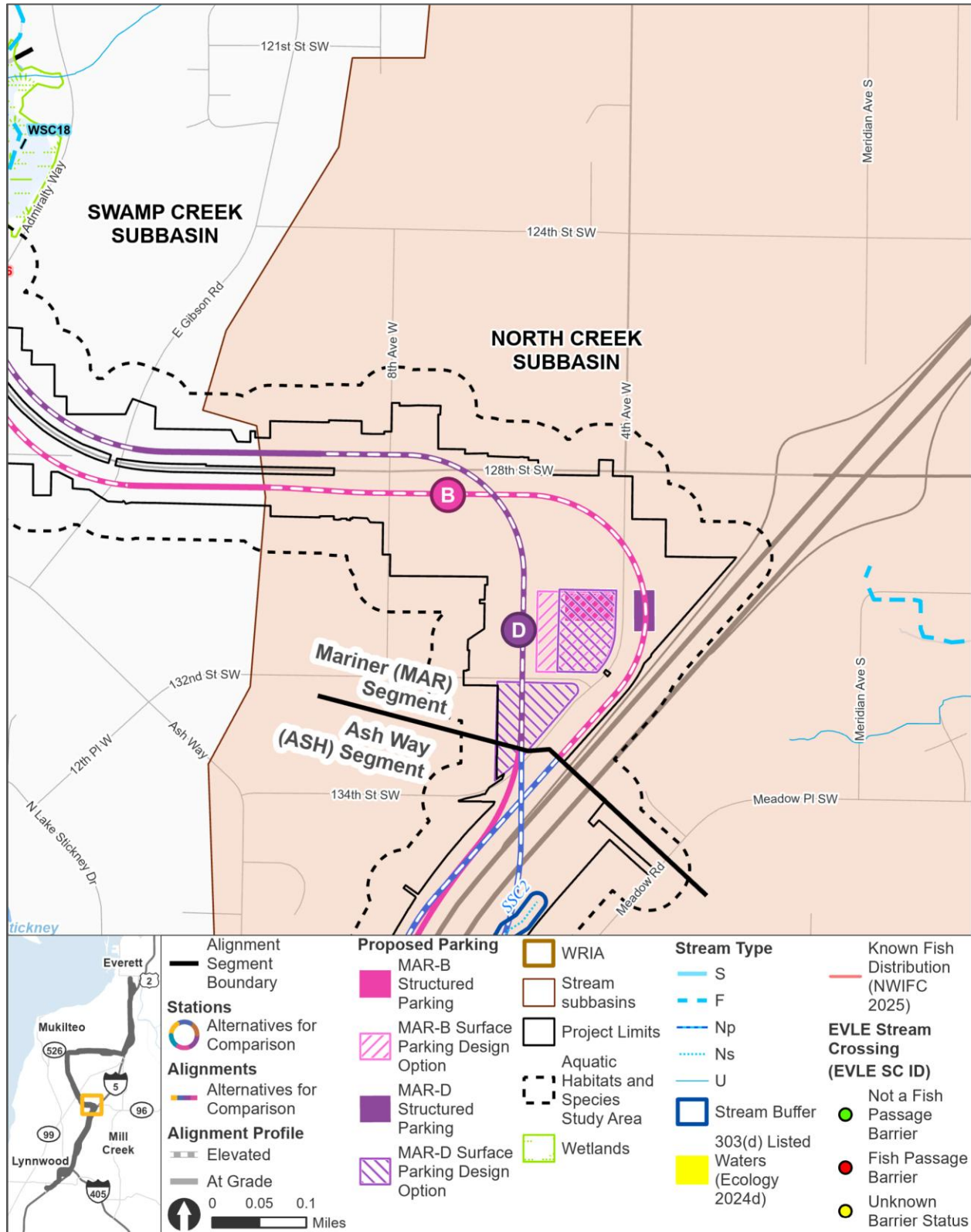
Figure 3-20 North Creek Study Area (Part 1 of 4)



SOURCE: Ecology (2024c), Ecology (2024d), NWIFC (2025), USGS (2024).

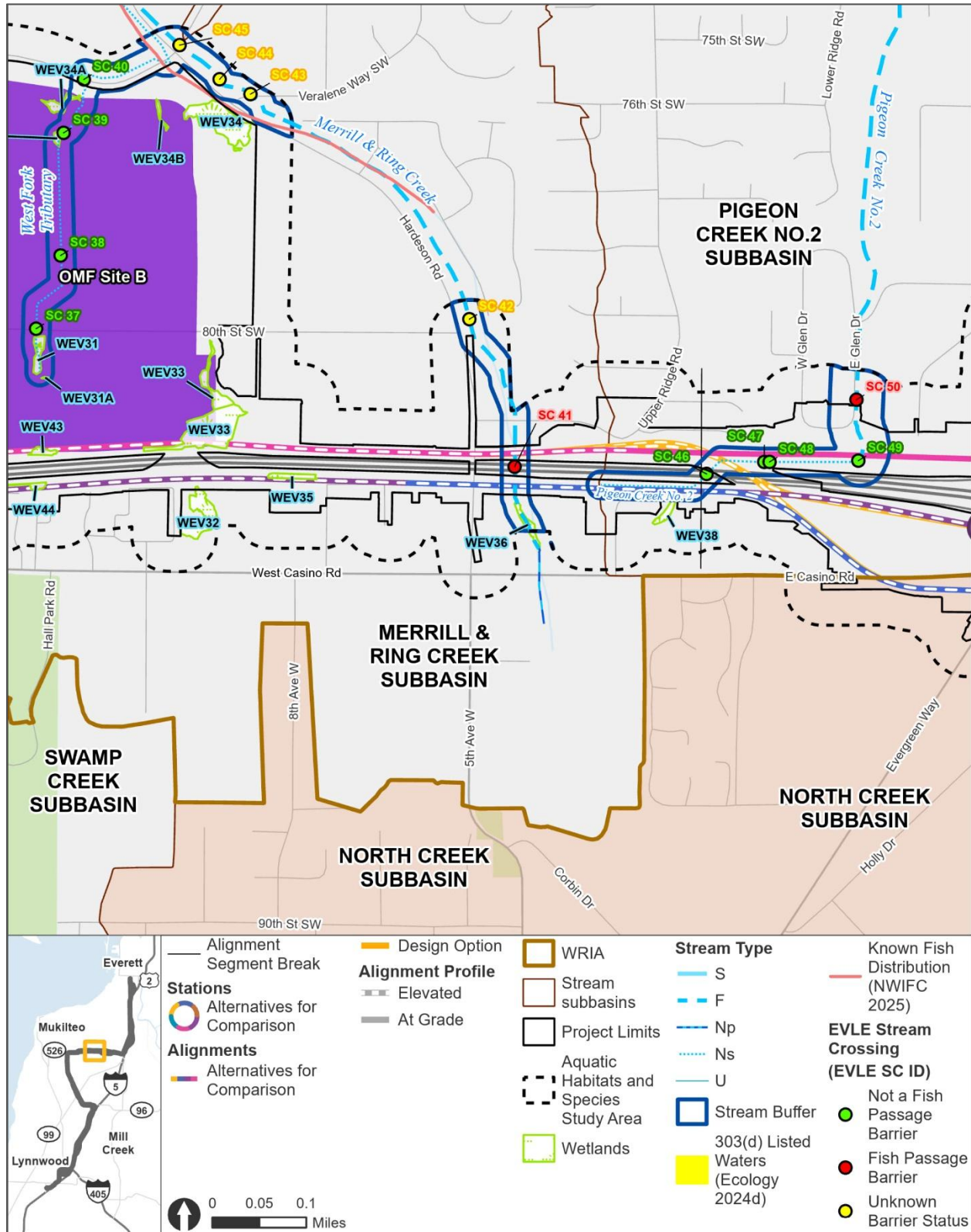


Figure 3-21 North Creek Study Area (Part 2 of 4)



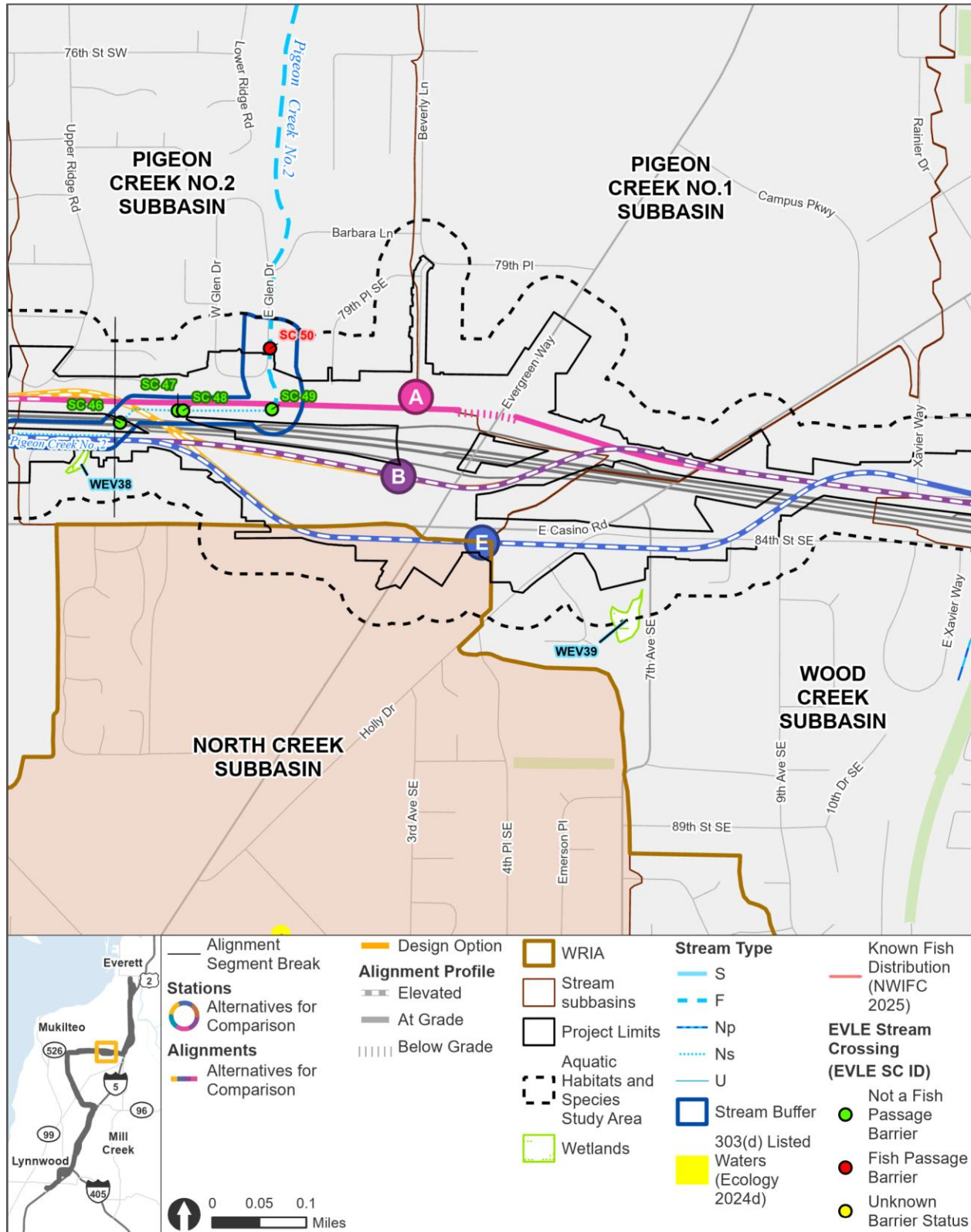
SOURCE: Ecology (2024c), Ecology (2024d), NWIFC (2025), USGS (2024).

Figure 3-22 North Creek Study Area (Part 3 of 4)



SOURCE: Ecology (2024c), Ecology (2024d), NWIFC (2025), USGS (2024).

Figure 3-23 North Creek Study Area (Part 4 of 4)



SOURCE: Ecology (2024c), Ecology (2024d), NWIFC (2025), USGS (2024).



### 3.1.2.2 Streams in the North Creek Subbasin

The one stream (Stream SSC2) identified within the North Creek subbasin within the study area is shown in Table 3-13.

**Table 3-13 Streams Within the Study Area and North Creek Subbasin**

| Stream | Alignment Segment | Stream Type <sup>a</sup> | Jurisdiction     | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|--------|-------------------|--------------------------|------------------|----------------------------|---------------------------------------|--------------------------------------------|
| SSC2   | ASH               | F                        | Snohomish County | 100                        | No                                    | Yes                                        |
|        |                   | Ns                       |                  | 50                         | No                                    | Yes                                        |

NOTES:

- a) Streams typing was done in accordance with SCC 30.62A.230.
- b) Buffers reflect those standard stream buffers based on stream typing as required under SCC 30.62A.320.3.
- c) Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- d) Suitable fish habitat as defined by WAC 222-16-031.

#### **Stream SSC2**

Stream SSC2 originates in the study area from a WSDOT stormwater pond east of I-5 (Figure 3-20). Stream SSC2 flows through an incised channel within the study area and then flows to the east for about 4,000 linear feet before discharging to North Creek.

#### **Stream Crossings**

Within the study area, Stream SSC2 drains west to east towards Meadow Road. Upon reaching Meadow Road, Stream SSC2 crosses under a private driveway within a 30-inch polyvinyl chloride pipe (Stream Crossing 31). Stream SSC2 pools immediately downstream of this private driveway where surface flow then crosses under Meadow Road via twin, 42-inch squashed corrugated steel pipes (Stream Crossing 32). Stream SSC2 then enters an open channel, east of Meadow Road within private property where it flows east and out of the study area (Table 3-14).

**Table 3-14 Stream Crossings Along Stream SSC2 Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream      | Alignment Segment/OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                       |
|--------------------|--------------|-------------|----------------------------|-------------|----------------------|-----------------------------------------------------------------------------|
| SC 31              | 102 N164     | Stream SSC2 | ASH                        | Ns, F       | Yes                  | 30-inch polyvinyl chloride pipe under a private drive, west of Meadow Road. |
| SC 32              | 102 N165     |             |                            |             | Yes                  | Two 42-inch squashed corrugated steel pipes under Meadow Road.              |

### Aquatic Habitat and Species

Stream SSC2 aquatic habitat within the study area is very limited due to the altered stream channel. West of Meadow Road, the stream channel flows east down a slope towards Meadow Road within what appears to be a narrow and incised channel that does not meet the physical conditions to support fish habitat. Further, flow along this upstream reach appears to be intermittent and largely supported by discharges from a WSDOT stormwater pond. However, as Stream SSC2 reaches the west shoulder of Meadow Road and enters a widened roadside ditch which ultimately drains east under Meadow Road, surface water becomes more permanent and the stream becomes a Type F stream. Stream sediments within the study area appear to be limited to sand, silts, and gravels. Woody material appears to be present in or over the stream channel west of Meadow Road. However, much of this wood spans the stream channel and is not engaged in the active channel.

Chinook, coho, sockeye salmon, and steelhead are documented within Stream SSC2 approximately 700 linear feet downstream (east) of the study area (NWIFC 2025). It is possible that resident fish are present east of Meadow Road. However, due to the total fish passage barriers under Meadow Road (WDFW 2024a) and the flow conditions west of Meadow Road, resident fish are not likely present west of Meadow Road. Therefore, aquatic species anticipated within the study area, west of Meadow Road, are limited to amphibians and macroinvertebrates.

### Riparian Habitat

Stream SSC2 riparian habitat west of Meadow Road is dominated by a dense understory of native and nonnative woody shrubs with mature conifers and deciduous trees present. As Stream SSC2 flows east of Meadow Road, the riparian habitat is dominated by sparse yet mature western red cedar trees with a highly disturbed lawn and landscaping on private property.

#### 3.1.2.3 Wetlands in the North Creek Subbasin

One wetland, WSC14, has been identified within the North Creek subbasin within the study area and is located immediately east of I-5 and the Interurban Trail (Figure 3-24). Wetland WSC14 is a small, depressional wetland with no outlet that is isolated from other aquatic areas or surface water features and is dominated by emergent vegetation. Wetland WSC14 is summarized in Table 3-15.

**Table 3-15 Wetlands Within the North Creek Subbasin Study Area**

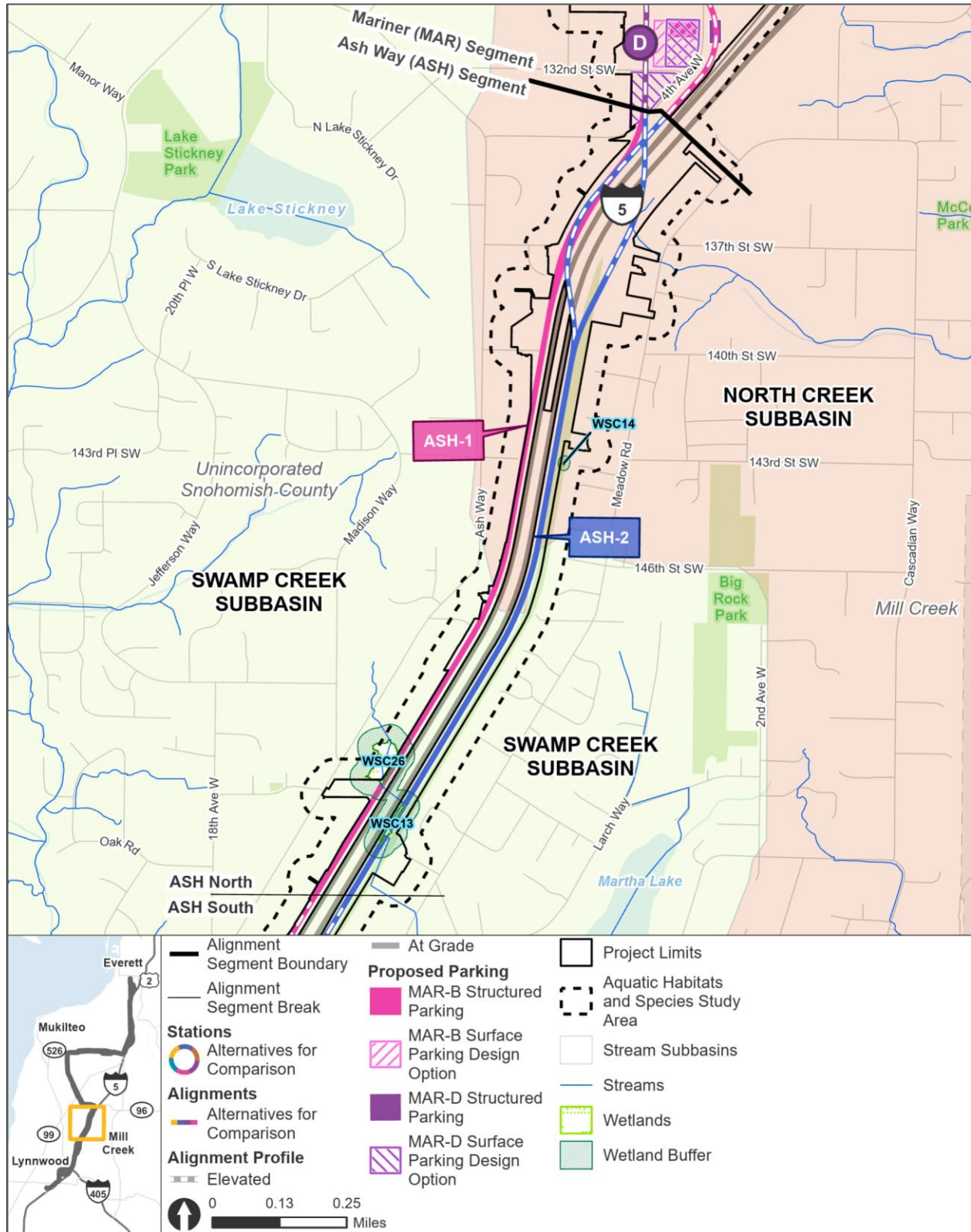
| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WSC14   | ASH               | PEM            | Depressional | 0.01                      | IV                             | 3                          | 50            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.



Figure 3-24 Wetlands – Ash Way Segment (North)



SOURCE: Snohomish County (2024b).

### **3.1.3 Threatened, Endangered, and Candidate Aquatic Species Within the Cedar-Sammamish Watershed and Subbasins**

An evaluation of ESA-listed aquatic species will be completed for the preferred alternative. A Biological Assessment (BA) will be prepared, which will address the potential impacts of the preferred alternative on species and habitat protected by the ESA and MSA. Below a preliminary evaluation of aquatic ESA-listed species, critical habitats, and EFH within the Cedar-Sammamish watershed is presented, to be further explored in the BA. Terrestrial ESA-listed species are discussed in Section 3.1.6.3.

Table 3-16 summarizes the federally listed aquatic and semi-aquatic species under the jurisdiction of NOAA Fisheries and the USFWS which might occur in aquatic habitats in the Cedar-Sammamish watershed study area. Figure 3-25 through Figure 3-31 show the distribution of mapped fish species within the study area, including those protected under both ESA and MSA.

**Table 3-16 Federally Listed Aquatic and Semi-Aquatic Species and Designated Critical Habitat Within the Study Area**

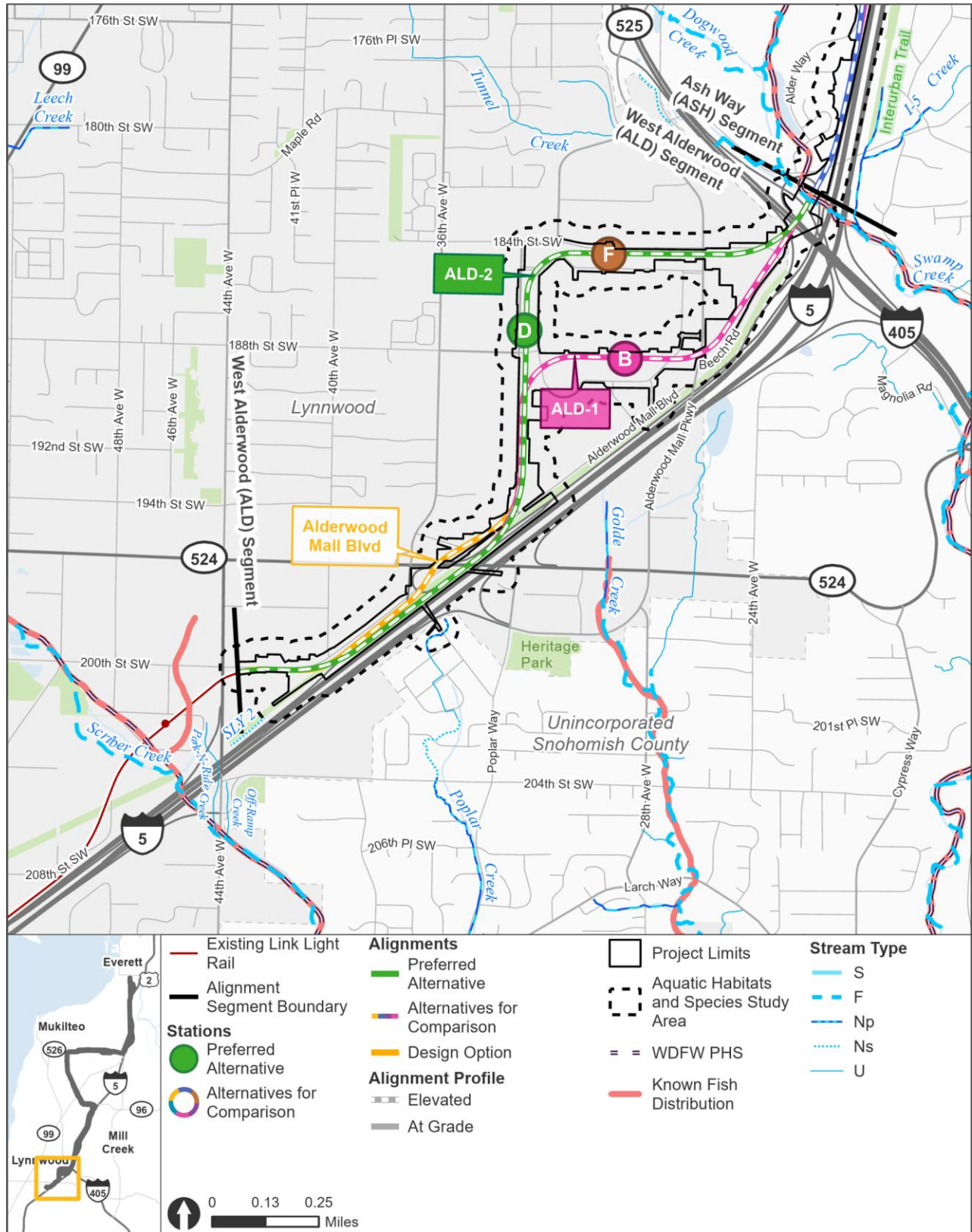
| Common Name                                                        | Scientific Name                 | Federal Status      | Service With Jurisdiction | Critical Habitat in Study Area | Suitable Habitat Within Study Area | Presence in Study Area | Project Segment and Location                    |
|--------------------------------------------------------------------|---------------------------------|---------------------|---------------------------|--------------------------------|------------------------------------|------------------------|-------------------------------------------------|
| Chinook Salmon – Puget Sound Evolutionarily Significant Unit (ESU) | <i>Oncorhynchus tshawytscha</i> | Threatened          | NOAA                      | No                             | Yes                                | Likely                 | ASH/ALD at I-5/I-405 interchange in Swamp Creek |
| Steelhead – Puget Sound Distinct Population Segment (DPS)          | <i>Oncorhynchus mykiss</i>      | Threatened          | NOAA                      | No                             | Yes                                | Likely                 | ASH/ALD at I-5/I-405 interchange in Swamp Creek |
| Bull trout, Coterminous U.S. DPS                                   | <i>Salvelinus confluentus</i>   | Threatened          | USFWS                     | No                             | No                                 | Not likely             | Not documented within study area                |
| Northwestern Pond Turtle <sup>a</sup>                              | <i>Actinemys marmorata</i>      | Proposed Threatened | USFWS                     | No                             | Yes                                | Not likely             | Not documented within study area                |

SOURCES: NOAA (2024b); USFWS (2025).

NOTES:

- a) Northwestern pond turtle is a semi-aquatic reptile with critical life stages and behaviors occurring in aquatic environments. For the purposes of this technical report, they were identified as a semi-aquatic species and grouped with aquatic fish species listed above.

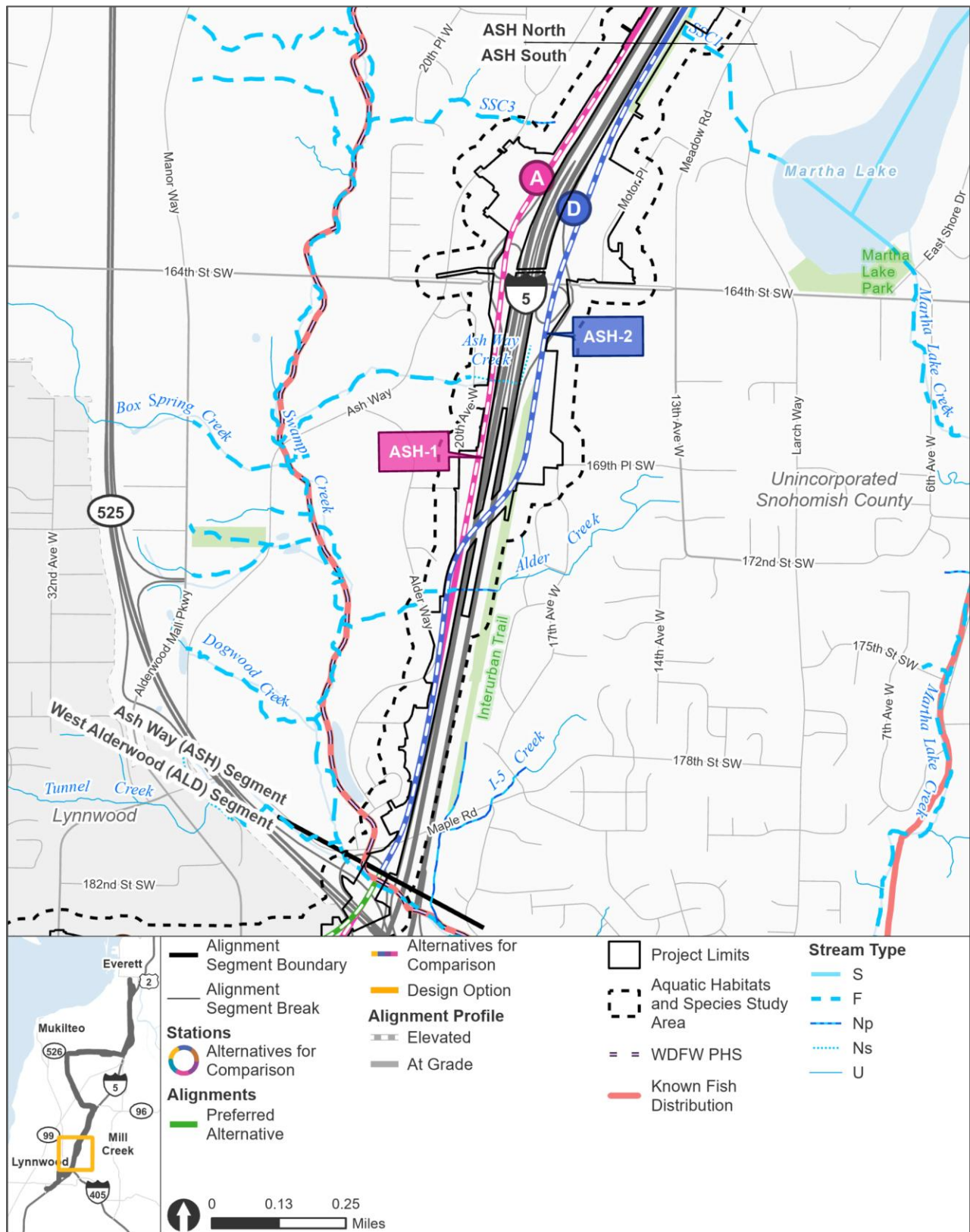
Figure 3-25 Aquatic Species – West Alderwood Segment



SOURCE: Snohomish County (2024b), WDFW (2024b), NWFC (2025), NOAA (2024b).

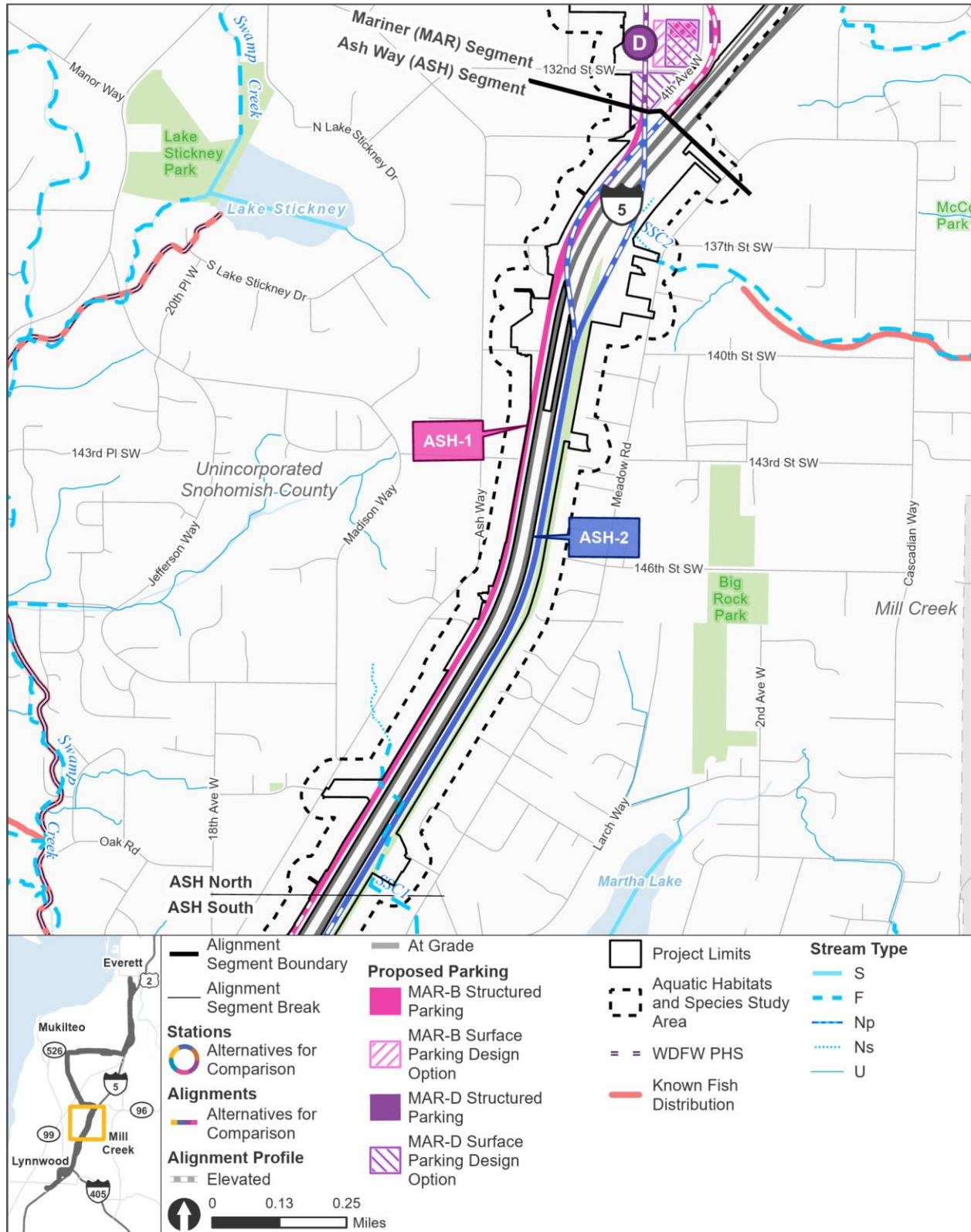


### Figure 3-26 Aquatic Species – Ash Way Segment (South)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b).

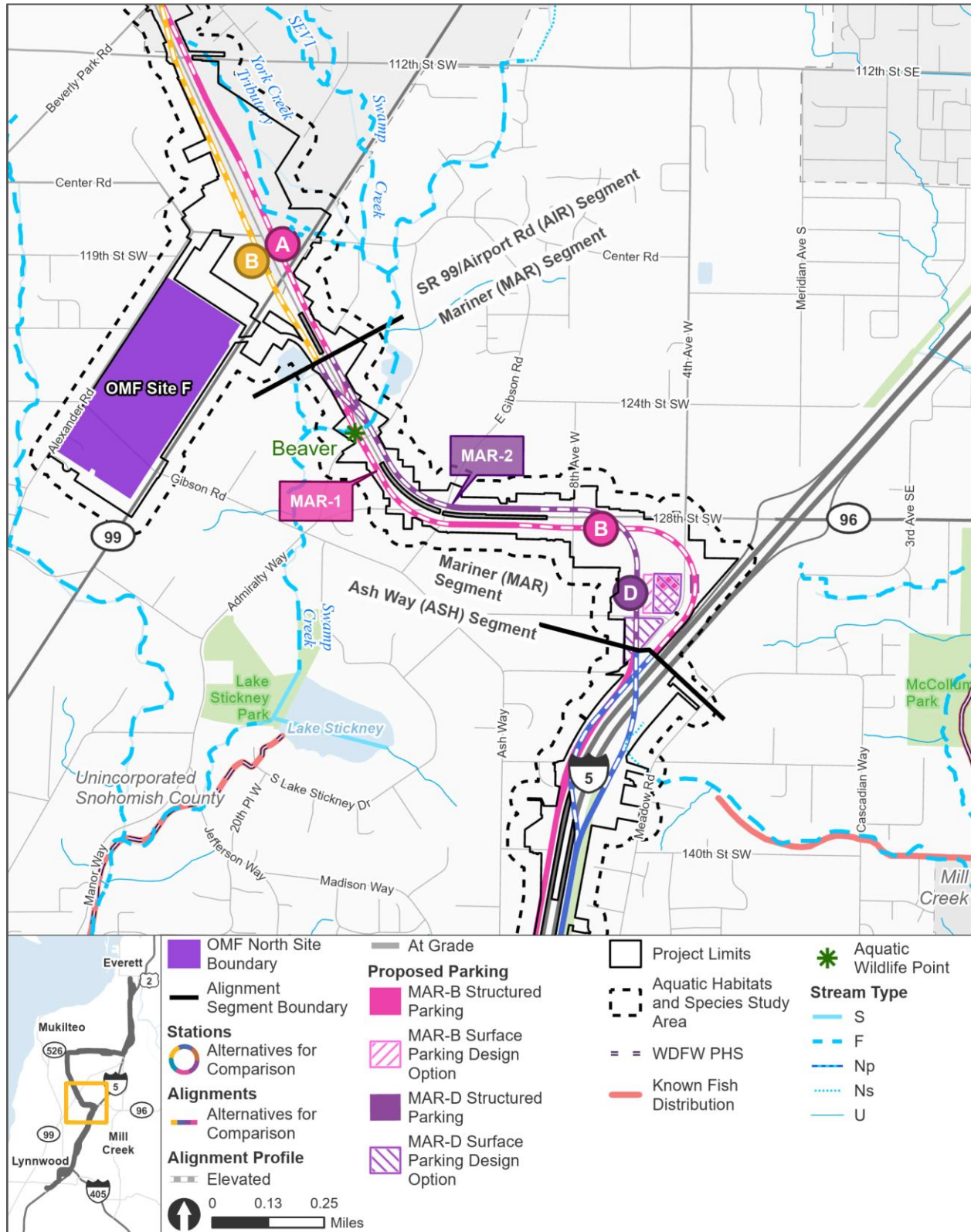
Figure 3-27 Aquatic Species – Ash Way Segment (North)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b).

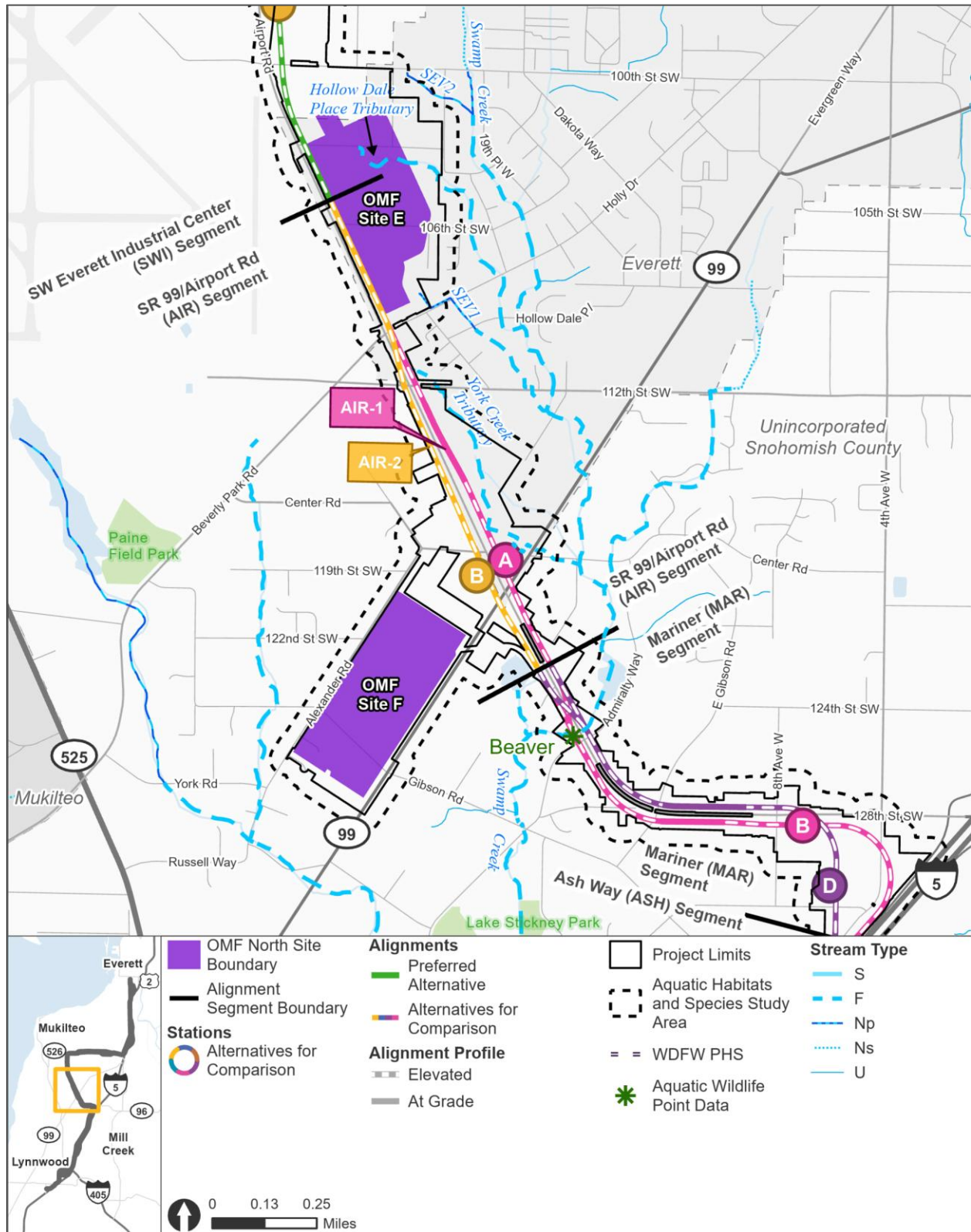


Figure 3-28 Aquatic Species – Mariner Segment



SOURCE: Snohomish County (2024b), WDFW (2024b), NWFC (2025), NOAA (2024b).

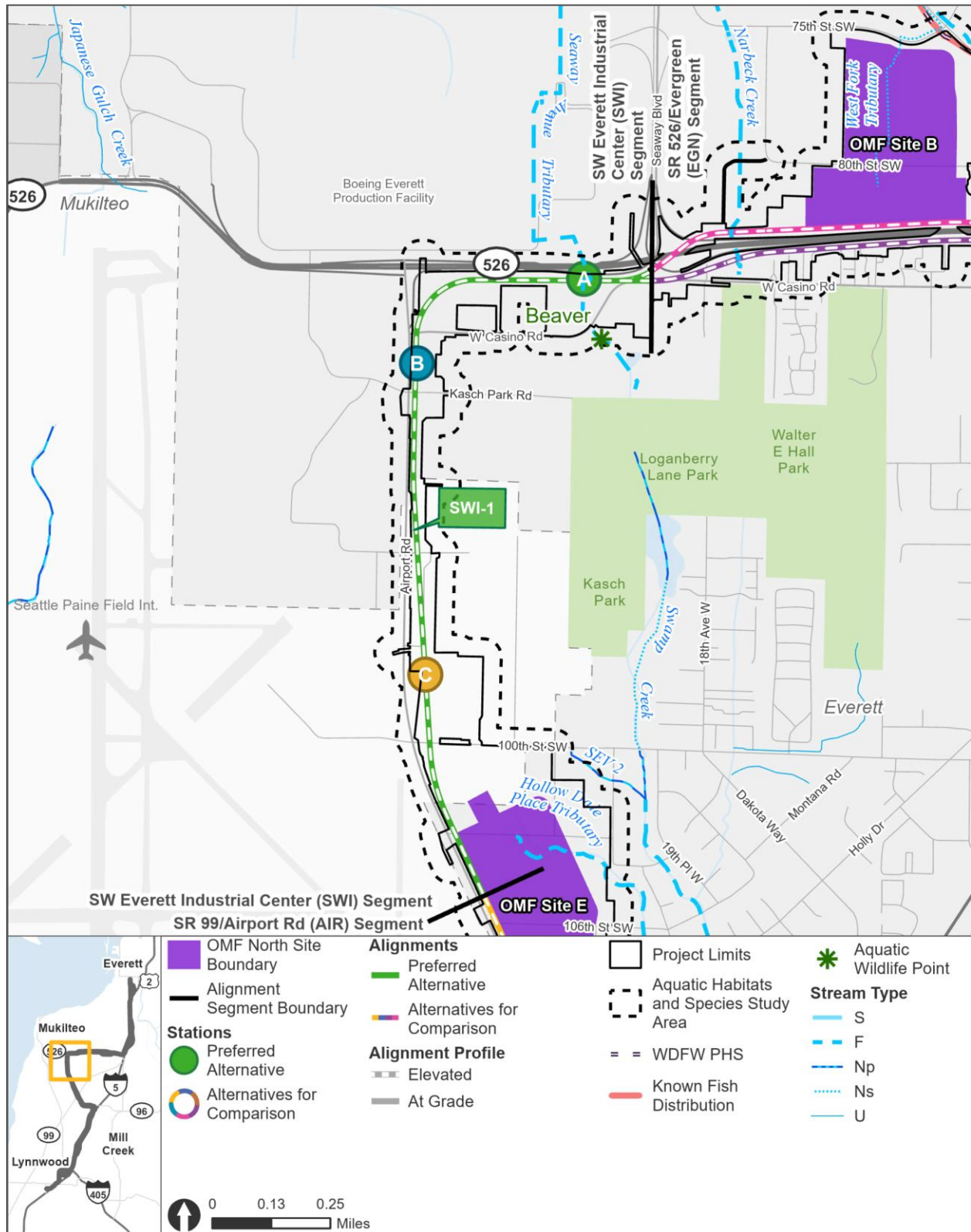
**Figure 3-29 Aquatic Species – SR 99/Airport Road Segment and OMF Sites F and E**



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b).

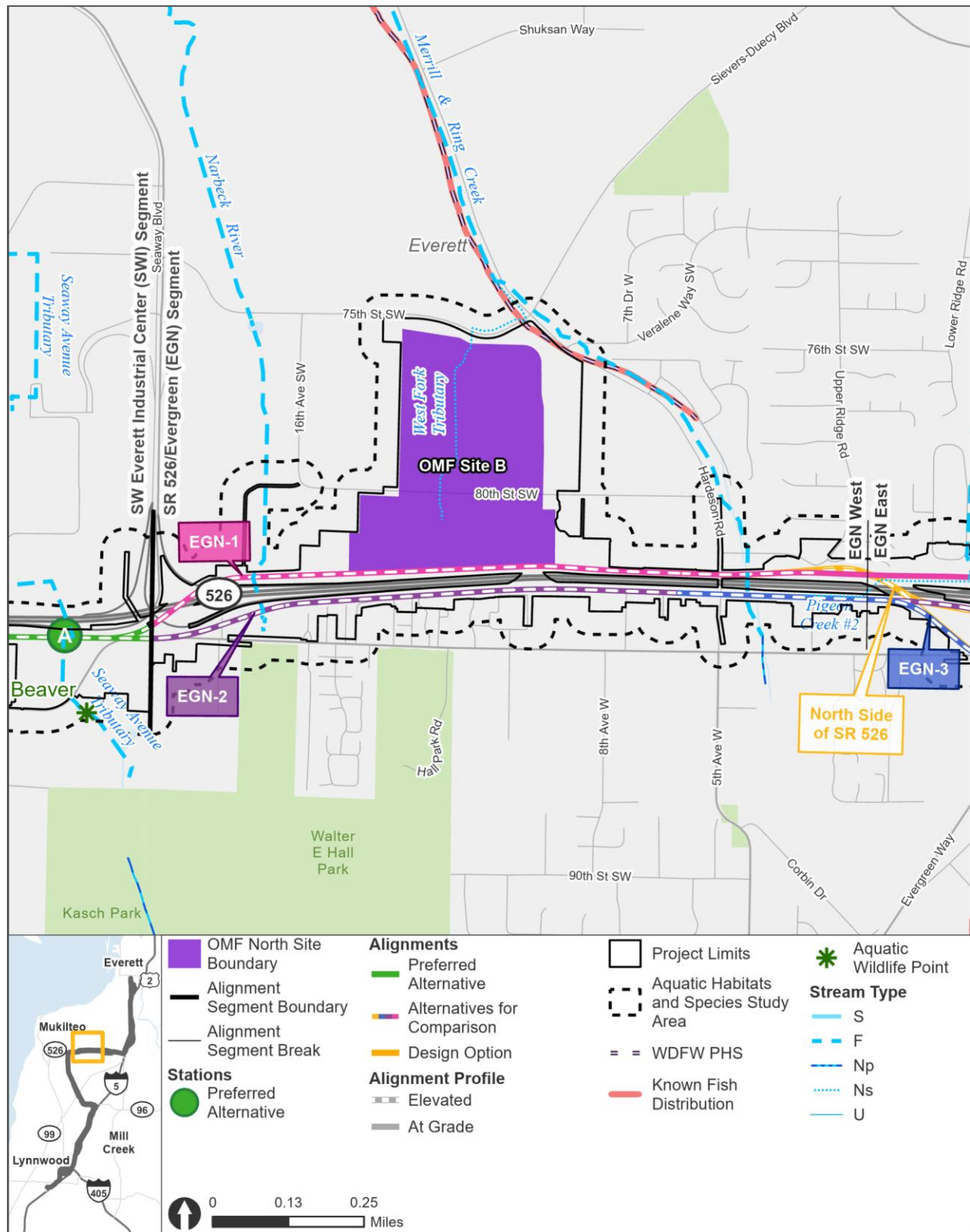


**Figure 3-30 Aquatic Species – SW Everett Industrial Center Segment and OMF Site E**



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b).

Figure 3-31 Aquatic Species – SR 526/Evergreen Segment (West) and OMF Site B



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b).

Both Puget Sound Evolutionarily Significant Unit (ESU) Chinook salmon and Puget Sound Distinct Population Segment (DPS) steelhead have been documented as present in Swamp Creek within the study area downstream of Lake Stickney. Puget Sound ESU Chinook salmon have been documented spawning and rearing within the study area below the I-5/I-405 interchange (WDFW 2024a, NWIFC 2025).

Puget Sound ESU Chinook salmon and Puget Sound DPS steelhead have also been documented, or have the potential to be present, downstream of Lake Stickney in all subbasins.

As described in Sections 3.1.1 and 3.1.2, most streams within the Cedar-Sammamish watershed study area are heavily urbanized, with some segments reportedly subject to drying up in summer months (City of Everett 2022a). The highly episodic and intermittent nature of these streams likely limits the presence of both anadromous and resident fish species in upstream reaches of the subbasin. With the exception of Swamp Creek near the I-5/I-405 interchange, salmonid habitat is generally absent in the Cedar-Sammamish study area.

As of 2020, northwestern pond turtles have only been found at six sites in Washington State: two in south Puget Sound (in Mason County and Pierce County) and four along the Columbia River Gorge (Western Pond Turtle Range-wide Conservation Coalition 2020). There are no documented observations of northwestern pond turtles (*Actinemys marmorata*) within the Cedar-Sammamish study area (WDFW 2024b). Given the distance between the existing population in Pierce County and the study area, as well as the dense urban development and road network system between the two areas, the potential for the species to occupy habitats in the Cedar-Sammamish study area is non-existent without human intervention.

### **3.1.3.1 Designated Critical Habitat**

No designated ESA critical habitat is mapped in the Cedar-Sammamish watershed study area. Critical habitats for ESA-listed aquatic species within the Cedar-Sammamish watershed study area are approximately 6 river miles downstream (south) near the confluence of the Sammamish River with Lake Washington (NOAA 2024b).

### **3.1.3.2 Essential Fish Habitat**

The MSA defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” of certain managed fisheries species (16 United States Code 1802[10]). The Pacific Coast Salmon Fisheries Management Plan (FMP) includes habitat designations for Chinook, coho, and pink salmon. The freshwater EFH distinctions within this FMP include all lakes, streams, ponds, rivers, wetlands, and other bodies of water that have been historically accessible to salmon (Pacific Fishery Management Council [PFMC] 2023). According to the National Marine Fisheries Services (NMFS) Essential Fish Habitat Mapper (NOAA 2024a) for Pacific Coast Salmon, the Swamp Creek and North Creek subbasins provide EFH to Chinook and coho salmon.

### **3.1.4 State and Local Aquatic Priority Habitats and Species Within the Cedar-Sammamish Watershed and Subbasins**

Local jurisdictions within the study area regulate aquatic habitats and species through their codes for critical areas. These areas generally include aquatic habitat areas, such as wetlands, streams, and lakes. In addition, local jurisdictions may also consider designated biodiversity

corridors or habitat areas that are primarily associated with aquatic species of local, state, or federal importance to be fish and wildlife habitat conservation areas.

Table 3-17 summarizes the aquatic PHS publicly mapped by WDFW within the Cedar-Sammamish study area.

**Table 3-17 Mapped Aquatic Priority Habitats and Species Within the Cedar-Sammamish Study Area**

| Priority Species                                           | Alignment Segments               | Scientific Name                 | Habitat                                                        | Priority Habitat Type                                   |
|------------------------------------------------------------|----------------------------------|---------------------------------|----------------------------------------------------------------|---------------------------------------------------------|
| Chinook salmon, Fall Chinook salmon, Summer Chinook salmon | ALD                              | <i>Oncorhynchus tshawytscha</i> | Swamp Creek                                                    | Occurrence/Migration, Breeding Area                     |
| Sockeye                                                    | ALD                              | <i>Oncorhynchus nerka</i>       | Swamp Creek                                                    | Breeding Area                                           |
| Resident coastal cutthroat                                 | ALD                              | <i>Oncorhynchus clarkii</i>     | Swamp Creek                                                    | Occurrence/Migration                                    |
| Coho                                                       | ALD                              | <i>Oncorhynchus kisutch</i>     | Swamp Creek                                                    | Occurrence/Migration, Breeding Area                     |
| Wetlands                                                   | ALD, ASH, MAR, AIR, SWI, and EGN | N/A                             | Swamp Creek Wetlands; Lake Stickney Wetlands; unnamed wetlands | Palustrine forested, scrub-shrub, and emergent wetlands |

SOURCE: WDFW (2024b).

In addition to state priority habitats and species listed above, the local jurisdictions of the study area regulate habitats and species of local importance. Furthermore, the City of Everett has identified Kasch Park (Bomarc) Bog as a significant biological area within the Swamp Creek subbasin, although it is not located within the study area.

### 3.1.5 Tribal Treaty Fishing Rights Within the Cedar-Sammamish Watershed and Subbasins

Federally recognized Tribes in the Pacific Northwest have Treaty-protected rights that include, but are not limited to, the rights to harvest fish free of state interference (subject to conservation principles) and to co-manage the fishery resource. Lake Washington is among the usual and accustomed fishing areas of the federally recognized Muckleshoot Indian Tribe. Project impacts to Lake Washington tributaries, including Swamp Creek and North Creek, could affect the productivity of fisheries resources, and thereby affect the fishing interests of the Muckleshoot Indian Tribe and other Tribes. Sound Transit is therefore coordinating with the Muckleshoot Indian Tribe Fisheries Division regarding these potential effects.



### 3.1.6 Upland Habitats and Species Within the Cedar-Sammamish Watershed and Subbasins

#### 3.1.6.1 Vegetation

##### *Land Cover Types*

Upland habitat within the Cedar-Sammamish watershed portion of the study area has been substantially altered or completely removed and replaced by impervious surfaces, including major interstate and state highway infrastructure, and industrial, commercial, and residential developments. Low density land uses and open spaces, including parks and ballfields, residential lawns, and cemeteries are also present within the study area. Low density and open space land covers can provide fragmented forested corridors that support nesting, roosting, and breeding habitats for wildlife species. Table 3-18 describes the land cover mapped within the Cedar-Sammamish study area. Figure 3-32 through Figure 3-38 show the land cover types in the Cedar-Sammamish study area.

**Table 3-18 Land Cover Types Within the Cedar-Sammamish Watershed Study Area**

| Land Cover Type <sup>a</sup>       | Acres Within Study Area | Percent of Land Cover Type | Description                                                                                                                                                        |
|------------------------------------|-------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Urban and Mixed: High-Density      | 389                     | 38%                        | Associated with high-density residential and high-intensity commercial and industrial land uses, particularly around Alderwood Mall, Airport Road, SR 99, and I-5. |
| Urban and Mixed: Moderate Density  | 369                     | 38%                        | Associated with low-density multi-family and low-rise commercial throughout the study area.                                                                        |
| Urban and Mixed: Low Density       | 163                     | 16%                        | Low-density residential properties predominantly around the Ash Way Segment, including portions of the Interurban Trail and along the I-5 corridor.                |
| Open Space: Shrublands/ Grasslands | 104                     | 10%                        | Includes portions of the Interurban Trail, utility corridors, the I-5 corridor, and some open space corresponding to riparian corridors.                           |
| Open Space: Forest                 | 13                      | 1%                         | Patches of forest occurring along Swamp Creek and adjacent to I-5, south of 128th Street SE.                                                                       |

NOTE:

- a) Land cover type was developed using the land cover structural descriptions (Johnson and O'Neil 2001).

Figure 3-32 Land Cover Types – West Alderwood Segment

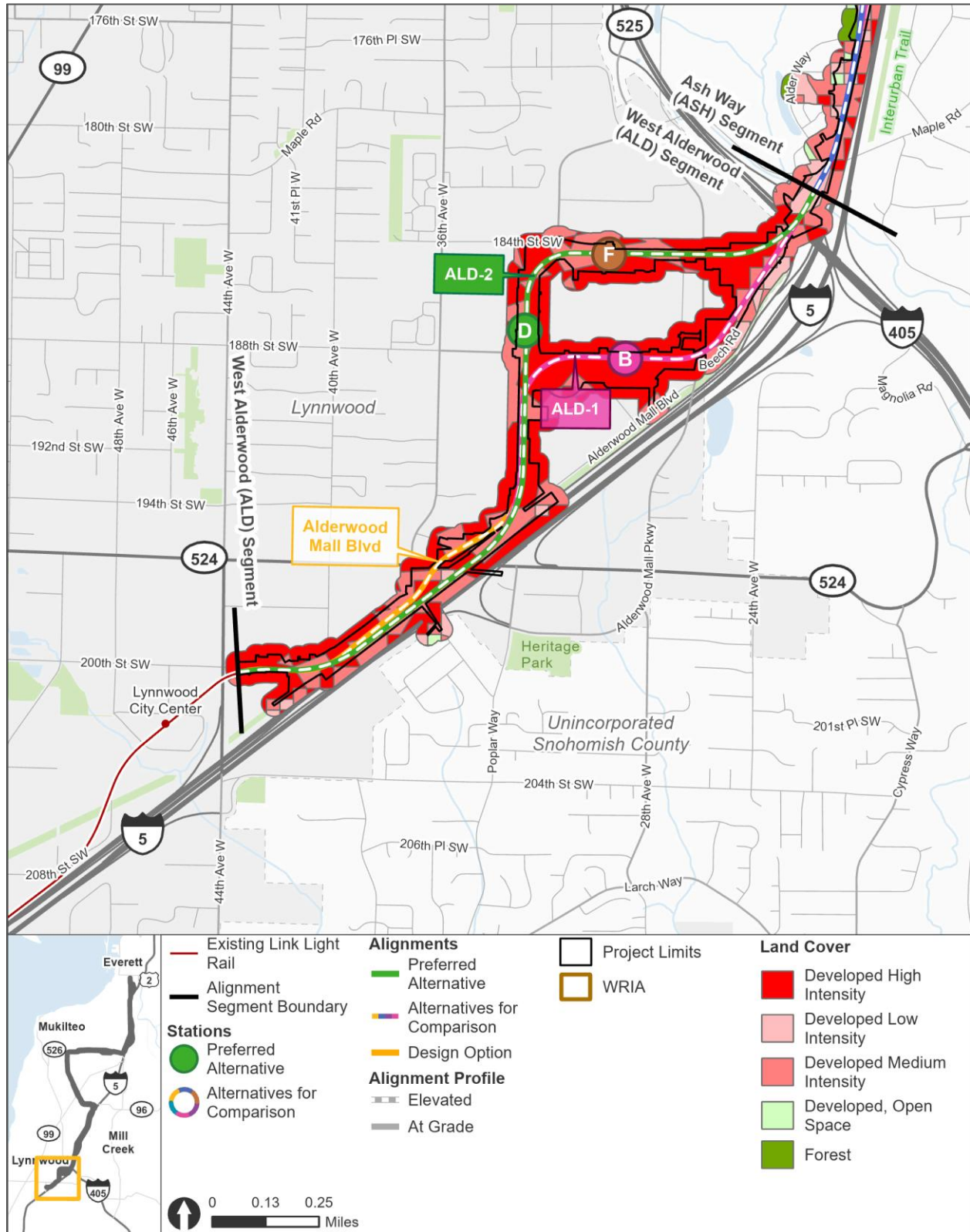
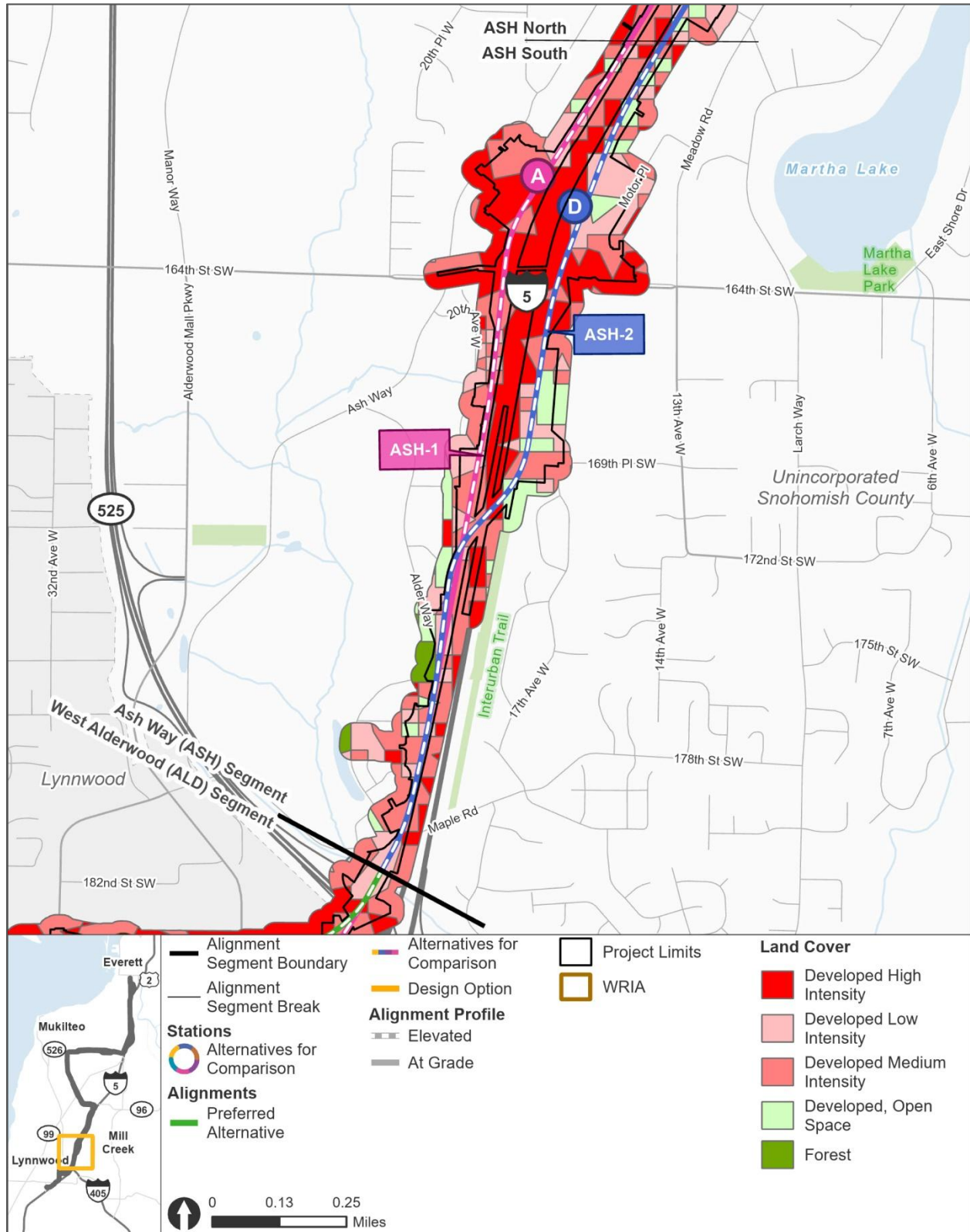


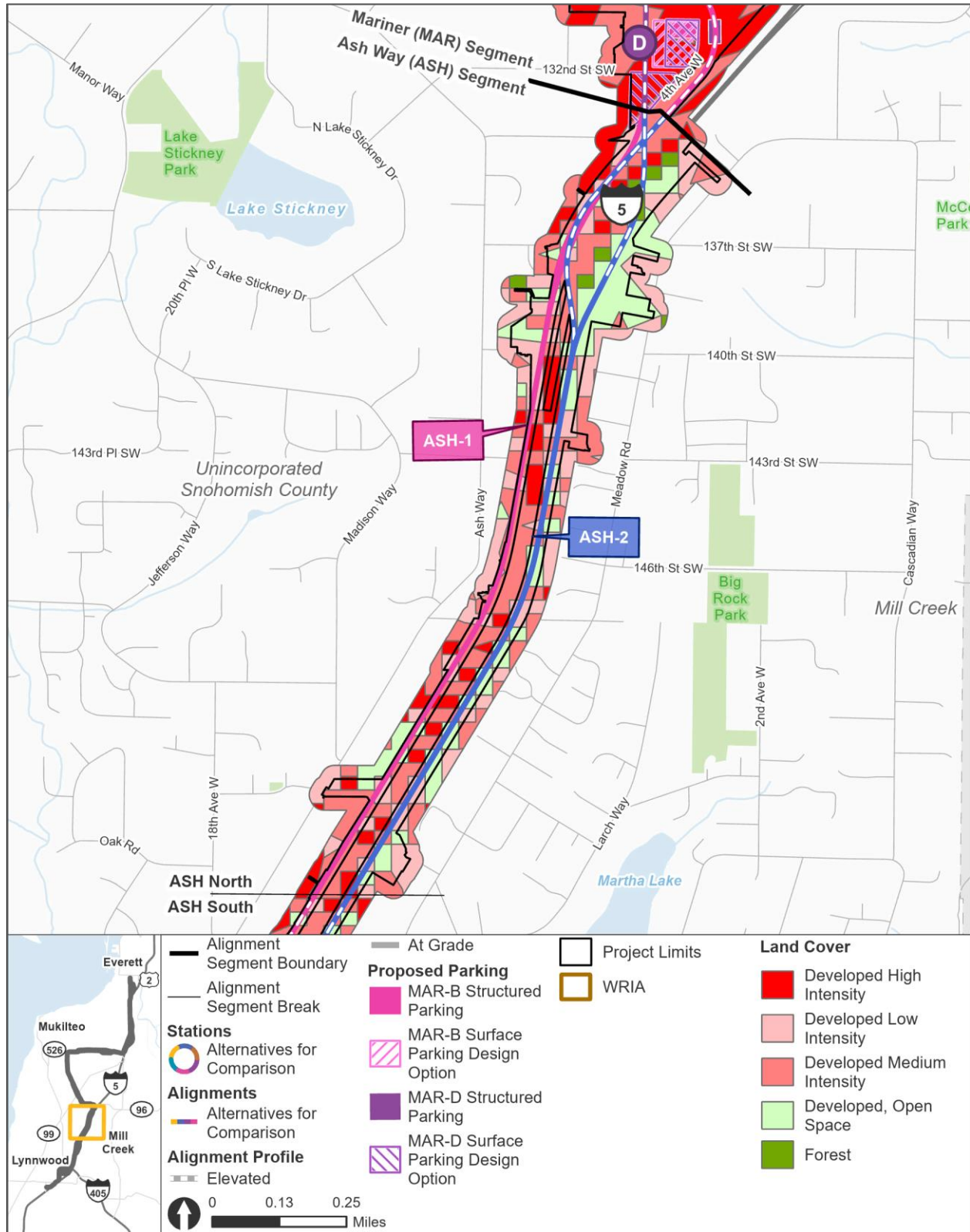
Figure 3-33 Land Cover Types – Ash Way (South) Segment



SOURCE: USGS (2021), Snohomish County (2024b).



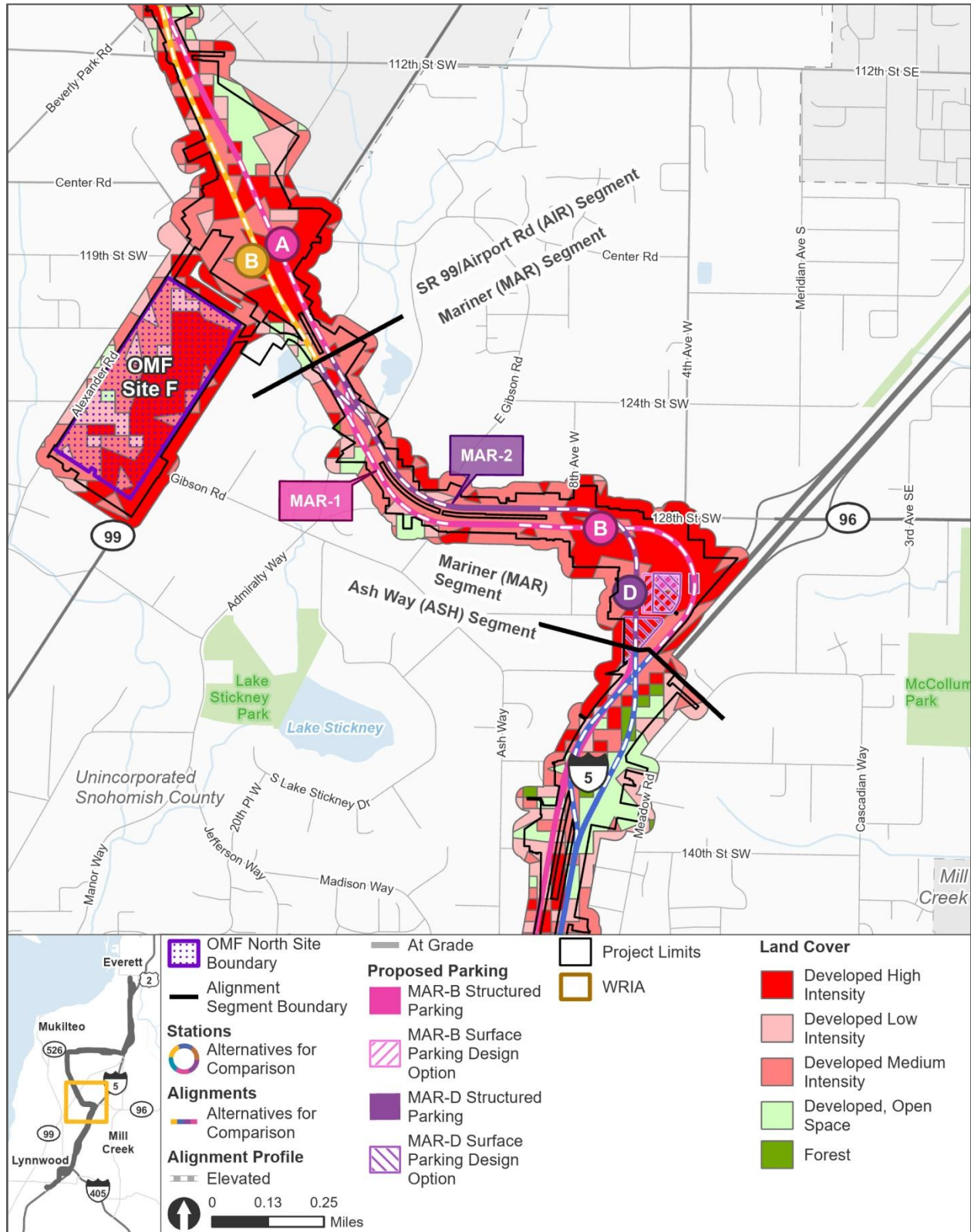
Figure 3-34 Land Cover Types – Ash Way (North) Segment



SOURCE: USGS (2021), Snohomish County (2024b).

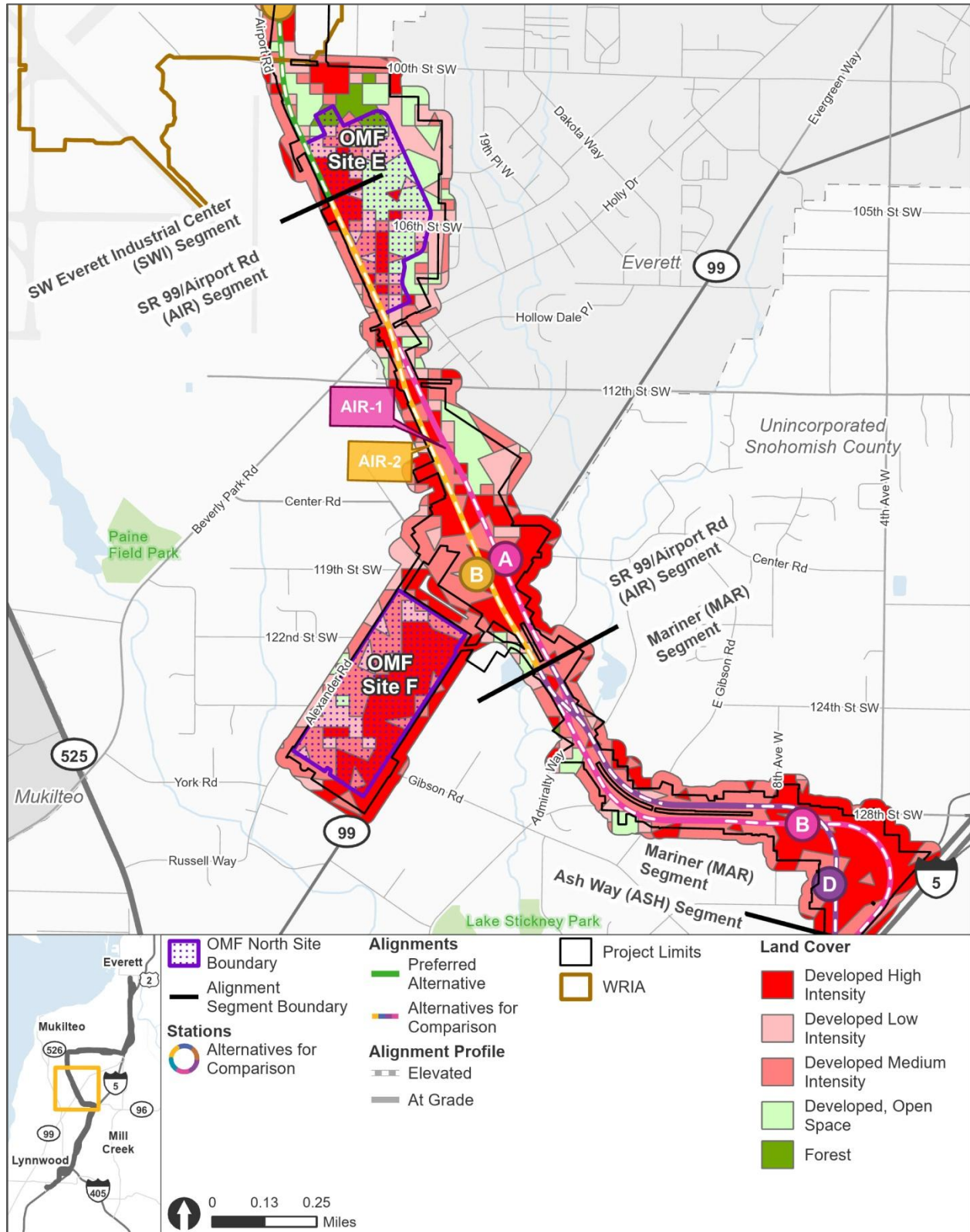


Figure 3-35 Land Cover Types – Mariner Segment



SOURCE: USGS (2021), Snohomish County (2024b).

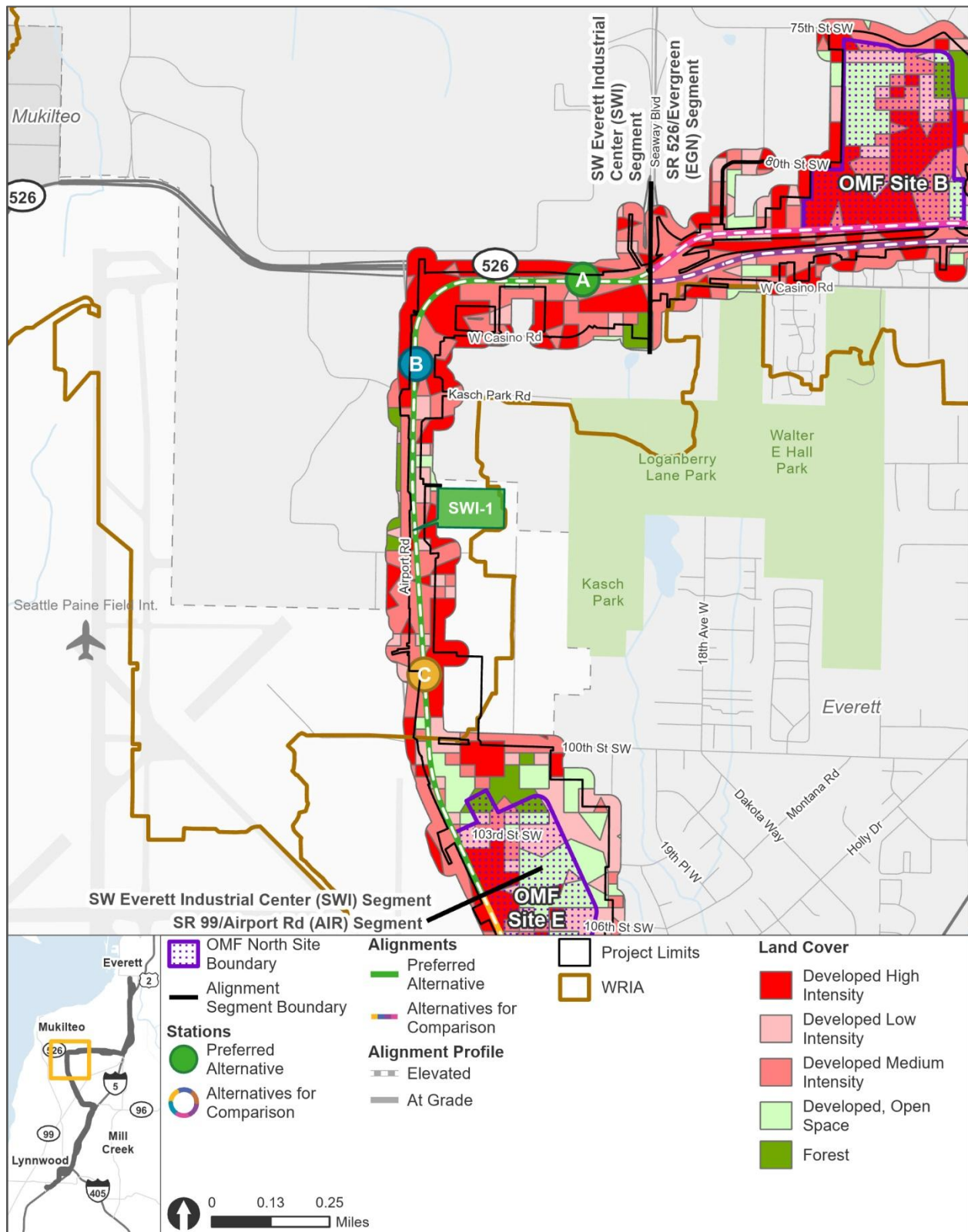
Figure 3-36 Land Cover Types – SR 99/Airport Road Segment



SOURCE: USGS (2021), Snohomish County (2024b).

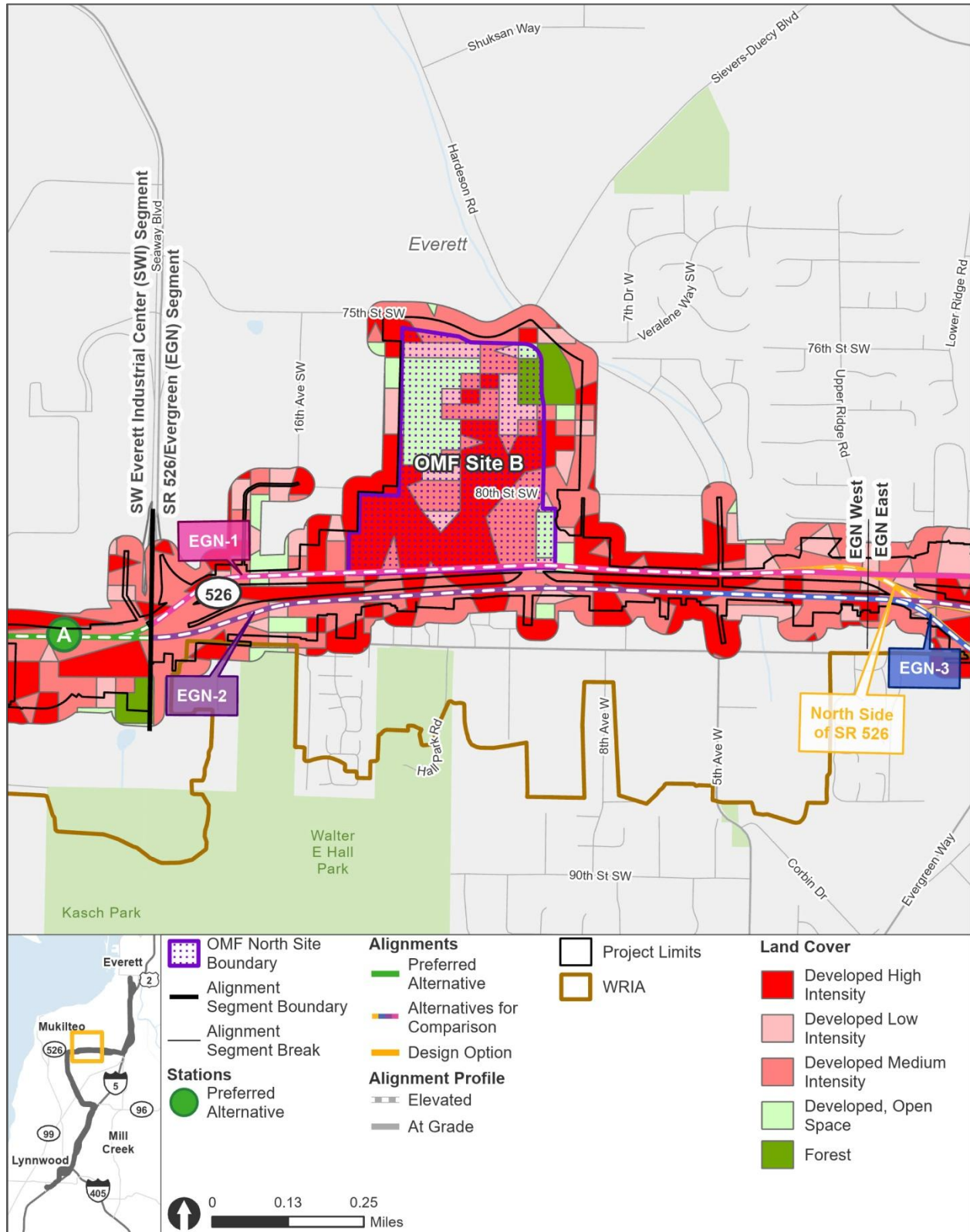


Figure 3-37 Land Cover Types – SW Everett Industrial Center Segment



SOURCE: USGS (2021), Snohomish County (2024b).

Figure 3-38 Land Cover Types – SR 526/Evergreen (West) Segment



SOURCE: USGS (2021), Snohomish County (2024b).



### ***Heritage and Significant Trees***

Heritage and significant trees are regulated as defined within Section 17.15 of the Lynnwood Municipal Code and Chapter 30.91S.320 of the Snohomish County Code. No tree protection code is known to have been adopted for the City of Everett.

A tree survey will be completed for the preferred alternative during development of the Final EIS to determine the extent of tree replacement required for each AHJ, and WSDOT, for the project following any avoidance or minimization measures implemented to reduce impacts to identified heritage or significant trees.

### ***Rare Plants***

No rare plant communities are documented within the Cedar-Sammamish study area (DNR 2024), and no rare plants were observed during the field surveys between 2023 and 2025.

### ***Invasive Plants***

The Snohomish County Noxious Weed Control Board lists several common weeds that may be present in the study area. These include Class A weeds (eradication of all infestations is required by law in Washington) and Class B weeds (in which prevention or control is decided at the local level). Invasive species that are not classified as Snohomish County Noxious Weeds were documented and are prevalent throughout the study area. Prominent species include English ivy, Himalayan blackberry, and non-native grasses such as reed canarygrass.

#### **3.1.6.2 Resources Conservation Areas**

Resources Conservation Areas (RCAs) are properties owned by WSDOT within their right-of-way. These areas originated with the Highway Beautification Act of 1965 and were previously called Beautification Areas, Landscape Areas, or Environmental Commitment Areas. RCAs were initially acquired to preserve vegetation to beautify the highway rights-of-way and serve as a buffer between the highway and adjacent land uses, protect mature vegetation and native habitats, and preserve the character of Washington State (Federal Highway Administration 2016). Figure 3-40, Figure 3-41, and Figure 3-42 show RCAs within the Cedar-Sammamish study area.

As Table 3-19 summarizes, there are 13 RCAs within the Cedar-Sammamish study area, totaling 3.72 acres. All 13 of the RCAs are located within the Ash Way Segment, specifically within the project limits of Alternative ASH-1A, west of I-5.

**Table 3-19 Resource Conservation Areas Within the Cedar-Sammamish Study Area**

| Alignment Segment | Build Alternative | RCA ID <sup>a</sup> | Area (acres) | Existing Value <sup>b</sup> | Description                                                                                                                                                                         |
|-------------------|-------------------|---------------------|--------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ASH               | ASH-1A            | 51                  | 0.04         | Low                         | Lacks forested canopy to provide effective screening.                                                                                                                               |
|                   |                   | 58                  | 0.13         | High                        | Conifer forest provides effective screening for low-density multi-family residences.                                                                                                |
|                   |                   | 62                  | 0.36         | High                        |                                                                                                                                                                                     |
|                   |                   | 66                  | 0.35         | High                        |                                                                                                                                                                                     |
|                   |                   | 178                 | 0.34         | High                        |                                                                                                                                                                                     |
|                   |                   | 179                 | 0.34         | High                        |                                                                                                                                                                                     |
|                   |                   | 180                 | 0.59         | High                        |                                                                                                                                                                                     |
|                   |                   | 181                 | 0.11         | High                        |                                                                                                                                                                                     |
|                   |                   | 182                 | 0.34         | Moderate                    | Vegetation is dominated by deciduous forest and shrub community associated with Wetland WSC26 and Stream SCC1, providing moderate screening to low-density multi-family residences. |
|                   |                   | 202                 | 0.49         | Very low                    | Redeveloped into Ash Way Park and Ride with no adjacent residential uses to screen.                                                                                                 |
|                   |                   | 203                 | 0.09         | Low                         | Forested vegetation only present within a portion of the RCA, reducing the effectiveness of its ability to provide screening for adjacent low-density multi-family residences.      |
|                   |                   | 204                 | 0.15         | Low                         |                                                                                                                                                                                     |
|                   |                   | 256                 | 0.39         | Very low                    | Redeveloped into Ash Way Park and Ride with no adjacent residential uses to screen.                                                                                                 |

SOURCE: WSDOT (2022b).

NOTES:

- a) RCA ID is a unique WSDOT identifier for RCA properties.
- b) Existing Value categories are very low, low, moderate, high, and very high. This is a qualitative evaluation of an RCA's landscaped condition and its ability to contribute to the improvement and beautification of the highway environment.

### 3.1.6.3 Terrestrial Wildlife Species

The urban terrestrial habitats within and adjacent to the study area primarily support those species adapted to the human-built environment. In these ecosystems, habitat loss and fragmentation has resulted in reduced species diversity and increased density of adaptable urban species. The mix of urbanized areas and remnant forest patches creates an environment that attracts both urban dwelling species and forest dwelling species capable of utilizing fringe habitats, which typically include birds and small mammals that are weakly territorial and have limited home ranges (Johnson and O'Neil 2001).

Small mammal species likely to inhabit the urban areas include Norway rat (*Rattus norvegicus*), deer mouse (*Peromyscus maniculatus*), eastern cottontail (*Sylvilagus floridanus*), Townsend's vole (*Microtus townsendii*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), and Eastern gray squirrel (*Sciurus carolinensis*).

The patches of forest and riparian corridors within the study area may support additional species such as Douglas squirrel (*Tamiasciurus douglasii*) and mountain beaver (*Aplodontia rufa*). Larger mammals may also inhabit these forested corridors or venture into urban areas including black-tailed deer (*Odocoileus hemionus hemionus*) and coyote (*Canis latrans*). These species are known to occur in the region and may utilize the study area, particularly in less developed sections or during nighttime hours. Coyote are one of the highest risk wildlife hazard species managed at Paine Field (USDA 2025) with the FAA's Wildlife Strike Database noting two aircraft strikes with coyotes occurring between 2022 and 2024 (FAA 2025).

Additional unverified large mammal species have been reported within 0.50 miles of the Cedar-Sammamish watershed study area. These include two black bears (*Ursinus americanus*) with three cubs in the Swamp Creek riparian corridor upstream of I-5 in 2023, a river otter (*Lontra canadensis*) within Martha Lake in 2024, bobcat (*Lynx rufus*) northeast of the I-5 and I-405 interchange in 2022, and a cougar/mountain lion (*Puma concolor*) south of Lynnwood Heritage Park in 2019 (Woodland Park Zoo 2024). Within 1.5 miles of the study area, multiple verified black bear sightings were reported within the North Creek riparian corridor in 2019 and 2022 (Woodland Park Zoo 2024).

The study area lies within the Pacific Flyway, a migratory corridor consisting of the western coastal areas of South, Central, and North America. Therefore, numerous birds may occur within the study area with some species occurring seasonally as they utilize stopover sites during migration, and some species maintaining year-round residency within the study area. Common bird species in the urban areas include American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), and house sparrow (*Passer domesticus*). The forested corridors may support a more diverse avian community, passerines such as black-capped chickadee (*Poecile atricapillus*), spotted towhee (*Pipilo maculatus*), house sparrow (*Passer domesticus*), white-crowned sparrow (*Zonotichia leucophrys*), song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), yellow warbler (*Dendroica petechial*), and various woodpeckers. Areas surrounding lakes, wetlands, and other open water within the study area, including stormwater ponds, may support waterfowl species, especially during the spring and fall migrations. According to bird data provided by eBird, four "eBird hot spots," public birding locations where public birding activities frequently occur, are located within parks and other open spaces within a half mile of the Cedar-Sammamish watershed study area. These "eBird hot spots" include Scriber Creek Park, Heritage Park, Martha Lake, and Kasch Park (see Figure 3-39, Figure 3-40, Figure 3-41, and Figure 3-44).

During field studies completed for the project, a 4- to 6-foot-diameter nest made out of sticks was observed at the top of a cottonwood tree northeast of the SR 99 and Center Road intersection. The nest is located outside of the 200-foot study area but within the 0.25 study area for documented occurrences of sensitive wildlife species. No birds were observed within the nest; however, given its size and its proximity to a bald eagle observation at Wetland WSC19 located 0.3 mile south of the nest, it is presumed at this time to be a bald eagle nest. A bald eagle management zone around the nest would extend into the study area associated with Alternative AIR-1A.

Several bat species are expected to utilize both urban and forested habitats, including little brown bat (*Myotis lucifugus*) and Yuma myotis (*Myotis yumanensis*), both of which are WDFW priority species. These species may roost in buildings, tree cavities, or under loose bark.

Reptile and amphibian presence is expected to be limited in heavily urbanized areas but may be more prominent in forested corridors. Species that might occur include Pacific tree frog (*Pseudacris regilla*), Northwestern garter snake (*Thamnophis ordinoides*), and Northern red-legged frog (*Rana aurora*) in suitable moist habitats.

### 3.1.6.4 Threatened, Endangered, and Proposed Upland Species

This section provides a preliminary evaluation of ESA-listed upland species and designated critical habitat. A detailed evaluation of ESA-listed terrestrial species will be completed for the preferred alternative, and a BA that addresses the potential impacts of the preferred alternative on species and habitat protected by the ESA and the MSA will be prepared. Aquatic ESA-listed species are addressed in Section 3.1.3.

Table 3-20 summarizes the federally listed upland species and designated critical habitats that were identified during the desktop evaluation of the study area.

**Table 3-20 Federally Listed Upland Species and Designated Critical Habitat Within the Study Area**

| Common Name                       | Scientific Name                 | Federal Status      | Service With Jurisdiction | Critical Habitat in Study Area | Suitable Habitat Within Study Area | Likely Presence in Study Area |
|-----------------------------------|---------------------------------|---------------------|---------------------------|--------------------------------|------------------------------------|-------------------------------|
| Marbled murrelet                  | <i>Brachyramphus marmoratus</i> | Threatened          | USFWS                     | No                             | No                                 | May occur during flyover      |
| Yellow-billed cuckoo, Western DPS | <i>Coccyzus americanus</i>      | Threatened          | USFWS                     | No                             | Likely                             | Unlikely                      |
| Monarch butterfly                 | <i>Danaus Plexippus</i>         | Proposed Threatened | USFWS                     | No                             | Likely                             | Unlikely                      |
| Suckley's cuckoo bumble bee       | <i>Bombus suckleyi</i>          | Proposed Endangered | USFWS                     | No                             | Likely                             | Unlikely                      |

SOURCE: USFWS (2025).

Marbled murrelet are small seabirds that forage in coastal marine waters and typically nest in late-successional, old-growth forest stands with large nesting platforms and multilayered canopies (USFWS 1992). In Washington, they are primarily found within 40 miles of the coast in northern Puget Sound, the Strait of Juan de Fuca, and the northern Pacific coast (USFWS n.d.). While the study area lacks suitable nesting habitat for marbled murrelets, these seabirds may occur above the study area during flights between their forested nesting grounds and marine foraging areas and, therefore, may be affected by actions related to the preferred alternative.

There are currently no documented federally threatened yellow-billed cuckoo populations within Washington State. The farthest northern extent of the yellow-billed cuckoo is the Sacramento



Valley in California (USFWS 2013). However, according to USFWS, there have been consistent and confirmed sightings of vagrants semiannually throughout Washington State, with one occurring as recently as 2017 at the Little Pend Oreille National Wildlife Refuge in Stevens County and in 2015 in Okanogan County (Wiles and Kalasz 2017).

The yellow-billed cuckoo selectively nests in humid, deciduous riparian habitats that include open clearings and dense shrubby vegetation. In western populations, patch size is a major limiting factor in breeding habitat, with studies indicating that sites less than 15 hectares (37 acres) in size are considered unsuitable (USFWS 2017). The yellow-billed cuckoo is much less selective in habitat preference during migration and winter roosting and will utilize smaller areas that include woodlands, secondary forests, forest edge, arid habitats, and disturbed vegetation, with areas near water being favored (USFWS 2017). The Cedar-Sammamish study area includes portions of large riparian corridor along Swamp Creek, including those associated with Wetland WSC3 within the study area, that may meet both breeding and migration/roosting habitat requirements. The preliminary evaluation indicates that, although unlikely, there is a potential for yellow-billed cuckoo to be affected by actions related to the preferred alternative within the Cedar-Sammamish watershed.

Monarch butterflies' main requirements for breeding, roosting, and migration are secure patches of milkweed, which often occur in weedy fields and sparsely vegetated areas, typically near wetlands and riparian habitats (WDFW 2025b). During migration, they require abundant nectar sources and trees for roosting and as shelter during inclement weather (WDFW 2025b). According to the Western Monarch Milkweed Mapper, no monarch butterflies have been observed within the study area, the closest observation occurring in the city of Seattle (The Xerces Society for Invertebrate Conservation et al. 2025a).

Suckley's cuckoo bumble bee is part of a parasitic subgenus, named *Psithyrus*, of the genus *Bombus* that are obligate social parasites that depend on social hosts for survival and raising young (89 FR 102074). This species parasitizes the nests of true bumble bee colonies and cannot establish their own nests, produce worker bees, or collect pollen. The two known hosts of this species are the western bumble bee (*Bombus occidentalis*) and the Nevada bumble bee (*Bombus nevadensis*), though more potential hosts may exist. Beyond a viable host species population, Suckley's cuckoo bumble bee also relies upon diverse native floral resources for nutrition and overwintering sites, which may include leaf litter, loose duff, and rotting logs.

The Suckley's cuckoo bumble bee's range extends from the Yukon south to Arizona and primarily occurs in western North America. The species has experienced a roughly 85% percent decline in probability of occupancy between 1900 and 2020 across its range (89 FR 102074). Suckley's cuckoo bumble bee has not been observed in the contiguous United States since 2016, despite an expanding survey effort throughout the range (89 FR 102074). The Marine West Coast Forest population range unit, where the project is located, has 515 historical occurrence records, but no occurrences have been recorded after 1982. The USFWS concludes in their status assessment of Suckley's cuckoo bumble bee that the species is quasi-extirpated within the population range units that have no occurrence records post 2000. Relative abundance of this species has declined 98% in Washington between 2011 and 2021 compared to pre-2011 levels (89 FR 102074). WDFW and others conducted 7,985 surveys between 2018 and 2024. Twenty-three bumble bee species were identified across 14,842 observations in Washington. Suckley's cuckoo bumble bee was not detected during these survey efforts (J. Combs, personal communication, April 9, 2025). Additionally, the two known hosts, the western bumble bee and Nevada bumble bee, have not been documented within the study area (The Xerces Society et al. 2025b).

### 3.1.6.5 Bald and Golden Eagle Protection Act

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act (USFWS 2025). During field surveys on November 8, 2023, a bald eagle was observed within the study area in the SR 99/Airport Road Segment. A presumed bald eagle nest has been observed within a cottonwood tree northeast of the SR 99 and Center Road intersection during multiple field investigations between 2023 and 2025, although no birds have been observed occupying the nest during that time. Golden eagles may fly over or roost within the study area (USFWS 2025).

### 3.1.6.6 Migratory Bird Treaty Act

All birds native to the United States and its territories are protected under the MBTA (USFWS 2025). The act prohibits taking, possessing, importing, exporting, transporting, selling, purchasing, bartering, or offering for sale any migratory bird, including their parts, nests, or eggs, except under the terms of a valid federal permit (USFWS 1918).

Within the study area, the general nesting season for all bird species extends from late January through mid-August. Spring migration occurs from April through June, peaking in May, while fall migration takes place in September (WTA 2025). Protected species, including passerines, raptors, waterfowl, and shorebirds, may fly over, forage, roost, and nest within the study area (USFWS 2025).

### 3.1.6.7 State and Local Upland Priority Habitats and Species

Habitat conservation areas for upland wildlife species are defined differently by the multiple jurisdictions within the study area. However, these areas generally include terrestrial habitat areas, such as forested corridors or avian nest sites. In addition, biodiversity corridors or habitat areas that are primarily associated with species of local, state, or federal importance may be considered a fish and wildlife habitat conservation area by the local jurisdictions, as shown in Figure 3-39 through Figure 3-45.

Table 3-21 presents potential species of concern that might use upland habitats and summarizes the priority habitats and species publicly mapped by WDFW within the study area. A thorough evaluation of project impacts to state and locally important species and habitats will be completed for the Final EIS after the preferred alternative has been identified.

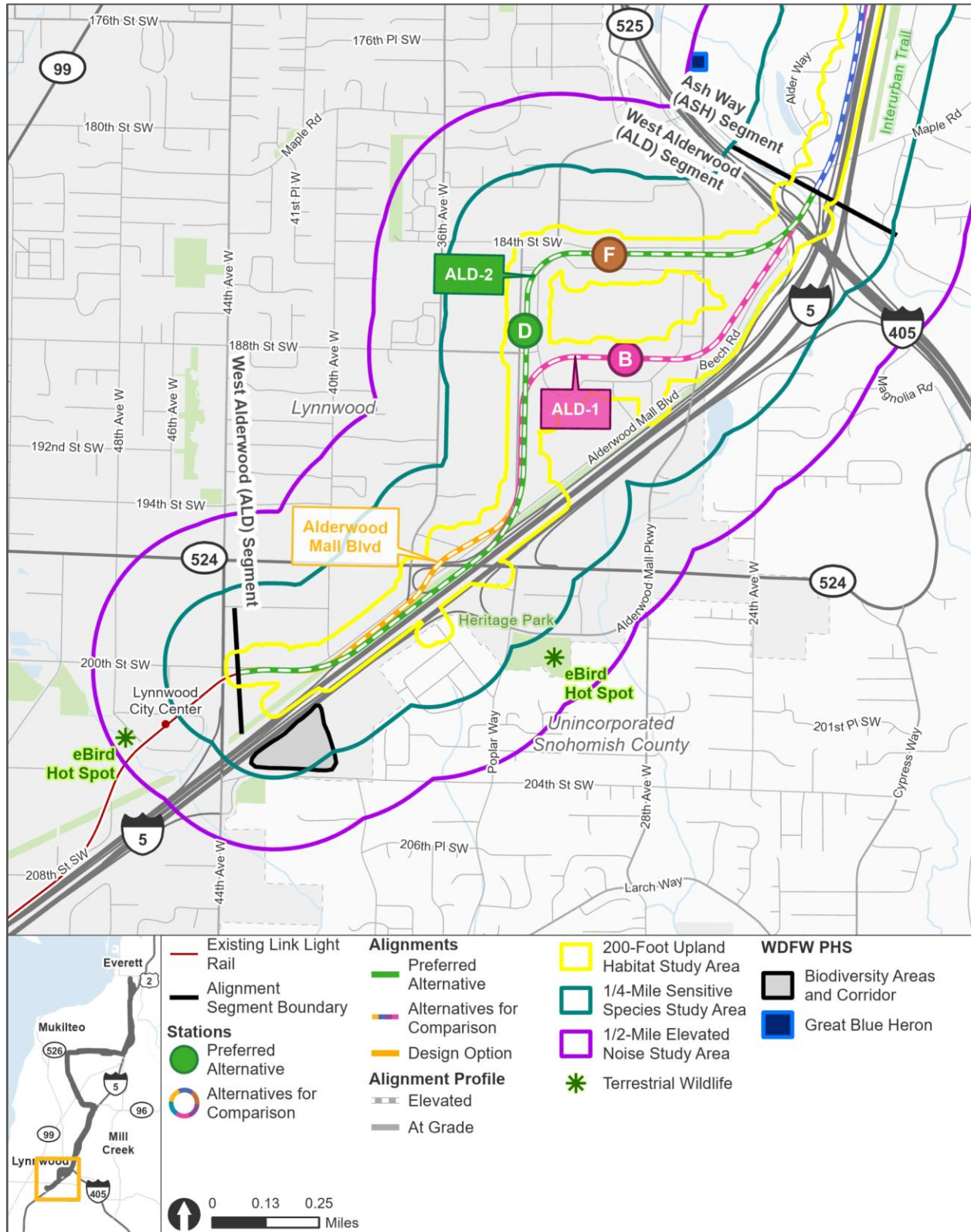
Great blue heron breeding areas have been identified within the Swamp Creek riparian and wetland complex upstream of the I-5/I-405 interchange (Figure 3-39 and Figure 3-40). Martha Lake is documented as a waterfowl concentration area (Figure 3-40). In addition, the study area contains four biodiversity areas and corridors (Figure 3-39, Figure 3-40, and Figure 3-44).

**Table 3-21 Upland Priority Habitats and Species Within the Cedar-Sammamish Watershed Study Area**

| Priority Species                 | Scientific Name       | Habitat                     | Priority Habitat Type                                                                                                                                                                |
|----------------------------------|-----------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Great blue heron                 | <i>Ardea herodias</i> | Swamp Creek wetland complex | Breeding areas                                                                                                                                                                       |
| Biodiversity Areas and Corridors | N/A                   | Terrestrial habitat         | City of Everett open spaces; West Snohomish County open space areas; Southwest Snohomish County open space; Puget Sound to I-5; I-5 to Snoqualmie River; Snohomish County park lands |
| Waterfowl Concentrations         | N/A                   | Martha Lake                 | Winter waterfowl habitat                                                                                                                                                             |

SOURCE: WDFW (2024b).

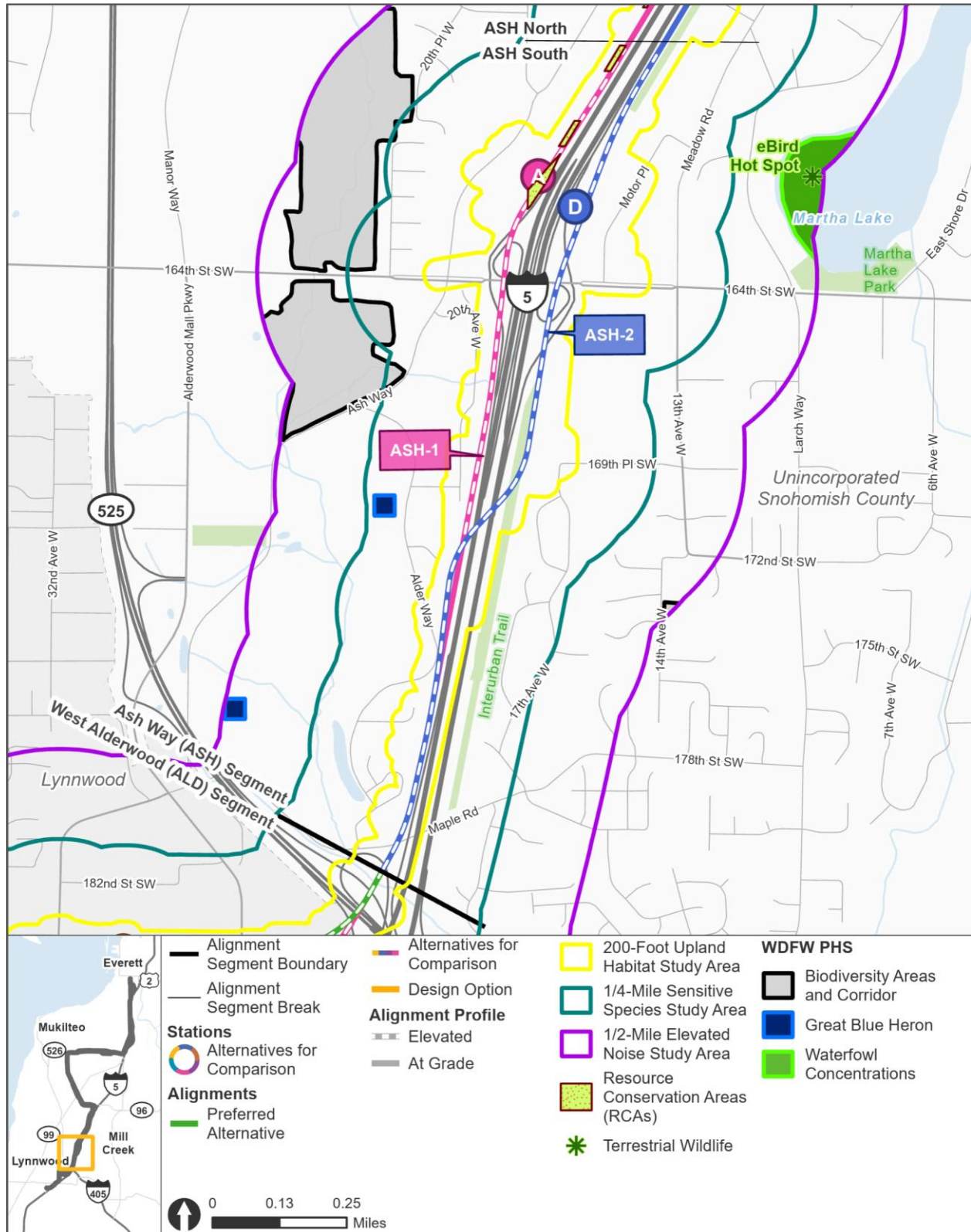
Figure 3-39 Upland Habitats and Species – West Alderwood Segment



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

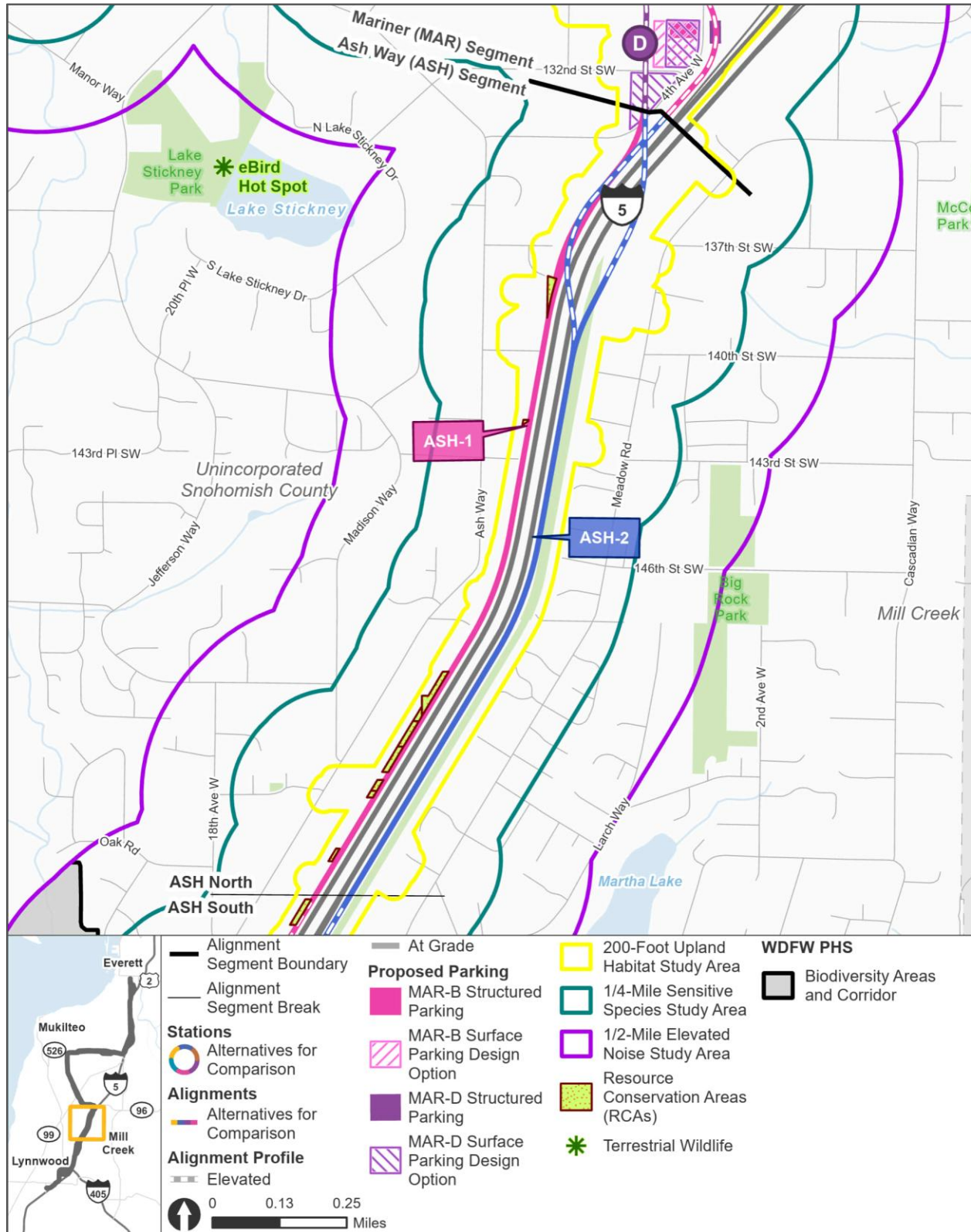


Figure 3-40 Upland Habitats and Species – Ash Way Segment (South)



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

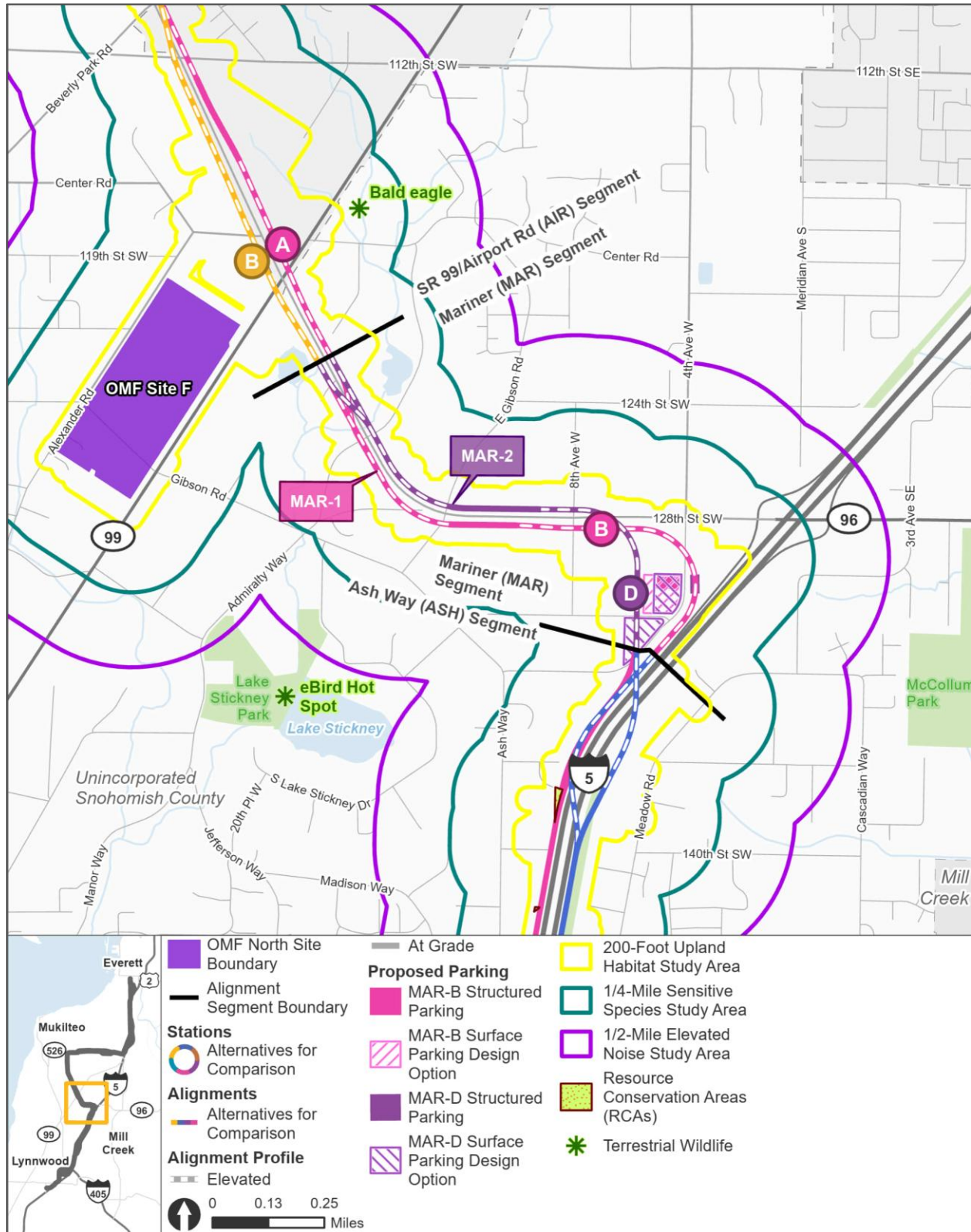
Figure 3-41 Upland Habitats and Species – Ash Way Segment (North)



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

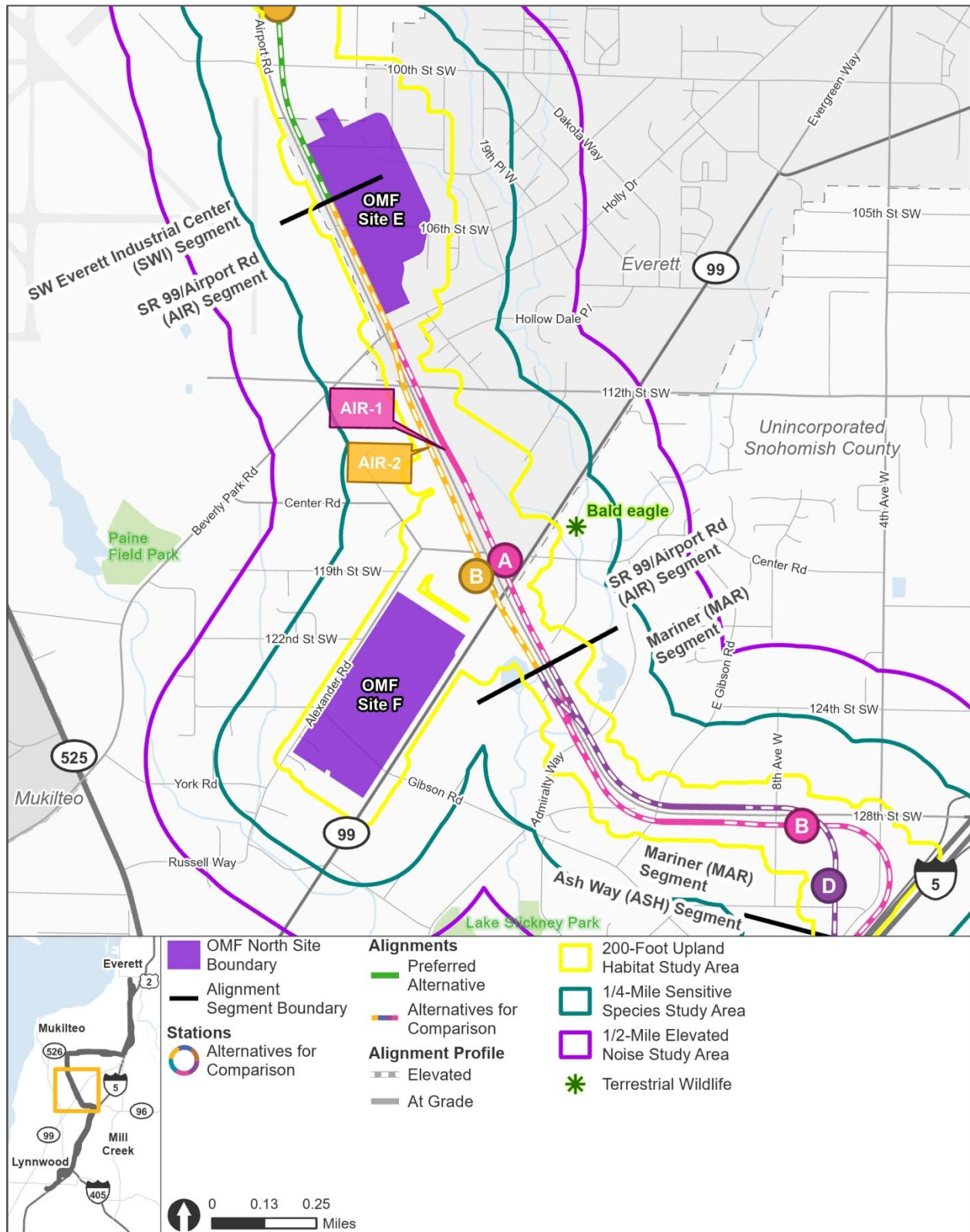


Figure 3-42 Upland Habitats and Species – Mariner Segment



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

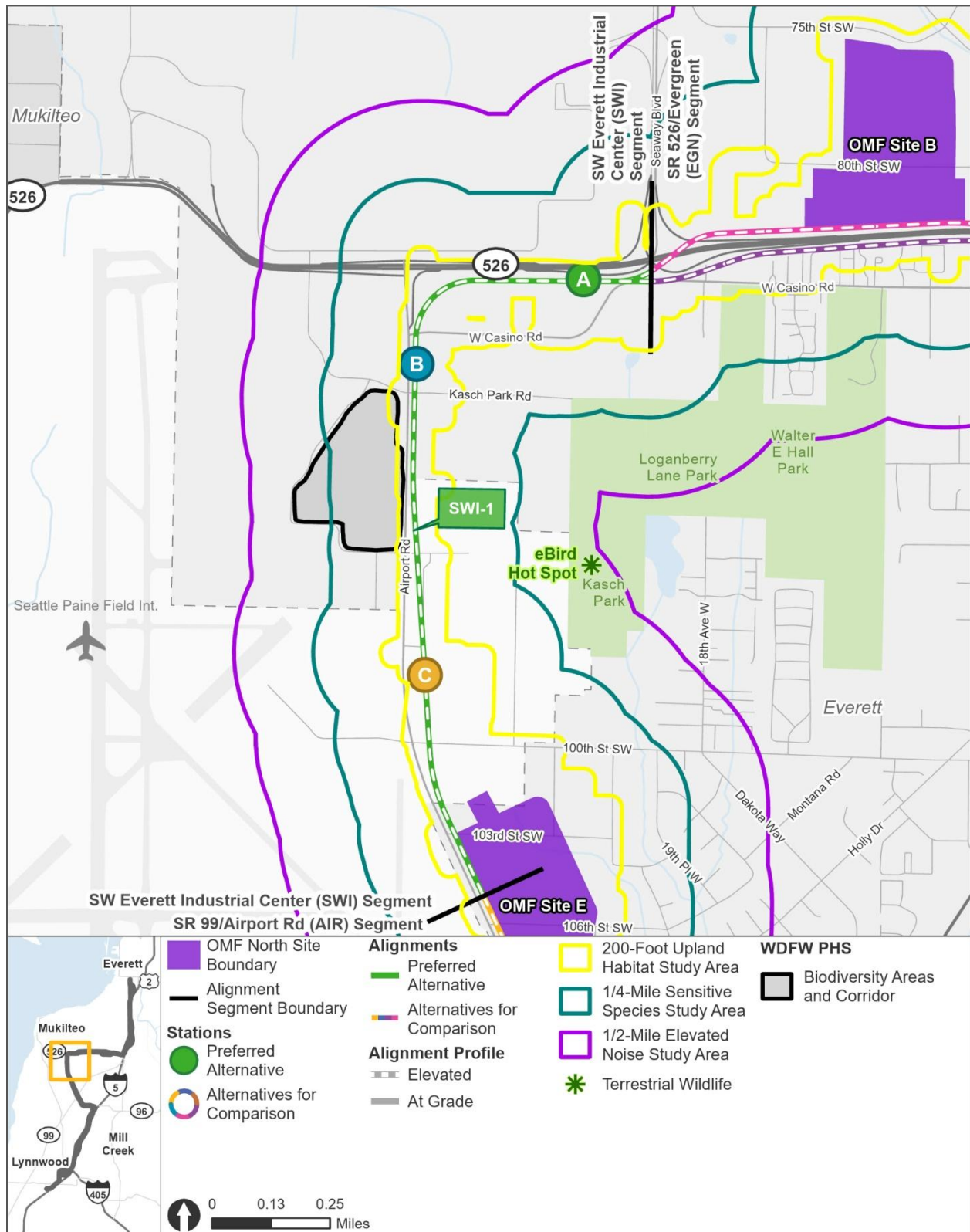
**Figure 3-43 Upland Habitats and Species – SR 99/Airport Road Segment and OMF Sites F and E**



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

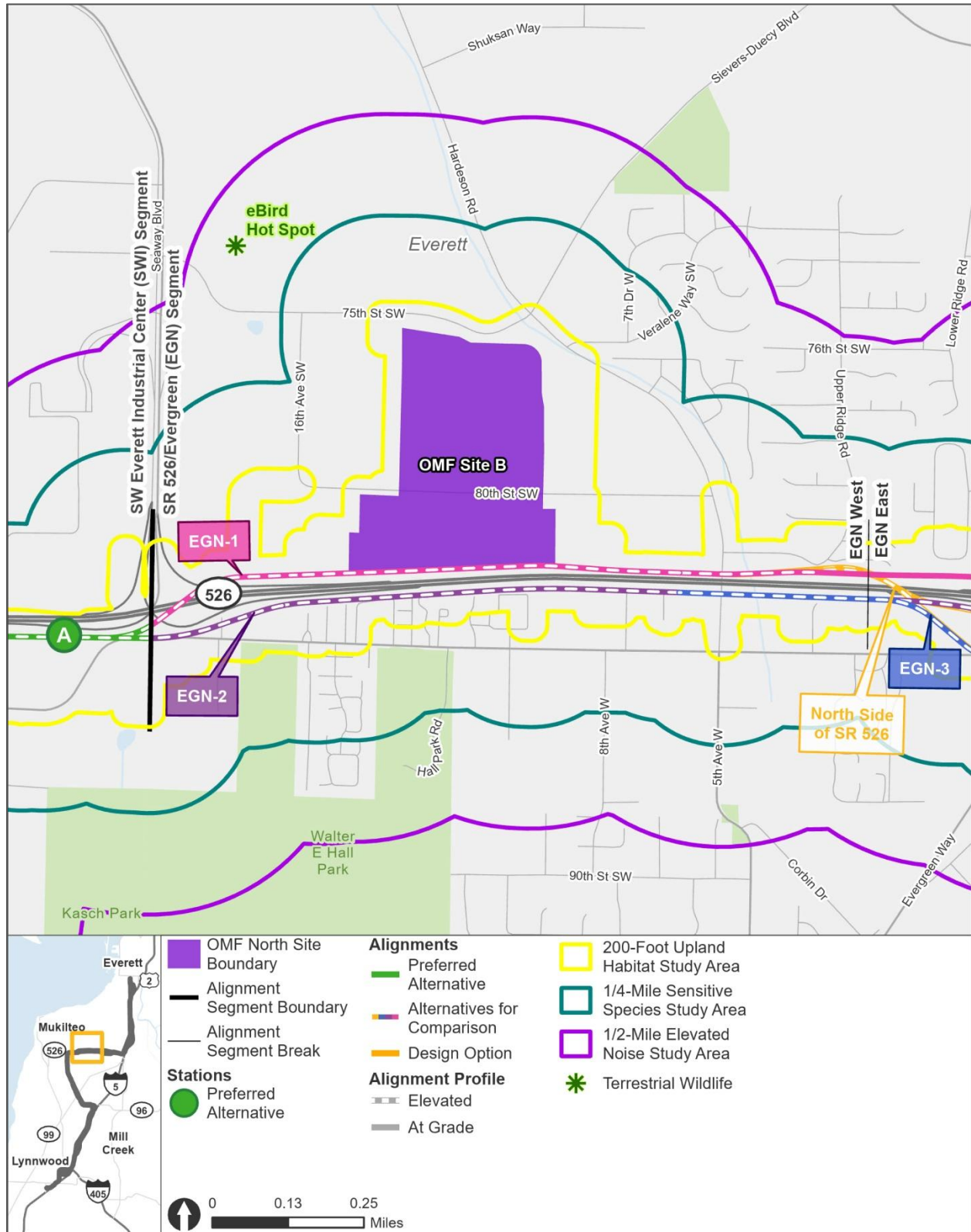


**Figure 3-44 Upland Habitats and Species – SW Everett Industrial Center Segment and OMF Site E**



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

Figure 3-45 Upland Habitats and Species – SR 526/Evergreen Segment (West)



SOURCE: USGS (2021), Snohomish County (2024b), WDFW (2024b), eBird (2024).

### 3.2 Snohomish Watershed and Subbasins

The Snohomish watershed and subbasins make up WRIA 7, spanning over 1,856 square miles across parts of King and Snohomish Counties (Ecology 2022b). The SW Everett Industrial Center, SR 526/Evergreen, Broadway/I-5, and Everett Station Segments are entirely or partially within WRIA 7.

That portion of the study area within WRIA 7 extends across parts of two HUC-12 watersheds:

- Snohomish River – Frontal Possession Sound (HUC 171100110203).
- Powder Mill Gulch – Frontal Possession Sound (HUC 171100190202).

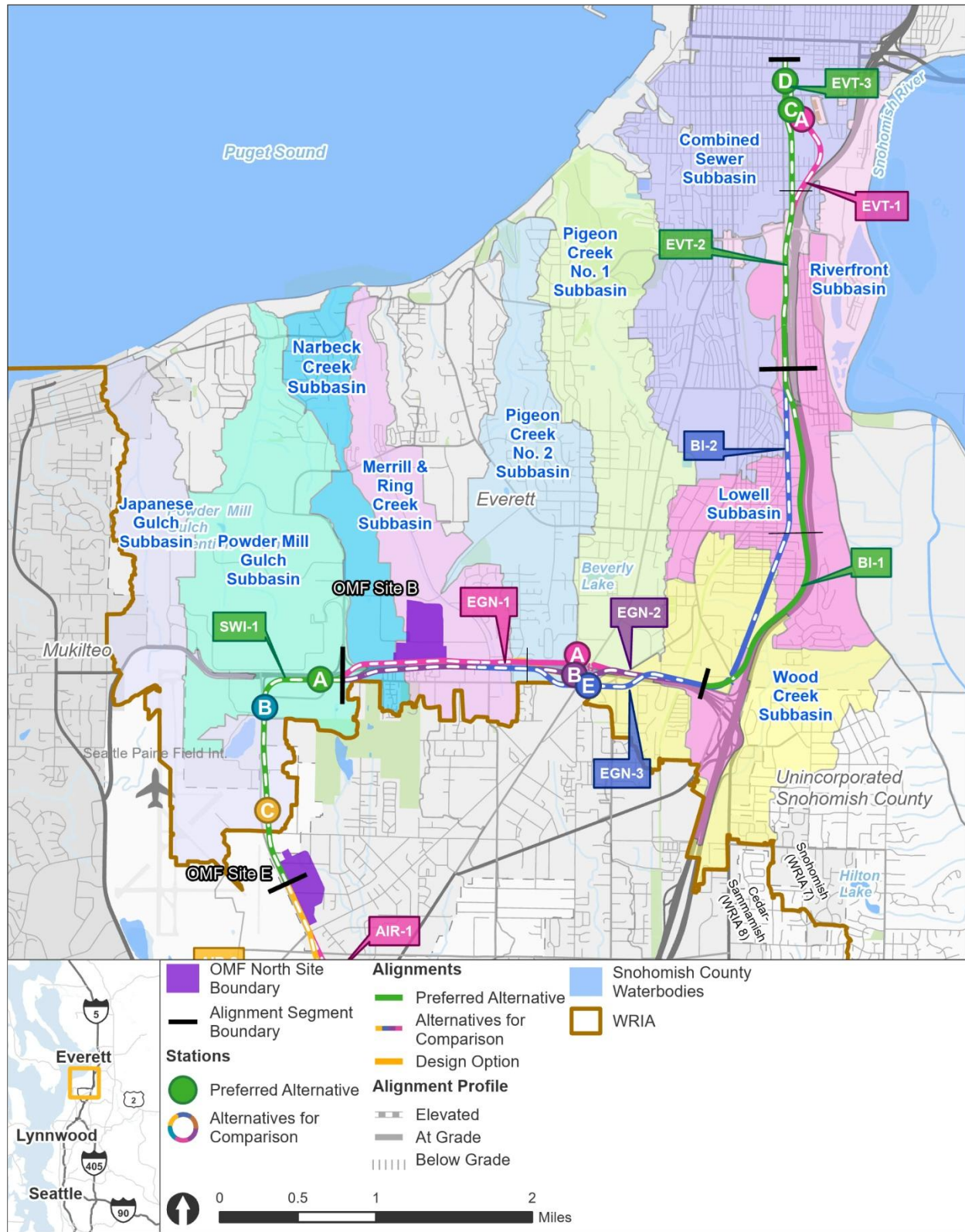
As shown in Figure 3-46, 10 subbasins are present within that portion of the study area within the Snohomish watershed. These 10 subbasins include:

- Japanese Gulch.
- Powder Mill Gulch.
- Narbeck Creek.
- Merrill & Ring Creek.
- Pigeon Creek No. 1.
- Pigeon Creek No. 2.
- Wood Creek.
- Lowell.
- Riverfront.
- Combined Sewer.

A summary of the streams and wetlands in these subbasins is provided in the sections below.



Figure 3-46 WRIA 7: Snohomish Watershed Study Area



SOURCE: City of Everett (2023), Ecology (2024c), USGS (2024).



### 3.2.1 Japanese Gulch Subbasin

The Japanese Gulch subbasin is approximately 1,150 acres in size and is located in the Powder Mill Gulch – Frontal Possession Sound HUC-12 watershed. It extends across a portion of the SW Everett Industrial Center Segment with the study area at the upper limits of the subbasin (Figure 3-47 and Figure 3-48). The Japanese Gulch subbasin has been heavily impacted by commercial and industrial development, in particular the construction of Paine Field and the Boeing Everett Production Facility. Paine Field was established in 1936, and the Boeing Everett Production Facility was initially completed in 1967 (Paine Field 2024, Boeing 2024). Both Paine Field and the Boeing Everett Production Facility extend across much of Japanese Gulch subbasin within the study area.

Topography in the Japanese Gulch subbasin is very flat in the upper (developed) portions of the watershed where the study area is located. No streams are present in the study area portion of this subbasin. Japanese Gulch originates west of the study area and flow descends north through a steep forested ravine and marine bluff before reaching Port Gardner Bay.

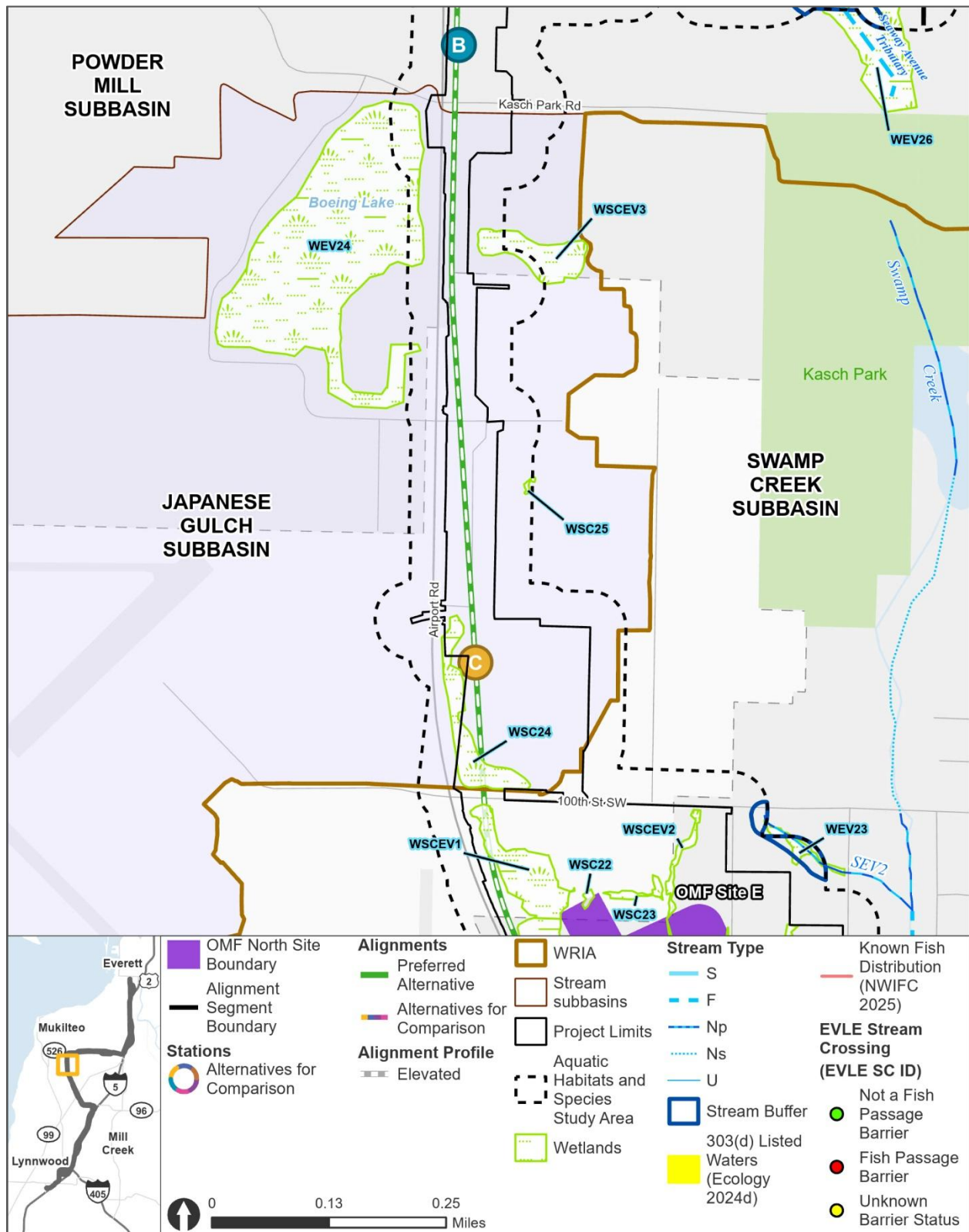
#### 3.2.1.1 Water Quality

Stormwater from the Boeing Everett Production Facility and Paine Field is captured and conveyed via a complex network of pipes and stormwater facilities, and discharges into Japanese Gulch outside of the study area (Otak 2008).

Japanese Gulch does not contain impaired waters according to Ecology's Section 303(d) list (Ecology 2024a). Pollution sources that likely adversely affect water quality in Japanese Gulch include point and non-point sources. The Japanese Gulch subbasin receives stormwater from pollution generating impervious and non-impervious surfaces within the study area. These areas include commercial/industrial areas associated with Boeing and Paine Field, which both discharge stormwater to Japanese Gulch under approved Industrial Stormwater General Permits (Ecology 2024e). Stormwater pollutants associated with these point sources are anticipated to include hydrocarbons, metals, tire rubber dust, deicers, fertilizers, and pesticides.

Non-point sources include urban runoff from PGIS and adjacent properties which introduce hydrocarbons, metals, tire rubber dust, fertilizers, pesticides, and fecal coliform bacteria.

Figure 3-47 Japanese Gulch Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

### 3.2.1.2 Streams in the Japanese Gulch Subbasin

There are no known streams located within the Japanese Gulch subbasin portion of the study area.

### 3.2.1.3 Wetlands in the Japanese Gulch Subbasin

Four wetlands have been identified within the study area within the Japanese Gulch subbasin, as summarized in Table 3-22 and shown in Figure 3-48. With the exception of Wetland WSC25, these wetlands are relatively large forested and shrub wetland systems.

Based on a review of historic aerial photos from 1952, Wetland WEV24 did not initially include deepwater habitat. Boeing Lake, which is part of Wetland WEV24, appears to have been constructed following the initial development of Paine Field but before the Boeing Everett Production Facility was constructed.

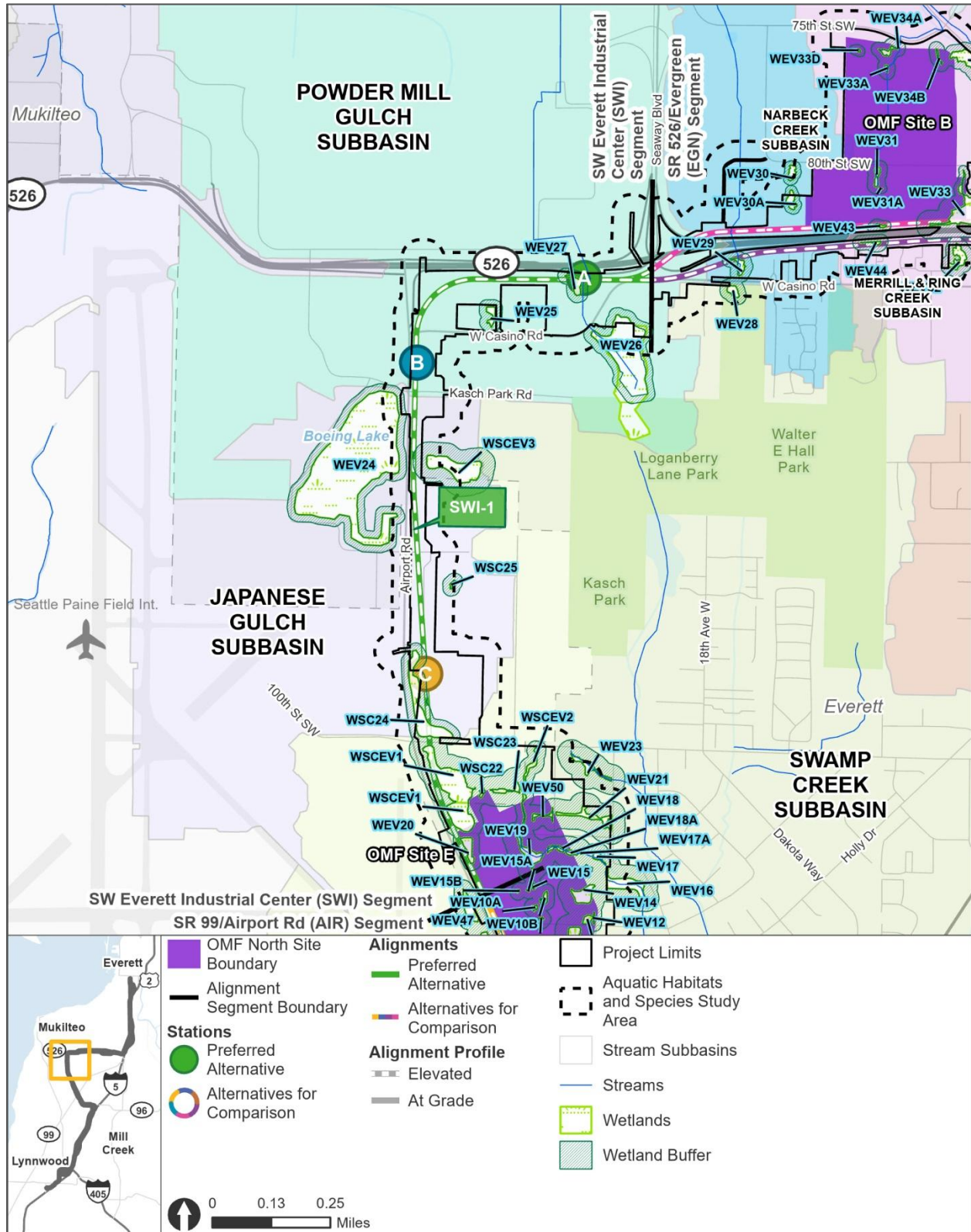
**Table 3-22 Wetlands Within the Study Area and Japanese Gulch Subbasin**

| Wetland             | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------------------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WSC24               | SWI               | PSS/PFO        | Depressional | 2.67                      | III                            | 5                          | 80            |
| WSC25 <sup>c</sup>  | SWI               | PSS/PFO        | Depressional | 0.05                      | III                            | 4                          | 80            |
| WSCEV3 <sup>d</sup> | SWI               | PSS/PFO        | Depressional | 2.35                      | III                            | 5                          | 150 / 80      |
| WEV24               | SWI               | PAB/PSS/PFO    | Depressional | 23.67                     | III                            | 5                          | 80            |

**NOTES:**

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.
- c) Wetland identified using publicly available data and has not been evaluated by Shannon & Wilson.
- d) Wetland buffers listed in order of County and then City.

Figure 3-48 Wetlands – SW Everett Industrial Center Segment



SOURCE: Snohomish County (2024b), City of Everett (2024)



### 3.2.2 Powder Mill Gulch Subbasin

The Powder Mill Gulch subbasin is approximately 1,280 acres in size and is the largest subbasin in the Powder Mill Gulch – Frontal Possession Sound HUC-12 watershed. The Powder Mill Gulch subbasin lies within the SW Everett Industrial Center Segment with the study area at the upper limits of the Powder Mill Gulch subbasin. The upper subbasin is heavily urbanized by commercial developments, Boeing Everett Production Facility, and SR 526. The Boeing Everett Production Facility collects and discharges stormwater into the Powder Mill Gulch Retention Basin. Stormwater from this detention basin ultimately discharges through a spillway and into an open channel identified as Powder Mill Gulch, which drains to Puget Sound.

Topography in the Powder Mill Gulch subbasin is very flat in the upper (developed) portions of the watershed where the study area is located. A gentle topographic high occurs northeast of Kasch Park and north of the Kasch Park (Bomarc) Bog, which separates the Powder Mill Gulch subbasin from the Swamp Creek subbasin. Although some online resources reviewed show the watershed boundaries incorrectly, the correct subbasin boundary is mapped in the City of Everett Surface Water Comprehensive Plan (City of Everett 2022a), which was confirmed in the field.

Further north, Powder Mill Gulch descends through a steep forested ravine and marine bluff before reaching Port Gardner Bay.

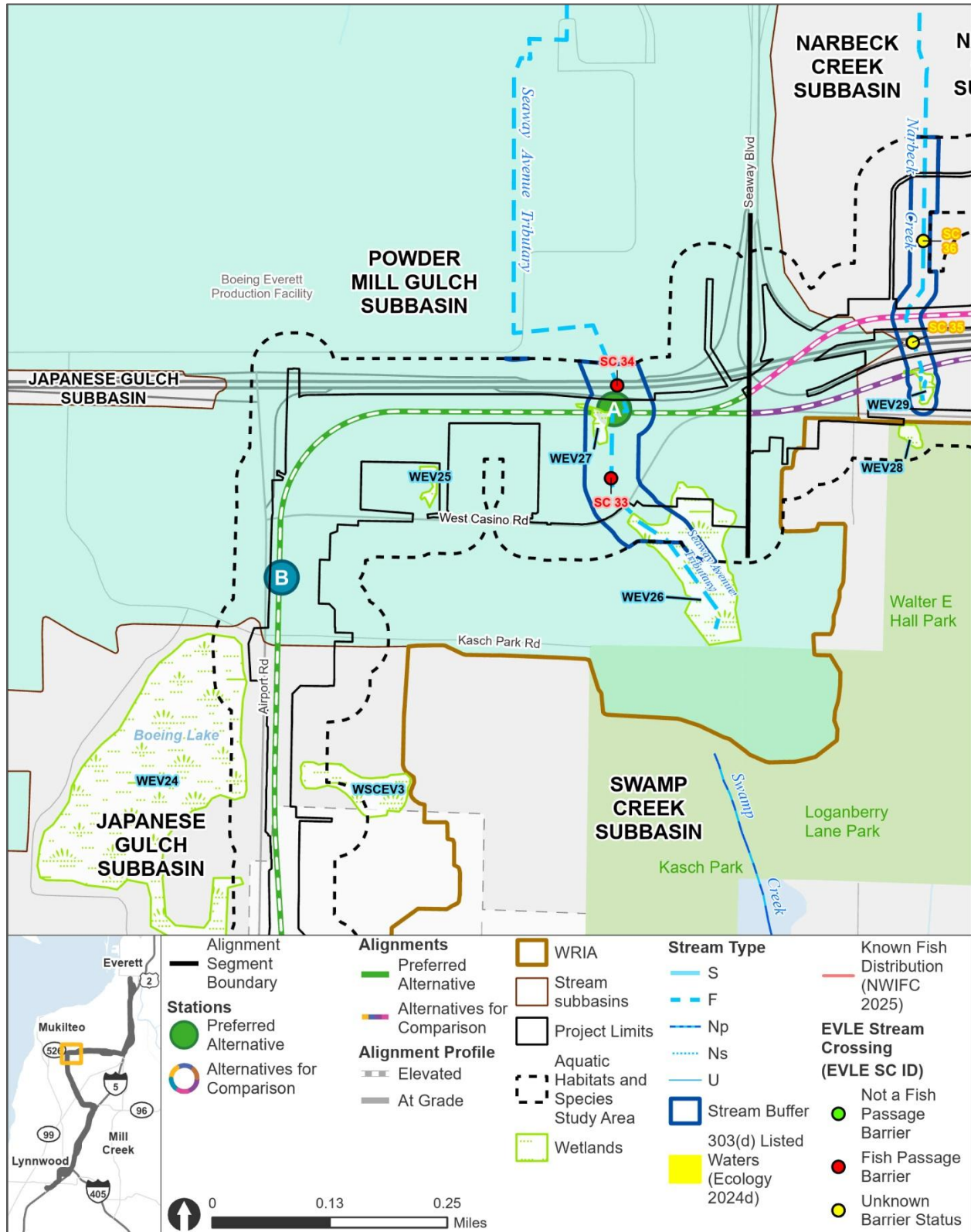
Seaway Avenue Tributary is the only study area stream located in the Powder Mill Gulch subbasin (Figure 3-49).

#### 3.2.2.1 Water Quality

Seaway Avenue Tributary is not identified as an impaired water pursuant to Ecology's 2023 Section 303(d) list (Ecology 2024a). However, Powder Mill Creek, which begins downstream of the Powder Mill Gulch Retention Basin approximately 1.75 miles downstream of the study area on the Boeing Everett Production Facility campus, is identified as an impaired water for fecal coliform, copper, and zinc (Ecology 2024a). Additionally, the Boeing Company has a National Pollution Discharge Elimination System (NPDES) permit as part of an ongoing remedial cleanup action associated with a trichloroethylene plume that releases into Powder Mill Creek (Ecology 2025).

Pollution sources that affect water quality within the study area include point and nonpoint sources from commercial and industrial land uses, which are expected to include hydrocarbons, metals, tire rubber dust, fertilizers, pesticides, and fecal coliform.

Figure 3-49 Powder Mill Gulch Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

### 3.2.2.2 Streams in the Powder Mill Gulch Subbasin

One study area stream (Seaway Avenue Tributary) was identified within the Powder Mill Gulch subbasin as shown in Table 3-23 and Figure 3-49.

**Table 3-23 Streams Within the Study Area and Powder Mill Gulch Subbasin**

| Stream                  | Alignment Segment | Stream Type <sup>a</sup> | Jurisdiction | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|-------------------------|-------------------|--------------------------|--------------|----------------------------|---------------------------------------|--------------------------------------------|
| Seaway Avenue Tributary | SWI               | F                        | Everett      | 150                        | No                                    | Yes                                        |

NOTES:

- a) Streams typing was done in accordance with EMC 19.37.160.
- b) Buffers reflect those standard stream buffers based on stream typing as required under EMC 19.37.170.
- c) Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- d) Suitable fish habitat as defined by WAC 222-16-031.

#### **Seaway Avenue Tributary**

Seaway Avenue Tributary originates from a large wetland (Wetland WEV26) located south of Casino Road and northeast of Kasch Park. A beaver dam is located at the downstream (north) end of Wetland WEV26 from which surface flow drains into an open channel for approximately 30 linear feet before entering a piped conveyance system which extends for approximately 680 linear feet under Casino Road and private property within the Station SWI-A site. Surface flow reemerges in a small pond above a second, smaller beaver dam before flowing approximately 45 feet within a linear channel and then into another piped conveyance system extending more than 8,000 linear feet under SR 526 and the Boeing Everett Production Facility to the Powder Mill Gulch Retention Basin outside the study area. Based on a review of a 1944 topographic map, a stream channel appears to have been present in this location prior to the construction of the Boeing Everett Production Facility.

#### **Stream Crossings**

Seaway Avenue Tributary generally drains south to north within an open channel before entering a 48-inch concrete pipe (Stream Crossing 33) conveying surface flow under Casino Road and private property associated with the Station SWI-A site. The stream daylights again within the Station SWI-A site for approximately 45 feet before entering another 48-inch concrete pipe (Stream Crossing 34) below SR 526 and continuing north under the Boeing Everett Production Facility campus (Table 3-24). WDFW has confirmed that both pipes are considered barriers to fish passage (WDFW 2025c).

**Table 3-24 Stream Crossings Along Seaway Avenue Tributary Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream                  | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                   |
|--------------------|--------------|-------------------------|-----------------------------|-------------|----------------------|-------------------------------------------------------------------------|
| SC 33              | 939011       | Seaway Avenue Tributary | SWI                         | F           | Yes                  | 48-inch precast concrete pipe under Casino Road and a private property. |
| SC 34              | 936665       |                         |                             |             | Yes                  | 48-inch precast concrete pipe under SR 526.                             |

#### *Aquatic Habitat and Species*

Seaway Avenue Tributary crosses south to north through the SW Everett Industrial Center Segment. As noted above, Seaway Avenue Tributary originates from a beaver-modified wetland (Wetland WEV26) south of Casino Road, which sustains a small, perennial channel within the study area. A small, linear channel flows for approximately 50 feet downstream of Wetland WEV26 before it enters a piped conveyance under W Casino Road and a private parking lot. The channel daylights south of SR 526 where it enters an approximately 50-foot-long open channel with further evidence of beaver activity as it approaches SR 526 and enters a closed piped conveyance for over 8,000 linear feet. Therefore, aquatic habitat within the study area is limited to two small, 50-foot-long reaches of open stream channel between SR 526 and Wetland WEV26.

The open channel reaches exhibit the physical criteria necessary to support fish habitat. Therefore, Seaway Avenue Tributary has been classified as a Type F stream despite the nearly 1.6 miles of downstream closed conveyance. The open channel reaches lacks large wood material or other in-stream channel complexity. Sediments within the stream are dominated by fine silts and sand. No anadromous fish are documented south of the Powder Mill Gulch Retention Basin – approximately 8,000 linear feet downstream (north) of the study area (NWIFC 2025). Multiple fish passage barriers downstream of the study area as well as Stream Crossings 33 and 34 preclude anadromous fish from utilizing Seaway Avenue Tributary within the study area. Aquatic species are anticipated to be limited to amphibians and macroinvertebrates. No resident fish species are known to be present in the small, open-channel reaches of Seaway Avenue Tributary within the study area due to the 1.6 miles of closed conveyance.

#### *Riparian Habitat*

Within the study area, riparian habitat in the Powder Mill Gulch system has been heavily impacted by road infrastructure and commercial and industrial land uses, especially in areas where the streambed, bank, and channel have been completely replaced with drainage infrastructure. Riparian habitat is relatively sparse where it does exist along the open channel downstream of Wetland WEV26. Where riparian habitat does occur, it consists of a deciduous overstory with both native and non-native shrubs present.



### 3.2.2.3 Wetlands in the Powder Mill Gulch Subbasin

Three wetlands have been identified within the study area within the Powder Mill Gulch subbasin, as summarized in Table 3-25 and shown in Figure 3-50.

Wetlands WEV25 and WEV27 are small forested/shrub wetlands. Wetland WEV26, the headwater to Seaway Avenue Tributary, is a large, forested/shrub beaver influenced wetland with inundation visible on aerial imagery.

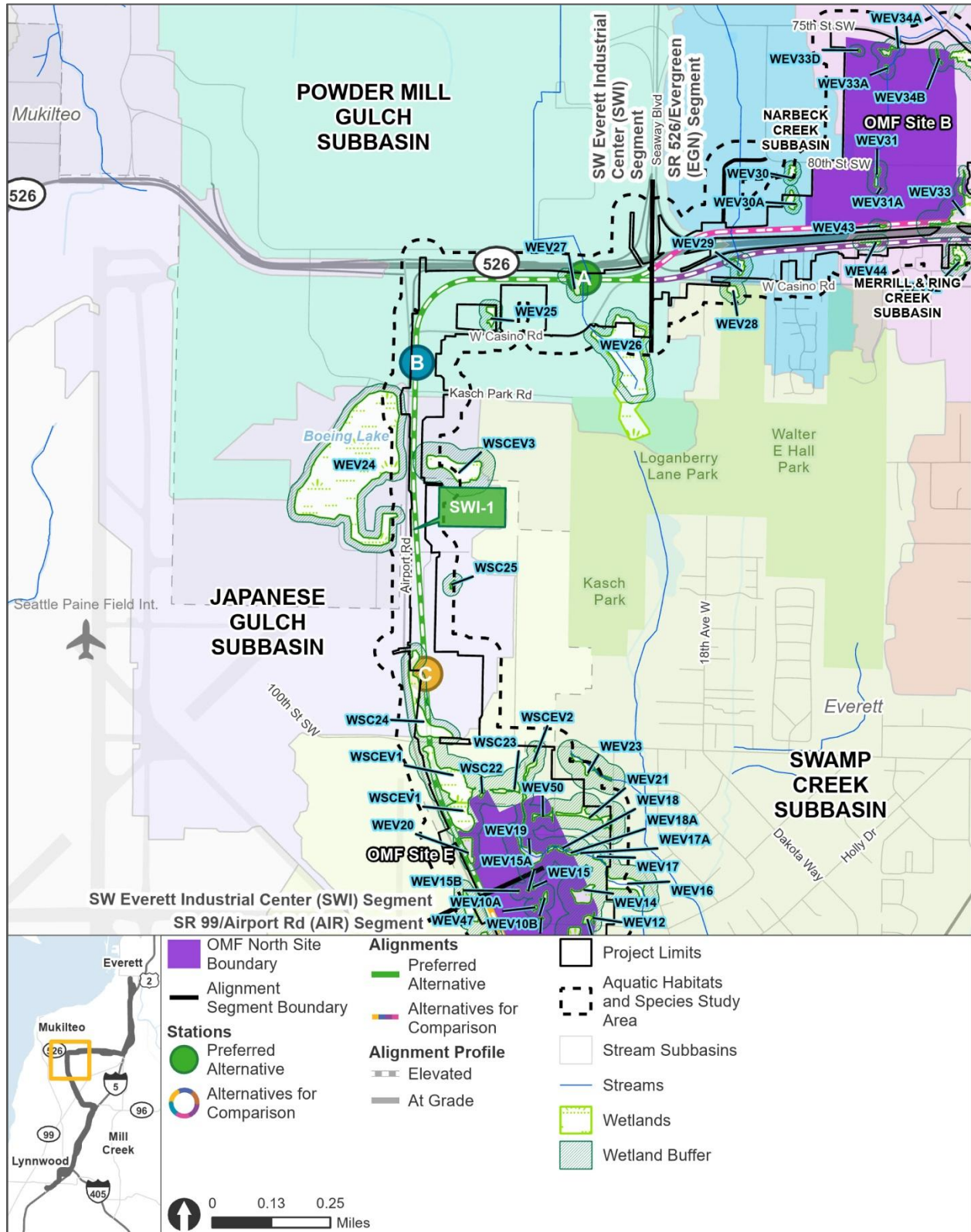
**Table 3-25 Wetlands in the Powder Mill Gulch Subbasin Study Area**

| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>2</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV25   | SWI               | PSS/PFO        | Depressional | 0.29                      | III                            | 3                          | 80            |
| WEV26   | SWI               | PSS/PFO        | Depressional | 6.33                      | III                            | 4                          | 80            |
| WEV27   | SWI               | PSS/PFO        | Depressional | 0.36                      | III                            | 3                          | 80            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.

Figure 3-50 Wetlands – SW Everett Industrial Center Segment



SOURCE: Snohomish County (2024b), City of Everett (2024).

### 3.2.3 Narbeck Creek Subbasin

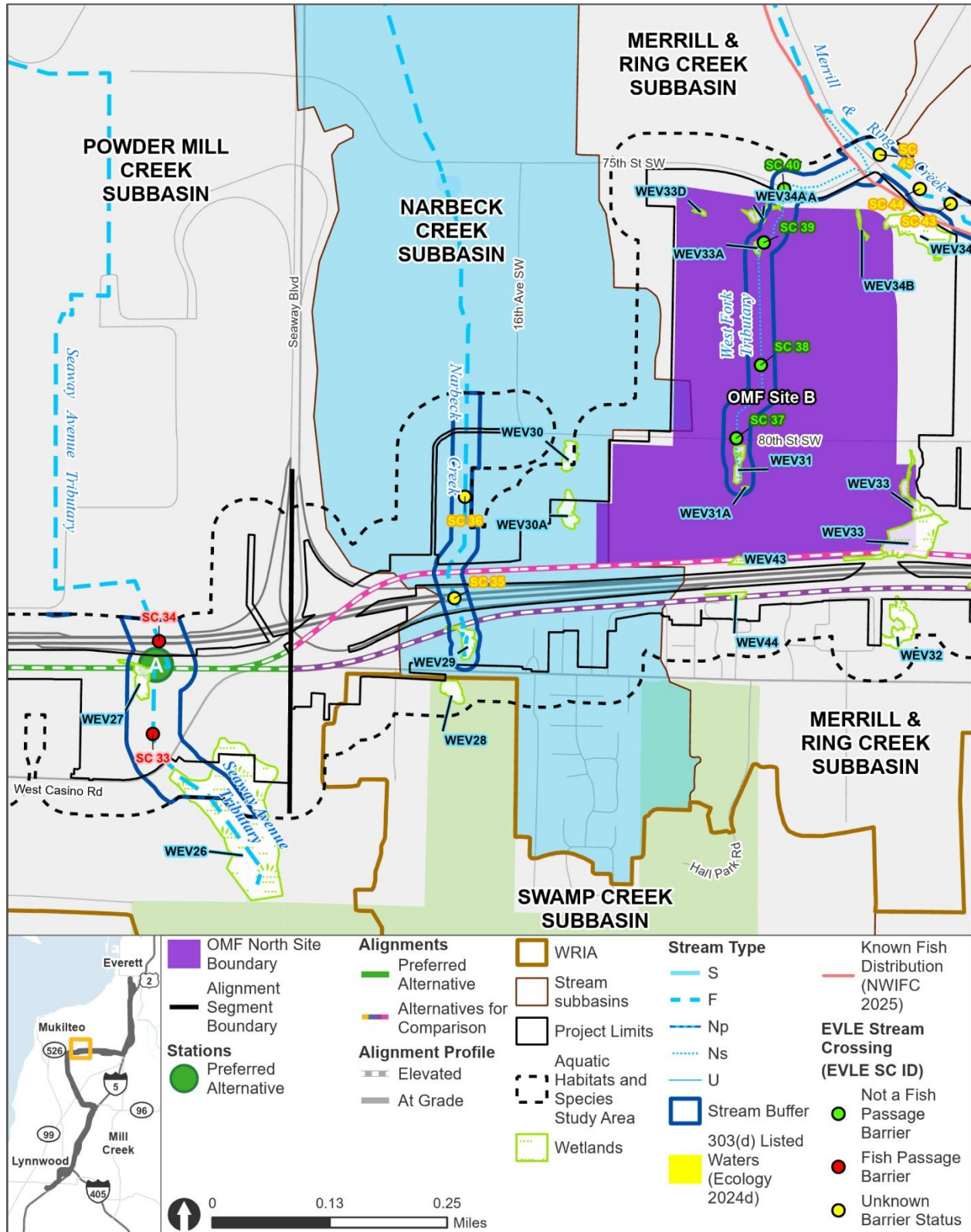
Located in the Powder Mill Gulch – Frontal Possession Sound HUC-12 watershed, the Narbeck Creek subbasin is approximately 490 acres in size. The Narbeck Creek subbasin extends into a portion of the SR 526/Evergreen Segment with its headwater wetland and stream channel originating within the study area (Figure 3-51). The Narbeck Creek subbasin has been heavily modified by industrial development in the upper reaches of the subbasin and contains only narrow riparian corridor for the Narbeck Creek mainstem, with the exception of the Narbeck Wetland Sanctuary. The Narbeck Wetland Sanctuary is part of the Paine Field Wetland Compensation Bank, a mitigation bank developed to offset wetland impacts associated with Paine Field.

Topography in the Narbeck Creek subbasin is relatively flat. The Narbeck Creek mainstem originates within the study area, on the south side of SR 526, and flows north.

#### 3.2.3.1 Water Quality

The Narbeck Creek subbasin does not have any known impaired waters; it is not listed on Ecology's Section 303(d) list (Ecology 2024a). Narbeck Creek subbasin does receive untreated stormwater from impervious surfaces. These areas include industrial, commercial, and residential areas and runoff from SR 526. Pollution from vehicle use (hydrocarbons, tire dust, and metals) and fecal coliform bacteria (from pets and wildlife as well as failed septic systems and illegal encampments) may affect water quality.

Figure 3-51 Narbeck Creek Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).



### 3.2.3.2 Streams in the Narbeck Creek Subbasin

One stream (Narbeck Creek) was identified within the Narbeck Creek subbasin within the study area as shown in Table 3-26 and Figure 3-51. Narbeck Creek originates north of Casino Road and south of SR 526 within Wetland WEV29. It flows south to north through Wetland WEV29 and into a culvert under SR 526 before entering a piped system and continues north beyond the study area.

**Table 3-26 Streams Within the Study Area and Narbeck Creek Subbasin**

| Stream        | Alignment Segment | Stream Type <sup>a</sup>         | Jurisdiction | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|---------------|-------------------|----------------------------------|--------------|----------------------------|---------------------------------------|--------------------------------------------|
| Narbeck Creek | EGN               | Ns <sup>e</sup> / F <sup>f</sup> | Everett      | 75 / 150                   | No                                    | Yes                                        |

**NOTES:**

- a) Streams typing was done in accordance with EMC 19.37.160.
- b) Buffers reflect those standard stream buffers based on stream typing as required under EMC 19.37.170.
- c) Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- d) Suitable fish habitat as defined by WAC 222-16-031.
- e) Per EMC 19.37.160.A.2, Narbeck Creek shall not be considered a Type F stream by the City of Everett.
- f) Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031.

#### ***Narbeck Creek***

Narbeck Creek originates south of SR 526 and north of Casino Road as a narrow channel within Wetland WEV29. It flows south to north through Wetland WEV29 and into a culvert under SR 526 before entering a piped system and continuing north beyond the study area towards the Narbeck Wetland Sanctuary and Puget Sound.

WDFW has determined Narbeck Creek to have the physical criteria necessary to support fish habitat (WDFW 2024e). Therefore, Narbeck Creek meets the definition of a Type F stream within WAC 222-16-031. However, according to the Everett Municipal Code (EMC) 19.37.170, the City of Everett does not consider Narbeck Creek to be a Type F stream.

#### ***Stream Crossings***

Surface flows from Wetland WEV29 and Narbeck Creek enters a 42-inch concrete pipe (Stream Crossing 35) under SR 526 and drains north. As Narbeck Creek exits this conveyance, it enters a short open channel approximately 8 feet wide and 15 to 20 feet long before entering a 24-inch polyethylene pipe (Stream Crossing 36) conveying Narbeck Creek north through a Snohomish County Public Utility District (SnoPUD) maintenance facility and outside of the study area (Table 3-27).

**Table 3-27 Stream Crossings Along Narbeck Creek Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream        | Alignment Segment/OMF Site | Stream Type                      | Fish Passage Barrier | Structure Description                                       |
|--------------------|--------------|---------------|----------------------------|----------------------------------|----------------------|-------------------------------------------------------------|
| 35                 | 934605       | Narbeck Creek | EGN                        | Ns <sup>a</sup> / F <sup>b</sup> | No                   | 42-inch concrete pipe under SR 526                          |
| 36                 | N/A          |               |                            | Ns <sup>a</sup> / F <sup>b</sup> | Unknown              | 24-inch polyethylene pipe under SnoPUD maintenance facility |

NOTES:

- a) Per EMC 19.37.160.A.2, Narbeck Creek shall not be considered a Type F stream by the City of Everett.
- b) WDFW has determined that Narbeck Creek provides suitable habitat for multiple anadromous and residential fish.

*Aquatic Habitat and Species*

Aquatic habitat within Narbeck Creek is limited to a relatively small headwater wetland (Wetland WEV29) to Narbeck Creek and approximately 250 feet of open stream channel. Another 1,300 linear feet of stream channel is piped through the study area. A minor amount of small to moderate sized wood material is present within Wetland WEV29, but no large wood or other in-stream habitat complexity was observed.

Salmonids and other resident fish species are not known to be present in the Narbeck Creek subbasin within the study area. Therefore, Narbeck Creek is presumed to currently provide aquatic habitat to amphibians and macroinvertebrates.

*Riparian Habitat*

Within the study area, development has significantly reduced the historic extent of riparian habitat. One short, approximately 15- to 20-foot reach of open stream channel north of SR 526 supports a small fragment of riparian habitat within the study area. The riparian corridor in this reach is less than 30 feet wide and dominated by shrub and tree species ranging from 20 to 40 feet in height.

**3.2.3.3 Wetlands in the Narbeck Creek Subbasin**

Three wetlands were identified within the Narbeck Creek subbasin within the study area, as summarized in Table 3-28 and shown in Figure 3-52. Wetlands WEV29, WEV30, and WEV30A are forest/shrub wetlands within a highly industrialized area that provide minimal wildlife habitat. Wetland WEV29 is the headwater to Narbeck Creek.

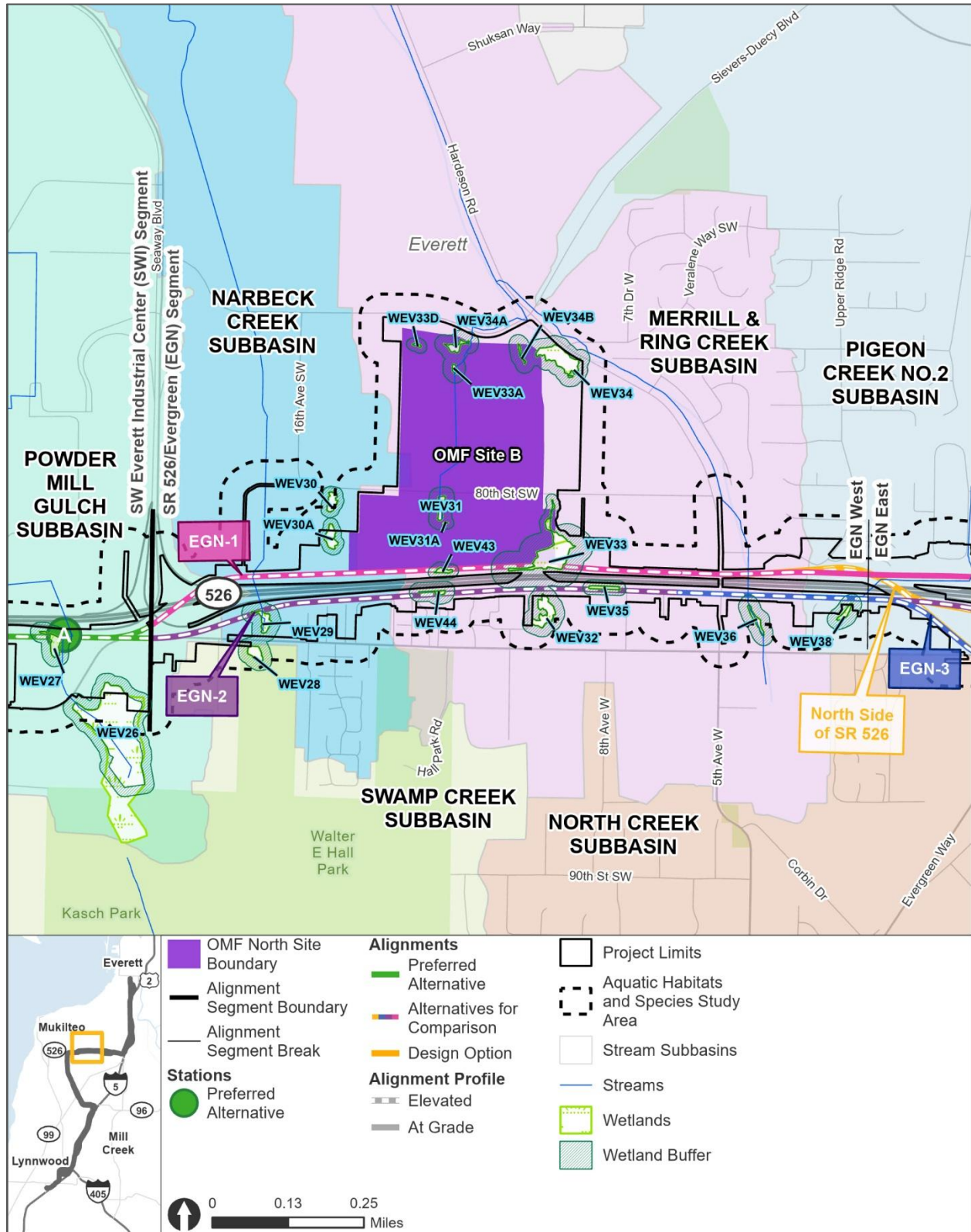
**Table 3-28 Wetlands Within the Narbeck Creek Study Area**

| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV29   | EGN               | PSS/PFO        | Depressional | 0.30                      | III                            | 4                          | 80            |
| WEV30   | EGN               | PSS/PFO        | Depressional | 0.26                      | IV                             | 3                          | 50            |
| WEV30A  | EGN               | PSS/PFO        | Depressional | 0.35                      | IV                             | 3                          | 50            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.

Figure 3-52 Wetlands – SR 526/Evergreen Segment (West)



SOURCE: Snohomish County (2024b), City of Everett (2024).

### 3.2.4 Merrill & Ring Creek Subbasin

The Merrill & Ring Creek subbasin, located in the Powder Mill Gulch – Frontal Possession Sound HUC-12 watershed, is approximately 740 acres in size (Figure 3-53). Upstream (south) of Merrill Creek Parkway, located approximately 1-mile downstream of the study area, the subbasin is heavily modified by industrial and residential development. Downstream (north) of Merrill Creek Parkway, the subbasin is less modified with larger areas of forested riparian habitat present. Topography in the Merrill & Ring Creek subbasin is relatively flat with areas of steeper slopes present.

The West Fork Tributary originates in the study area within the footprint of OMF Site B and flows north to its confluence with Merrill & Ring Creek near the intersection of Hardsen Road and 75th Street SW. A portion of the West Fork Tributary within the study area was recently daylighted as a linear open channel in 2023 as part of a site redevelopment.

Merrill & Ring Creek originates south of W Casino Road and flows north into the study area as it crosses the SR 526/Evergreen Segment. It is piped under SR 526 and a City of Everett municipal pond north of SR 526 before flowing north along the east side of Hardsen Road.

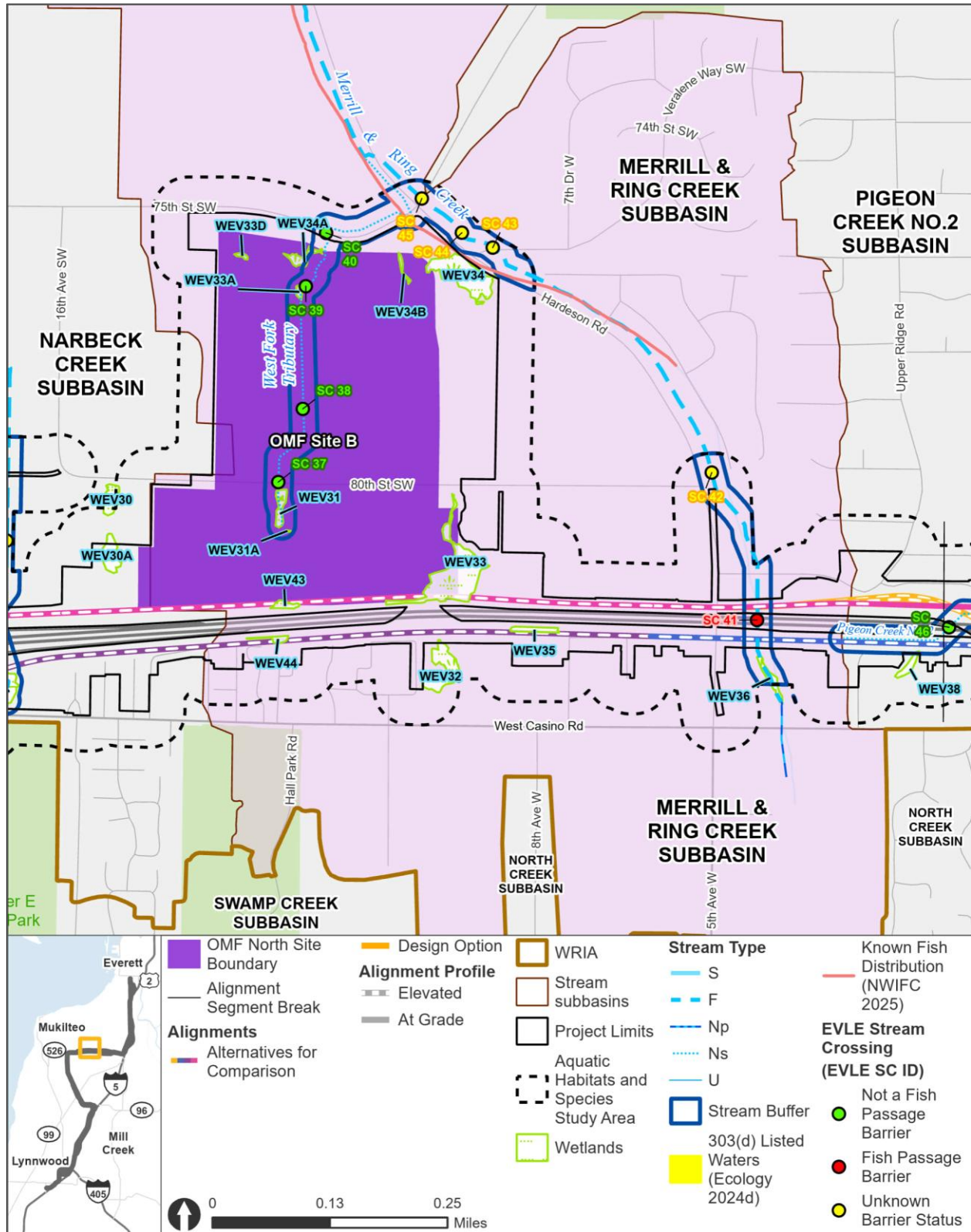
From its confluence with the West Fork Tributary, Merrill & Ring Creek flows northwest through highly modified commercial and industrial land uses where surface water is constrained by ditches, pipes, and culverts along the west side of Hardsen Road. The stream then passes under Merrill Creek Parkway and enters a forested ravine where it flows to Port Gardner Bay.

#### 3.2.4.1 Water Quality

There are no known impaired surface waters within the Merrill & Ring Creek subbasin (Ecology 2024a). The Merrill & Ring Creek subbasin does receive untreated stormwater from impervious surfaces. These areas include commercial, industrial, and residential areas. The Merrill & Ring Creek mainstem may also receive runoff from SR 526. Pollution from vehicle use (hydrocarbons, tire dust, and metals) and fecal coliform bacteria (from pets and wildlife as well as failed septic systems and illegal encampments) may affect water quality.



Figure 3-53 Merrill & Ring Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).

### 3.2.4.2 Streams in the Merrill & Ring Creek Subbasin

Merrill & Ring Creek and the West Fork Tributary are located in the study area (Table 3-29). The West Fork Tributary flows south to north within the study area towards 75th Street SW. Wetlands WEV31, WEV33A, and WEV34A are located on or drain to the West Fork Tributary within the study area. Merrill & Ring Creek flows south to north, crossing under SR 526, and flowing east of Hardsen Road. Wetlands WEV36 and WEV34 occur along or drain to Merrill & Ring Creek. The West Fork Tributary and Merrill & Ring Creek join within a piped conveyance and then flow north out of the study area.

**Table 3-29 Streams Within the Study Area and Merrill & Ring Creek Subbasin**

| Stream               | Alignment Segment | Stream Type <sup>a</sup>         | Jurisdiction | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|----------------------|-------------------|----------------------------------|--------------|----------------------------|---------------------------------------|--------------------------------------------|
| West Fork Tributary  | EGN / OMF Site B  | Ns                               | Everett      | 75                         | No                                    | No                                         |
| Merrill & Ring Creek | EGN               | Np <sup>e</sup> / F <sup>f</sup> | Everett      | 75 / 150                   | No                                    | Yes                                        |

**NOTES:**

- a) Streams typing was done in accordance with EMC 19.37.160.
- b) Buffers reflect those standard stream buffers based on stream typing as required under EMC 19.37.170.
- c) Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- d) Suitable fish habitat as defined by WAC 222-16-031.
- e) Per EMC 19.37.160.A.2, Merrill & Ring Creek south of Merrill Creek Parkway shall not be considered a Type F stream.
- f) Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031.

#### **West Fork Tributary**

West Fork Tributary originates with stormwater from adjacent uplands discharged into Wetland WEV31, as well as expressing groundwater, and flows to the north through a series of pipes and open channel on OMF Site B before joining with Merrill & Ring Creek 200 feet north of the study area (Figure 3-53).

The upper limits of the West Fork Tributary, north of 80th Street SW, is a linear stream with a uniform profile and channel rock-lined stream bed that was recently daylighted as part of a site redevelopment. This recently constructed, rock-lined channel discharges into a more naturalized and incised stream channel that is less than 2-feet wide, which drains northeast towards a piped conveyance under 75th Street SW. The physical conditions associated with this naturalized stream channel do not meet the physical criteria necessary to presume suitable fish habitat. Therefore, the West Fork Tributary is considered a Type Ns stream.

#### **Stream Crossings**

Surface flows from a WSDOT drainage ditch, Wetland WEV43, stormwater from Pepsi Bottling Group, and Wetland WEV31 flow into a 15-inch concrete pipe under 80th Street SW and then into an 18-inch corrugated metal pipe (Stream Crossing 37) before discharging into the recently created rock-lined stream channel that flows in a straight line for approximately 870 linear feet. The created stream channel flows under a private road through a 30-inch corrugated polyethylene pipe (Stream Crossing 38) and then into a second 30-inch corrugated polyethylene pipe (Stream Crossing 39) where it discharges into a more natural stream channel for approximately 350 linear feet, which flows towards 75th Street SW. As West Fork Tributary

approaches 75th Street SW, it enters a 12-inch precast concrete pipe (Stream Crossing 40), which conveys the stream east under 75th Street SW and then north along Hardeson Road and out of the study area (Table 3-30).

**Table 3-30 Stream Crossings Along the West Fork Tributary Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream              | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                                          |
|--------------------|--------------|---------------------|-----------------------------|-------------|----------------------|------------------------------------------------------------------------------------------------|
| SC 37              | N/A          | West Fork Tributary | OMF Site B                  | Ns          | No                   | 15-inch concrete pipe, 18-inch corrugated metal pipe under 80th Street SW and private property |
| SC 38              |              |                     |                             |             | No                   | 30-inch corrugated polyethylene pipe on private property                                       |
| SC 39              |              |                     |                             |             | No                   | 30-inch corrugated polyethylene pipe on private property                                       |
| SC 40              |              |                     |                             |             | No                   | 12-inch concrete pipe under 75th Street SW                                                     |

#### *Aquatic Habitat and Species*

Aquatic habitat is limited to 870 linear feet of the recently daylighted stream channel and approximately 350 linear feet of naturalized stream channel south of 75th Street SW. The recently daylighted stream channel has no in-stream habitat, including large wood or other aquatic habitat features, as the channel appears comprised of streambed cobble substrates with no evidence of a defined bed or bank having yet established. As surface flow enters the more naturalized stream channel segment, stream sediments transition to a combination of sands, silts, and gravel within a narrow, sinuous stream channel. The stream channel is steep in places where erosion has created undercut banks with woody debris and overhanging vegetation present.

As noted above, the West Fork Tributary does not exhibit the physical criteria believed to support suitable fish habitat. Therefore, the West Fork Tributary is considered to be non-fish bearing stream according to WAC 222-16-031. Aquatic species are anticipated to be limited to amphibians and macroinvertebrates.

#### *Riparian Habitat*

The approximately 870 linear feet of recently daylighted stream channel is highly modified and lacks any established riparian habitat. Woody tree and shrub species have been planted along the stream banks as part of the stream daylighting and site development, although these species have not yet been able to establish a functional riparian habitat. Where West Fork Tributary enters the 350 linear feet of naturalized stream channel, the riparian habitat present includes a native deciduous overstory with native shrub understory that includes salmonberry and sword fern. West Fork Tributary flows through Wetland WEV33A. Wetland WEV33A is described in Table 3-32.

### Merrill & Ring Creek

Merrill & Ring Creek originates south of SR 526 and drains south to north across the study area, east of Hardeson Road (Figure 3-53).

The physical conditions of Merrill & Ring Creek south of SR 526 are difficult to observe from public rights-of-way. However, north of SR 526, Merrill & Ring Creek flows within a variable width channel that exceeds 2-feet wide and exhibits the criteria necessary to support fish habitat (WDFW 2024e). Therefore, Merrill & Ring Creek meets the definition of a Type F stream within WAC 222-16-031. However, according to the Everett Municipal Code (EMC) 19.37.170, the City of Everett does not consider Merrill & Ring Creek to be a Type F stream.

### Stream Crossings

Merrill & Ring Creek flows north through Wetland WEV36 before entering a 48-inch corrugated steel pipe (Stream Crossing 41) that crosses under SR 526, a City of Everett stormwater detention pond, and Upper Ridge Road before returning to an open channel within forested riparian ravine east of Hardeson Road. Merrill & Ring Creek remains within an open channel for approximately 375 linear feet before entering a 36-inch stainless steel pipe (Stream Crossing 42) on private properties near Hardeson Road and 80th Street SW. Upon exiting this conveyance Merrill & Ring Creek enters a narrow, forested corridor highly disturbed by residential and commercial activities and temporarily exits the study area.

Merrill & Ring Creek re-enters the study area for approximately 700 linear feet near the intersection of Hardeson Road and Veralene Way SW. This section of stream corridor is fragmented by three piped stream conveyances, including a 36-inch corrugated steel pipe (Stream Crossing 43) under Veralene Way SW, a 30-inch precast concrete pipe (Stream Crossing 44) under a private driveway, and a 30-inch to 36-inch precast concrete pipe (Stream Crossing 45) under Sievers Duecy Boulevard before exiting the study area (Table 3-31).

**Table 3-31 Stream Crossings Along the East Fork Tributary Within the Study Area**

| Stream Crossing ID | WDFW Site ID        | Stream               | Alignment Segment/OMF Site | Stream Type                      | Fish Passage Barrier | Structure Description                                                  |
|--------------------|---------------------|----------------------|----------------------------|----------------------------------|----------------------|------------------------------------------------------------------------|
| SC 41              | 995127 <sup>a</sup> | Merrill & Ring Creek | EGN                        | Np <sup>b</sup> / F <sup>c</sup> | Yes                  | 48-inch corrugated steel pipe under SR 526 and Upper Ridge Road        |
| SC 42              | 933666              |                      |                            |                                  | Unknown              | 36-inch stainless steel pipe on private property                       |
| SC 43              | 920581              |                      | OMF Site B                 |                                  | Unknown              | 36-inch corrugated steel pipe under Veralene Way SW                    |
| SC 44              | N/A                 |                      |                            |                                  | Unknown              | 30-inch concrete pipe under a private driveway                         |
| SC 45              | 920583              |                      |                            |                                  | Unknown              | 30-inch to 36-inch precast concrete pipe under Sievers Duecy Boulevard |

**NOTES:**

- a) The WDFW Fish Passage and Diversion Screening Inventory Database Site Description Report for this stream crossing structure is greater than 10 years old. Findings within these stream crossing assessments are assumed to still be valid.
- b) Per EMC 19.37.160.A.2, Merrill & Ring Creek south of Merrill Creek Parkway shall not be considered a Type F stream.
- c) Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031.



### Aquatic Habitat and Species

Merrill & Ring Creek is largely piped within the study area. Aquatic habitat is limited to open channel areas within Wetland WEV36, south of SR 526, and an open stream channel north of Upper Ridge Road. Due to the lack of access and the heavily forested ravine which Merrill & Ring Creek flows through north of Upper Ridge Road, the aquatic habitat within the study area has not been observed.

The City of Everett considers Merrill & Ring Creek to be a non-fish bearing stream upstream (south) of Merrill Creek Parkway. While the stream does possess the physical criteria to support fish habitat, fish are precluded from the study area portion of Merrill & Ring Creek due to multiple barriers downstream and within the study area, including a total fish passage barrier at Merrill Creek Parkway. Therefore, aquatic species are anticipated to be limited to amphibians and macroinvertebrates.

### Riparian Habitat

The riparian habitat along Merrill & Ring Creek within the study area, south of SR 526, consists of a shrub habitat dominated by Himalayan blackberry with deciduous trees present. Merrill & Ring Creek flows through Wetland WEV36. Wetland WEV36 is described in Table 3-32. North of Upper Ridge Road, the riparian habitat is comprised of a mixed forested overstory with a native shrub understory. As Merrill & Ring Creek flows north and parallel to Hardeson Road, north of 80th Street SW, the riparian corridor transitions to a narrow, forested habitat that is heavily impacted and fragmented by Hardeson Road to the west, development to the east, and multiple road crossings.

#### 3.2.4.3 Wetlands in the Merrill & Ring Creek Subbasin

Thirteen wetlands were identified within the Merrill & Ring Creek subbasin within the study area, as summarized in Table 3-32 and shown in Figure 3-54 and Figure 3-55. Wetlands within the Merrill & Ring Creek subbasin are generally small, depressional or slope wetlands that receive stormwater runoff from surrounding industrial development and SR 526. Wetlands WEV33 and WEV34 are wetland mitigation sites for industrial developments. Wetlands within the Merrill & Ring Creek subbasin generally provide high water quality and hydrologic function but provide low quality wildlife habitat due to their positions within a highly industrialized area.

**Table 3-32 Wetlands Within the Merrill & Ring Creek Study Area**

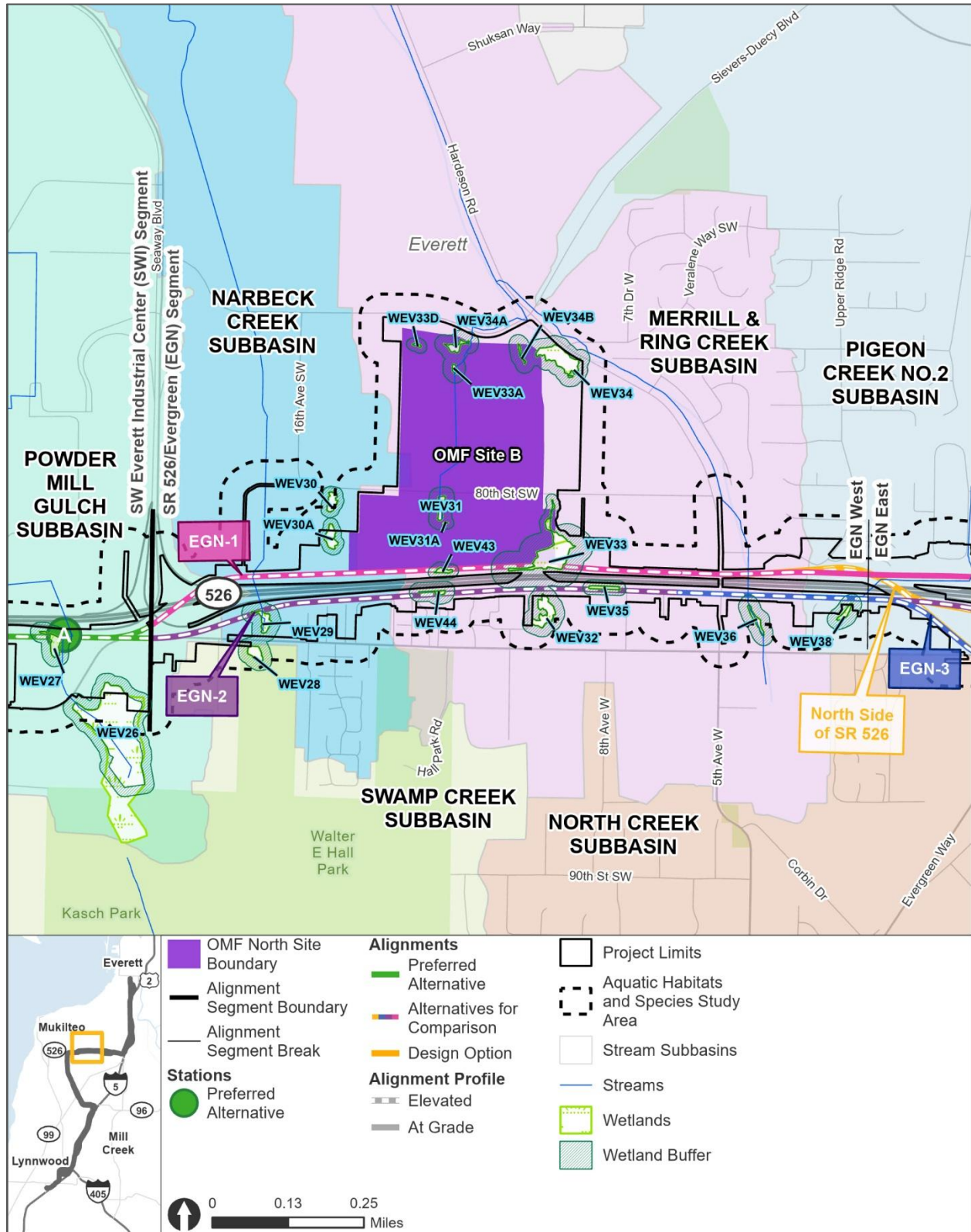
| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV31   | OMF Site B        | PEM/PSS        | Depressional | 0.19                      | III                            | 4                          | 80            |
| WEV31A  | OMF Site B        | PEM            | Depressional | <0.01                     | IV                             | 3                          | 50            |
| WEV32   | EGN               | PEM/PFO        | Depressional | 0.63                      | III                            | 4                          | 80            |
| WEV33   | EGN / OMF Site B  | PAB/PSS/ PFO   | Depressional | 1.34                      | III                            | 3                          | 80            |
|         |                   |                | Slope        | 0.31                      | IV                             | 4                          | 50            |
| WEV33A  | OMF Site B        | PSS            | Depressional | 0.05                      | III                            | 3                          | 80            |
| WEV33D  | OMF Site B        | PSS            | Slope        | 0.03                      | IV                             | 3                          | 50            |
| WEV34   | OMF Site B        | PEM/PSS/ PFO   | Depressional | 1.06                      | III                            | 4                          | 80            |

| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV34A  | OMF Site B        | PFO/PSS        | Slope        | 0.18                      | III                            | 3                          | 80            |
| WEV34B  | OMF Site B        | PEM            | Depressional | 0.05                      | III                            | 4                          | 80            |
| WEV35   | EGN               | PEM            | Depressional | 0.16                      | IV                             | 4                          | 50            |
| WEV36   | EGN               | PSS/PFO        | Depressional | 0.19                      | III                            | 4                          | 80            |
| WEV43   | EGN / OMF Site B  | PSS            | Depressional | 0.11                      | IV                             | 3                          | 50            |
| WEV44   | EGN               | PSS/PFO        | Depressional | 0.08                      | III                            | 4                          | 80            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.

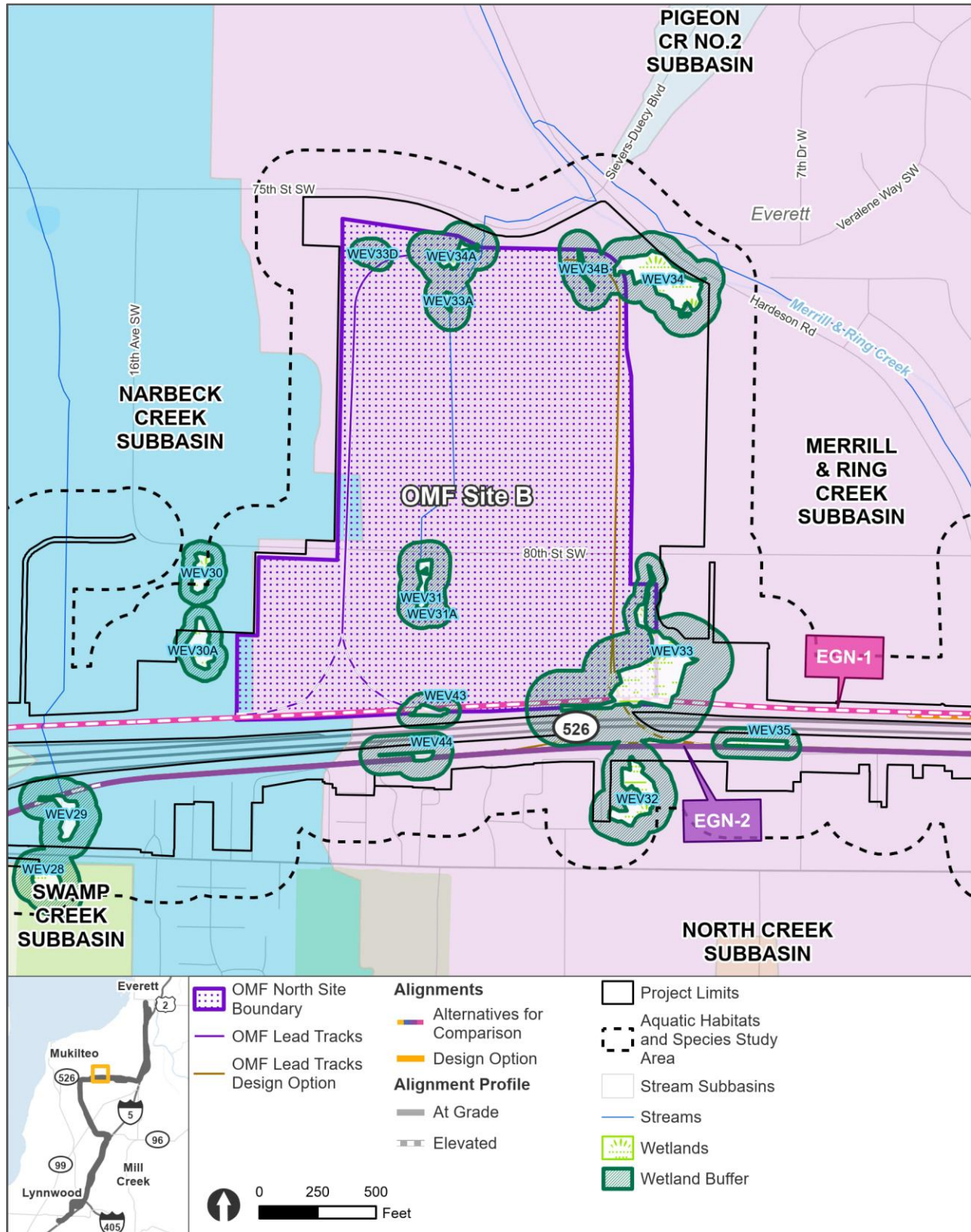
Figure 3-54 Wetlands – SR 526/Evergreen Segment (West)



SOURCE: Snohomish County (2024b), City of Everett (2024).



Figure 3-55 Wetlands – OMF Site B



SOURCE: Snohomish County (2024b), City of Everett (2024).



### 3.2.5 Pigeon Creek No. 2 Subbasin

Pigeon Creek No. 2, located in the Powder Mill Gulch – Frontal Possession Sound watershed and like other north-draining subbasins within the study area, is relatively small at approximately 825 acres in size (Figure 3-56). Pigeon Creek No. 2 flows approximately 2.3 miles from its headwaters south of SR 526 in the SR 526/Evergreen Segment. From its headwaters, the creek flows north into a highly modified residential area and hydrology is constrained by several ditches, pipes, and culverts.

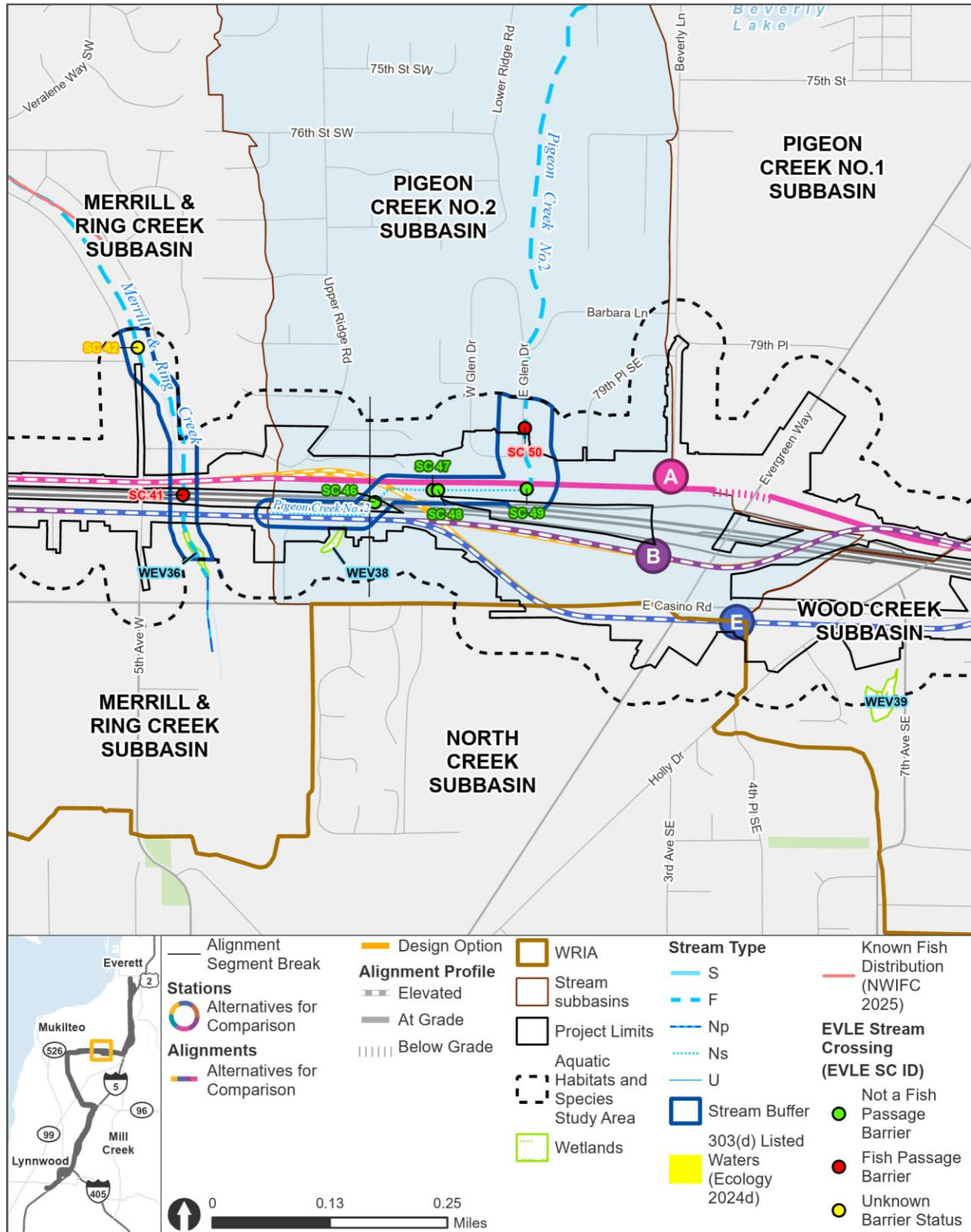
Topography in Pigeon Creek No. 2 is relatively flat in its upper basin where the study area is located. Approximately 2 miles north of the study area, Pigeon Creek No. 2 enters a forested ravine before reaching Possession Sound.

Hydrology and riparian habitat in the Pigeon Creek No.2 subbasin have become heavily modified by extensive development in its upper and central reaches, particularly from residential and commercial development and construction of road infrastructure near SR 526. Further downstream, where the channel enters the forested ravine, anthropogenic factors are primarily from residential development and related land use activities. Within the study area and in stream segments immediately downstream, the streambed, bank, channel, and associated riparian habitat have been disturbed or completely removed and replaced by stormwater conveyance structures such as pipes and culverts.

#### 3.2.5.1 Water Quality

Pigeon Creek No. 2 is not listed on Ecology's Section 303(d) list (Ecology 2024a). However, Pigeon Creek No. 2 does receive untreated stormwater from impervious surfaces in the study area. These areas include commercial, industrial, and residential areas and runoff from SR 526. Pollution from vehicle use (hydrocarbons, tire dust, and metals) and fecal coliform bacteria (from pets and wildlife as well as failed septic systems and illegal encampments) may affect water quality.

Figure 3-56 Pigeon Creek No. 2 Study Area



### 3.2.5.2 Streams in the Pigeon Creek No. 2 Subbasin

The southern headwaters of Pigeon Creek No. 2 originate within a narrow linear channel along SR 526 within the study area that flows west to east (Table 3-33). As the channel turns north, the east fork of Pigeon Creek No. 2 transitions to naturalized stream channel that meets the physical criteria to support fish habitat before entering a pipe under E Glen Drive (Figure 3-56).

**Table 3-33 Streams Within the Study Area and the Pigeon Creek No. 2 Subbasin**

| Stream             | Alignment Segment | Stream Type <sup>a</sup> | Jurisdiction | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|--------------------|-------------------|--------------------------|--------------|----------------------------|---------------------------------------|--------------------------------------------|
| Pigeon Creek No. 2 | EGN               | Ns                       | Everett      | 75                         | No                                    | No                                         |
|                    |                   | F                        |              | 150                        | No                                    | Yes                                        |

NOTES:

- a) Stream typing was done in accordance with EMC 19.37.160.
- b) Buffers reflect those standard stream buffers based on stream typing as required under EMC 19.37.170.
- c) Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- d) Suitable fish habitat as defined by WAC 222-16-031.

#### ***East Fork Pigeon Creek No. 2***

East Fork Pigeon Creek No. 2 originates south of SR 526 within a drainage ditch within the study area before flowing north, under SR 526, into a narrow non-fish bearing stream channel north of and parallel to SR 526. Surface flow then turns north into a small stream channel southwest of E Glen Drive. The stream then flows into a conveyance system that carries the East Fork Pigeon Creek No. 2 to the north and beyond the study area, under E Glen Drive, to an open channel northeast of the intersection of E Glen Drive and Barbara Lane.

After leaving the study area, Pigeon Creek No. 2 continues down a 660-foot stormwater pipe running parallel to E Glen Drive and into an open channel at Barbara Lane. The stream then flows through a somewhat confined open channel for 1,140 feet before passing under a culvert at 76th Street SE. Over the next 1.3 miles, the stream becomes greatly fragmented and the channel bed and bank become largely undefined. Surface waters pass through a series of forested swales that now primarily function as residential stormwater ponds. Pigeon Creek No. 2 is then piped under a residential area and outlets into a roadside ditch at Brookridge Boulevard and passes under 1st Avenue SE before flowing through a confined open water channel at Hannabrook Park and into the forested ravine. The east and west forks of Pigeon Creek No. 2 merge north of 1st Drive West within the forested ravine. The creek travels approximately 1.0 mile through the forested ravine flowing under W Mukilteo Boulevard before its outlet, a Burlington Northern Santa Fe (BNSF) culvert at the Port Gardner Bay shoreline.

#### ***Stream Crossings***

Surface flows cross under SR 526 via an 18-inch precast concrete pipe (Stream Crossing 46) where surface water enters an open channel draining east, parallel to SR 526, through two 15-inch precast concrete pipes (Stream Crossings 47 and 48) and one 18-inch precast concrete pipe (Stream Crossing 49). After exiting the 18-inch culvert, the stream channel turns north towards E Glen Drive where it enters a screened 30-inch concrete pipe (Stream Crossing 50) that conveys East Fork Pigeon Creek No. 2 north and beyond the study area.

**Table 3-34 Stream Crossings Along East Fork Pigeon Creek No. 2 Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream                       | Alignment Segment/OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                   |
|--------------------|--------------|------------------------------|----------------------------|-------------|----------------------|---------------------------------------------------------|
| SC 46              | 936720       | East Fork Pigeon Creek No. 2 | EGN                        | Ns          | No                   | 18-inch precast concrete pipe under SR 526              |
| SC 47              | 939017       |                              |                            |             |                      | 15-inch precast concrete pipe within WSDOT right-of-way |
| SC 48              | 939020       |                              |                            |             |                      | 15-inch precast concrete pipe within WSDOT right-of-way |
| SC 49              | 939016       |                              |                            |             |                      | 18-inch precast concrete pipe within WSDOT right-of-way |
| SC 50              | 939019       |                              |                            | F           | Yes                  | 30-inch precast concrete pipe under E Glen Drive        |

#### *Aquatic Habitat and Species*

Within the study area, East Fork Pigeon Creek No. 2 is largely contained within an open channel with stream sediments comprised of silt, gravels, and large cobbles. Overhanging vegetation includes English holly, sword fern, and native deciduous and coniferous trees. Small to moderate diameter woody debris and logs are present in the stream channel.

The southern reach of East Fork Pigeon Creek No. 2 within the WSDOT right-of-way along SR 526 does not meet the physical criteria for fish habitat and has been classified as a Type Ns stream. North of WSDOT right-of-way and south of E Glenn Drive, East Fork Pigeon Creek No. 2 is considered a Type F stream. Anadromous fish species are not known to be present in East Fork Pigeon Creek No. 2 within the study area (City of Everett 2022a). At least one partial and two total human-made fish-passage barriers and natural gradient and stream flow fish-passage barriers are present downstream of the study area (City of Everett 2022a). Therefore, aquatic species within that portion of the study area in the East Fork Pigeon Creek No. 2 are anticipated to be limited to amphibians and macroinvertebrates.

#### *Riparian Habitat*

Within the study area, linear transportation infrastructure (SR 526 and E Glen Drive) and low-density residential development have significantly reduced the historic extent of riparian habitat. A fragmented parcel of riparian habitat is present along East Fork Pigeon Creek No. 2 on the north side of SR 526, upstream of where the stream enters the 30-inch culvert under E Glen Drive. The riparian habitat at this location is densely vegetated and consists of both native and non-native dominant species. Western red cedar is dominant within the overstory, and Himalayan blackberry is dominant within the understory.



### 3.2.5.3 Wetlands in the Pigeon Creek No. 2 Subbasin

One wetland has been identified within the study area in the Pigeon Creek No. 2 subbasin, as summarized in Table 3-35 and shown in Figure 3-57. WEV38 is a depressional wetland with low habitat quality. It is surrounded by high intensity residential development and bordered to the north by SR 526. WEV38 is understood to drain to East Fork Pigeon Creek No. 2.

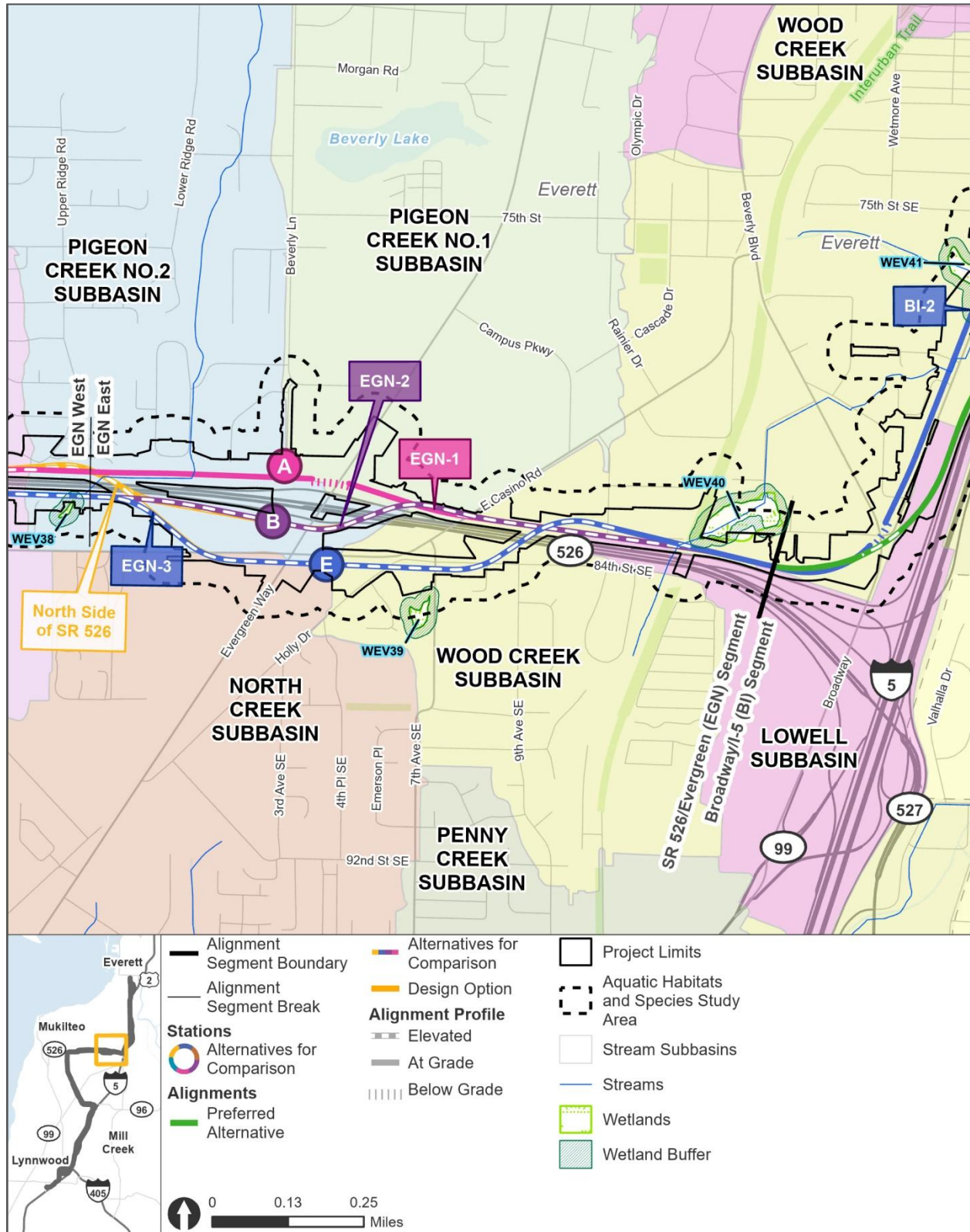
**Table 3-35 Wetlands Within the Pigeon Creek No. 2 Study Area**

| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV38   | EGN               | PSS/PFO        | Depressional | 0.13                      | III                            | 3                          | 80            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.

Figure 3-57 Wetlands – SR 526/Evergreen Segment (East)



SOURCE: Snohomish County (2024b).

### 3.2.6 Wood Creek Subbasin

The Wood Creek subbasin, approximately 1,280 acres in size, is located within the Snohomish River-Frontal Possession Sound HUC-12 watershed (Figure 3-58). Wood Creek flows northeast approximately 3.4 miles from its headwaters southwest of the I-5/SR 526 interchange and crosses both the SR 526/Evergreen and Broadway/I-5 Segments of the study area. After it crosses the Broadway/I-5 Segment, Wood Creek crosses under I-5 within a piped conveyance identified as a fish passage barrier (WDFW 2024a) before flowing to the east toward its confluence with the Snohomish River.

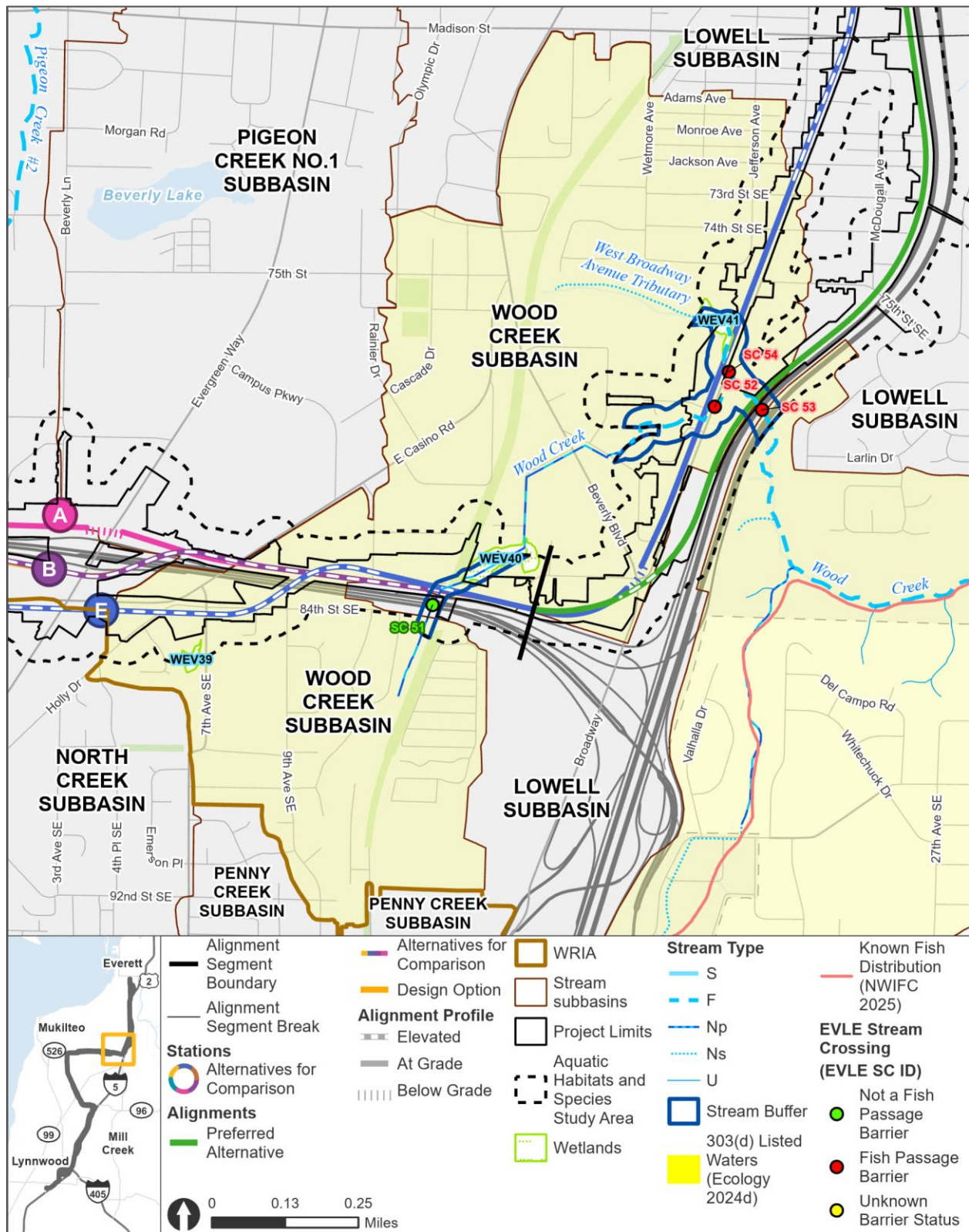
This subbasin has been heavily modified by extensive development in its upper reaches, particularly from residential development and construction of road infrastructure along I-5 and SR 526. Within the study area, upstream of I-5, the streambed, bank, and associated riparian habitat have become modified by human development or replaced by stormwater conveyance structures. Within the study area, Wood Creek is piped for approximately 2,150 linear feet and is within an open channel for approximately 2,775 linear feet.

Wood Creek has one tributary, West Broadway Avenue Tributary, in the study area (City of Everett 2022a). West Broadway Avenue Tributary flows west to east to a culvert under Broadway before merging with Wood Creek within a catchbasin within the Broadway/I-5 Segment.

#### 3.2.6.1 Water Quality

No streams in the Wood Creek subbasin within the study area are listed on Ecology's Section 303(d) list (Ecology 2024a). However, both streams receive untreated stormwater from study area impervious surfaces. These impervious surfaces include residential areas and road infrastructure, including SR 526 and I-5. Pollution from vehicle use (hydrocarbons, tire dust, and metals) and fecal coliform bacteria (from pets and wildlife) may affect water quality.

Figure 3-58 Wood Creek Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).



### 3.2.6.2 Streams in the Wood Creek Subbasin

There are two streams within the Wood Creek subbasin in the study area: Wood Creek and West Broadway Avenue Tributary (Figure 3-58). Within the study area, Wood Creek flows through WEV40 downstream (north) of SR 526 within the SR 526/Evergreen Segment. West Broadway Avenue Tributary flows through Wetland WEV41, west of Broadway, before entering a culvert that conveys flow west under Broadway and I-5. These streams are described in Table 3-36.

**Table 3-36 Streams Within the Study Area and Wood Creek Subbasin**

| Stream                         | Alignment Segment | Stream Type <sup>a</sup> | Jurisdiction | Buffer (feet) <sup>b</sup> | Documented Fish Presence <sup>c</sup> | Suitable Fish Habitat Present <sup>d</sup> |
|--------------------------------|-------------------|--------------------------|--------------|----------------------------|---------------------------------------|--------------------------------------------|
| Wood Creek                     | EGN / BI          | Ns                       | Everett      | 75                         | No                                    | No                                         |
|                                |                   | F                        |              | 150                        |                                       | Yes                                        |
| West Broadway Avenue Tributary | BI                | Ns                       |              | 75                         |                                       | No                                         |
|                                |                   | F                        |              | 150                        |                                       | Yes                                        |

NOTES:

- a) Streams typing was done in accordance with EMC 19.37.160.
- b) Buffers reflect those standard stream buffers based on stream typing as required under EMC 19.37.170.
- c) Documented fish presence based on data provided by the Statewide Washington Integrated Fish Distribution database (NWIFC 2025).
- d) Suitable fish habitat as defined by WAC 222-16-031.

#### Wood Creek

Wood Creek originates south of SR 526, as a perennial stream, west of the Interurban Trail, where surface water is discharged from a stormwater detention wet pond into a linear open channel that drains north. Wood Creek enters the study area within the SR 526/Evergreen Segment within a piped conveyance under 84th Street SE, SR 526, and the Interurban Trail. It then flows through Wetland WEV40 before temporarily leaving the study area. This segment of Wood Creek is upstream of suitable fish habitat (WDFW 2024a, WDFW 2024f) and is therefore considered a Type Np stream.

Wood Creek reenters the study area along the Broadway/I-5 Segment where it flows east within an open stream channel before entering a piped conveyance system. The piped system initially conveys Wood Creek east under Broadway and then north to its confluence with West Broadway Avenue Tributary within a catchbasin. Wood Creek then sharply turns to the southeast where it continues below private property and under I-5 where it exits the study area on its way to the Snohomish River. WDFW has determined that this segment has suitable habitat for fish (WDFW 2024a, WDFW 2025a) and is therefore a Type F stream.

#### Stream Crossings

There is one stream crossing along Wood Creek within the SR 526/Evergreen Segment, which is a 42-inch precast concrete pipe (Stream Crossing 51) under 84th Street SE, SR 526, and the Interurban Trail.

As Wood Creek returns to the study area, it enters a 24-inch precast concrete pipe (Stream Crossing 52) that conveys the stream under Broadway towards its confluence with the West

Broadway Avenue Tributary where the piped conveyance transitions to a 30-inch precast concrete pipe and again to a 42-inch precast concrete pipe (Stream Crossing 53) under I-5 and east of the study area.

**Table 3-37 Stream Crossings Along Wood Creek Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream     | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                                                   |
|--------------------|--------------|------------|-----------------------------|-------------|----------------------|-------------------------------------------------------------------------|
| SC 51              | N/A          | Wood Creek | EGN                         | Ns          | No                   | 42-inch pipe under 84th Street SE, SR 526, and Interurban Trail         |
| SC 52              | 939039       |            | BI                          | F           | Yes                  | 24-inch precast concrete pipe under private property and Broadway       |
| SC 53              | 995262       |            |                             | F           | Yes                  | 30-inch to 42-inch precast concrete pipe under private property and I-5 |

#### *Aquatic Habitat and Species*

The extent of aquatic habitat within the study area has been heavily impacted. Wood Creek, where it occurs within the SR 526/Evergreen Segment, is confined to the inundated areas of Wetland WEV40. This segment of Wood Creek is above the upper limits of suitable fish habitat determined by WDFW (WDFW 2024a, WDFW 2024f). However, Wood Creek and Wetland WEV40 could provide suitable habitat to amphibians and other types of aquatic species.

As Wood Creek reenters the study area, within the Broadway/I-5 Segment, it occurs within an open channel for approximately 500 linear feet before entering a piped conveyance system. The 500 linear feet of stream is located between private residential properties and was therefore not directly observed. However, WDFW has determined that this stream segment supports the physical conditions to provide fish habitat. Due to the extent of fish passage barriers downstream, it is unlikely that anadromous or resident fish use the Wood Creek open channel within the study area currently. Amphibians and other aquatic species may be present within the available aquatic habitat in the study area.

#### *Riparian Habitat*

Development surrounding Wood Creek has significantly reduced the historic extent of riparian habitat within the study area, upstream and west of I-5. Where Wood Creek enters the study area within the SR 526/Evergreen Segment, it flows west of the Interurban Trail within a narrow riparian corridor comprised of mature cottonwoods and other deciduous trees with an understory comprised of native woody shrubs. Wetland WEV40, which Wood Creek flows through north of SR 526 within the SR 526/Evergreen Segment, is dominated by reed canarygrass and willow species. Wetland WEV40 is described in Table 3-39.

Within the Broadway/I-5 Segment, Wood Creek returns to the study area within a narrow riparian corridor dominated by a deciduous overstory with both native and non-native shrubs present.

### West Broadway Avenue Tributary

West Broadway Avenue Tributary originates north of the Beverly Park Substation upstream (west) of the study area within the Broadway/I-5 Segment as a seasonal stream (Type Ns stream). Stormwater from the surrounding low-density residential and commercial areas in the vicinity of the Beverly Park Substation discharges into a highly eroded channel with over-steepened banks that flows northeast within a utility corridor towards low-density residential properties. The eroded stream channel then dissipates into a forested corridor before returning to a defined stream bed as surface water flows east towards Broadway. West Broadway Avenue Tributary generally flows west to east before entering Wetland WEV41 and ultimately entering a conveyance under Broadway to its piped confluence with Wood Creek.

Upstream (west) of Broadway, West Broadway Avenue Tributary exhibits the physical conditions to support fish in accordance with WAC 222-16-031. Therefore, that portion of the West Broadway Avenue Tributary within the study area is a Type F stream.

#### Stream Crossings

Surface flows from West Broadway Avenue Tributary enter a 30-inch precast concrete pipe (Stream Crossing 54) under Broadway Avenue which joins with the 30-inch precast concrete pipe (Stream Crossing 53) containing Wood Creek (Table 3-38).

**Table 3-38 Stream Crossings Along West Broadway Avenue Tributary Within the Study Area**

| Stream Crossing ID | WDFW Site ID | Stream                         | Alignment Segment/ OMF Site | Stream Type | Fish Passage Barrier | Structure Description                        |
|--------------------|--------------|--------------------------------|-----------------------------|-------------|----------------------|----------------------------------------------|
| SC 54              | 995262       | West Broadway Avenue Tributary | BI                          | F           | Yes                  | 30-inch precast concrete pipe under Broadway |

#### Aquatic Habitat and Species

Within the study area, aquatic habitat is limited to approximately 625 linear feet of stream within Wetland WEV41 and utility corridor. Stream sediments are dominated by sands, silt, and gravel. No wood material or other habitat complexity was observed. While West Broadway Avenue Tributary exhibits the physical conditions to support fish, the extent of fish passage barriers and seasonally low-flow conditions, it is unlikely that anadromous or resident fish are present within West Broadway Avenue Tributary. Therefore, it is likely that aquatic species within West Broadway Avenue Tributary in the study area is limited to amphibians, macroinvertebrates, and other non-fish species.

#### Riparian Habitat

Where it occurs within the study area, West Broadway Avenue Tributary flows within a utility corridor which has a highly modified vegetation community, lacking mature trees and native woody shrubs due to overhead utility lines. However, just before entering the piped conveyance, West Broadway Avenue Tributary flows through a property for approximately 100 linear feet containing large, mature conifers and native emergent vegetation. West Broadway Avenue Tributary flows through Wetland WEV41. Wetland WEV41 is described in Table 3-39.

### 3.2.6.3 Wetlands in the Wood Creek Subbasin

Three wetlands have been identified within the Wood Creek subbasin within the study area, as summarized in Table 3-39 and shown in Figure 3-59.

Wetlands within the Wood Creek Subbasin study area are forested-shrub depressional wetlands with moderate habitat value. Wetland WEV39 is part of an ongoing wetland restoration project that began in 2022 (City of Everett 2024) and is a depressional forested-shrub wetland surrounded by residential and commercial developments (Figure 3-58 and Figure 3-60). The Wood Creek mainstem flows through Wetland WEV40, and West Broadway Avenue Tributary flows through Wetland WEV41 (Figure 3-57 to Figure 3-59). While the northern portion of Wetland WEV41 is forested, the southern portion is maintained as a shrub wetland due to its position under overhead utility lines.

**Table 3-39 Wetlands Within the Wood Creek Study Area**

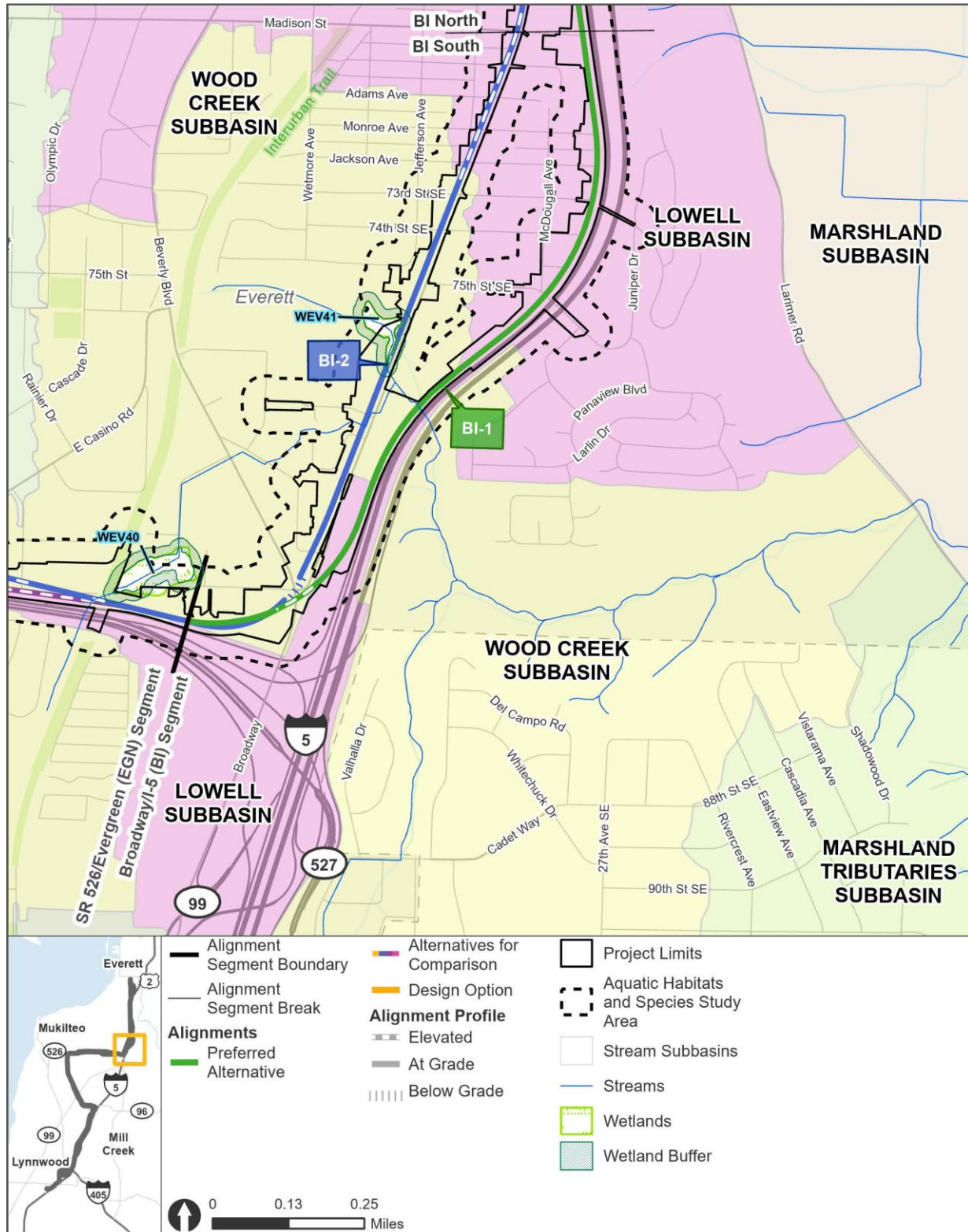
| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV39   | EGN               | PSS/PFO        | Depressional | 0.57                      | III                            | 4                          | 80            |
| WEV40   | EGN               | PSS/PFO        | Depressional | 2.86                      | III                            | 4                          | 80            |
| WEV41   | BI                | PSS/PFO        | Depressional | 1.50                      | III                            | 4                          | 80            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.



Figure 3-59 Wetlands – Broadway/I-5 Segments (South)



SOURCE: Snohomish County (2024b).

### 3.2.7 Pigeon Creek No. 1, Lowell, Riverfront, and Combined Sewer Subbasins

The Pigeon Creek No.1 subbasin is located within the Powder Mill Gulch – Frontal Possession Sound HUC-12 watershed while the Lowell, Riverfront, and Combined Sewer subbasins are within the Snohomish River-Frontal Possession Sound HUC-12 watershed (Figure 3-60 and Figure 3-61). These subbasins include portions of the SR 526/Evergreen, Broadway/I-5, and Everett Station Segments. No streams, wetlands, or other aquatic habitats are known to occur within the study area within the Pigeon Creek No. 1, Riverfront, and Combined Sewer subbasins. Therefore, only the Lowell subbasin is described below.

#### 3.2.7.1 Wetlands in the Pigeon Creek No. 1, Lowell, Riverfront, and Combined Sewer Subbasins within the Study Area

One wetland has been identified within the Lowell subbasin within the study area, as summarized in Table 3-40. Wetland WEV42 is a small, depressional roadside wetland on the west side of Broadway that provides little to no habitat function and minimal water quality and hydrological function. No wetlands were identified in the other subbasins.

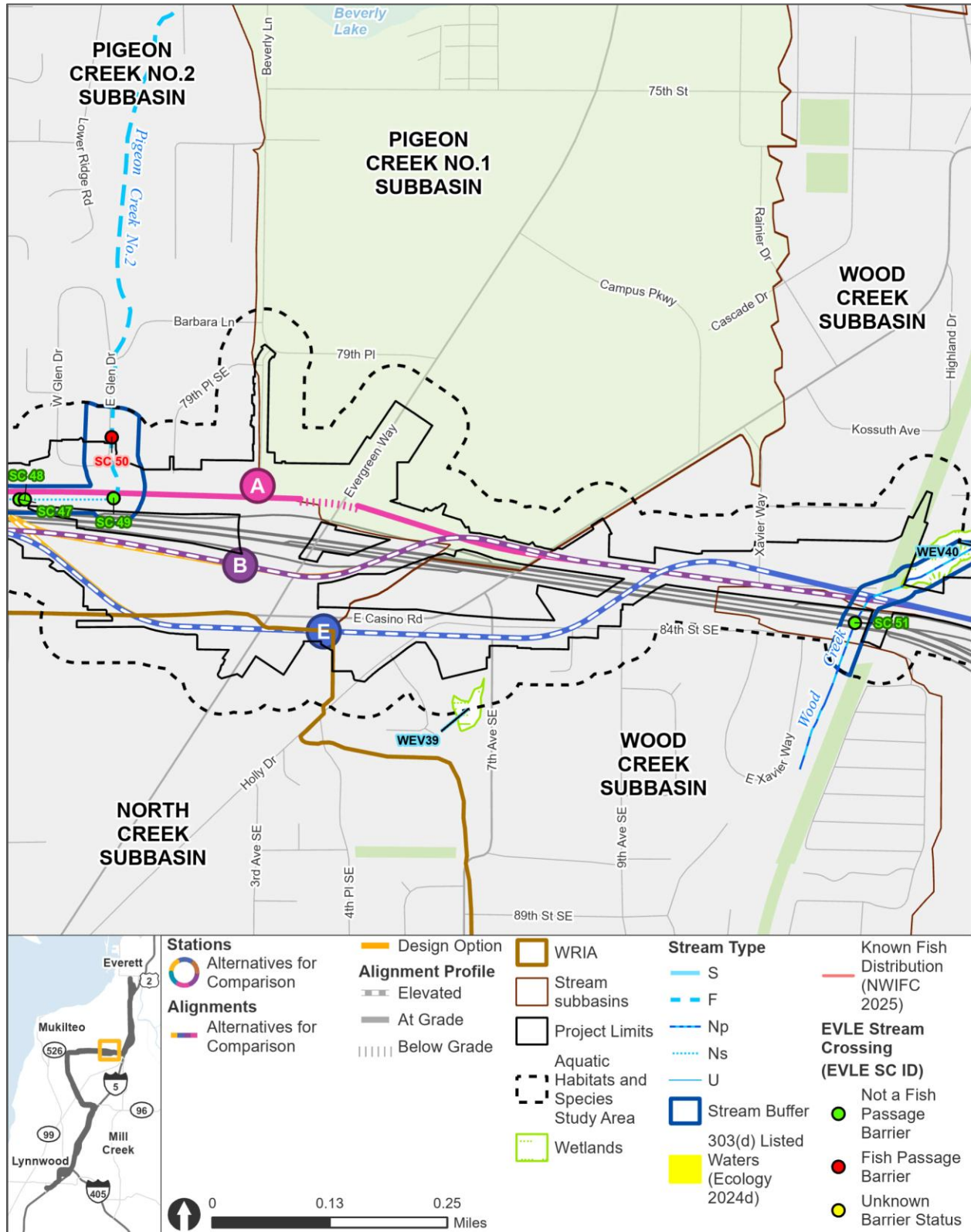
**Table 3-40 Wetlands Within the Lowell Subbasin Within the Study Area**

| Wetland | Alignment Segment | Cowardin Class | HGM Class    | Size (acres) <sup>a</sup> | Rating (category) <sup>b</sup> | Habitat Score <sup>b</sup> | Buffer (feet) |
|---------|-------------------|----------------|--------------|---------------------------|--------------------------------|----------------------------|---------------|
| WEV42   | EVT               | PSS            | Depressional | 0.01                      | III                            | 4                          | 80            |

NOTES:

- a) Wetland size is estimated based on preliminary field and desktop evaluations.
- b) Wetland ratings are preliminary and were made using best available information and best professional judgement.

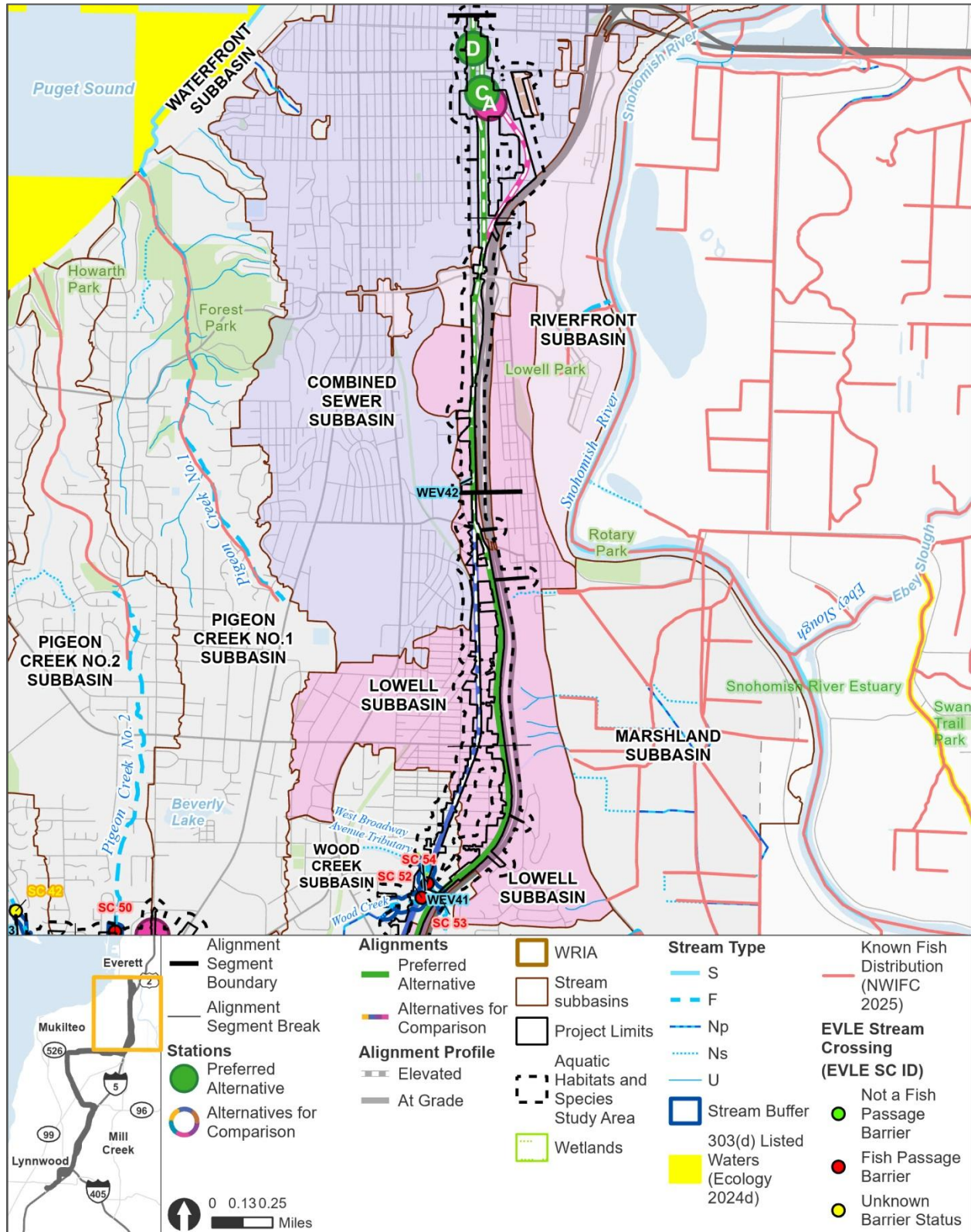
Figure 3-60 Pigeon Creek No. 1 Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).



Figure 3-61 Lowell, Riverfront, and Combined Sewer Study Area



SOURCE: Ecology (2024c), Ecology (2024d), City of Everett (2023), NWIFC (2025), USGS (2024).



### **3.2.8 Threatened, Endangered, and Candidate Aquatic Species Within the Snohomish Watershed and Subbasins**

An evaluation of ESA-listed aquatic species will be completed for the preferred alternative. A BA will be prepared, which addresses the potential impacts of the preferred alternative on species and habitat protected by the ESA and the MSA. Below is a preliminary evaluation of aquatic ESA-listed species, critical habitats, and EFH within the Snohomish watershed, to be further explored in the BA. Terrestrial ESA-listed species are discussed in Section 3.1.6.3.

Table 3-41 summarizes the federally listed aquatic and semi-aquatic species under the jurisdiction of NOAA Fisheries and USFWS that might occur in aquatic habitats in the Snohomish watershed study area. Figure 3-62 through Figure 3-68 show the distribution of aquatic species within the study area.

**Table 3-41 Federally Listed Aquatic and Semi-Aquatic Species and Designated Critical Habitat Within the Snohomish Watershed Study Area**

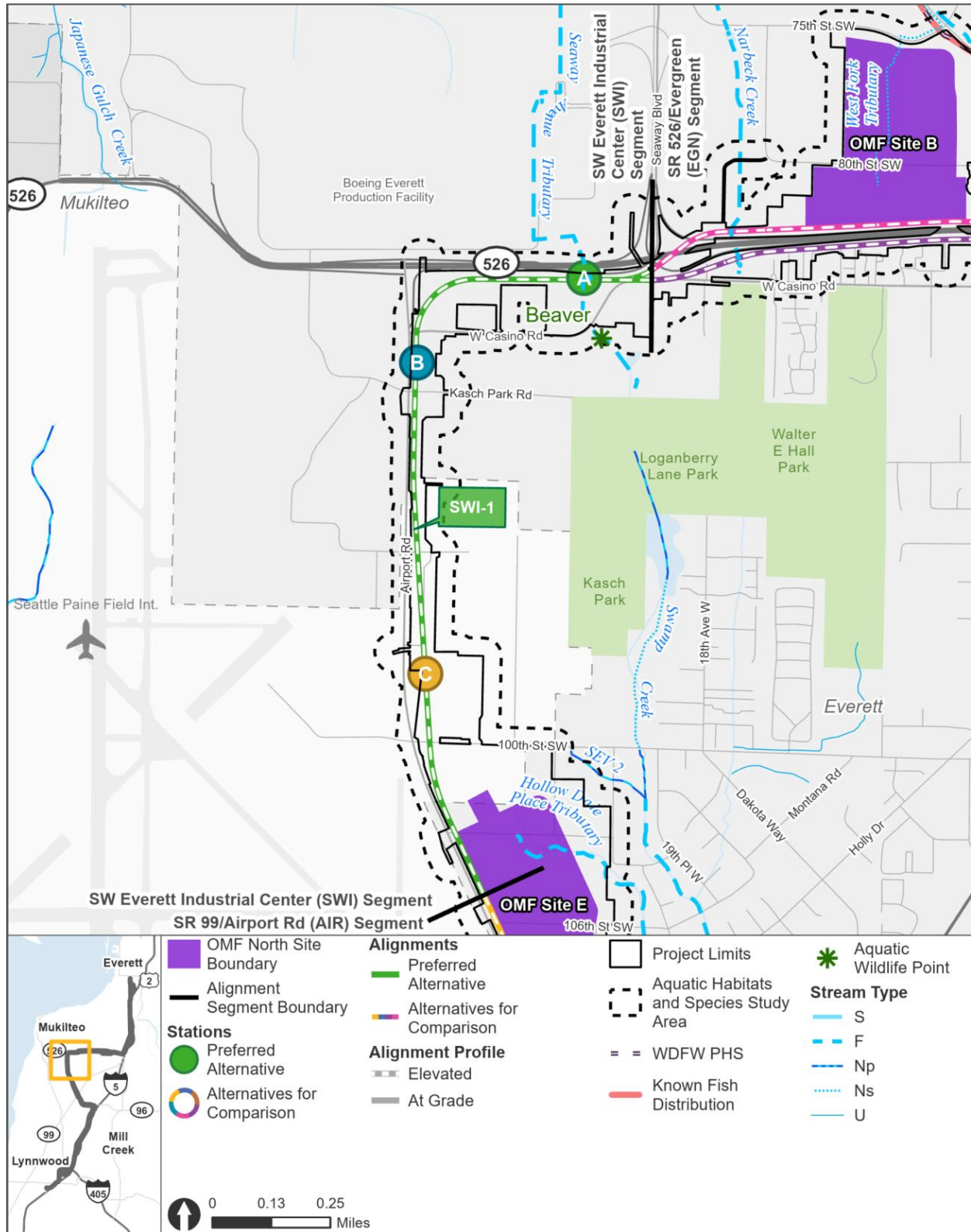
| Common Name                                                        | Scientific Name                 | Federal Status      | Service With Jurisdiction | Critical Habitat in Study Area | Suitable Habitat Within Study Area | Presence in Study Area | Project Segment and Location                         |
|--------------------------------------------------------------------|---------------------------------|---------------------|---------------------------|--------------------------------|------------------------------------|------------------------|------------------------------------------------------|
| Chinook Salmon – Puget Sound Evolutionarily Significant Unit (ESU) | <i>Oncorhynchus tshawytscha</i> | Threatened          | NOAA                      | No                             | No                                 | Not likely             | Not documented within Snohomish watershed study area |
| Steelhead – Puget Sound Distinct Population Segment (DPS)          | <i>Oncorhynchus mykiss</i>      | Threatened          | NOAA                      | No                             | No                                 | Not likely             | Not documented within Snohomish watershed study area |
| Bull trout, Coterminous U.S. DPS                                   | <i>Salvelinus confluentus</i>   | Threatened          | USFWS                     | No                             | No                                 | Not likely             | Not documented within study area                     |
| Northwestern Pond Turtle <sup>a</sup>                              | <i>Actinemys marmorata</i>      | Proposed Threatened | USFWS                     | No                             | Yes                                | Not likely             | Not documented within study area                     |

SOURCES: NOAA (2024b); USFWS, (2025).

NOTES:

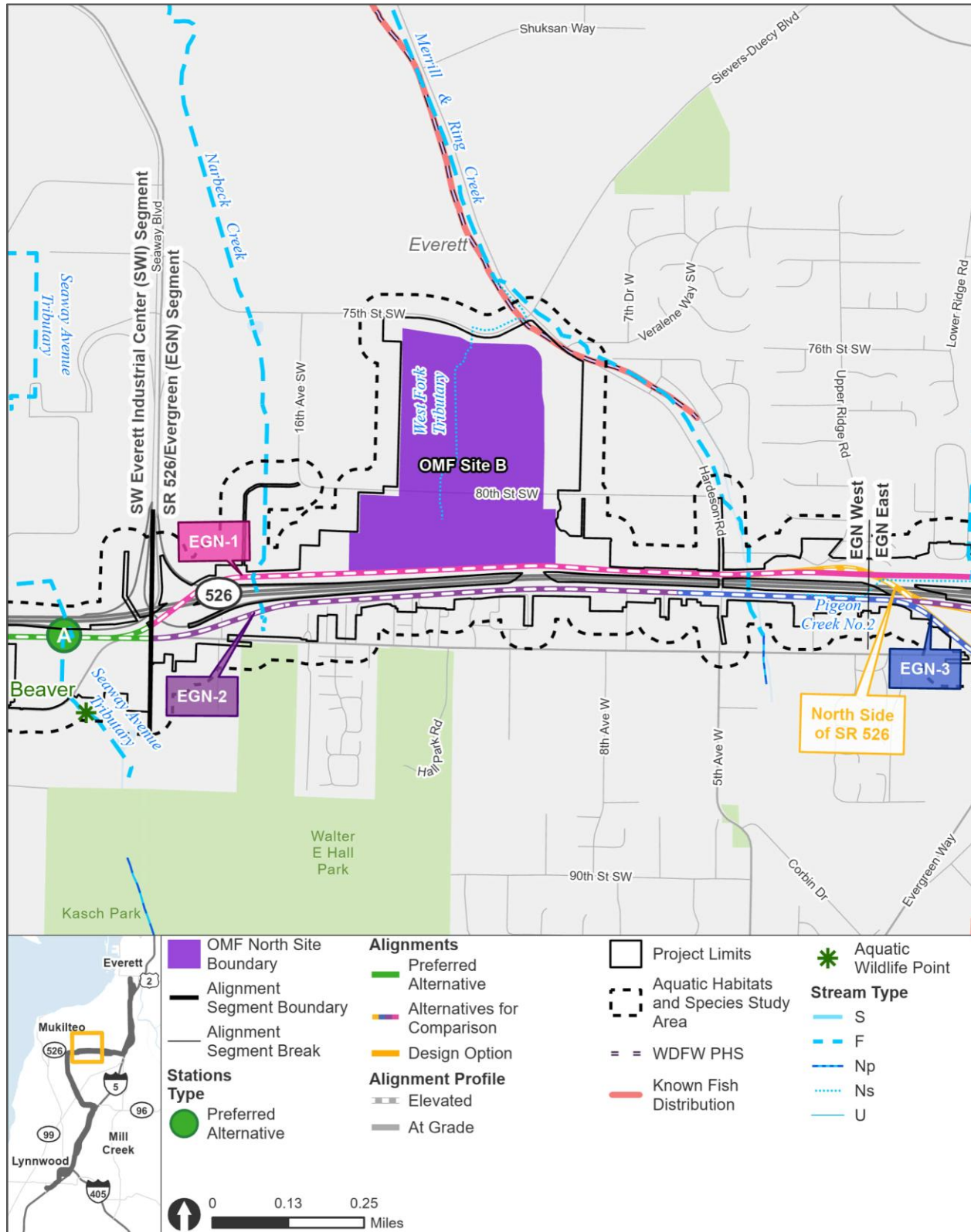
- a) Northwestern pond turtle is a semi-aquatic reptile with critical life stages and behaviors occurring in aquatic environments. For the purposes of this technical report, they were identified as a semi-aquatic species and grouped with aquatic fish species listed above.

Figure 3-62 Aquatic Species – SW Everett Industrial Center Segment



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b), USFWS (2022).

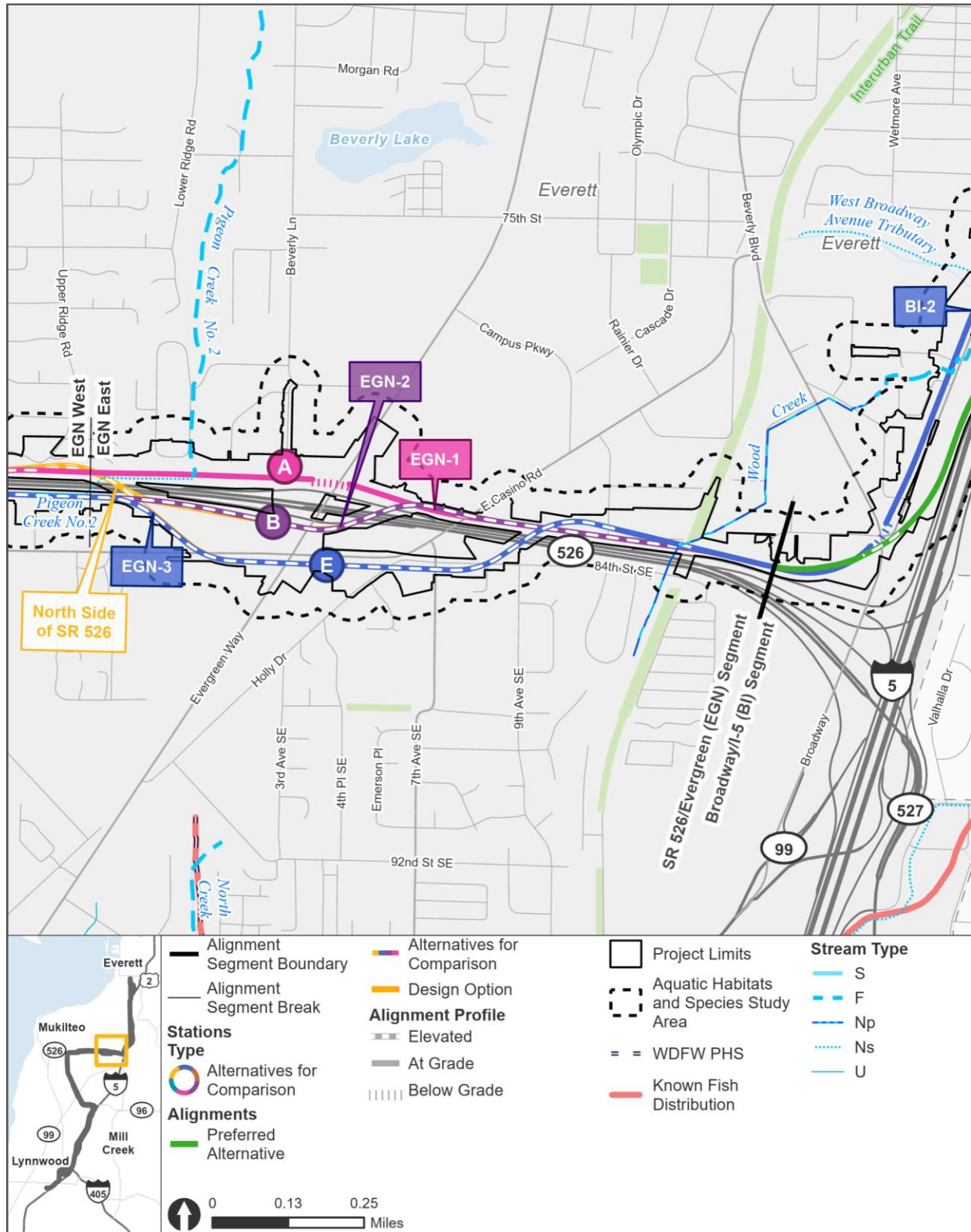
Figure 3-63 Aquatic Species – SR 526/Evergreen Segment (West) and OMF Site B



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b), USFWS (2022).

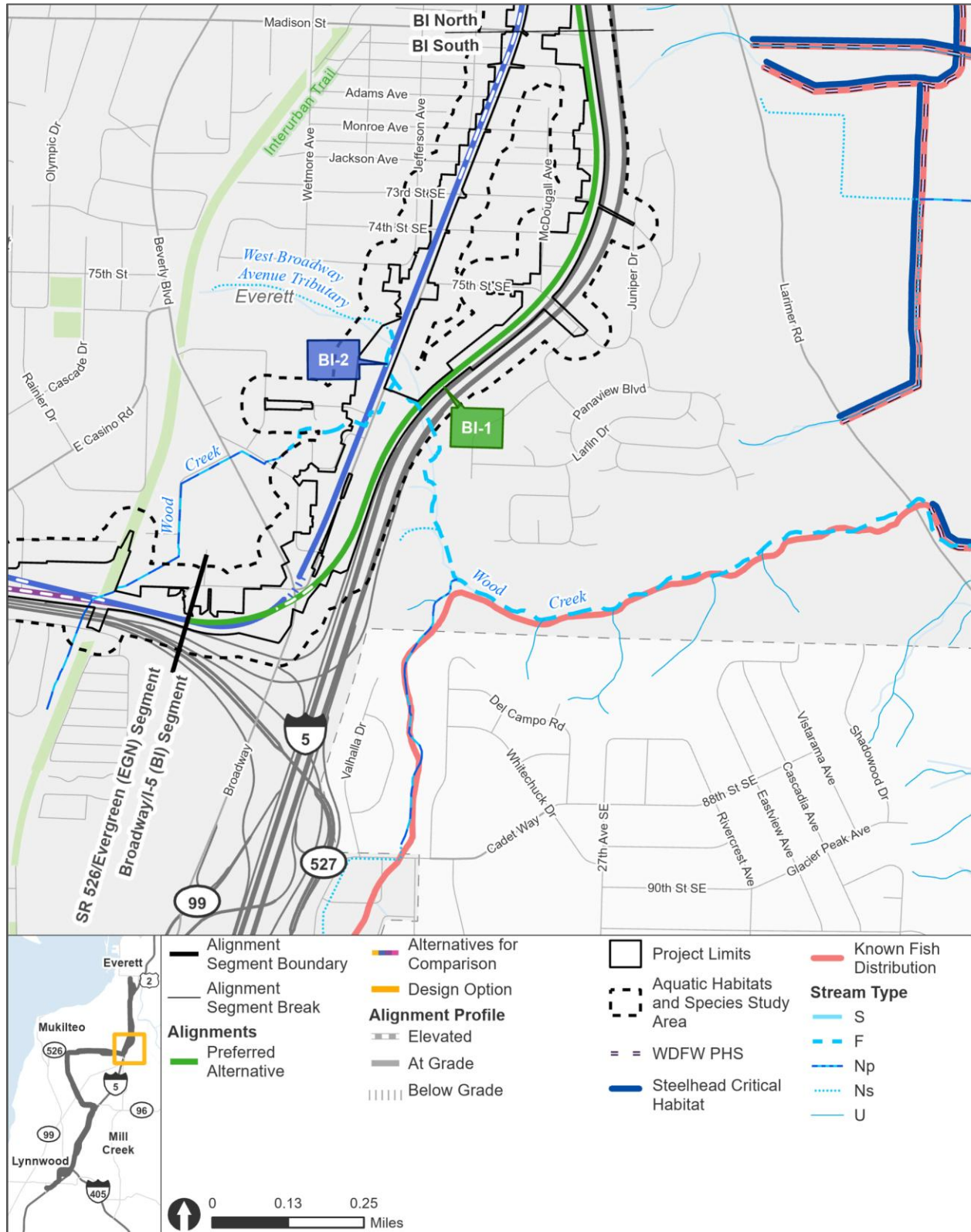


Figure 3-64 Aquatic Species – SR 526/Evergreen Segment (East)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b), USFWS (2022).

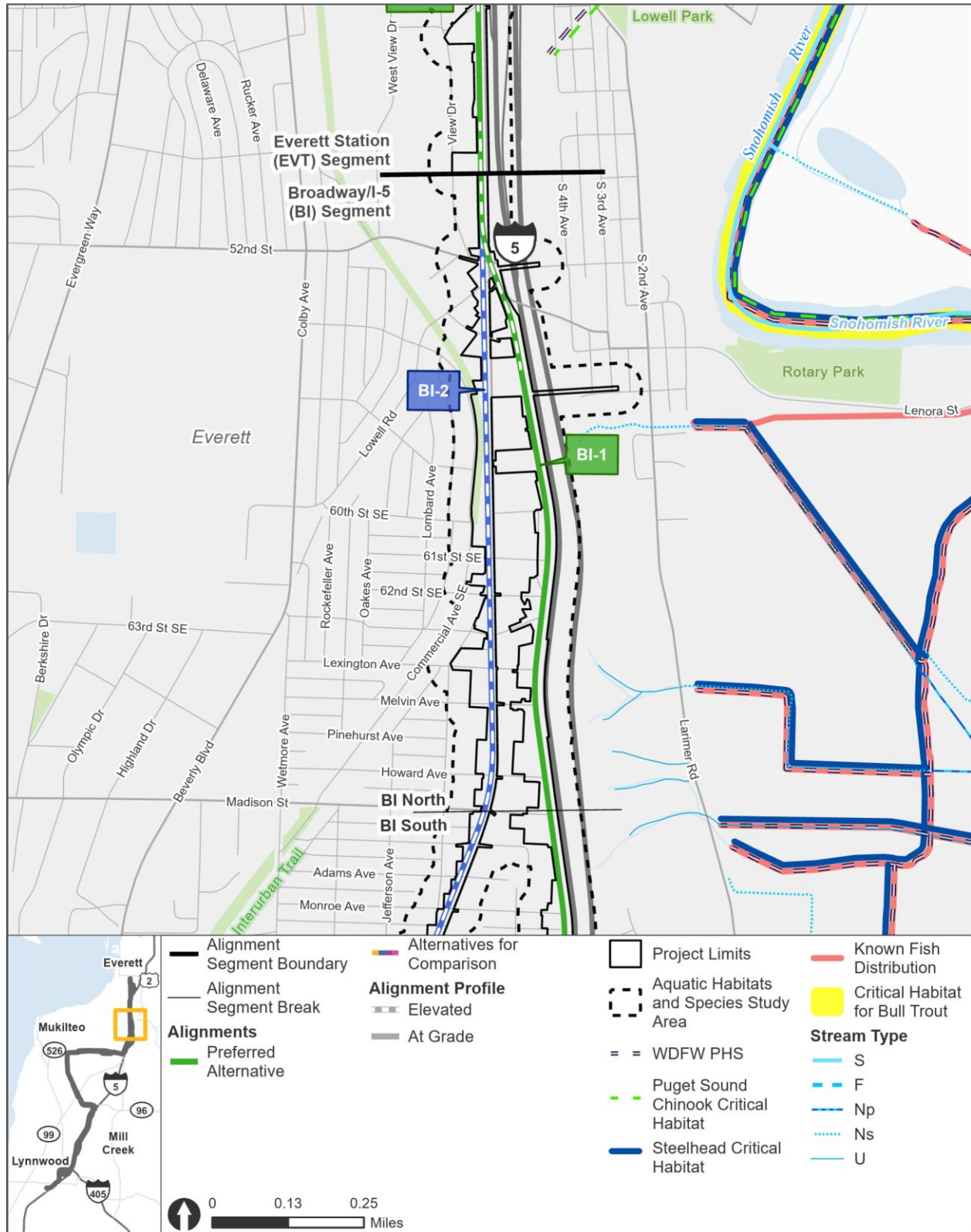
Figure 3-65 Aquatic Species – Broadway/I-5 Segment (South)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWFC (2025), NOAA (2024b), USFWS (2022).

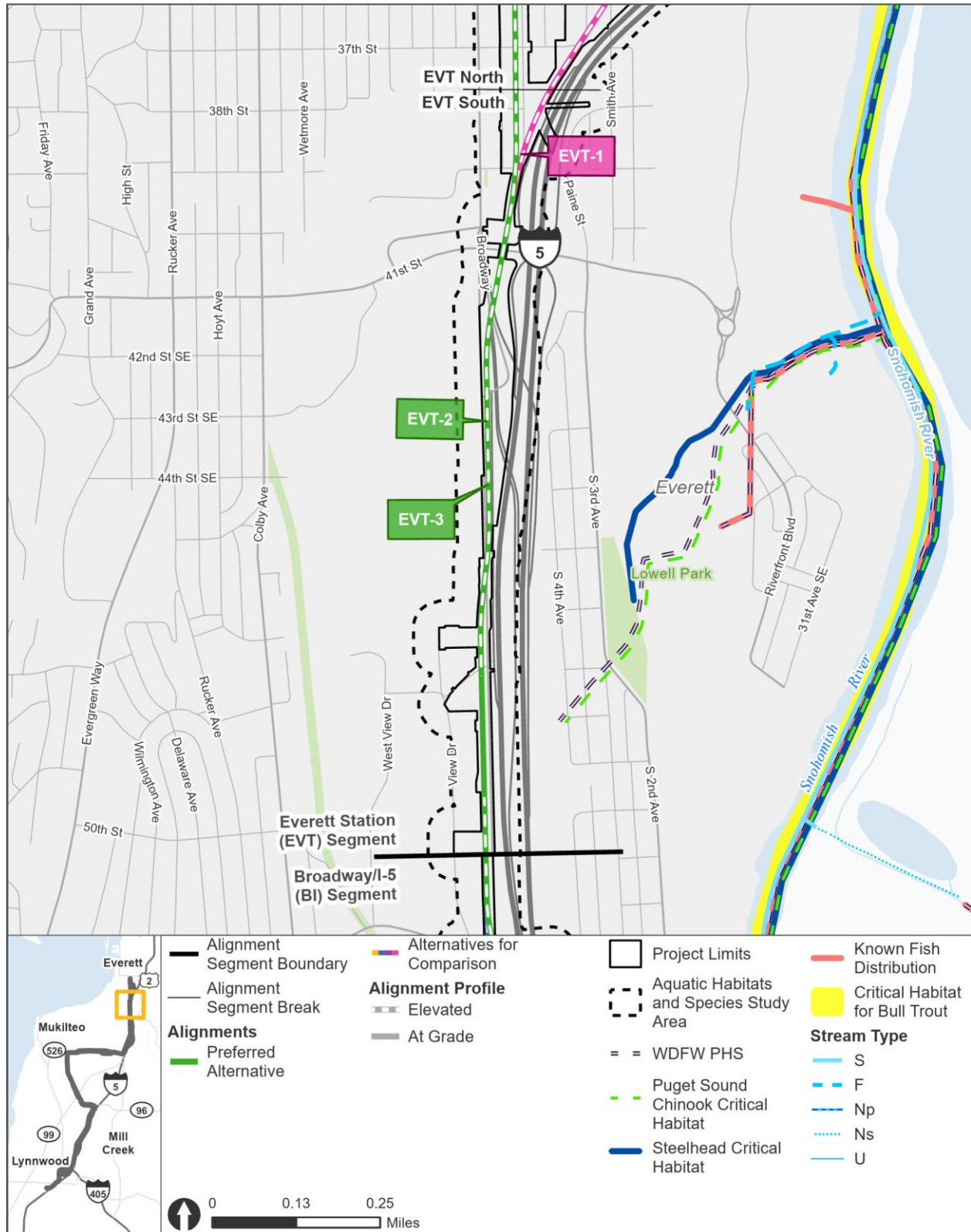


Figure 3-66 Aquatic Species – Broadway/I-5 Segment (North)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWFC (2025), NOAA (2024b), USFWS (2022).

Figure 3-67 Aquatic Species – Everett Station Segment (South)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b), USFWS (2022).



Figure 3-68 Aquatic Species – Everett Station Segment (North)



SOURCE: Snohomish County (2024b), WDFW (2024b), NWIFC (2025), NOAA (2024b), USFWS (2022).

Puget Sound Evolutionarily Significant Unit (ESU) Chinook salmon and Puget Sound Distinct Population Segment (DPS) steelhead have not been documented within the study area portion of the Snohomish watershed (NWIFC 2025); however, there may be suitable habitat for these species downstream of the study area. While not documented within the study area, bull trout are documented as rearing in the Snohomish River and its unnamed tributaries, more than 1.0 mile from the study area (WDFW 2024b, NWIFC 2025, USFWS 2022).

As described in Sections 3.2.1 to 3.2.7, most streams within the Snohomish River study area are heavily urbanized (City of Everett 2022a). The highly disturbed nature of these streams likely limits the presence of both anadromous and resident fish species in upstream reaches of the subbasin.

As of 2020, northwestern pond turtles have only been found at six sites in Washington State: two in south Puget Sound (in Mason County and Pierce County) and four along the Columbia River Gorge (Western Pond Turtle Range-wide Conservation Coalition 2020). There are no documented observations of northwestern pond turtles (*Actinemys marmorata*) within the study area (WDFW 2024b). Given the distance between the existing population in Pierce County and the study area, as well as the dense urban development and road network system between the two areas, the potential for the species to occupy habitats in the study area is non-existent without human intervention.

### 3.2.8.1 Designated Critical Habitat

No designated critical habitat is mapped in the aquatic study area within the Snohomish watershed. Critical habitat for Chinook salmon and steelhead is mapped 630 feet and 1,100 feet, respectively, east of the Broadway/I-5 Segment (NOAA 2024b) (Figure 3-66). However, this mapped critical habitat is separated from the project limits by I-5. Further, known fish distribution does not indicate that anadromous fish currently use this section of mapped critical habitat (NWIFC 2025).

Additional critical habitat for aquatic species is approximately 1.1 miles downstream of the study area within the Snohomish River. Critical habitat for steelhead, Chinook salmon, and bull trout is mapped in the Snohomish River. Steelhead critical habitat extends into diked agricultural fields in the Snohomish River floodplain.

### 3.2.8.2 Essential Fish Habitat

The MSA defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” of certain managed fisheries species (16 United States Code 1802[10]). The Pacific Coast Salmon Fisheries Management Plan (FMP) includes habitat designations for Chinook, coho, and pink salmon. The freshwater EFH distinctions within this FMP include all lakes, streams, ponds, rivers, wetlands, and other bodies of water that have been historically accessible to salmon (PFMC 2023). According to the NMFS Essential Fish Habitat Mapper (NOAA 2024a) for Pacific Coast Salmon, Japanese Gulch, Powder Mill Gulch, Narbeck Creek, Merrill & Ring Creek, Pigeon Creek No. 2, Wood Creek, Lowell, and Combined Sewer subbasins provide EFH to Chinook, pink, and coho salmon. Outside of the study area, the Snohomish River and the downstream reach of Wood Creek provides EFH to Pacific Coast Salmon, Coastal Pelagic Species, and Groundfish (NOAA 2024a).

### 3.2.9 State and Local Aquatic Priority Habitats and Species Within the Snohomish Watershed and Subbasins

Local jurisdictions within the study area regulate aquatic habitats and species through their critical areas codes. These areas generally include aquatic habitat areas, such as wetlands, streams, and lakes. In addition, local jurisdictions may also consider designated biodiversity corridors or habitat areas that are primarily associated with aquatic species of local, state, or federal importance to be fish and wildlife habitat conservation areas.

Table 3-42 summarizes the aquatic PHS publicly mapped by WDFW within the Snohomish watershed study area.

**Table 3-42 Mapped Aquatic Priority Habitats and Species Within the Snohomish Watershed Study Area**

| Priority Species           | Scientific Name             | Habitat                           | Priority Habitat Type                                   |
|----------------------------|-----------------------------|-----------------------------------|---------------------------------------------------------|
| Resident coastal cutthroat | <i>Oncorhynchus clarkii</i> | Merrill & Ring Creek              | Occurrence/Migration                                    |
| Wetlands                   | N/A                         | Unnamed wetlands of various types | Palustrine forested, scrub-shrub, and emergent wetlands |

SOURCE: WDFW (2024b).

In addition to the state priority habitats and species listed above, the local jurisdictions of the study area regulate habitats and species of local importance per the following critical areas codes:

- City of Everett Municipal Code Chapter 19.37, Critical Areas Code.
  - Significant biological areas regulations described in City of Everett Municipal Code Chapters 19.37.040 and 19.37.190. Freshwater areas that are identified as City of Everett significant biological areas per City of Everett Municipal Code Chapter 19.04.110 are:
    - Maulsby Swamp.
    - Simpson Lee site Category I wetlands.
    - Narbeck Swamp.
    - Jetty Island.
- Snohomish County Code Chapter 32.62A, Habitat Management Plans.
  - Species of local importance code described in Snohomish County Code Chapter 32.62A.470.

Most wetlands within the study area have not yet been delineated and wetland impacts have not yet been evaluated. A complete wetland report, and accompanying mitigation plan, will be completed when a preferred alternative is selected.

### 3.2.10 Tribal Treaty Fishing Rights Within the Snohomish Watershed and Subbasins

The Snohomish Watershed and subbasins in the study area are among the usual and accustomed fishing areas of the federally recognized Tulalip Tribes. Project impacts to tributaries of the Snohomish River could affect the productivity of fisheries resources. Sound Transit is coordinating with the Tulalip Tribes regarding these potential effects. The Boldt decision also concluded that the Confederated Tribes and Bands of the Yakama Nation has a treaty right to fish in certain areas including the Snohomish River.

### 3.2.11 Upland Habitats and Species Within the Snohomish Watershed and Subbasins

#### 3.2.11.1 Vegetation

##### *Land Cover Types*

Upland habitats within the Snohomish watershed have been substantially altered from past high- and moderate-density land use activities, such as Paine Field, the Boeing Everett Production Facility, adjacent industrial and manufacturing development, Cascade High School, and the Everett central business district. Low density land uses and open spaces, including parks and ballfields, residential lawns, wetlands, and cemeteries are present although occur as relatively small fragments throughout the study area. These low density and open space land cover types can provide suitable habitat as isolated patches or as part of forested corridors extending beyond the study area, providing nesting, roosting, and breeding habitats for wildlife species. Table 3-43 describes these land cover types and examples of where they occur within the study area. Figure 3-69 through Figure 3-75 show the upland habitats and species in the study area, including vegetation and land cover types.

**Table 3-43 Land Cover Types Within the Study Area**

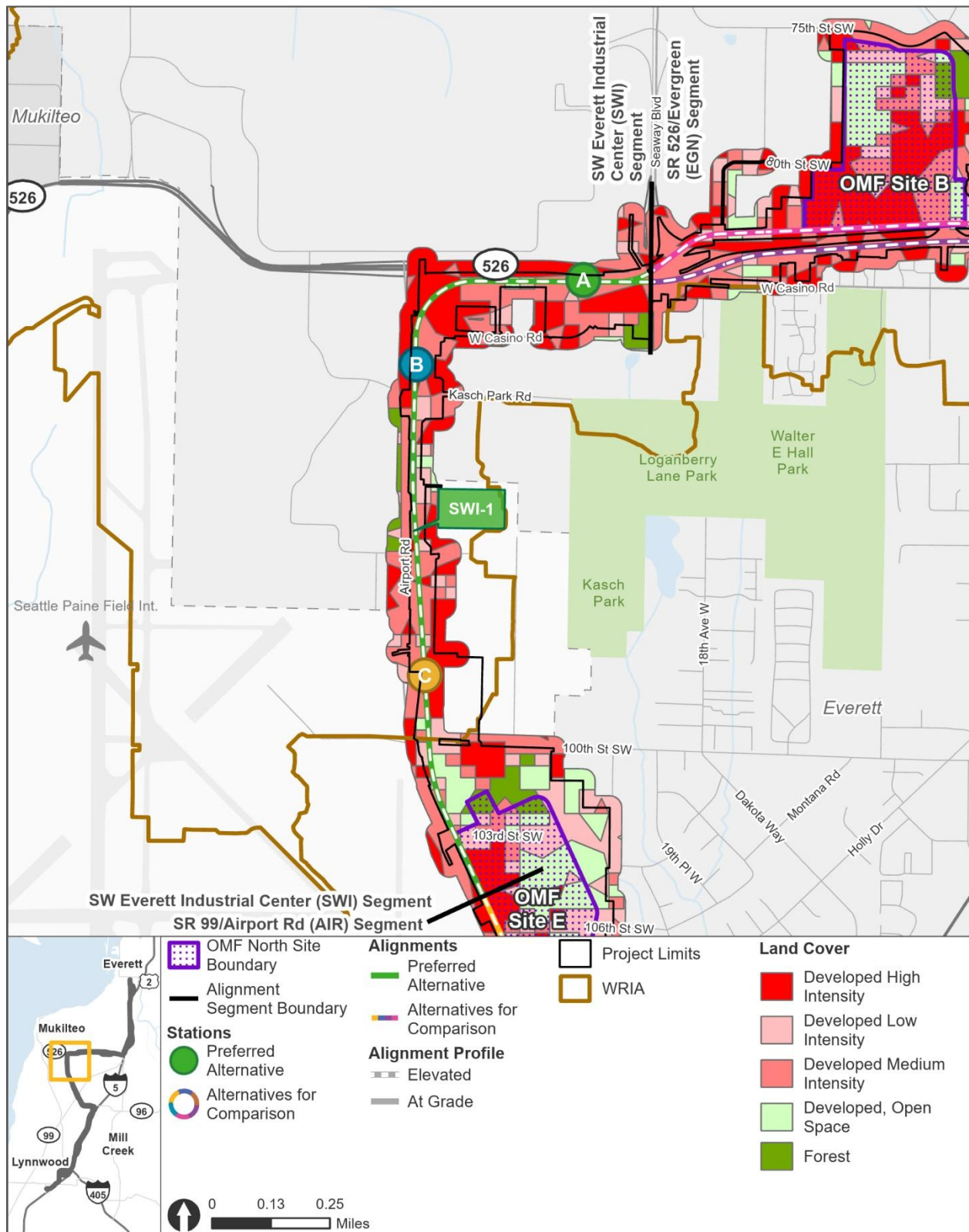
| Land Cover Type <sup>a</sup>       | Acres Within Study Area | Percent of Land Cover Type | Description                                                                                                                                                                                                  |
|------------------------------------|-------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Urban and Mixed: High-Density      | 326                     | 41%                        | Associated with high-intensity commercial and industrial land uses, particularly around Paine Field, the Boeing Everett Production Facility, Cascade High School, and the Everett central business district. |
| Urban and Mixed: Moderate Density  | 316                     | 40%                        | Associated with low-density multi-family and low-rise commercial throughout the study area.                                                                                                                  |
| Urban and Mixed: Low Density       | 111                     | 14%                        | Predominantly associated with developed, low-density residential and low-rise commercial land uses occurring along both major and minor arterials, including Broadway.                                       |
| Open Space: Shrublands/ Grasslands | 28                      | 3%                         | Undeveloped lands, including grasslands and shrub lands, including along a forested ravine east of I-5 and the Evergreen Funeral Home and Cemetery west of Broadway.                                         |
| Open Space: Forest                 | 10                      | 1%                         | Occurring at wetlands with a deciduous forest canopy and deciduous forested wetland buffer.                                                                                                                  |

NOTE:

- a) Land cover type was developed using the land cover structural descriptions (Johnson and O'Neil 2001).

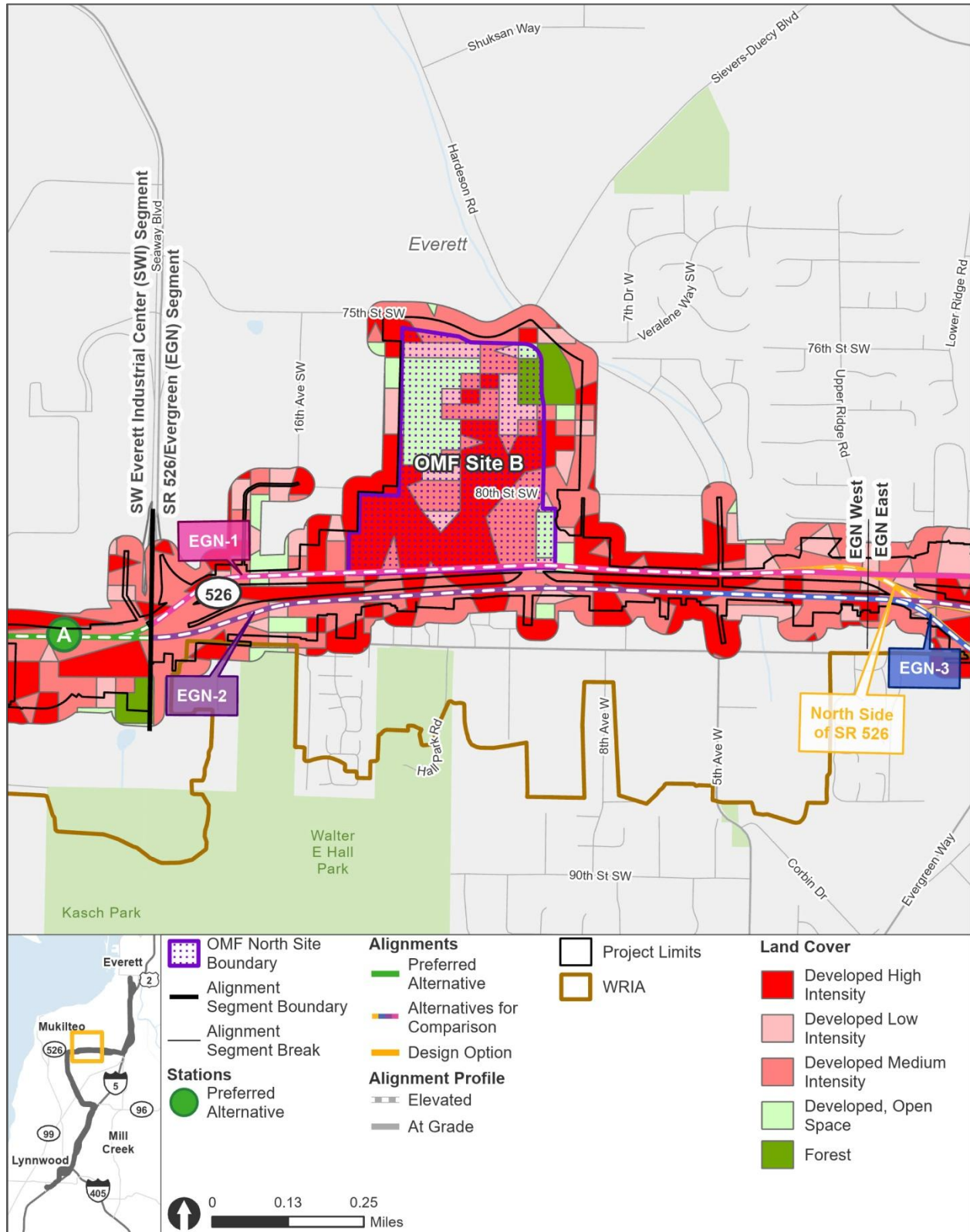


Figure 3-69 Land Cover Types – SW Everett Industrial Center Segment



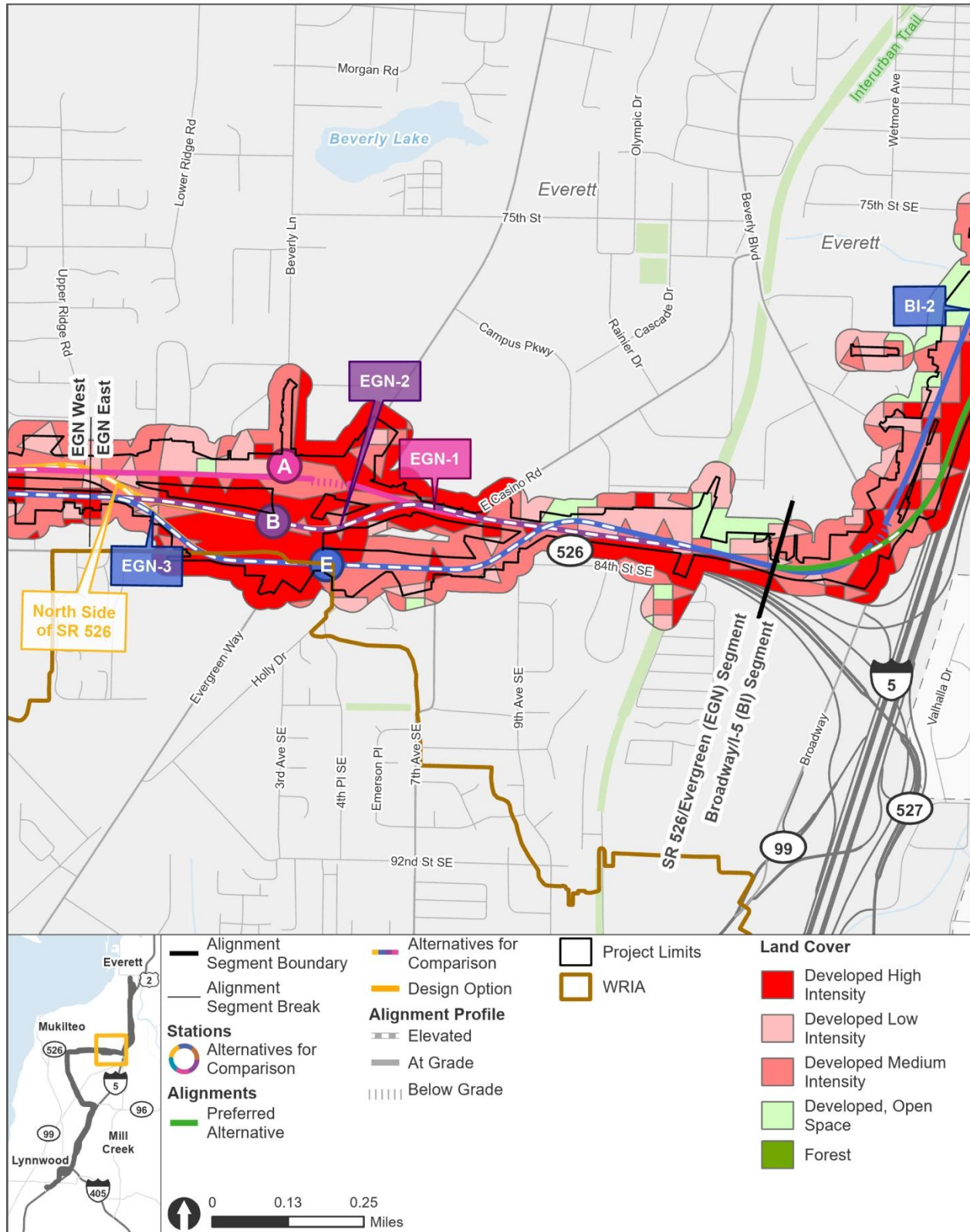
SOURCE: USGS (2021), Snohomish County (2024b).

Figure 3-70 Land Cover Types – SR 526/Evergreen Segment (West)



SOURCE: USGS (2021), Snohomish County (2024b).

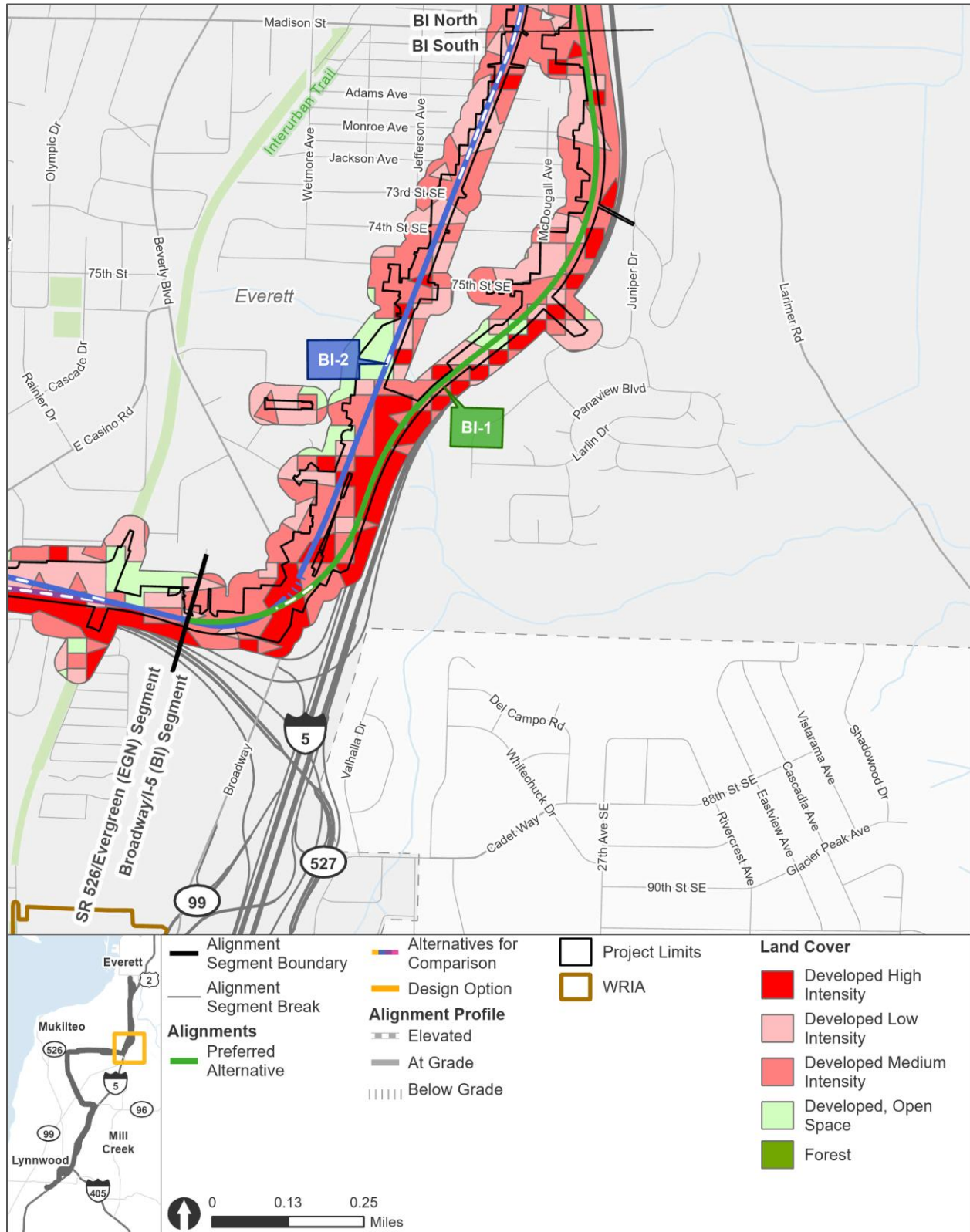
Figure 3-71 Land Cover Types – SR 526/Evergreen Segment (East)



SOURCE: USGS (2021), Snohomish County (2024b).



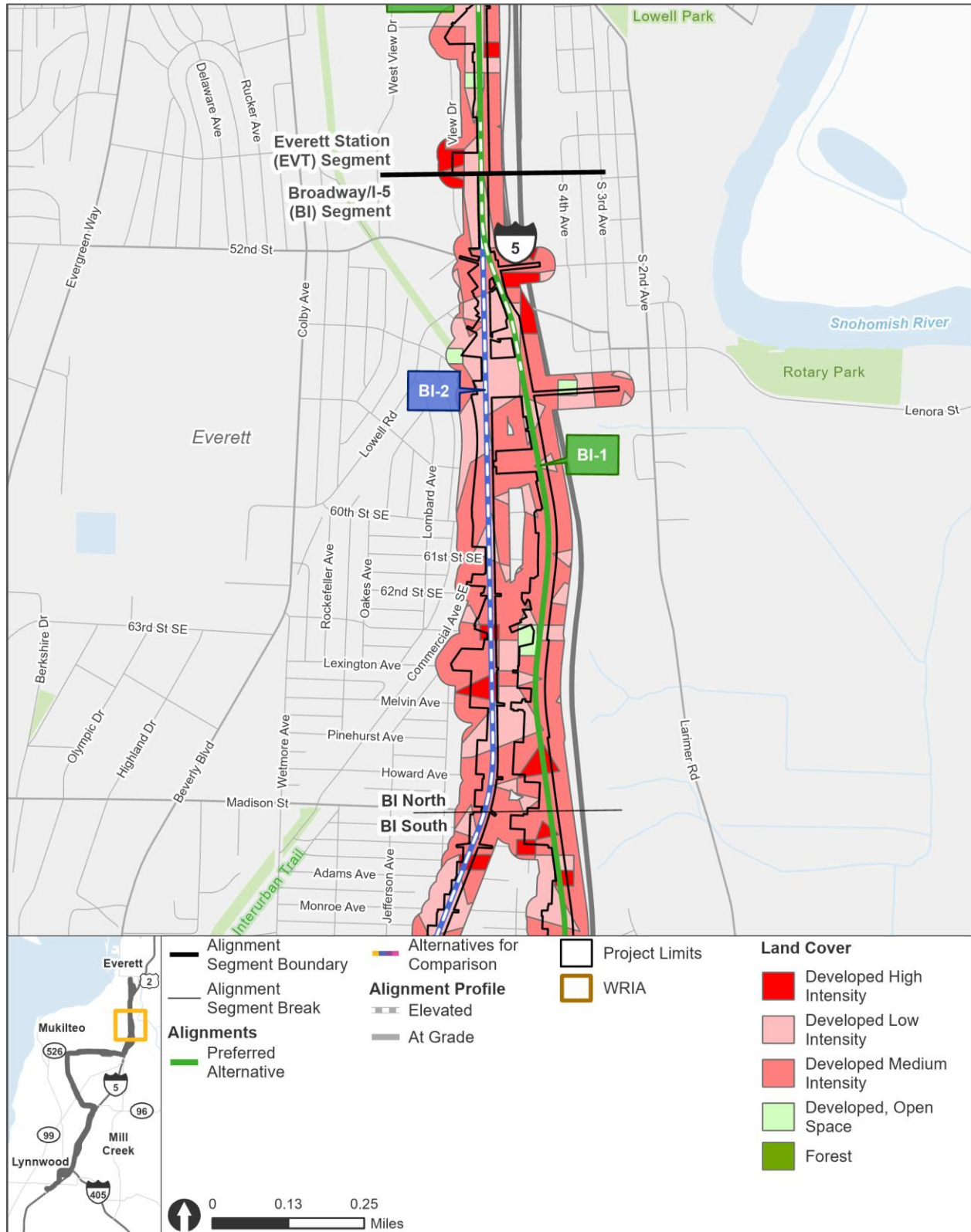
Figure 3-72 Land Cover Types – Broadway/I-5 Segment (South)



SOURCE: USGS (2021), Snohomish County (2024b).

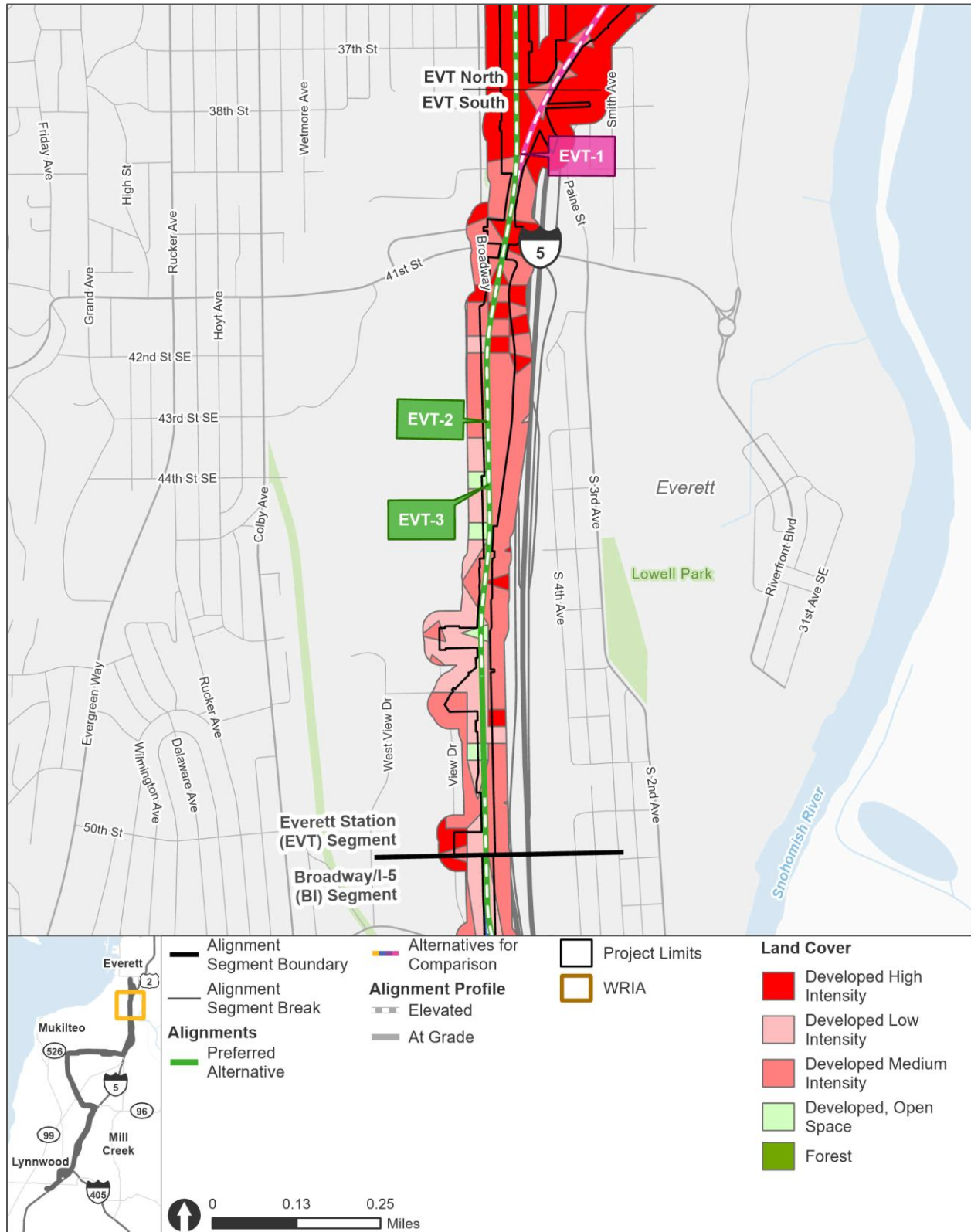


Figure 3-73 Land Cover Types – Broadway/I-5 Segment (North)



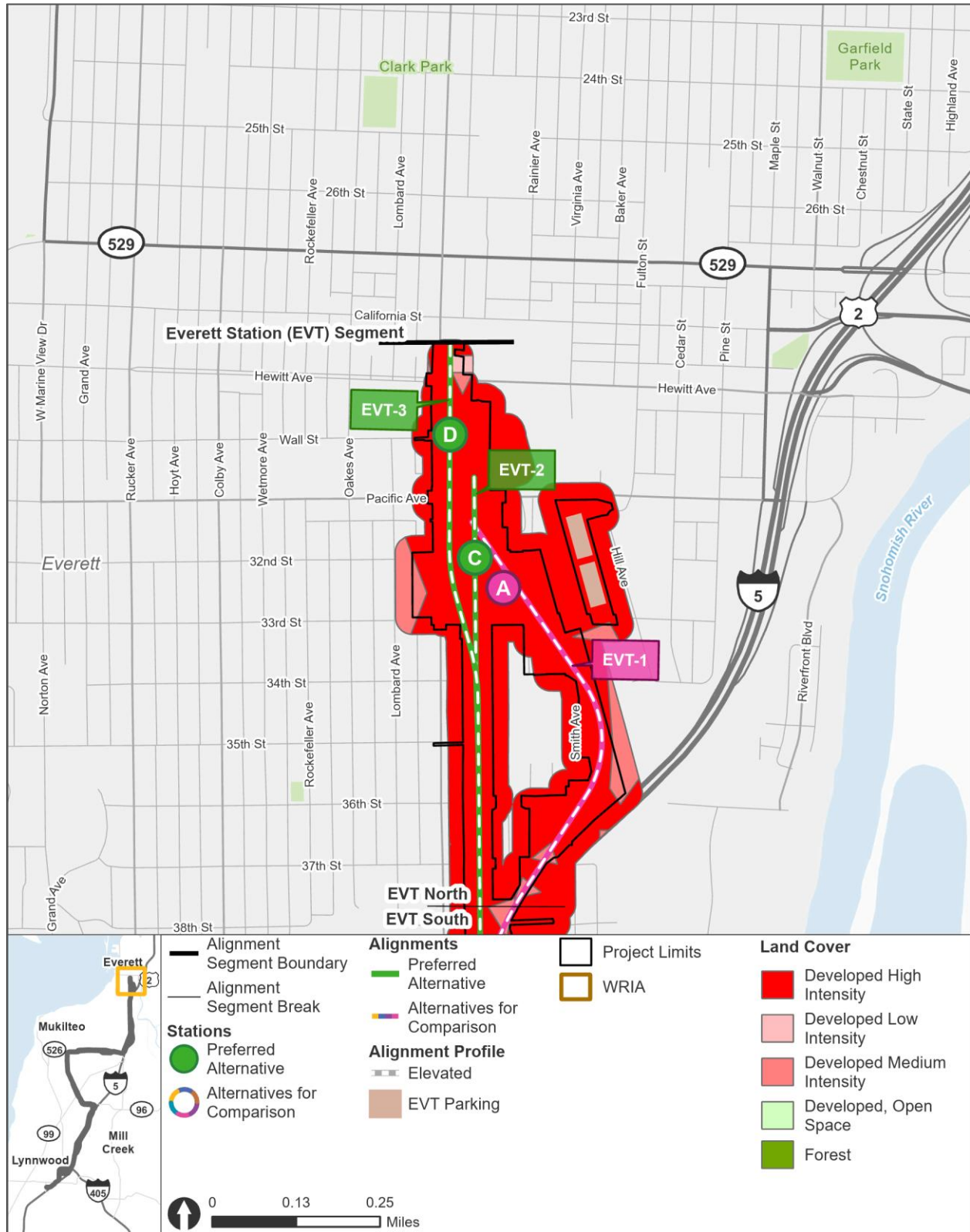
SOURCE: USGS (2021), Snohomish County (2024b).

Figure 3-74 Land Cover Types – Everett Station Segment (South)



SOURCE: USGS (2021), Snohomish County (2024b).

Figure 3-75 Land Cover Types – Everett Station Segment (North)



SOURCE: USGS (2021), Snohomish County (2024b).

### ***Heritage and Significant Trees***

There is no City of Everett code which specifically defines “heritage” or “significant” tree.

A tree survey will be completed for the preferred alternative to determine the extent of tree replacement required for each AHJ, including WSDOT, for the project following any avoidance or minimization measures implemented to reduce impacts to identified heritage or significant trees.

### ***Rare Plants***

No rare plant communities are documented within the Snohomish watershed study area (DNR 2024), and rare plants were not observed during the wetland and stream field surveys between 2023 and 2025.

### ***Invasive Plants***

The Snohomish County Noxious Weed Control Board lists several common weeds that may be present in the study area. These include Class A weeds (eradication of all infestations is required by law in Washington) and Class B weeds (in which prevention or control is decided at the local level). Invasive species that are not classified as Snohomish County Noxious Weeds were documented and are prevalent in the study area. Prominent species include English ivy, Himalayan blackberry, and non-native grasses such as reed canarygrass.

#### **3.2.11.2 Resources Conservation Areas**

There are no RCAs within the Snohomish watershed study area.

#### **3.2.11.3 Terrestrial Wildlife Species**

The urban terrestrial habitats within and adjacent to the Snohomish watershed study area primarily support those species adapted to the human-built environment. In these ecosystems, habitat loss and fragmentation results in reduced species diversity and increased species density of certain adaptable species. The mix of urbanized areas and remnant forest patches creates an environment that attracts both urban dwelling species and forest dwelling species capable of utilizing fringe habitats, which typically include birds and small mammals that are weakly territorial and have limited home ranges (Johnson and O’Neil 2001).

Small mammal species likely to inhabit the urban areas include Norway rat, deer mouse, Townsend’s vole, raccoon, opossum, and Eastern gray squirrel.

The patches of forest and riparian corridors within the study area may support additional species such as Douglas squirrel and mountain beaver. Larger mammals may also inhabit these forested corridors or venture into urban areas including deer and coyote. These species are known to occur in the region and may utilize the study area, particularly in less developed sections or during nighttime hours. Additional unverified large mammal species reported within 0.50 miles of the Snohomish watershed study area include a river otter along Holly Drive in 2020 and a black bear in 2023 between I-5 and the Snohomish River (Woodland Park Zoo 2024).

The study area lies within the Pacific Flyway, a migratory corridor consisting of the western coastal areas of South, Central, and North America. Therefore, numerous birds may occur within the study area with some species occurring seasonally as they utilize stopover sites



during migration, and some species maintaining year-round residency within the study area. Common bird species in the urban areas include American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), and house sparrow (*Passer domesticus*). The forested corridors may support a more diverse avian community, passerines such as black-capped chickadee (*Poecile atricapillus*), spotted towhee (*Pipilo maculatus*), house sparrow (*Passer domesticus*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), yellow warbler (*Dendroica petechial*), and various woodpeckers. Areas surrounding lakes, wetlands, and other open water within the study area, including stormwater ponds, may support waterfowl species, especially during the spring and fall migrations. According to bird data provided by eBird, six “bird hot spots” occur within parks and other open spaces within a half mile the project area. These “bird hot spots” include Kasch Park, Narbeck Wetland Sanctuary, Cascade High School, Evergreen Funeral Home and Cemetery, and Everett Memorial Stadium and Athletic Field and are mapped on Figure 3-76 to Figure 3-82.

Several bat species are expected to utilize both urban and forested habitats, including little brown bat (*Myotis lucifugus*) and Yuma myotis (*Myotis yumanensis*), both of which are priority species. These species may roost in buildings, tree cavities, or under loose bark.

Reptile and amphibian presence is expected to be limited in heavily urbanized areas but may be more prominent in forested corridors. Species that might occur include Pacific tree frog, Northwestern garter snake, and Northern red-legged frog in suitable moist habitats.

Given the proximity of Paine Field to the study area, those habitat types that attract wildlife on or near public-use airports are of particular concern, especially high-risk wildlife species. The highest risk species is deer. Other high-risk species are predominantly birds: snow goose (*Anser caerulescens*), turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), sandhill crane (*Antigone canadensis*), bald eagle, double-crested cormorant (*Nannopterum auritum*), mallard (*Anas platyrhynchos*), osprey (*Pandion haliaetus*), and great blue heron (*Ardea herodias*) (FAA 2018). As such, natural and human-made wildlife attractants are assessed under the *Wildlife Hazard Management Plan for the Snohomish County Airport/Paine Field* (Snohomish County 2022) within 5 miles of Paine Field’s aircraft operations area. There were 85 wildlife strikes at Paine Field between 2019 and 2023, of which only three strikes were reported to have resulted in damage. American kestrel (*Falco sparverius*), Savanna sparrow (*Passerculus sandwichensis*), and glaucous-winged gull (*Larus glaucescens*) are the most common species involved in reported strikes during that period (FAA 2024).

### 3.2.11.4 Threatened, Endangered, and Proposed Upland Species

This section provides a preliminary evaluation of upland ESA-listed species and critical habitat. A detailed evaluation of ESA-listed terrestrial species will be completed for the preferred alternative, and a BA report that addresses the potential impacts of the preferred alternative on species and habitat protected by the ESA and the MSA will be prepared. Aquatic ESA-listed species are addressed in Section 3.1.3.

Table 3-44 summarizes the federally listed upland species and designated critical habitats that were identified during the desktop evaluation of the Snohomish watershed study area. No federally listed upland plant species, wildlife species, or designated critical habitat under the jurisdiction of the USFWS occur in the Snohomish watershed study area.

**Table 3-44 Federally Listed Upland Species and Designated Critical Habitat Within the Study Area**

| Common Name                       | Scientific Name                 | Federal Status      | Service With Jurisdiction | Critical Habitat in Study Area | Suitable Habitat Within Study Area | Likely Presence in Study Area |
|-----------------------------------|---------------------------------|---------------------|---------------------------|--------------------------------|------------------------------------|-------------------------------|
| Marbled murrelet                  | <i>Brachyramphus marmoratus</i> | Threatened          | USFWS                     | No                             | No                                 | May occur during flyover      |
| Yellow-billed cuckoo, Western DPS | <i>Coccyzus americanus</i>      | Threatened          | USFWS                     | No                             | No                                 | Unlikely                      |
| Monarch butterfly                 | <i>Danaus Plexippus</i>         | Proposed Threatened | USFWS                     | No                             | Likely                             | Unlikely                      |
| Suckley's cuckoo bumble bee       | <i>Bombus suckleyi</i>          | Proposed Endangered | USFWS                     | No                             | Likely                             | Unlikely                      |

SOURCE: USFWS (2025).

Marbled murrelet are small seabirds that forage in coastal marine waters and typically nest in late-successional, old-growth forest stands with large nesting platforms and multilayered canopies (USFWS 1992). In Washington, they are primarily found within 40 miles of the coast in northern Puget Sound, the Strait of Juan de Fuca, and the northern Pacific coast (USFWS n.d.). While the study area lacks suitable nesting habitat for marbled murrelets, these seabirds may occur above the study area during flights between their forested nesting grounds and marine foraging areas and, therefore, may be affected by actions related to the preferred alternative.

There are currently no documented federally threatened yellow-billed cuckoo populations within Washington State. The farthest northern extent of the yellow-billed cuckoo is the Sacramento Valley in California (USFWS 2013). However, according to USFWS, there have been consistent and confirmed sightings of vagrants semiannually throughout Washington State, with one occurring as recently as 2017 at the Little Pend Oreille National Wildlife Refuge in Stevens County and in 2015 in Okanogan County (Wiles and Kalasz 2017).

The yellow-billed cuckoo selectively nests in humid, deciduous riparian habitats that include open clearings and dense shrubby vegetation. In western populations, patch size is a major limiting factor in breeding habitat, with studies indicating that sites less than 15 hectares (37 acres) in size are considered unsuitable (USFWS 2017). The yellow-billed cuckoo is much less selective in habitat preference during migration and winter roosting and will utilize smaller areas that include woodlands, secondary forests, forest edge, arid habitats, and disturbed vegetation, with areas near water being favored (USFWS 2017). Within the Snohomish watershed study area, suitable riparian habitat for breeding and migration/roosting are absent. Outside of the study area, riparian corridors along Wood Creek or downstream reaches of Powder Mill Creek, Merrill & Ring Creek, and Pigeon Creek No. 2 may meet breeding and migration/roosting habitat requirements. The preliminary evaluation indicates that it is unlikely for yellow-billed cuckoo to be affected by actions related to the preferred alternative within the Snohomish watershed.

Monarch butterflies' main requirements for breeding, roosting, and migration are secure patches of milkweed, which often occur in weedy fields and sparsely vegetated areas, typically near wetlands and riparian habitats (WDFW 2025b). During migration, they require abundant nectar sources and trees for roosting and as shelter during inclement weather (WDFW 2025b). According to the Western Monarch Milkweed Mapper, no monarch butterflies have been observed within the study area, the closest observation occurring in the city of Seattle (The Xerces Society for Invertebrate Conservation et al. 2025a).

Suckley's cuckoo bumble bee is part of a parasitic subgenus, named *Psithyrus*, of the genus *Bombus* that are obligate social parasites that depend on social hosts for survival and raising young (89 FR 102074). This species parasitizes the nests of true bumble bee colonies and cannot establish their own nests, produce worker bees, or collect pollen. The two known hosts of this species are the western bumble bee (*Bombus occidentalis*) and the Nevada bumble bee (*Bombus nevadensis*), though more potential hosts may exist. Beyond a viable host species population, Suckley's cuckoo bumble bee also relies upon diverse native floral resources for nutrition and overwintering sites, which may include leaf litter, loose duff, and rotting logs.

The species' range extends from the Yukon south to Arizona and primarily occurs in western North America. Suckley's cuckoo bumble bee has experienced a roughly 85% percent decline in probability of occupancy between 1900 and 2020 across its range (89 FR 102074). The species has not been observed in the contiguous United States since 2016, despite an expanding survey effort throughout the range (89 FR 102074). The Marine West Coast Forest population range unit, where the project is located, has 515 historical occurrence records, but no occurrences have been recorded after 1982. The USFWS concludes in their status assessment of Suckley's cuckoo bumble bee that the species is quasi-extirpated within the population range units that have no occurrence records post 2000. Relative abundance of this species has declined 98% in Washington between 2011 and 2021 compared to pre-2011 levels (89 FR 102074). WDFW and others conducted 7,985 surveys between 2018 and 2024. Twenty-three bumble bee species were identified across 14,842 observations in Washington. Suckley's cuckoo bumble bee was not detected during these survey efforts (J. Combs, personal communication, April 9, 2025). Additionally, the two known hosts, the western bumble bee and Nevada bumble bee, have not been documented within the study area (The Xerces Society et al. 2025b).

### 3.2.11.5 Bald and Golden Eagle Protection Act

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act (USFWS 2025). No potential bald eagle nests were identified within the Snohomish watershed study area during the 2023 through 2025 field surveys. Golden eagles may fly over or roost within the study area (USFWS 2025).

### 3.2.11.6 Migratory Bird Treaty Act

All birds native to the United States and its territories are protected under the MBTA (USFWS 2025). The act prohibits taking, possessing, importing, exporting, transporting, selling, purchasing, bartering, or offering for sale any migratory bird, including their parts, nests, or eggs, except under the terms of a valid federal permit (USFWS 1918).

Within the study area, the general nesting season for all bird species extends from late January through mid-August. Spring migration occurs from April through June, peaking in May, while fall migration takes place in September (WTA 2025). Protected species, including passerines,

raptors, waterfowl, and shorebirds, may fly over, forage, roost, and nest within the study area (USFWS 2025).

### 3.2.11.7 State and Local Upland Priority Habitats and Species

Habitat conservation areas for upland wildlife species are defined differently by the different jurisdictions of the Snohomish watershed study area. However, these areas generally include terrestrial habitat areas, such as forested corridors or avian nest sites. In addition, biodiversity corridors or habitat areas that are primarily associated with species of local, state, or federal importance may be considered a fish and wildlife habitat conservation area by the local jurisdictions, as shown in Figure 3-76 through Figure 3-82.

Table 3-45 presents potential species of concern that might use upland habitats and summarizes the priority habitats and species publicly mapped by WDFW within the study area. A thorough evaluation of project impacts to state and locally important species and habitats will be completed for the Final EIS after the preferred alternative has been identified.

The study area also overlaps numerous biodiversity areas and corridors (WDFW 2024b). PHS bat species, little brown bat, and Yuma myotis have been documented to occur (WDFW 2024b) and may forage and roost within the forested corridors that overlap the study area. The ponded and forested areas within the study area also likely provide foraging and nesting habitat for local waterfowl species.

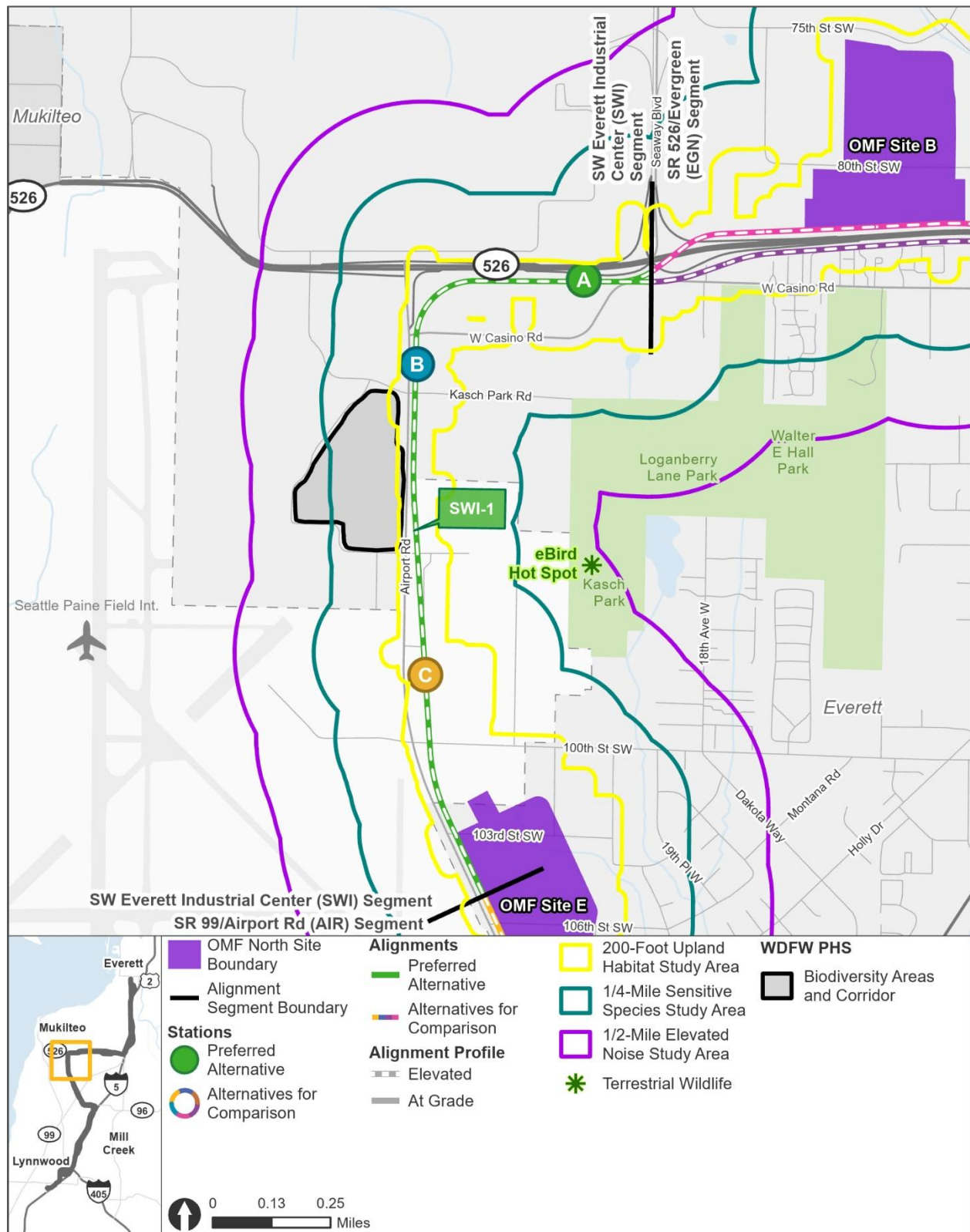
**Table 3-45 Upland Priority Habitats and Species Within the Study Area**

| Priority Species                 | Scientific Name          | Habitat                                   | Priority Habitat Type                                                                                                                                                                                        |
|----------------------------------|--------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Little brown bat                 | <i>Myotis lucifugus</i>  | N/A                                       | Occurrence                                                                                                                                                                                                   |
| Yuma myotis                      | <i>Myotis yumanensis</i> | N/A                                       | Occurrence                                                                                                                                                                                                   |
| Biodiversity Areas and Corridors | N/A                      | Terrestrial habitat                       | Paine Field open space; City of Everett open spaces; West Snohomish County open space areas; Southwest Snohomish County open space; Puget Sound to I-5; I-5 to Snoqualmie River; Snohomish County park lands |
| Waterfowl Concentrations         | N/A                      | Snohomish River estuary, Snohomish Valley | Winter waterfowl habitat                                                                                                                                                                                     |

SOURCE: WDFW (2024b).

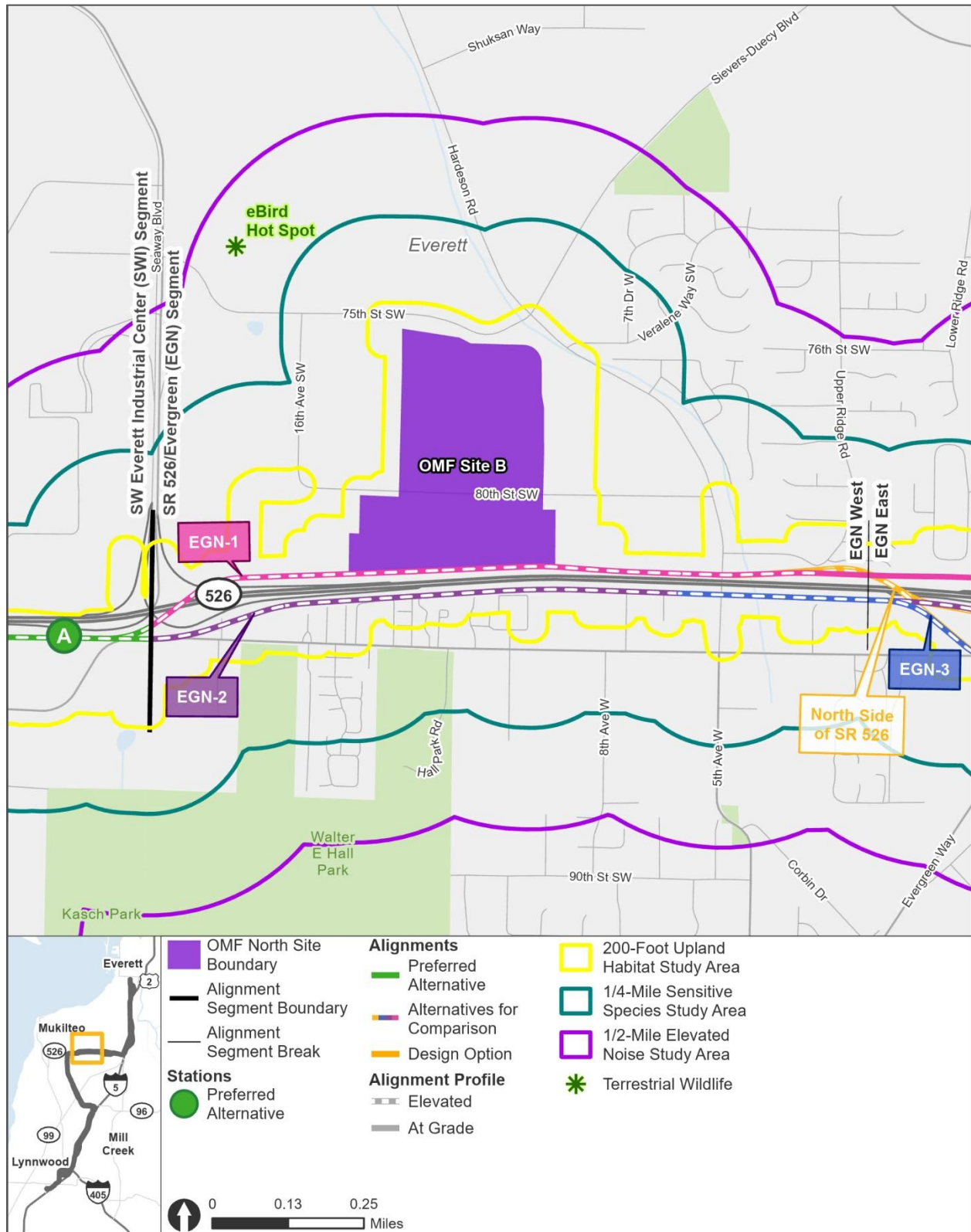


Figure 3-76 Upland Habitats and Species – SW Everett Industrial Center Segment



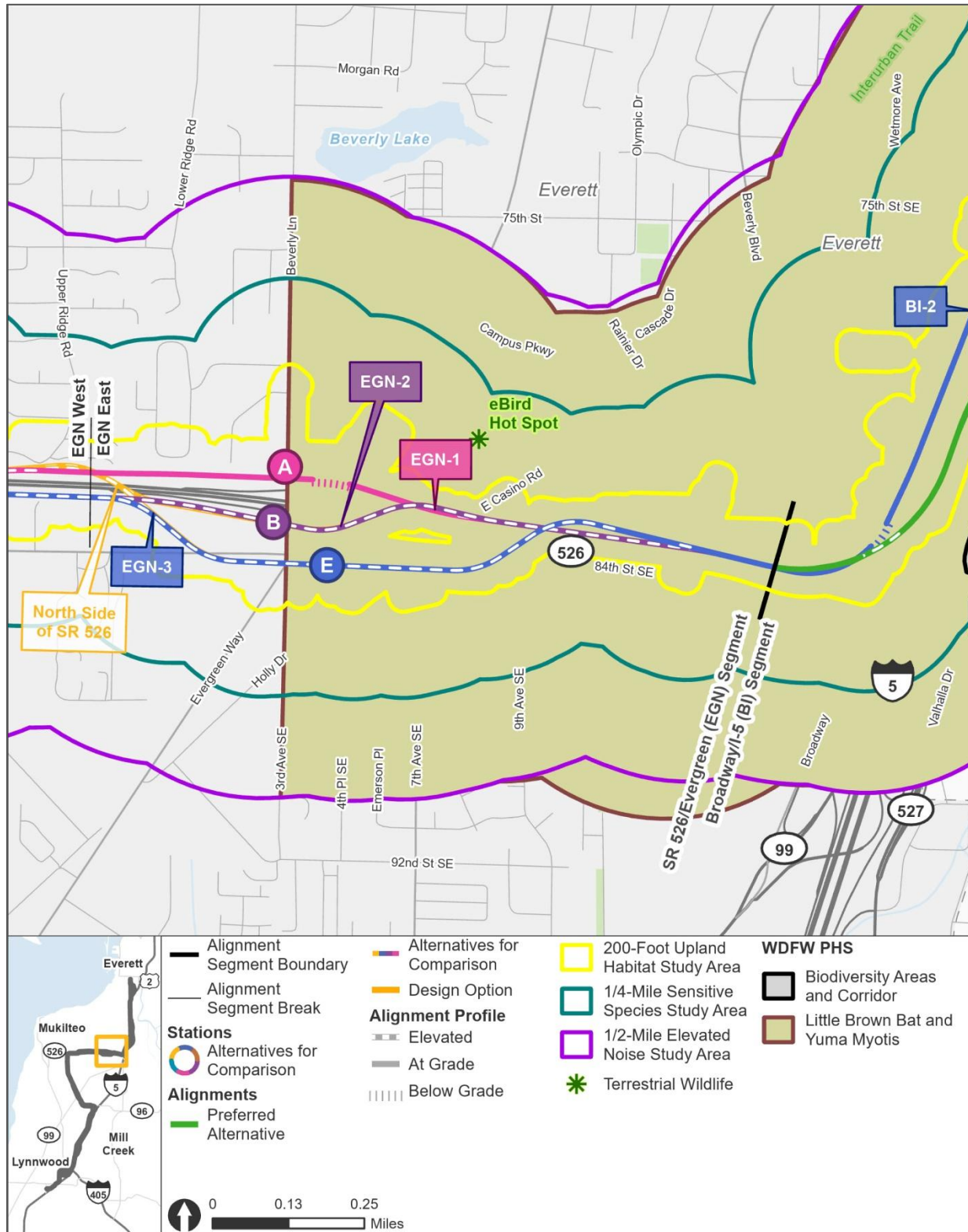
SOURCE: WDFW (2024b), eBird (2024).

**Figure 3-77 Upland Habitats and Species – SR 526/Evergreen Segment (West) and OMF Site B**



SOURCE: WDFW (2024b), eBird (2024).

Figure 3-78 Upland Habitats and Species – SR 526/Evergreen Segment (East)

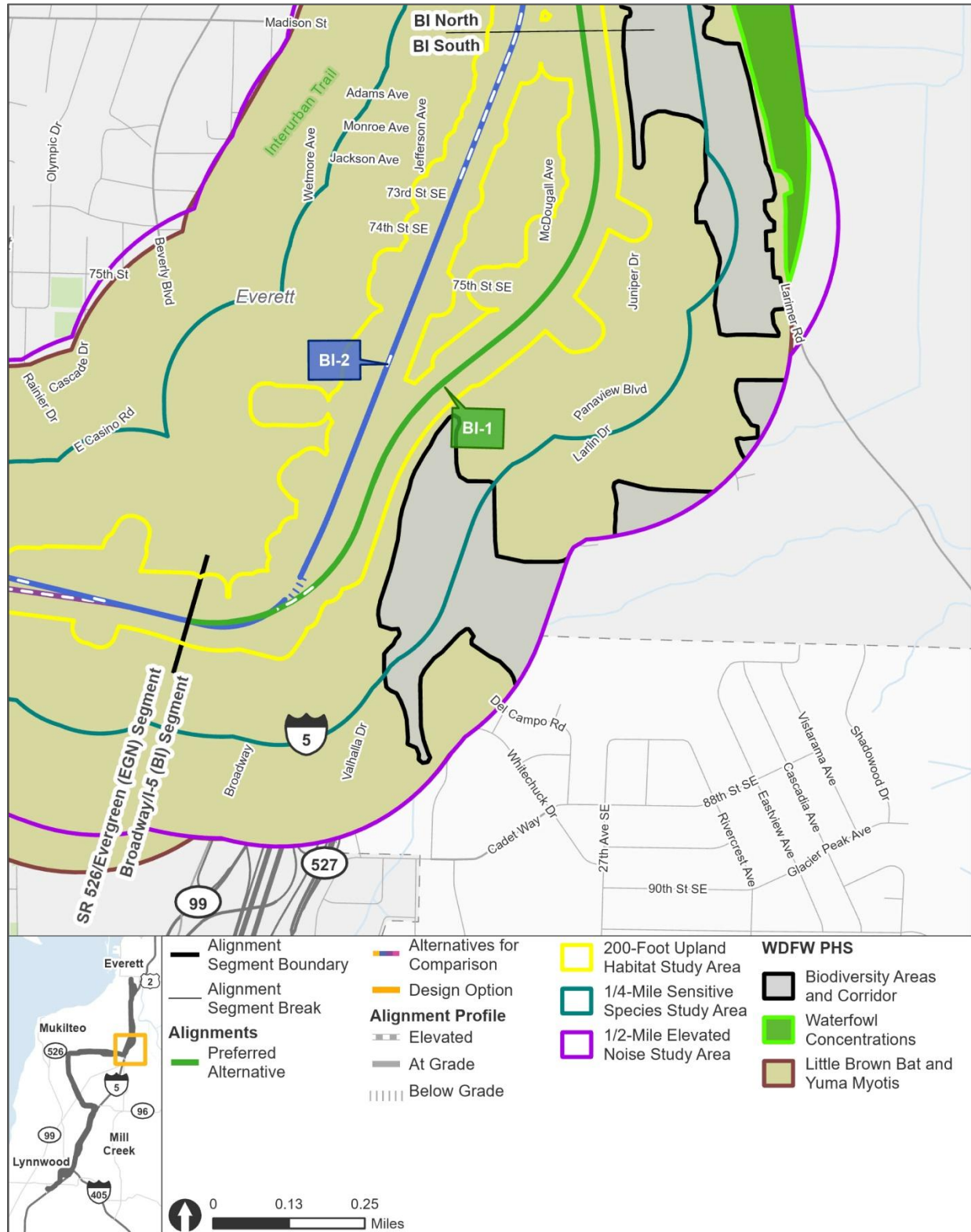


SOURCE: WDFW (2024b), eBird (2024).

NOTE: Although specific locations of Little brown bat and Yuma myotis are not shown in the PHS data, the species are mapped by WDFW as occurring within sections of the Public Land Survey System where they may occur.



Figure 3-79 Upland Habitats and Species – Broadway/I-5 Segment (South)

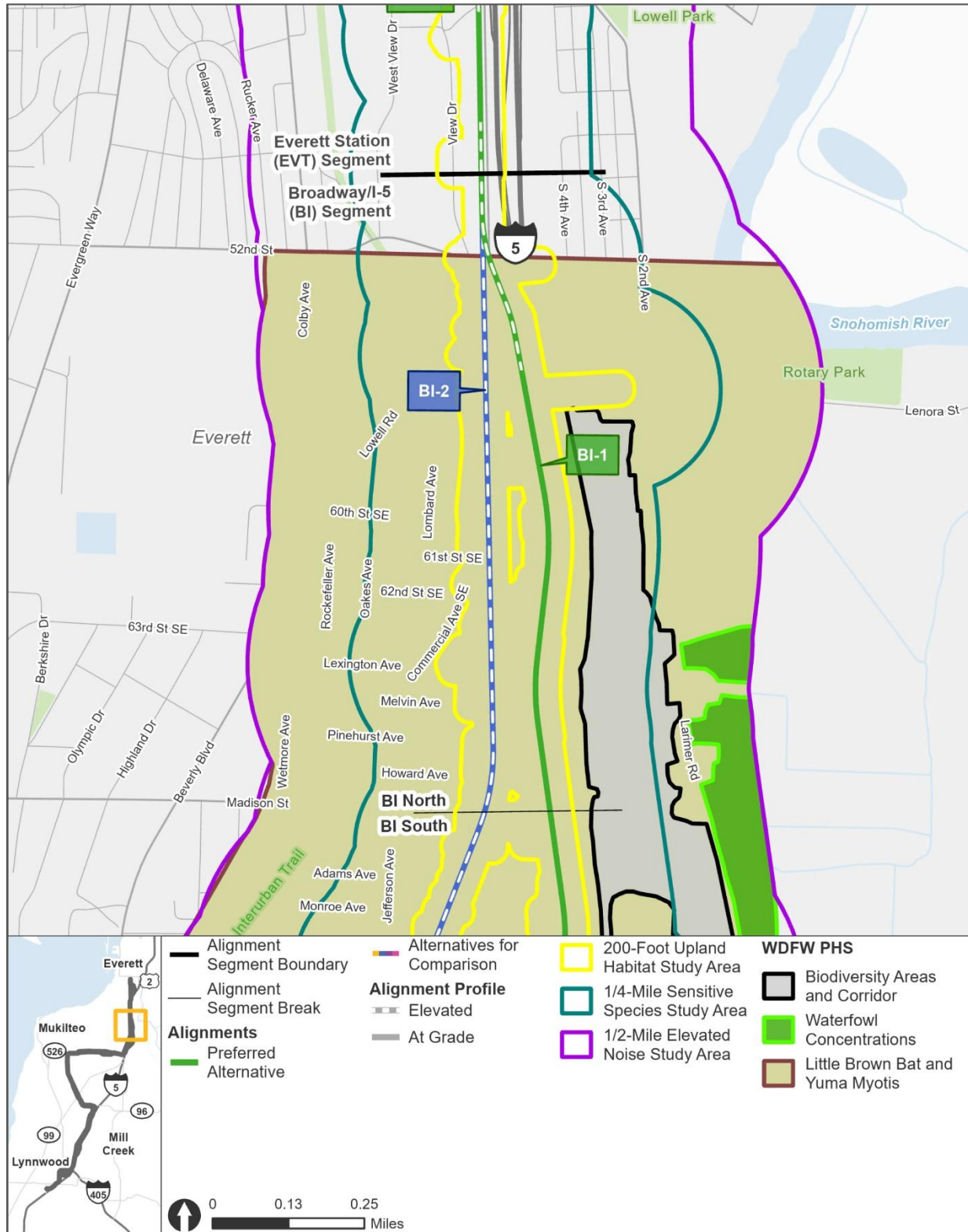


SOURCE: WDFW (2024b), eBird (2024).

NOTE: Although specific locations of Little brown bat and Yuma myotis are not shown in the PHS data, the species are mapped by WDFW as occurring within sections of the Public Land Survey System where they may occur.



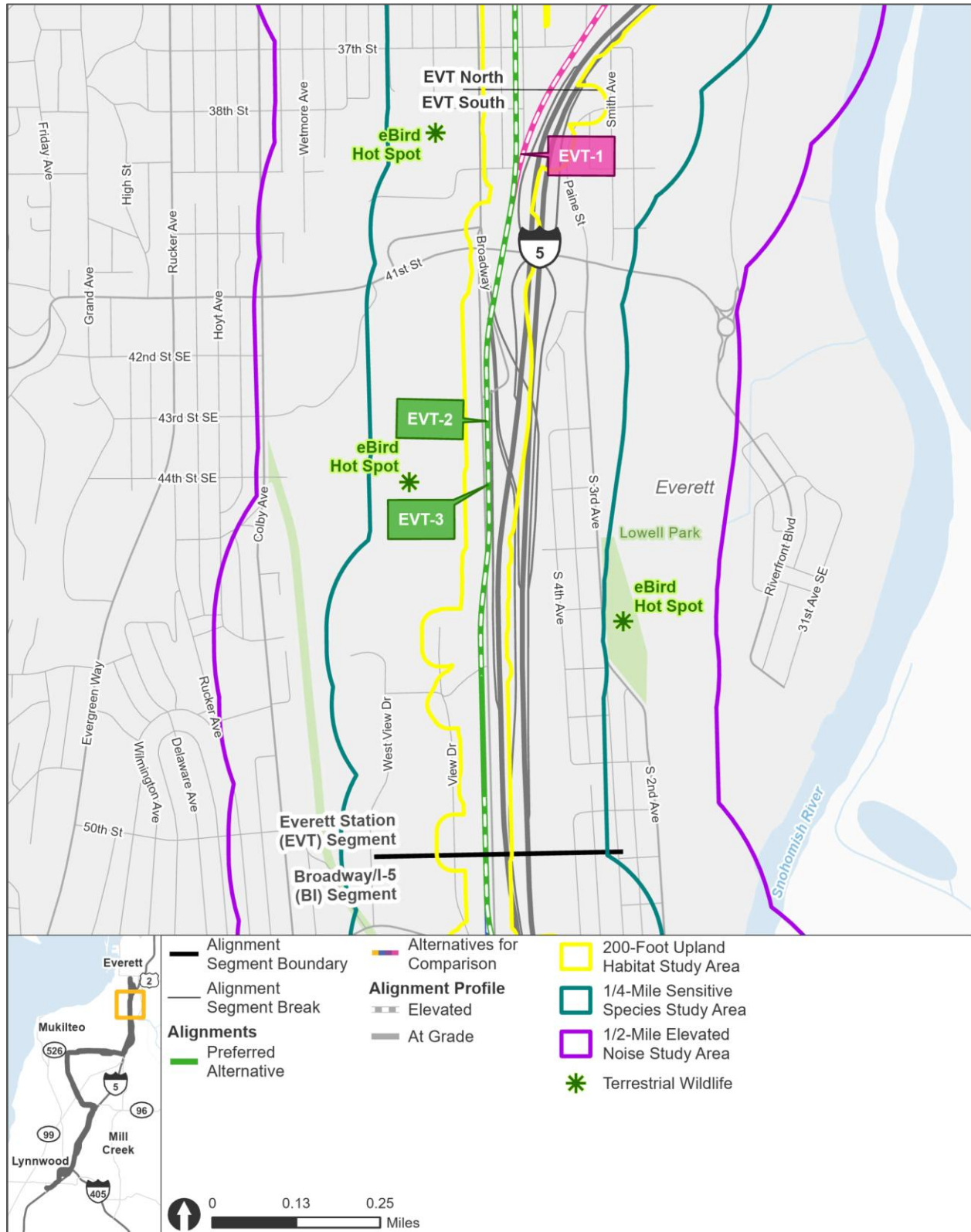
Figure 3-80 Upland Habitats and Species – Broadway/I-5 Segment (North)



SOURCE: WDFW (2024b), eBird (2024).

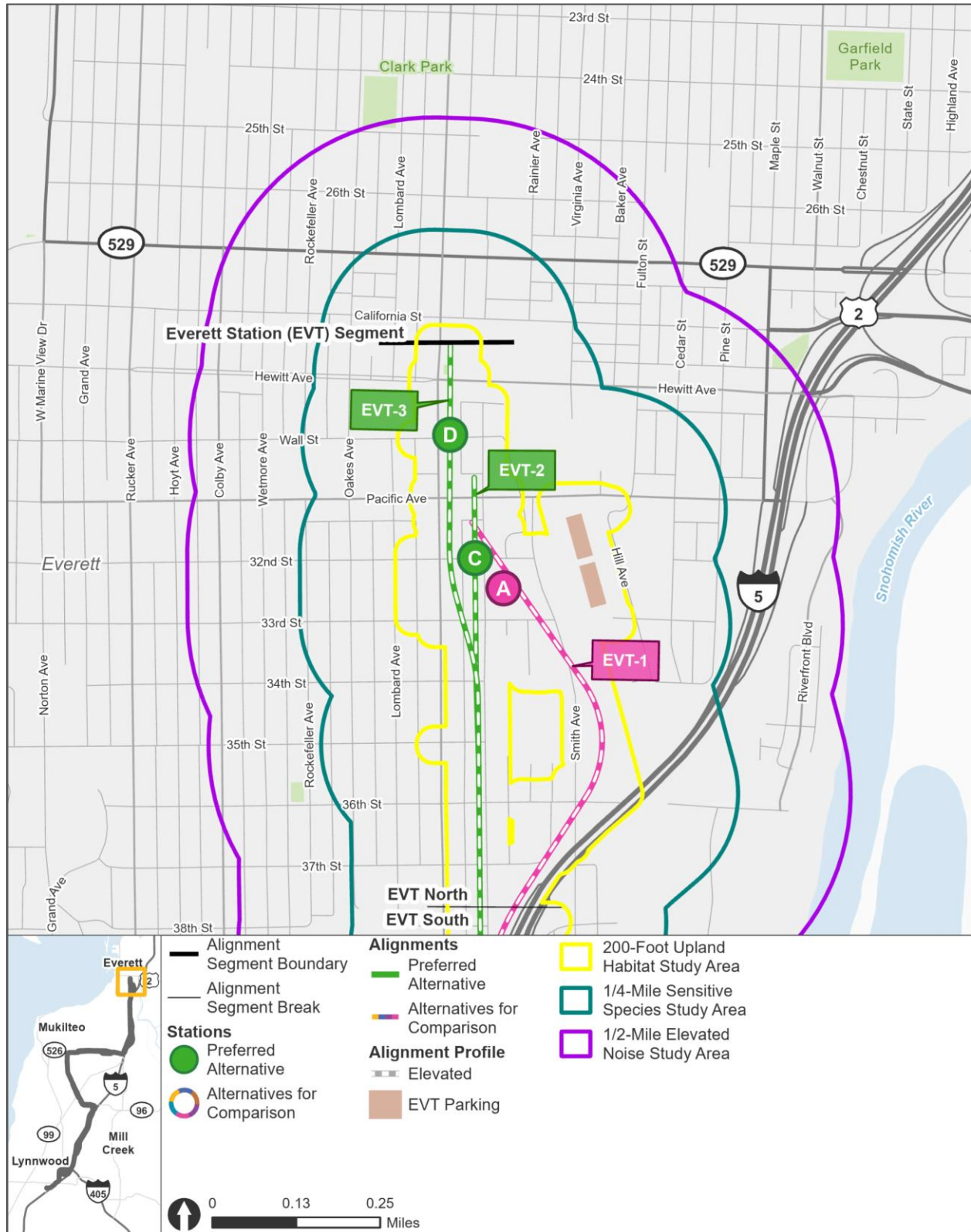
NOTE: Although specific locations of Little brown bat and Yuma myotis are not shown in the PHS data, the species are mapped by WDFW as occurring within sections of the Public Land Survey System where they may occur.

Figure 3-81 Upland Habitats and Species – Everett Station Segment (South)



SOURCE: WDFW (2024b), eBird (2024).

Figure 3-82 Upland Habitats and Species – Everett Station Segment (North)





## 4 ENVIRONMENTAL IMPACTS

This section assesses the potential reasonably foreseeable impacts of the Build and No Build Alternatives to those ecosystems within the affected environment. This analysis characterizes the type, character, duration, and extent of impacts associated with each alternative. Impacts are quantified where feasible. To evaluate impacts of the conceptual design for the Build Alternatives, assumptions were made as described below.

Operational impacts may result from structures and facilities that alter, convert, or otherwise result in impacts to identified ecosystems over the lifespan of the Build Alternative. Unless otherwise described, operational impacts associated with each Build Alternative generally include the following permanent facilities and structures necessary for the operation of the project:

- The footprint of the guideway plus a 10-foot setback, reflecting Sound Transit's vegetated clear zone and required structure setback associated with local codes, extending outward from the guideway.
- The footprint of each station alternative and associated parking facility, as applicable.
- TPSS facilities plus a 10-foot setback.
- Stormwater ponds and vaults.
- All areas within 10 feet of the site boundary (fence line) of each OMF North site alternative.

Operational impacts could result in a change or loss of wetland, wetland buffer, open stream channel, riparian habitat, or forest habitats that support numerous aquatic and wildlife species. In other cases, operational impacts could be beneficial to the ecosystem where wetland is created or rehabilitated, piped streams daylighted and open stream channels are reconnected with their riparian and upland habitats, and/or undersized conveyances that limit fish passage are removed or replaced.

Construction impacts are temporary, associated with construction only, and encompass the remaining area within the project footprint of each Build Alternative. It is assumed that the remaining project limits may be temporarily impacted during construction for staging areas, equipment storage, temporary stormwater facilities, stream diversions, or access routes.

The following impact assessment was performed by overlapping the conceptual design for the Build Alternatives onto the spatial data of all the ecosystem resources identified in the study area and discussed in Section 3. The acreage or length of resulting impacts is presented below for each Build Alternative as a basis of comparison of relative ecosystem impacts.

### 4.1 Build Alternatives

This section summarizes the potential operational impacts and construction impacts associated with the Build Alternatives. The impact analysis of the alignment and station alternatives is presented first, followed by the OMF North site alternatives. If the project were to be constructed in phases (i.e., MOS first), the impacts of the associated Build Alternatives would occur as those phases were constructed.



Some of the Build Alternatives would have impacts on wetlands, streams, and their buffers where the project footprint would cross those resources. Filling or excavating within wetlands for column placement would result in loss of wetland function through the loss of wetland area or changes to surface or subsurface water flows. Depending on the height of the guideway, shading effects could also occur to wetlands, streams, and buffers and could affect the type and quantity of vegetation that could be established in these areas. If elevated alignments were changed to at-grade or trenched alignments during final design, those facilities would also result in loss of wetland, stream, and buffer area due to excavation, fill placement, or construction of retaining and/or sound walls. For these reasons, the impacts analysis considered project effects to wetland, stream, and buffer areas located under elevated guideway as operational impacts. The elevated guideway will be further evaluated during final design to reduce operational impacts. If operational impacts become limited to just the guideway column areas as the design progresses, the rest of the operational impacts under the guideway may convert to construction impacts.

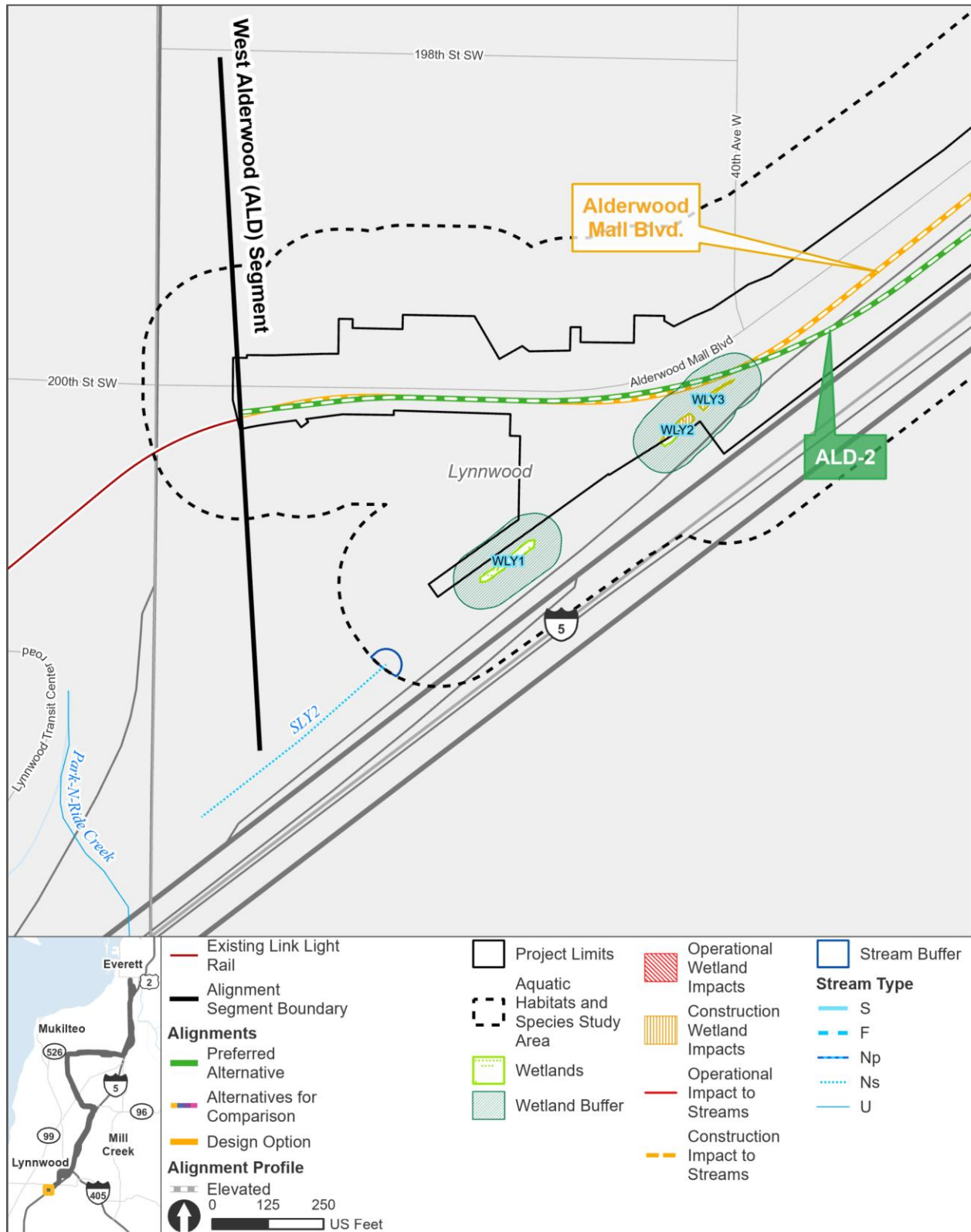
Beyond the direct impacts from the project structures and construction, changes to land use and economic development plans and policies that influence development types and patterns around stations and along the guideway could also occur. These plans are expected to develop further as the project design advances, but could reasonably be expected to increase the likelihood of redevelopment around the project, resulting in adverse and beneficial impacts to ecosystems and the species that use them.

The following summarizes the operational and construction impacts to aquatic habitats and species, wetlands, and upland habitats and species from the alignment and station alternatives.

#### **4.1.1 West Alderwood Segment**

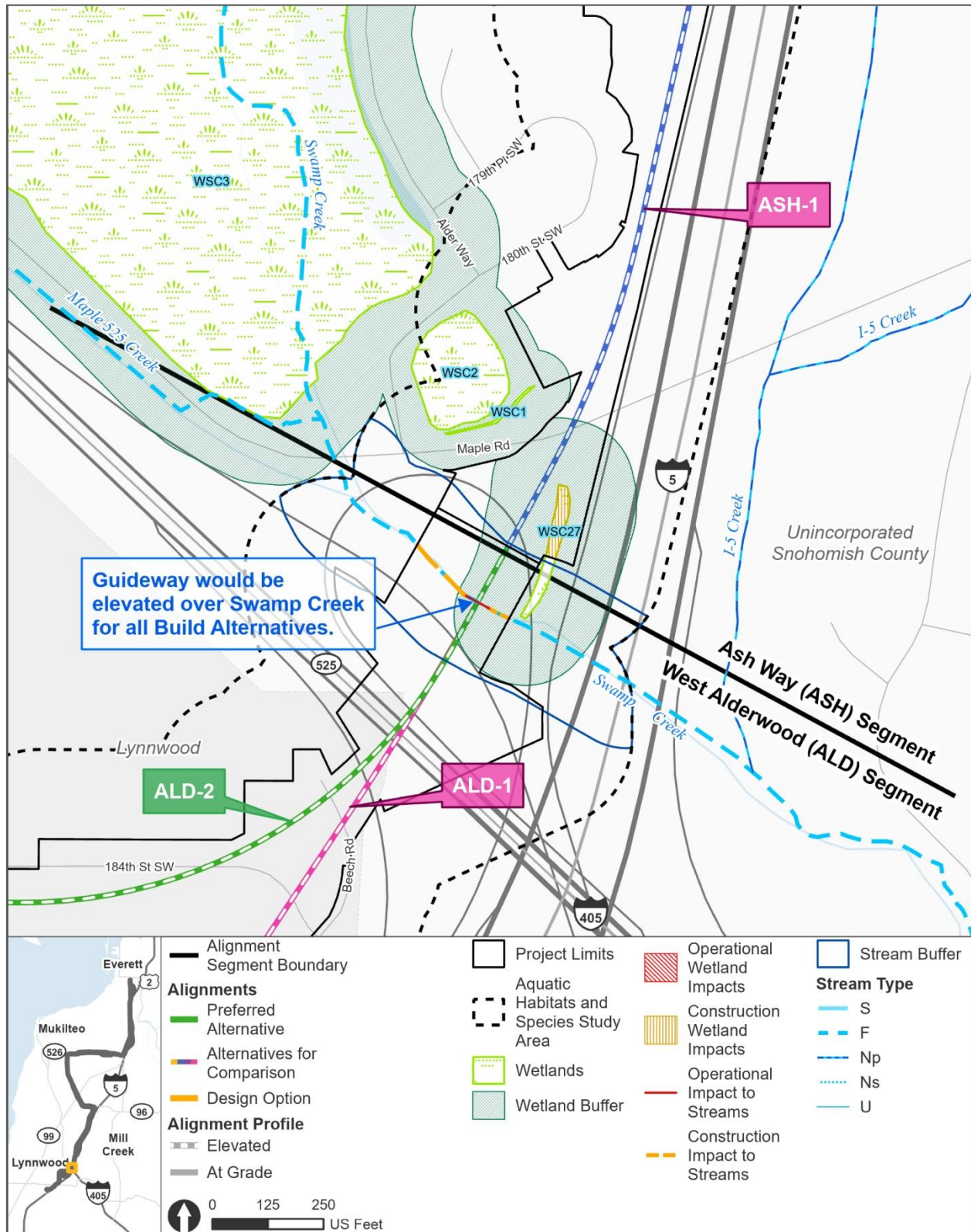
Ecosystems impacts in the West Alderwood Segment would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-1 and Figure 4-2 and described in subsequent sections. All Build Alternatives in the West Alderwood Segment would have the same expected impacts to streams, wetlands, and open space habitats, as detailed below.

**Figure 4-1 Operational and Construction Impacts to Aquatic Resources and Wetlands – West Alderwood Segment (Part 1 of 2)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

**Figure 4-2 Operational and Construction Impacts to Aquatic Resources and Wetlands – West Alderwood Segment (Part 2 of 2)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

#### 4.1.1.1 Aquatic Habitats and Species

Operational and construction impacts to one stream, Swamp Creek, are anticipated in the West Alderwood Segment as summarized in Table 4-1 and below. All Build Alternatives would result in the same operational impacts to this reach of Swamp Creek.

**Table 4-1 Impacts to Streams – West Alderwood Segment**

| Build Alternative                                  | Stream(s)            | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|----------------------------------------------------|----------------------|---------------|------------------------------------------------|-------------------------------------------------|
| ALD-1B                                             | Swamp Creek          | F             | 50                                             | 200                                             |
| ALD-1B with Alderwood Mall Boulevard Design Option | <b>Total Impacts</b> |               | <b>50</b>                                      | <b>200</b>                                      |
| ALD-2D                                             |                      |               |                                                |                                                 |
| ALD-2D with Alderwood Mall Boulevard Design Option |                      |               |                                                |                                                 |
| ALD-2F                                             |                      |               |                                                |                                                 |
| ALD-2F with Alderwood Mall Boulevard Design Option |                      |               |                                                |                                                 |

**NOTES**

- a) Stream impacts have been rounded to the nearest 50 feet.

#### **Operational Impacts**

All proposed Build Alternatives in the West Alderwood Segment would meet at a single crossing location over the mainstem of Swamp Creek, northwest of the I-5/I-405 interchange (Figure 4-2). This reach of Swamp Creek is the only location where the project would cross a stream with documented anadromous fish, including federally protected ESA species (Puget Sound Chinook salmon and steelhead).

At this location, the aerial guideway would be oriented generally perpendicular to the Swamp Creek mainstem channel and would be located approximately 70 feet above the stream. Given the height of the elevated guideway over Swamp Creek, it is expected that a forested and/or shrub-dominant riparian corridor below the aerial guideway, similar to what is there presently, could be restored along the Swamp Creek channel following construction while still satisfying Sound Transit's vegetation clear zone requirements. While the elevated guideway is not expected to result in any physical impacts to the Swamp Creek mainstem, the elevated guideway would result in new shading to the stream and adjacent riparian habitats. Overwater shading could affect fish habitat, including changes in water temperature, alterations in riparian and in-stream vegetation, shifts in fish behavior, and reductions in prey species availability. However, the severity of these impacts is expected to be limited by the height of the guideway above the creek. At 70 feet above Swamp Creek, the structure would allow sunlight to reach each portion of the stream at varying times throughout the day, reducing the duration and intensity of shading at any single location.

For each Build Alternative, columns would be required to support the elevated crossing. These columns would be located as far away from the open stream channel as infrastructure allows and design parameters recommend.



### Construction Impacts

All Build Alternatives within the West Alderwood Segment would have the same construction impacts to Swamp Creek as summarized in Table 4-1. These construction impacts could result from the placement of temporary stream crossings and the removal of riparian vegetation to facilitate construction of the aerial guideway within the footprint of all the West Alderwood Segment Build Alternatives. Impacts to Swamp Creek from these construction activities would be temporary and include reduced water quality from increased turbidity and suspended sediments, decreased stream shading due to the temporary removal of riparian vegetation, and a short-term reduction of terrestrial-based invertebrate prey.

#### 4.1.1.2 Wetlands

Construction impacts are anticipated to wetlands in the West Alderwood Segment as summarized in Table 4-2. All Build Alternatives would result in the same wetland impacts.

**Table 4-2 Impacts to Wetlands – West Alderwood Segment**

| Build Alternative                                  | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|----------------------------------------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| ALD-1B                                             | WLY2                     | III                        | 0.04                 | 0                                        | <0.1                                      |
| ALD-1B with Alderwood Mall Boulevard Design Option | WLY3                     | III                        | 0.02                 | 0                                        | <0.1                                      |
| ALD-2D                                             | <b>Total Impacts</b>     |                            |                      | <b>0</b>                                 | <b>&lt;0.1</b>                            |
| ALD-2D with Alderwood Mall Boulevard Design Option |                          |                            |                      |                                          |                                           |
| ALD-2F                                             |                          |                            |                      |                                          |                                           |
| ALD-2F with Alderwood Mall Boulevard Design Option |                          |                            |                      |                                          |                                           |

NOTES:

a) Wetland impacts have been rounded to the nearest tenth.

### Operational Impacts

There are no anticipated operational impacts to wetlands within the West Alderwood Segment. The elevated guideway for all Build Alternatives is expected to be located within 10 feet of Wetland WLY3 at the south end of the West Alderwood Segment (Figure 4-1). However, as Wetland WLY3 is dominated by emergent vegetation, no change to the vegetation community would be necessary to comply with Sound Transit's vegetation clear zone requirement. Further, since the elevated guideway would be located north of Wetland WLY3, it would not shade the wetland or its vegetation.

### Construction Impacts

All Build Alternatives within the West Alderwood Segment would be expected to result in the same construction impacts to wetlands as summarized in Table 4-2. All Build Alternatives would result in construction impacts to the entirety of Wetland WLY3. These construction impacts may include impacts to wetlands from construction staging or other similar activities that occur within the limits of the Build Alternative but outside the assumed area of operational impacts. Construction activities may require the placement of temporary fill or result in compaction within

wetlands. Construction impacts to wetlands would be restored post-construction. Mitigation for construction impacts to wetlands includes avoidance and minimization as design progresses and compensatory mitigation for impacts that cannot be avoided as described in Section 5.

#### 4.1.1.3 Upland Habitat and Species

Operational and construction impacts are anticipated to upland habitat and species in the West Alderwood Segment.

##### **Operational Impacts**

All Build Alternatives within the West Alderwood Segment occur within the Lynnwood City Center Alderwood area, a regional growth center identified by the Puget Sound Regional Council. The urban land cover types, particularly the high-density and moderate-density land cover types, are dominant within the area of operational impacts to upland habitats (Table 4-3). No open space land cover occurs within the area of operational impacts. Therefore, no terrestrial habitat for wildlife is present within this segment. Operational effects would be limited to removal of street trees and urban landscaping.

**Table 4-3 Operational Impacts to Upland Habitats – West Alderwood Segment**

| Build Alternative                                  | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|----------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                                    | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                                    | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| ALD-1B                                             | 11.1                        | 6.3              | 0.9         | 0                     | 0      | 18.3                                     |
| ALD-1B with Alderwood Mall Boulevard Design Option | 11.6                        | 5.8              | 0.7         | 0                     | 0      | 18.1                                     |
| ALD-2D                                             | 9.5                         | 8.4              | 0.6         | 0                     | 0      | 18.4                                     |
| ALD-2D with Alderwood Mall Boulevard Design Option | 10.4                        | 7.8              | 0.5         | 0                     | 0      | 18.7                                     |
| ALD-2F                                             | 8.6                         | 7.6              | 0.5         | 0                     | 0      | 16.7                                     |
| ALD-2F with Alderwood Mall Boulevard Design Option | 10.0                        | 7.3              | 0.5         | 0                     | 0      | 17.8                                     |

##### **Construction Impacts**

All Build Alternatives within the West Alderwood Segment would result in construction impacts to upland habitats. These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project. All Build Alternatives would result in similar impacts to the built environment, with most construction impacts occurring in high-density and moderate-density land cover types (Table 4-4). Because no impacts to open space are anticipated, operational effects would be limited to removal of street trees and urban landscaping.

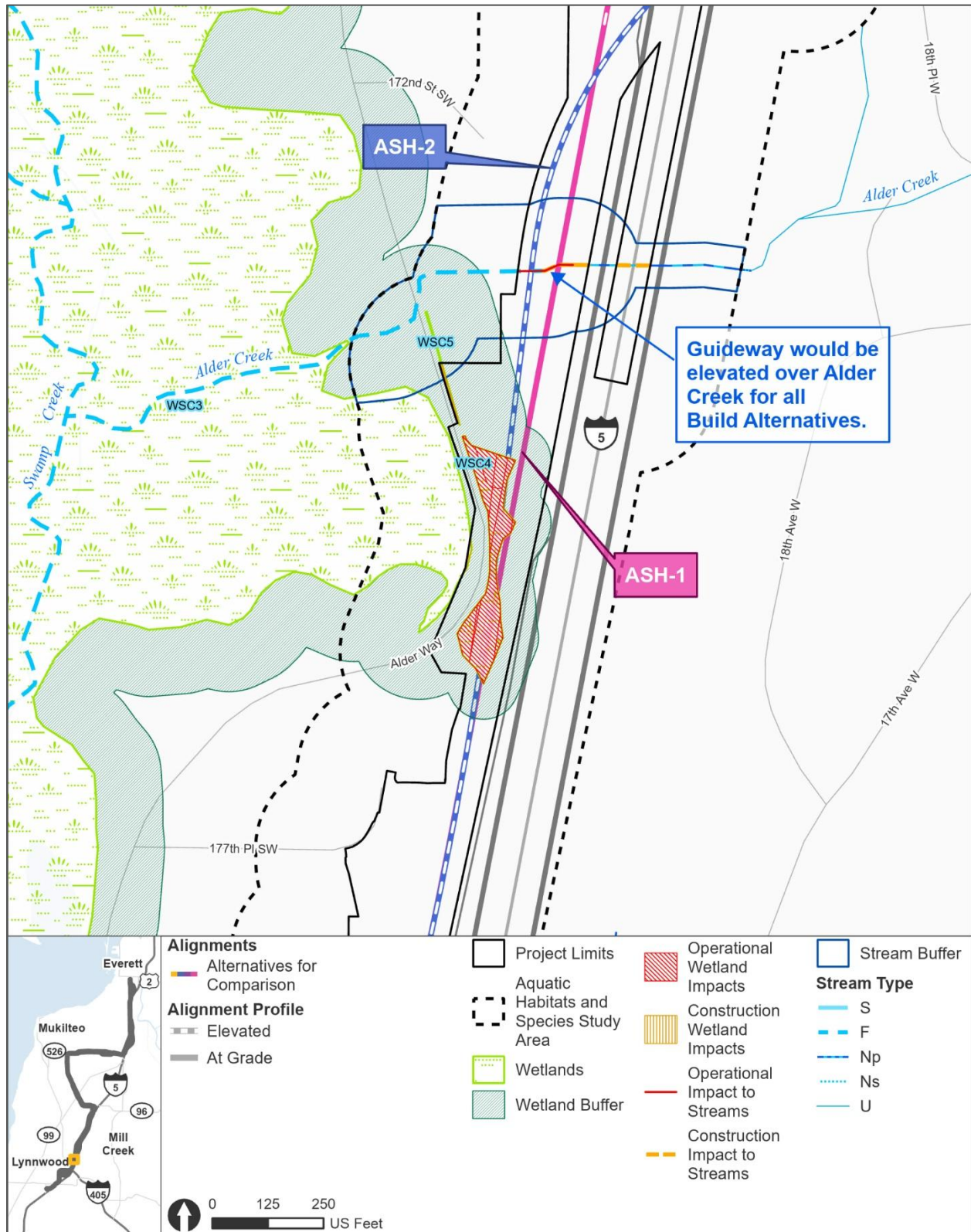
**Table 4-4 Construction Impacts to Upland Habitats – West Alderwood Segment**

| Build Alternative                                  | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|----------------------------------------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                                    | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                                                    | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| ALD-1B                                             | 28.6                         | 14.1             | 2.8         | 0                     | 0      | 45.4                                      |
| ALD-1B with Alderwood Mall Boulevard Design Option | 27.3                         | 10.4             | 2.0         | 0                     | 0      | 39.7                                      |
| ALD-2D                                             | 23.8                         | 18.1             | 2.7         | 0                     | 0      | 44.6                                      |
| ALD-2D with Alderwood Mall Boulevard Design Option | 22.1                         | 14.5             | 1.9         | 0                     | 0      | 38.5                                      |
| ALD-2F                                             | 26.1                         | 19.0             | 2.8         | 0                     | 0      | 47.9                                      |
| ALD-2F with Alderwood Mall Boulevard Design Option | 23.9                         | 15.1             | 1.9         | 0                     | 0      | 41.0                                      |

#### 4.1.2 Ash Way Segment

Ecosystems impacts in the Ash Way Segment would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-3 through Figure 4-7 and described in subsequent sections. Of the two Build Alternatives in this segment, Alternative ASH-1A would result in fewer impacts to streams, wetlands, and open space habitats than Alternative ASH-2D, as detailed below.

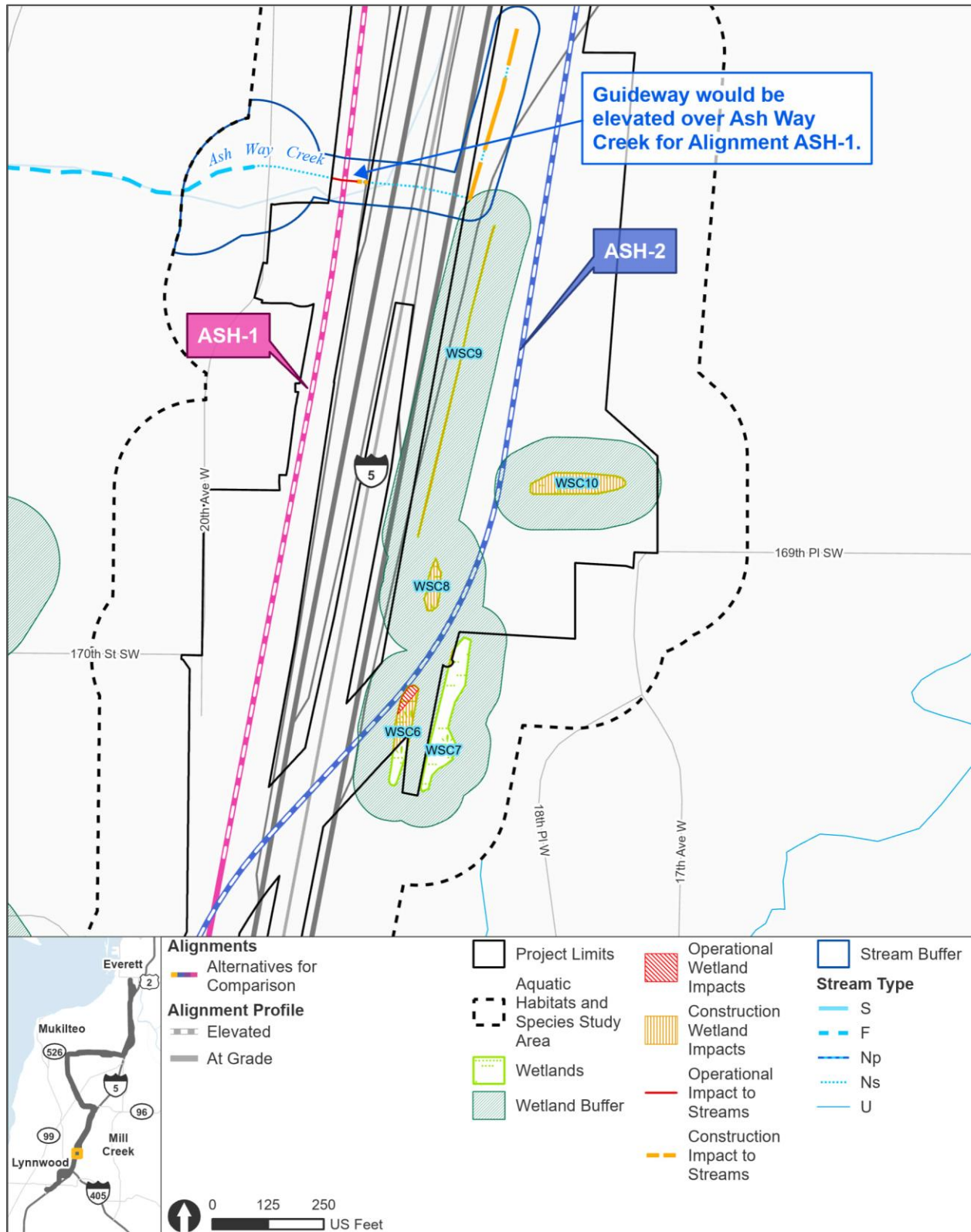
**Figure 4-3 Operational and Construction Impacts to Aquatic Resources and Wetlands – Ash Way Segment (Part 1 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

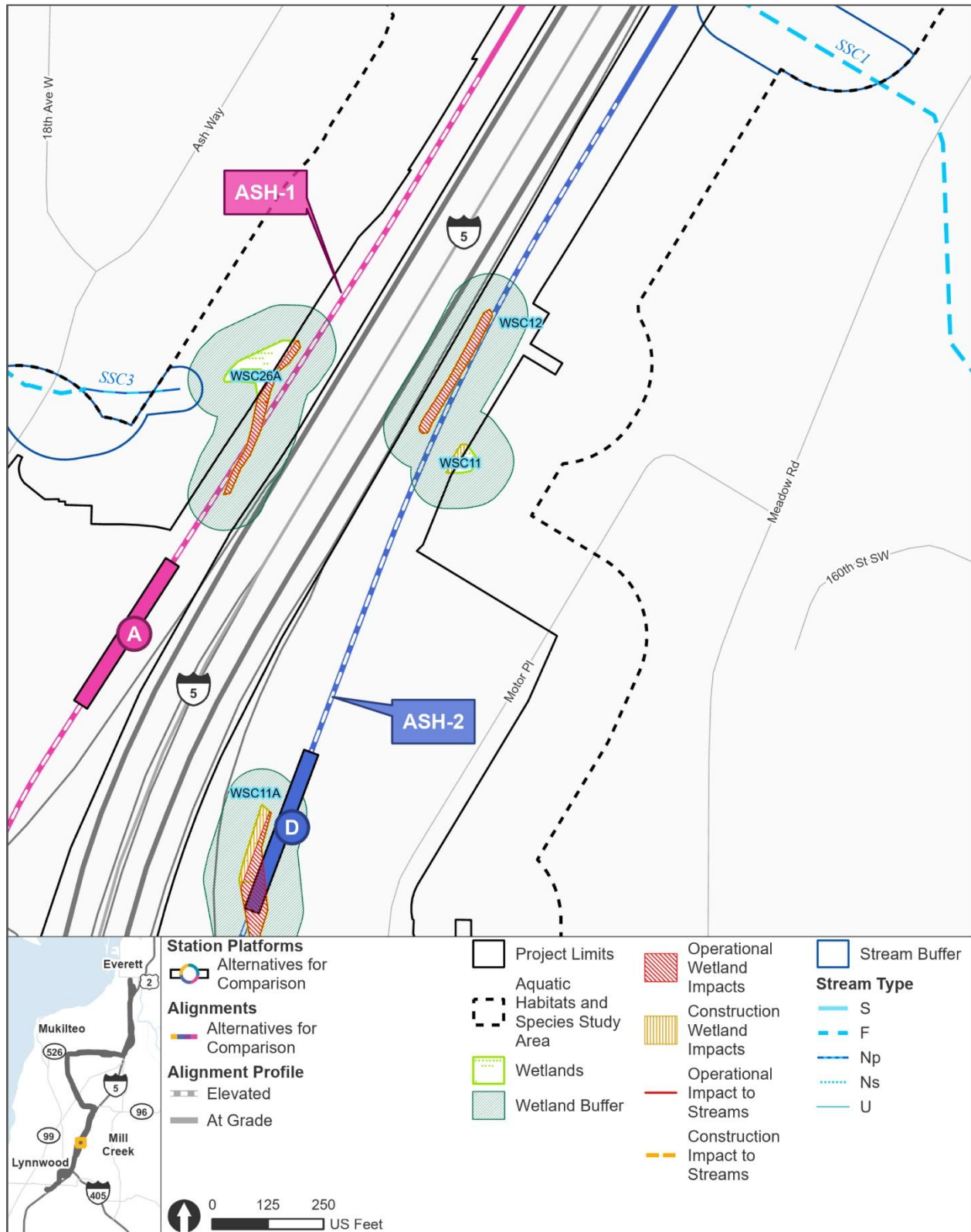


**Figure 4-4 Operational and Construction Impacts to Aquatic Resources and Wetlands – Ash Way Segment (Part 2 of 5)**



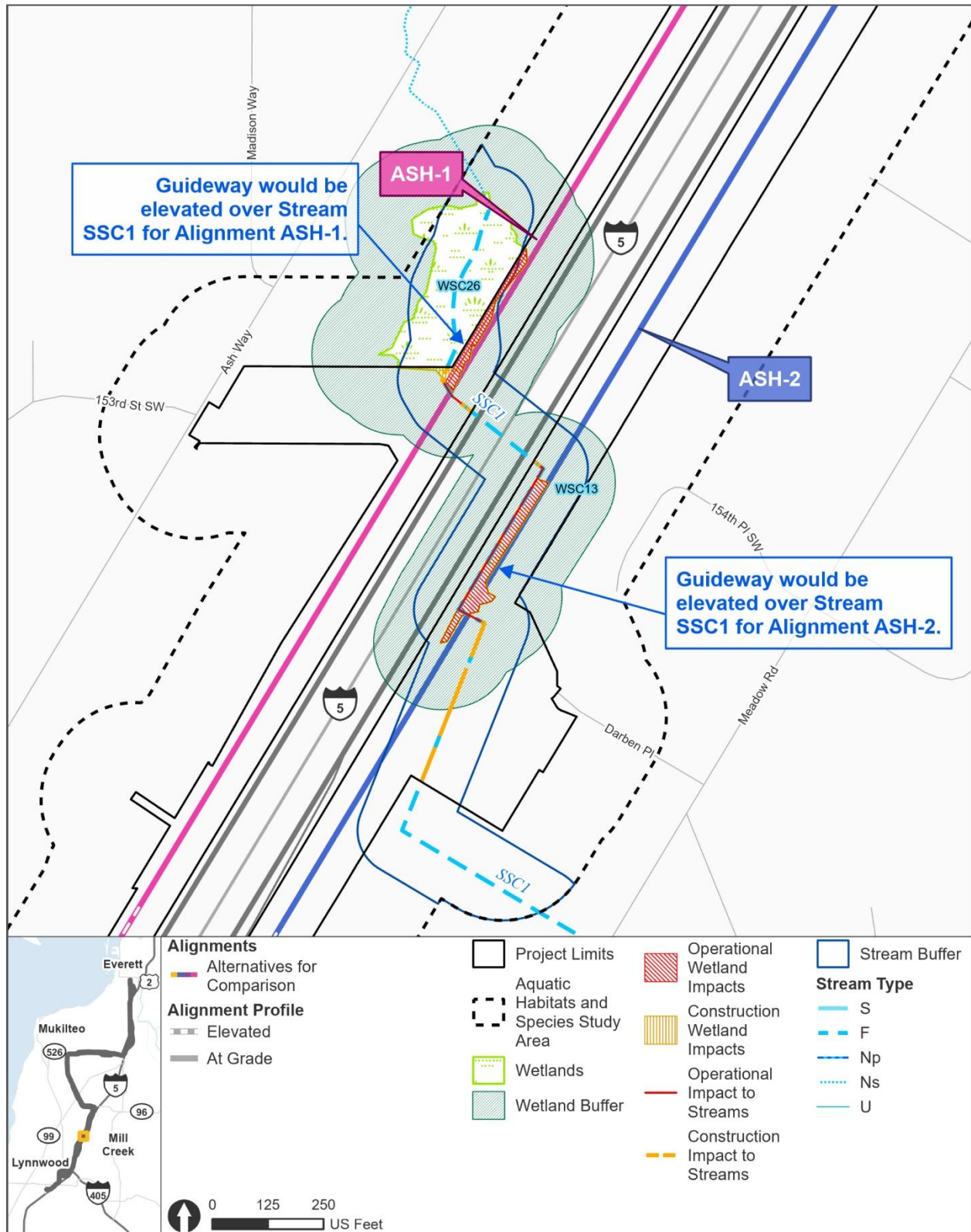
SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

**Figure 4-5 Operational and Construction Impacts to Aquatic Resources and Wetlands – Ash Way Segment (Part 3 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

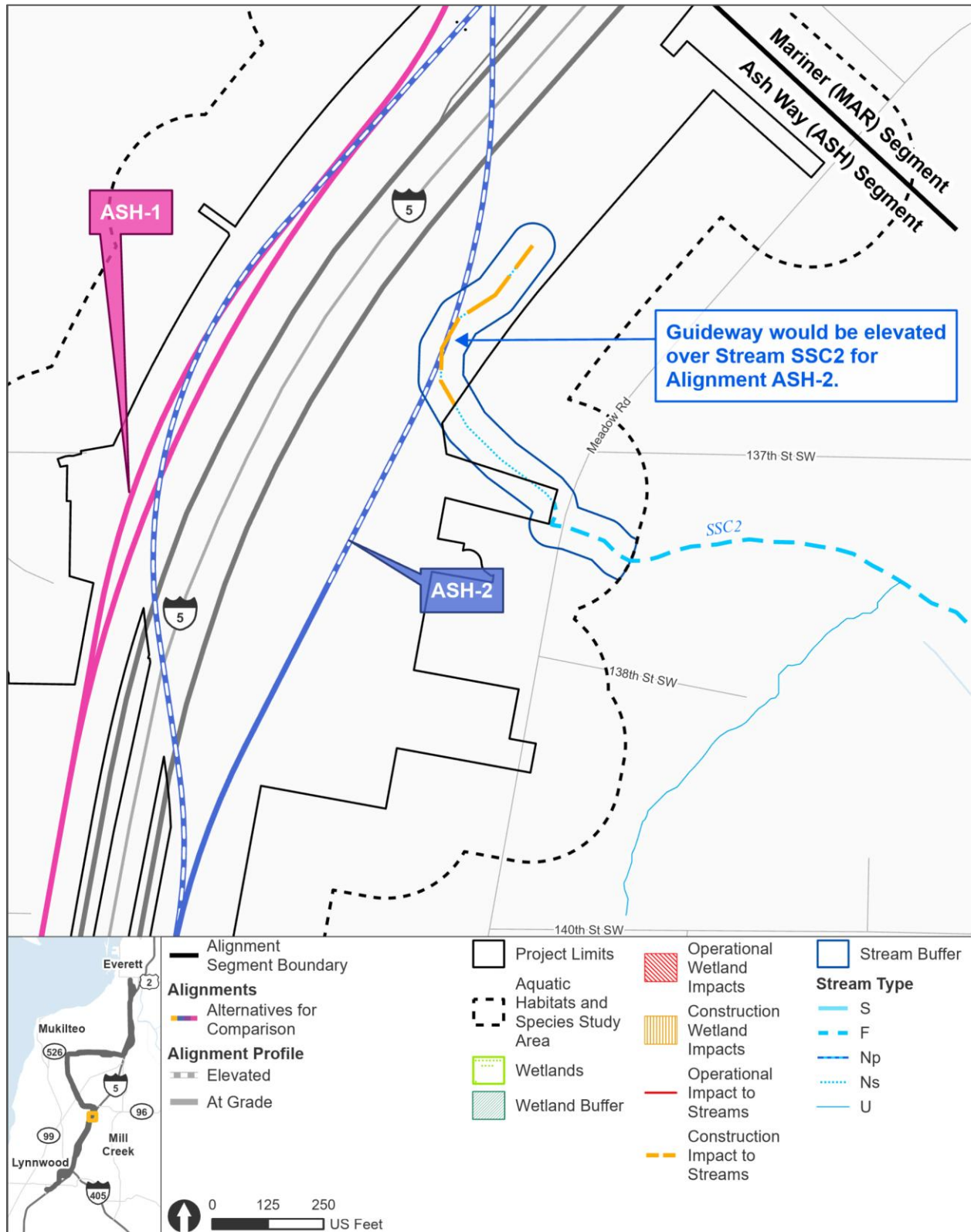
**Figure 4-6 Operational and Construction Impacts to Aquatic Resources and Wetlands – Ash Way Segment (Part 4 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).



**Figure 4-7 Operational and Construction Impacts to Aquatic Resources and Wetlands – Ash Way Segment (Part 5 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).



#### 4.1.2.1 Aquatic Habitats and Species

Operational and construction impacts to streams are anticipated in the Ash Way Segment as summarized in Table 4-5 below.

**Table 4-5 Impacts to Streams – Ash Way Segment**

| Build Alternative | Stream(s)            | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|-------------------|----------------------|---------------|------------------------------------------------|-------------------------------------------------|
| ASH-1A            | Alder Creek          | F             | 50                                             | 50                                              |
|                   | Ash Way Creek        | Np            | 50                                             | 50                                              |
|                   | SSC1                 | F             | 50                                             | 50                                              |
|                   | <b>Total Impacts</b> |               | <b>150</b>                                     | <b>150</b>                                      |
| ASH-2D            | Alder Creek          | F             | 50                                             | 150                                             |
|                   | SSC1                 | F             | 450                                            | 400                                             |
|                   | SSC2                 | Ns            | 0                                              | 450                                             |
|                   | <b>Total Impacts</b> |               | <b>500</b>                                     | <b>1,000</b>                                    |

NOTES:

a) Stream impacts have been rounded to the nearest 50 feet.

#### **Operational Impacts**

The guideway in the Ash Way Segment would generally be located within the WSDOT right-of-way along I-5, where Alternative ASH-1A would remain entirely along the west side of I-5 while Alternative ASH-2D would cross to the east side of I-5. Both Build Alternatives in the Ash Way Segment would begin within the Swamp Creek subbasin at the south and cross over into the North Creek subbasin toward the north end of the segment. Alternative ASH-1A would cross three streams: Alder Creek, Ash Way Creek, and Stream SSC1. Alternative ASH-2D would cross two streams: Alder Creek and Stream SSC1. However, primarily due to its alignment over Stream SSC1, Alternative ASH-2D would have higher operational impacts than Alternative ASH-1A (Figure 4-6 and Table 4-5).

Both Alternatives ASH-1A and ASH-2D would aerially span Alder Creek in similar locations close to where Alder Creek discharges into an open channel from Stream Crossing 9 (Figure 4-3). The guideway at this location would bridge Alder Creek with a new fish passable structure. The guideway would result in new shading of Alder Creek and impacts to riparian vegetation. Operational impacts to fish habitat within Alder Creek may include changes to water temperature, impacts to riparian and in-stream vegetation, alteration of fish behavior, and impacts to prey species availability.

Alternative ASH-1A would span Ash Way Creek, west of I-5, with an approximately 50-foot-high aerial guideway (Figure 4-4). The aerial guideway would result in new shading of Ash Way Creek and would impact the size and type of riparian vegetation along the stream in this location. Alternative ASH-2D would not span Ash Way Creek on the east side of I-5.

Both Alternatives ASH-1A and ASH-2D would cross Stream SSC1 where it occurs along the east side of I-5 (Alternative ASH-2D) and west side of I-5 (Alternative ASH-1A) (Figure 4-6). Both Build Alternatives would be elevated over Stream SSC1 with an elevated section of guideway approximately 1 to 5 feet above the existing ground surface and stream channel. Both the Alternative ASH-1A and ASH-2D guideways would result in an operational impact to

forested riparian habitat where the guideway would cross Stream SSC1 and would result in permanent shading to their respective stream reaches and impacts to fish habitat. Operational impacts to fish habitat within Stream SSC1 may include changes to water temperature, impacts to riparian and in-stream vegetation, shifts in fish behavior, and reductions in prey species availability. Further, columns necessary to support the aerial guideway may require that some or all the affected stream channel be realigned below or adjacent to the aerial guideway. Stream SSC1 would be impacted more by Alternative ASH-2D, which would run parallel with the stream for a few hundred feet, than by Alternative ASH-1A, which would cross the stream once. However, the severity of these impacts is expected to be limited by the height of the guideway above the creek, which would allow sunlight to reach each portion of the stream at varying times throughout the day, reducing the duration and intensity of shading at any single location.

### Construction Impacts

Construction impacts to aquatic species and habitat in the Ash Way Segment would occur due to temporary stream crossings, stream bypasses, temporary shading, impacts to riparian vegetation, or other similar impacts outside the assumed area of operational impacts. Alternative ASH-2D would have more construction impacts than Alternative ASH-1A (Table 4-5).

In the Swamp Creek subbasin, both Build Alternatives within the Ash Way Segment would result in construction impacts to Alder Creek and Stream SSC1 as summarized in Table 4-5. Alternative ASH-1A would also impact Ash Way Creek during construction. Construction impacts to Alder Creek and Stream SSC1 would be temporary and include reduced water quality from increased turbidity and suspended sediments, decreased stream shading due to the temporary removal of riparian vegetation, and a short-term reduction of terrestrial-based invertebrate prey.

In the North Creek subbasin, Alternative ASH-2D would result in construction impacts to Stream SSC2. The impacts to Stream SSC2 would be related to clearing and grubbing within the project limits.

#### 4.1.2.2 Wetlands

Operational and construction impacts are anticipated to wetlands in the Ash Way Segment as summarized in Table 4-6.

**Table 4-6 Impacts to Wetlands – Ash Way Segment**

| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| <b>ASH-1A</b>     | WSC3                     | I                          | 118.0                | 0                                        | <0.1                                      |
|                   | WSC4                     | III                        | 0.6                  | 0.6                                      | 0                                         |
|                   | WSC5                     | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WSC26                    | III                        | 1.6                  | 0.1                                      | 0.1                                       |
|                   | WSC26A                   | III                        | 0.3                  | 0.1                                      | <0.1                                      |
|                   | WSC27                    | III                        | 0.2                  | 0                                        | 0.1                                       |
|                   | <b>Total Impacts</b>     |                            |                      | <b>0.9</b>                               | <b>0.2</b>                                |
| <b>ASH-2D</b>     | WSC3                     | I                          | 118.0                | 0                                        | <0.1                                      |
|                   | WSC4                     | III                        | 0.6                  | 0.6                                      | 0                                         |

| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
|                   | WSC5                     | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WSC6                     | III                        | 0.2                  | <0.1                                     | 0.1                                       |
|                   | WSC7                     | III                        | 0.3                  | 0                                        | <0.1                                      |
|                   | WSC8                     | III                        | 0.1                  | 0                                        | 0.1                                       |
|                   | WSC9                     | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WSC10                    | III                        | 0.2                  | 0                                        | 0.2                                       |
|                   | WSC11                    | III                        | 0.1                  | 0                                        | <0.1                                      |
|                   | WSC11A                   | III                        | 0.3                  | 0.2                                      | 0.1                                       |
|                   | WSC12                    | III                        | 0.2                  | 0.2                                      | 0                                         |
|                   | WSC13                    | II                         | 0.3                  | 0.3                                      | 0                                         |
|                   | WSC27                    | III                        | 0.2                  | 0                                        | 0.10                                      |
|                   | <b>Total Impacts</b>     |                            |                      | <b>1.3</b>                               | <b>0.6</b>                                |

NOTES:

- a) Wetland impacts have been rounded to the nearest tenth. Totals may not appear to add up using the rows above due to rounding.

### Operational Impacts

Both Build Alternatives would have operational impacts to wetlands. Alternative ASH-1A would impact three wetlands for a total of 0.9 acres of impact, whereas Alternative ASH-2D would have impacts to five wetlands for a total of 1.3 acres. At the southern end of the Ash Way Segment, both Alternatives ASH-1A and ASH-2D would include aerial guideways west of I-5, between the WSDOT compatibility line and east of Alder Way. Both Build Alternatives would span Wetland WSC4 to the east of the large Wetland WSC3 (Figure 4-3). Wetland WSC4 is a slope wetland originating from seeps and stormwater outfalls located on the steep WSDOT embankment. While both Build Alternatives propose an aerial guideway with columns constructed within the WSDOT embankment and within parts of Wetland WSC4, it is reasonably expected that WSDOT and Sound Transit would seek ground improvements at this location that would likely permanently impact Wetland WSC4. While the location of both alignments differ slightly over Wetland WSC4, both Build Alternatives would impact the entirety of the 0.6-acre Wetland WSC4.

Alternative ASH-1A would have operational impacts to two other wetlands, Wetlands WSC26 and WSC26A (Figure 4-5 and Figure 4-6), both located west of I-5 and east of multifamily residential communities and associated with Stream SSC1 and Stream SSC2, respectively. These wetlands would be impacted from the at-grade guideway and long-term management of vegetation adjacent to the guideway.

Traveling north, Alternative ASH-2D would include an elevated crossing over I-5 from west to east, which would span part of Wetland WSC6 (Figure 4-4). Wetland WSC6 is a shallow depressional wetland located east of I-5 and west of the Interurban Trail with no observed outlet (Figure 4-4). Due to its presumed isolation from other Traditional Navigable Waters, this wetland may not be considered a Water of the U.S. by the Corps. Columns for the aerial guideway and other permanent features are located outside of the wetland itself. Therefore, operational impacts to Wetland WSC6 are expected to include shading from the aerial guideway and long-term management of vegetation along the guideway.

Wetland WSC12 is located along the east side of I-5 along the Alternative ASH-2D aerial guideway alignment (Figure 4-5). This wetland appears to be a constructed stormwater facility to manage WSDOT stormwater and may not be considered a Water of the U.S. by the Corps or a Water of the State by Ecology. However, as the aerial guideway spans this wetland, columns associated with the elevated structure may be constructed within and adjacent to the wetland. Therefore, operational impacts to Wetland WSC12 would include wetland fill associated with columns, shading, and management of vegetation along the guideway.

North of Wetland WSC12, the guideway transitions to an at-grade condition for approximately 1,500 feet before it returns to an elevated span as it approaches Stream SSC1. Wetland WSC13 is located along Stream SSC1 (Figure 4-6). As the guideway would be elevated over the wetland, columns to support the elevated section of guideway would be necessary. However, due to the shallow height of the guideway over the ground surface, it is unlikely that hydrophytic vegetation would establish below the guideway. Therefore, it is expected that the full extent of the wetland would be impacted.

Along with anticipated permanent fill placement, shading, and vegetation management within wetlands associated with the Build Alternatives within the Ash Way Segment, project-related improvements would result in changes to impervious surface areas and new or replaced stormwater outfalls, resulting in operational impacts to the wetland hydroperiods within the study area, as described in the Water Resources Technical Report (see Draft EIS Appendix G.9). The location and extent of these operational impacts within the Ash Way Segment will become more clear as design advances. Mitigation for operational impacts to wetlands would result in a no-net loss of ecosystem functions and acreages as described in Section 5.

### ***Construction Impacts***

Both Build Alternatives within the Ash Way Segment would be expected to result in construction impacts to wetlands as summarized in Table 4-6. Alternative ASH-2D would have more construction impacts, both in area and in number of wetlands, than Alternative ASH-1A. Alternative ASH 1-A is expected to result in construction impacts to five wetlands whereas Alternative ASH-2D is expected to impact up to 10 wetlands during construction.

Both Alternatives ASH-1A and ASH-2D may result in a small area of construction impact to Wetland WSC3, a large Category I wetland complex associated with the Swamp Creek mainstem and located west of Wetland WSC4 discussed within the operational impacts, due to expected utility relocations. These construction impacts are due to construction staging, access, or other similar activities that occur within the limits of the Build Alternative but outside the assumed area of operational impacts. Mitigation for construction impacts to wetlands includes avoidance and minimization as design progresses and compensatory mitigation for impacts that cannot be avoided as described in Section 5.

#### **4.1.2.3 Upland Habitat and Species**

Operational and construction impacts are anticipated to upland habitat and species in the Ash Way Segment as summarized in Table 4-7 and Table 4-8.

### ***Operational Impacts***

The Ash Way Segment is dominated by urban and mixed land cover types but does contain shrublands/grasslands and a small amount of forested habitat. The majority of operational impacts for both Build Alternatives would be to urban environments, although there are some



expected impacts to shrublands/grasslands for both, as well as to forested lands for Alternative ASH-2D. Operational impacts to these open spaces would be much higher for Alternative ASH-2D than for Alternative ASH-1A (Table 4-7).

Alternative ASH-1A would result in 1.56 acres of operational impact to 12 separate RCA properties located along the west side of I-5. RCAs are owned by WSDOT and were originally acquired to preserve vegetation and beautify the highway rights-of-way (see Section 3.1.6.2). While land cover mapping does not indicate forest land cover types within the Alternative ASH-1A study area, field observations of the RCA properties identified isolated patches of forested vegetation on these properties. However, no operational impacts to these RCA forested patches are anticipated.

**Table 4-7 Operational Impacts to Upland Habitats – Ash Way Segment**

| Build Alternative | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| ASH-1A            | 3.1                         | 14.3             | 9.3         | 2.8                   | 0      | 29.5 <sup>a</sup>                        |
| ASH-2D            | 2.5                         | 10.8             | 8.7         | 8.8                   | 0.1    | 30.8                                     |

NOTE:

a) Included in this total area is 1.56 acres of operational impacts to 12 separate RCAs.

### Construction Impacts

Both Build Alternatives within the Ash Way Segment would result in construction impacts to upland habitats. These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project.

Alternative ASH-2D would have substantially more impact to open space land cover types, including more than 24 acres of shrublands/grasslands and forests, much of this located east of I-5 and along the Interurban Trail (Table 4-8). Alternative ASH-1A would result in 0.60 acres of construction impact to 13 RCA properties, which include patches of forested vegetation. Construction impacts to shrublands/grasslands and forested habitat would result in a temporary loss of habitat for birds and small mammals including nesting bird habitat, reduced foraging habitat, and reduced cover.

**Table 4-8 Construction Impacts to Upland Habitats – Ash Way Segment**

| Build Alternative | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                   | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                   | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| ASH-1A            | 12.0                         | 22.5             | 9.7         | 3.7                   | 3.2    | 51.1 <sup>a</sup>                         |
| ASH-2D            | 18.0                         | 9.6              | 20.0        | 20.2                  | 3.9    | 71.7                                      |

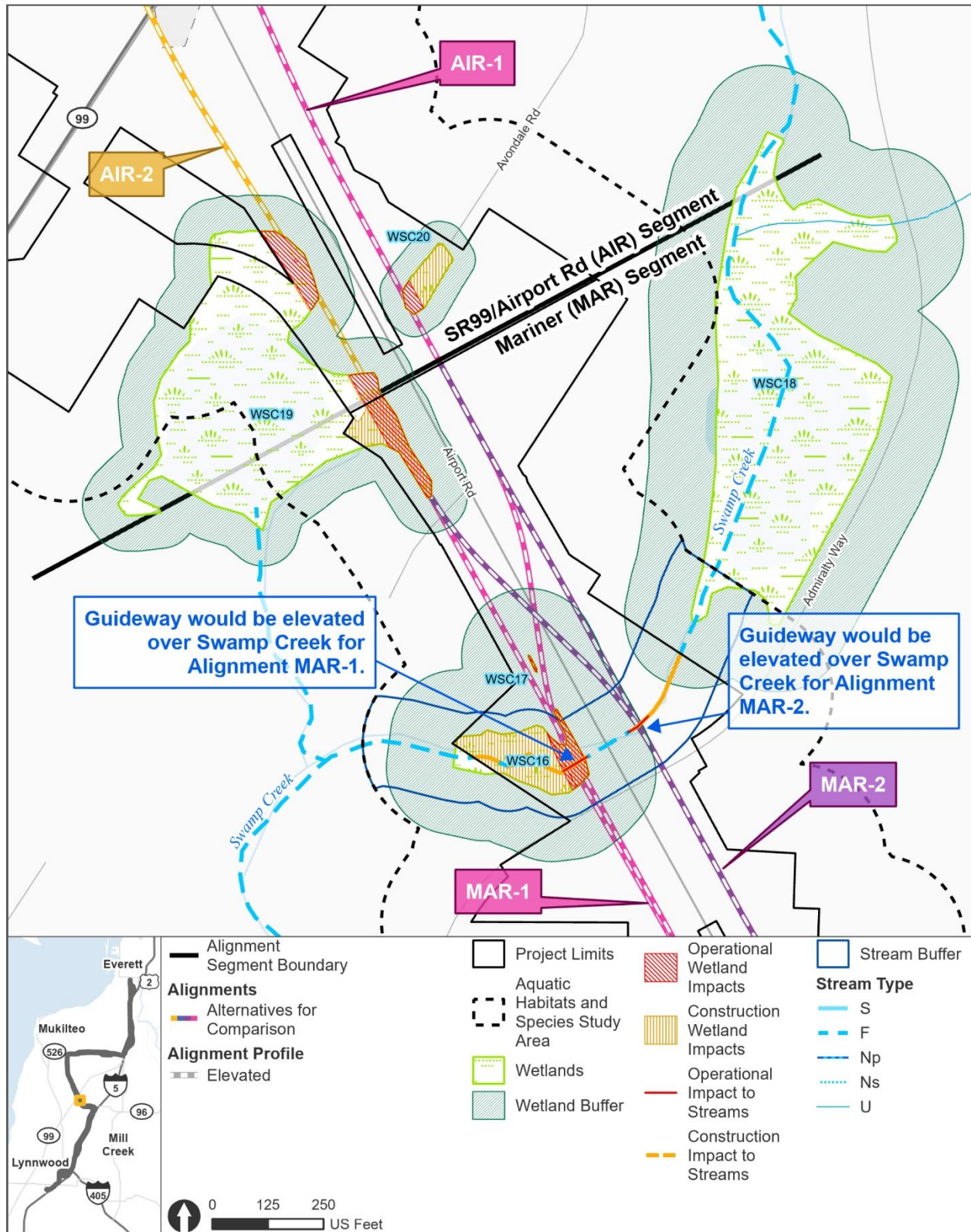
NOTE:

- a) Included in this total area is 0.60 acre of construction impacts to 13 separate RCAs.

#### **4.1.3 Mariner Segment**

Ecosystems impacts in the Mariner Segment would include operational and construction impacts to streams, wetlands, and uplands, as shown on Figure 4-8 and described in subsequent sections. All Build Alternatives in the Mariner Segment would have the same area of impacts to streams and similar extents of impacts to wetlands. Alternative MAR-1B would have greater impacts to upland habitats, as detailed below.

**Figure 4-8 Operational and Construction Impacts to Aquatic Resources and Wetlands – Mariner Segment**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

#### 4.1.3.1 Aquatic Habitats and Species

Operational and construction impacts to one stream, Swamp Creek, are anticipated in the Mariner Segment as summarized in Table 4-9. All Build Alternatives would result in the same operational impacts to this reach of Swamp Creek.

**Table 4-9 Impacts to Streams – Mariner Segment**

| Build Alternative                         | Stream(s)            | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|-------------------------------------------|----------------------|---------------|------------------------------------------------|-------------------------------------------------|
| MAR-1B                                    | Swamp Creek          | F             | 50                                             | 450                                             |
| MAR-1B with Surface Parking Design Option | <b>Total Impacts</b> |               | <b>50</b>                                      | <b>450</b>                                      |
| MAR-2D                                    |                      |               |                                                |                                                 |
| MAR-2D with Surface Parking Design Option |                      |               |                                                |                                                 |

NOTES:

a) Stream impacts have been rounded to the nearest 50 feet.

#### **Operational Impacts**

In the Mariner Segment, the guideway would generally shift from the I-5 right-of-way onto 128th Street SW, within the North Creek subbasin, where it would follow 128th Street SW before turning northwest onto Airport Road and back into the Swamp Creek subbasin.

Just northwest of where the Mariner Segment Build Alternatives would cross over Admiralty Way, the aerial guideway would span the Swamp Creek channel with the underside of the girders more than 50 feet above the existing stream water surface elevation (Figure 4-8). Alternative MAR-1B would span Swamp Creek south of Airport Road, whereas Alternative MAR-2D would span Swamp Creek north of Airport Road. After crossing Swamp Creek, Alternatives MAR-1B and MAR-2D may cross Airport Road depending on which SR 99/Airport Road Segment Build Alternative (i.e., Alternative AIR-1A or AIR-2B) and which OMF North site alternative (e.g., OMF Site F) are part of the preferred alternative. The operational impacts associated with both Build Alternatives would be the same, and include columns associated with the elevated guideway located outside of Swamp Creek but within its riparian corridor. Further, the elevated guideway would result in new shading and long-term vegetation management along the guideway.

Under both Build Alternatives, the aerial guideway may be required to cross Airport Road to join Alternative AIR-1A, Alternative AIR-2B, and/or connect with lead tracks into OMF Site F. In these circumstances, a center column would be required within Airport Road and necessitate road improvements. Grading activities and other associated road improvements may trigger replacement of the 72-inch conveyance with a larger fish passable structure under Airport Road. Further, due to limited space within the right-of-way north of Airport Road and the geometry of the necessary bend in the Alternative MAR-2D aerial guideway should it have to cross Airport Road to connect with Alternative AIR-2B, a column would be necessary within the roadway, resulting in widening of the Airport Road fill prism.



### Construction Impacts

All Build Alternatives within the Mariner Segment would result in the same construction impacts to Swamp Creek (Table 4-9). These construction impacts may include temporary stream crossings, temporary stream bypass, or other similar impacts to Swamp Creek within the project limits of the Build Alternative but outside the operational impact area.

#### 4.1.3.2 Wetlands

Operational and construction impacts are anticipated to wetlands in the Mariner Segment as summarized in Table 4-10.

**Table 4-10 Impacts to Wetlands – Mariner Segment**

| Build Alternative                                      | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|--------------------------------------------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| MAR-1B                                                 | WSC16                    | II                         | 0.7                  | 0.1                                      | 0.5                                       |
| MAR-1B with Surface Parking Design Option              | WSC17 <sup>b</sup>       | III                        | <0.1                 | <0.1                                     | 0                                         |
|                                                        | WSC19                    | III                        | 4.9                  | 0                                        | 0.3                                       |
|                                                        | <b>Total Impacts</b>     |                            |                      | <b>0.1</b>                               | <b>0.8</b>                                |
| MAR-2D                                                 | WSC16                    | II                         | 0.7                  | 0.1                                      | 0.5                                       |
| MAR-2D with Surface Parking Design Option <sup>c</sup> | WSC17 <sup>c</sup>       | III                        | <0.1                 | 0                                        | <0.1                                      |
|                                                        | WSC19                    | III                        | 4.9                  | 0.2                                      | 0.1                                       |
|                                                        | <b>Total Impacts</b>     |                            |                      | <b>0.3</b>                               | <b>0.6</b>                                |

NOTES:

- a) Wetland impacts have been rounded to the nearest tenth.
- b) Wetlands may be determined to be stormwater features constructed in historic uplands and not regulated wetlands.
- c) Operational impacts to wetlands from Alternative MAR-2D would only occur if paired with Alternative AIR-2B or OMF Site F.

### Operational Impacts

All Mariner Segment Build Alternatives have the potential to result in operational impacts to wetlands, with Alternative MAR-2D expected to have slightly more impacts than Alternative MAR-1B (Figure 4-8). However, Alternative MAR-2D would only result in operational impacts to wetlands if the aerial guideway crosses Airport Road northwest of Swamp Creek to connect with Alternative AIR-2B or the lead tracks to OMF Site F. Otherwise, Alternative MAR-2D would avoid operational impacts to wetlands. The Surface Parking Design Option for each Mariner Segment Build Alternative would not alter the extent of operational impacts to wetlands.

Alternative MAR-1B would span Swamp Creek mainstem, downstream (south) of Airport Road, where Swamp Creek flows north to south through Wetland WSC16, a riverine wetland that has been rated as a Category II wetland. Operational impacts to Wetland WSC16 are expected to include loss of forested riparian wetland vegetation and new shade. Further, as part of the conceptual design of Alternative MAR-1B, columns necessary to support the aerial guideway were moved as far as possible from the Swamp Creek channel itself but may not be able to fully avoid Wetland WSC16.

The Alternative MAR-1B guideway would also result in operational impacts to Wetland WSC17. This wetland is a small depressional wetland that receives stormwater. It may be a constructed stormwater feature and may not be considered a regulated wetland by the Corps or Ecology. Impacts to Wetland WSC17 would be limited to new shading of the wetlands. As the wetland is an emergent dominant wetland, no impacts are expected from long-term vegetation management along the guideway.

Additionally, Alternatives MAR-1B and MAR-2D could result in operational impacts to Wetland WSC19 if Alternative AIR-2B is selected as the preferred alternative and the aerial guideway northwest of Swamp Creek travels along the south side of Airport Road. Wetland WSC19 includes a large (2+ acre) pond with an open water wetland unit that supports waterfowl and where a bald eagle was observed during a 2023 field survey.

Finally, along with anticipated permanent fill placement, shading, and vegetation management within wetlands associated with the Build Alternatives within the Mariner Segment, project-related improvements would result in changes to impervious surface areas and new or replaced stormwater outfalls, resulting in operational impacts to the wetland hydroperiods within the study area, as described in the Water Resources Technical Report (see Draft EIS Appendix G.9). The location and extent of these operational impacts within the Mariner Segment will become more clear as design advances. Mitigation for operational impacts to wetlands would result in a no-net loss of ecosystem functions and acreages as described in Section 5.

### ***Construction Impacts***

All Build Alternatives within the Mariner Segment would be expected to result in construction impacts to wetlands due to construction staging or other similar activities that occur within the limits of the Build Alternative but outside the assumed area of operational impacts. Due to its close proximity to Wetland WSC16, Alternative MAR-1B would have slightly more impacts than Alternative MAR-2D (Table 4-10).

#### **4.1.3.3 Upland Habitat and Species**

Operational and construction impacts are anticipated to upland habitat and species in the Mariner Segment as summarized in Table 4-11 and Table 4-12.

### ***Operational Impacts***

The Mariner Segment is dominated by urban and mixed land cover types but does contain some shrublands/grasslands. Alternative MAR-2D and Alternative MAR-2D with Surface Parking Design Option would avoid all open space impacts. Alternative MAR-1B and Alternative MAR-1B with Surface Parking Design Option would have limited impacts on open space (Table 4-11).

**Table 4-11 Operational Impacts to Upland Habitats – Mariner Segment**

| Build Alternative                         | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                           | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                           | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| MAR-1B                                    | 6.5                         | 8.6              | 0.3         | 0.7                   | 0      | 16.2                                     |
| MAR-1B with Surface Parking Design Option | 11.5                        | 9.3              | 0.3         | 0.7                   | 0      | 21.8                                     |
| MAR-2D                                    | 5.0                         | 8.7              | 0.5         | 0                     | 0      | 14.1                                     |
| MAR-2D with Surface Parking Design Option | 10.6                        | 9.8              | 0.5         | 0                     | 0      | 20.8                                     |

### **Construction Impacts**

All Build Alternatives within the Mariner Segment would result in construction impacts to upland habitats due to clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project. Alternative MAR-1B and Alternative MAR-1B with Surface Parking Design Option would have more open space impacts, specifically to shrublands/grasslands, than Alternative MAR-2D and Alternative MAR-2D with Surface Parking Design Option (Table 4-12).

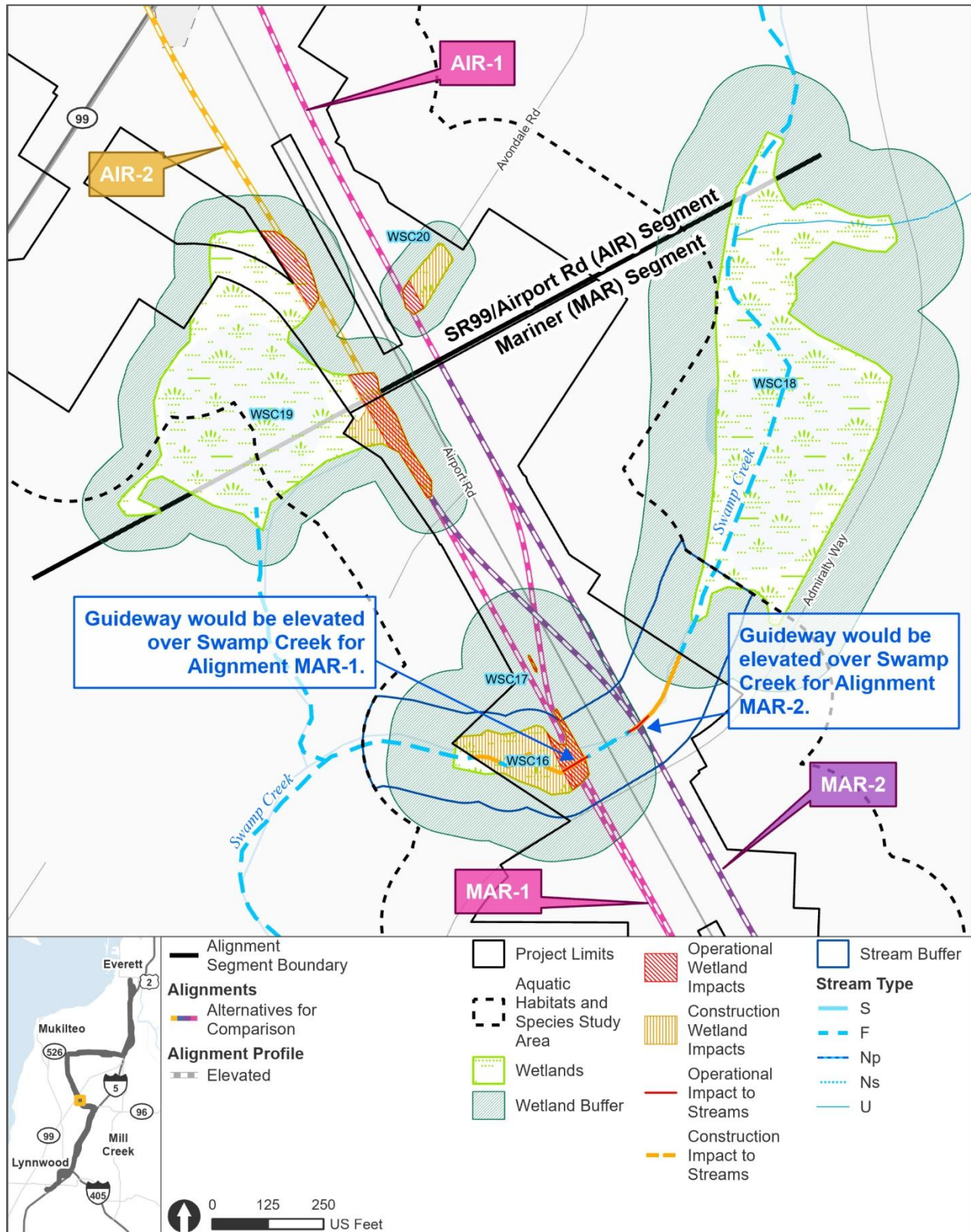
**Table 4-12 Construction Impacts to Upland Habitats – Mariner Segment**

| Build Alternative                         | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------------------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                           | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                                           | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| MAR-1B                                    | 24.2                         | 16.7             | 1.9         | 0.6                   | 0.1    | 43.6                                      |
| MAR-1B with Surface Parking Design Option | 19.2                         | 16.1             | 1.9         | 0.6                   | 0.1    | 37.9                                      |
| MAR-2D                                    | 19.7                         | 18.3             | 1.3         | 0                     | 0.1    | 39.5                                      |
| MAR-2D with Surface Parking Design Option | 8.9                          | 16.8             | 1.3         | 0                     | 0.1    | 27.1                                      |

### **4.1.4 SR 99/Airport Road Segment**

Ecosystems impacts in the SR 99/Airport Segment would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-9 through Figure 4-11 and described in subsequent sections. Alternative AIR-2B would generally have less impact to streams, wetlands, and open space habitats than Alternative AIR-1A as detailed below.

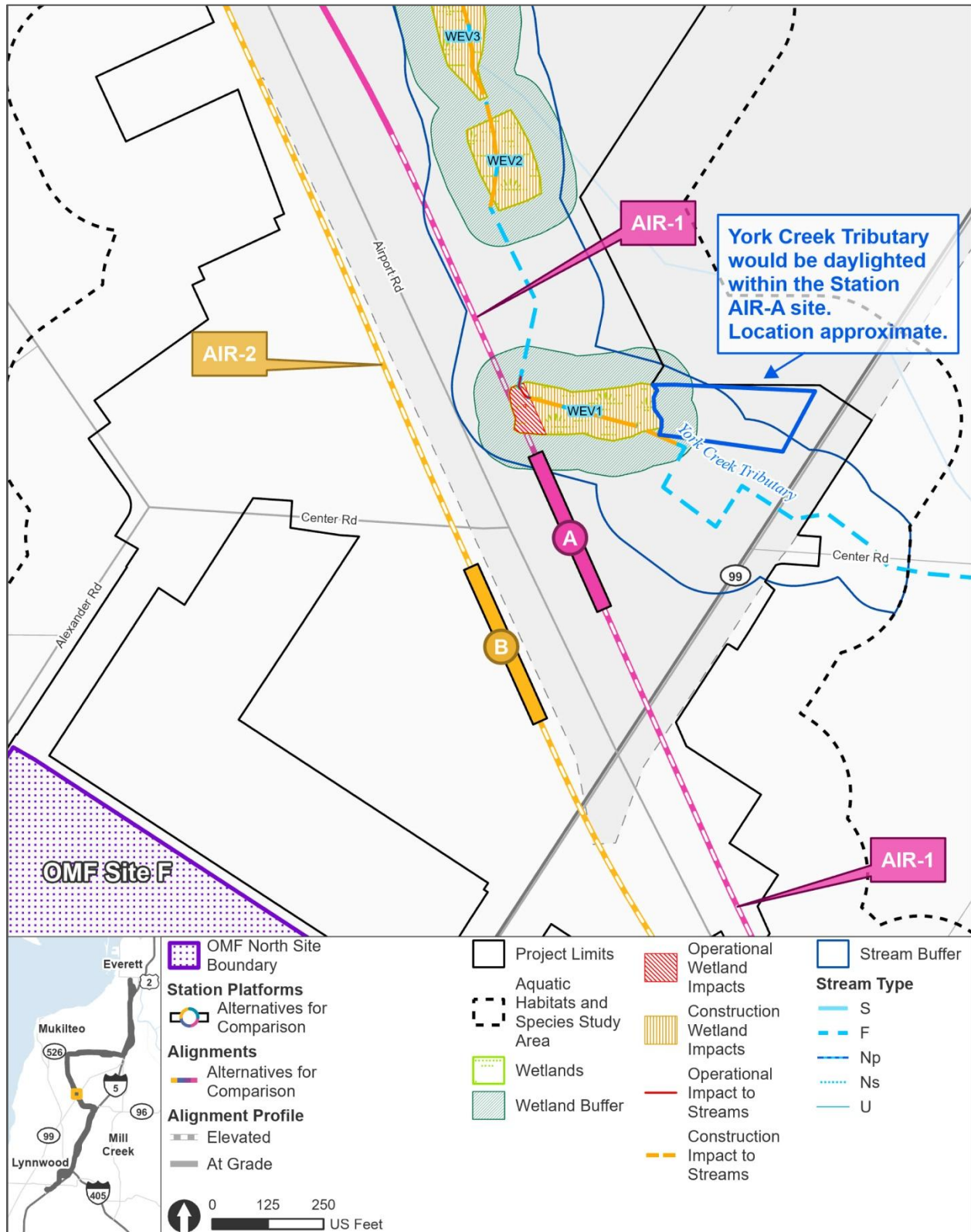
**Figure 4-9 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 99/Airport Road Segment (Part 1 of 4)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

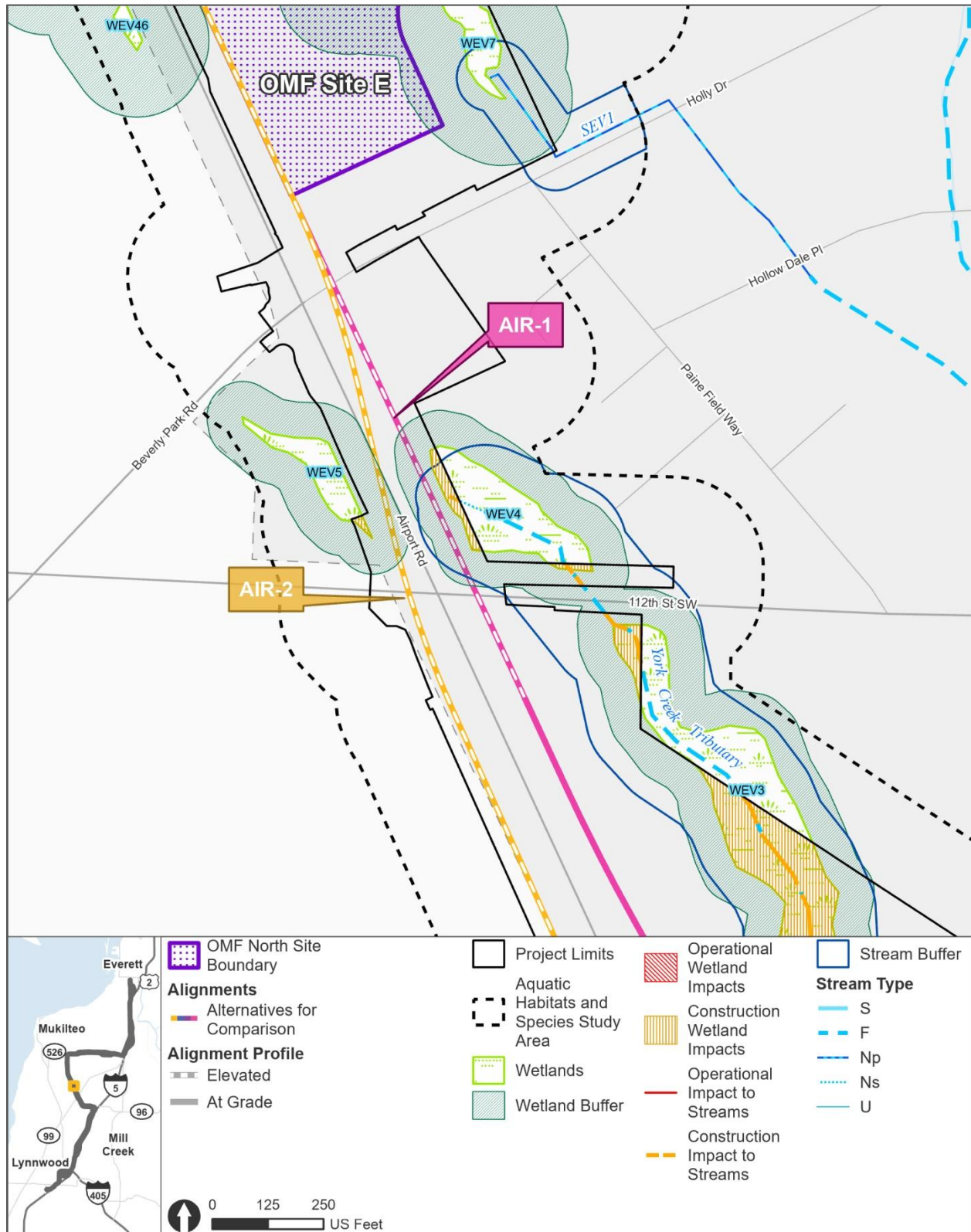


**Figure 4-10 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 99/Airport Road Segment (Part 2 of 4)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

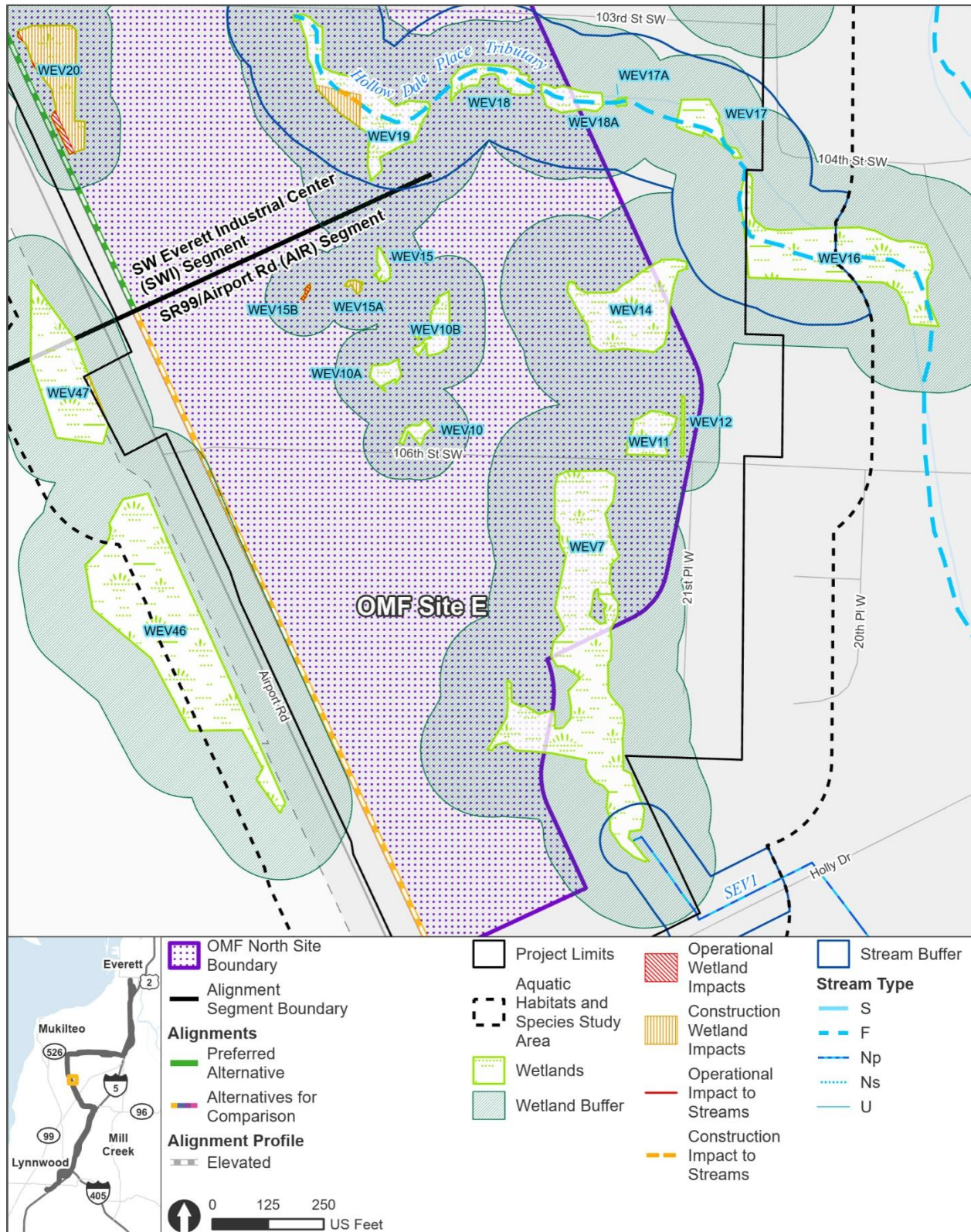
**Figure 4-11 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 99/Airport Road Segment (Part 3 of 4)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).



**Figure 4-12 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 99/Airport Road Segment (Part 4 of 4)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

#### 4.1.4.1 Aquatic Habitats and Species

Operational and construction impacts are anticipated to one stream, York Creek Tributary, in the SR 99/Airport Segment as summarized in Table 4-13. These impacts are all associated with Alternative AIR-1A; however, some of these impacts are considered beneficial, as detailed in the Operational Impacts section.

**Table 4-13 Impacts to Streams – SR 99/Airport Segment**

| Build Alternative | Stream(s)            | Stream Typing <sup>a</sup> | Operational Impacts (linear feet) <sup>b</sup> | Construction Impacts (linear feet) <sup>b</sup> |
|-------------------|----------------------|----------------------------|------------------------------------------------|-------------------------------------------------|
| AIR-1A            | York Creek Tributary | F                          | 50                                             | 1,550                                           |
|                   |                      | Ns                         | 0                                              | 50                                              |
|                   | <b>Total Impacts</b> |                            | <b>50</b>                                      | <b>1,600</b>                                    |
| AIR-2B            | None                 | NA                         | 0                                              | 0                                               |
|                   | <b>Total Impacts</b> |                            | <b>0</b>                                       | <b>0</b>                                        |

NOTES:

- a) Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031.
- b) Stream impacts have been rounded to the nearest 50 feet.

#### **Operational Impacts**

The Build Alternatives within the SR 99/Airport Road Segment would follow Airport Road to the north and remain entirely within the Swamp Creek subbasin.

Alternative AIR-1A generally follows the north side of Airport Road, whereas Alternative AIR-2B follows the south side of Airport Road. As a result of these alignments, Alternative AIR-2B would avoid operational impacts to streams whereas Alternative AIR-1A would result in operational impacts to the York Creek Tributary. York Creek Tributary exists within a piped conveyance system through parts of the Alternative AIR-1A project limits (Figure 4-9 to Figure 4-11). The majority of operational impacts to aquatic resources associated with Alternative AIR-1A would occur on or adjacent to Station AIR-A. Under this alternative, York Creek Tributary would be removed from approximately 1,550 linear feet of piped conveyance and realigned into a naturalized open channel on the Station AIR-A site. These operational impacts would be considered a beneficial impact.

Farther north (upstream), Alternative AIR-1A would span York Creek Tributary north of 112th Street SW where it is located within a pipe under Airport Road (Stream Crossing 18). The guideway at this location would be aerial and elevated approximately 35 feet over the existing ground surface. As York Creek Tributary is generally located within a pipe under Airport Road and the aerial guideway, potential operational impacts to York Creek Tributary at this location would generally include some shading of the limited open-channel adjacent to the guideway and long-term management of vegetation along the guideway.

Along with the physical impacts to York Creek Tributary associated with Alternative AIR-1A, Station AIR-A would have operational impacts to the water quality and water quantity within York Creek Tributary from the alteration of existing drainage patterns, changes to land cover types, and the proposed stormwater treatment and detention infrastructure. These operational



impacts are more thoroughly described within the Water Resources Technical Report (Draft EIS Appendix G.9).

### Construction Impacts

Only Alternative AIR-1A within the SR 99/Airport Road Segment would be expected to result in potential construction impacts to York Creek Tributary (Table 4-13). These construction impacts may include temporary stream crossings, stream bypass, temporary shading or loss of shading, or other similar impacts within the limits of the Build Alternative project limits but outside the assumed area of operational impacts.

#### 4.1.4.2 Wetlands

Operational and construction impacts are anticipated to wetlands in the SR 99/Airport Segment as summarized in Table 4-14.

**Table 4-14 Impacts to Wetlands – SR 99/Airport Segment**

| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| AIR-1A            | WEV1                     | III                        | 0.8                  | 0.1                                      | 0.7                                       |
|                   | WEV2                     | III                        | 0.6                  | 0                                        | 0.6                                       |
|                   | WEV3                     | III                        | 3.1                  | 0                                        | 2.1                                       |
|                   | WEV4                     | III                        | 1.0                  | 0                                        | 0.1                                       |
|                   | WEV15A                   | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WEV15B                   | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WSC20 <sup>b</sup>       | IV                         | 0.2                  | <0.1                                     | 0.2                                       |
|                   | <b>Total Impacts</b>     |                            |                      | <b>0.2</b>                               | <b>3.6</b>                                |
| AIR-2B            | WEV5                     | III                        | 0.4                  | 0                                        | <0.1                                      |
|                   | WEV15A                   | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WEV15B                   | III                        | <0.1                 | 0                                        | <0.1                                      |
|                   | WSC19                    | III                        | 4.9                  | 0.3                                      | <0.1                                      |
|                   | WEV47                    | II                         | 0.8                  | 0                                        | <0.1                                      |
|                   | <b>Total Impacts</b>     |                            |                      | <b>0.3</b>                               | <b>&lt;0.1</b>                            |

NOTES:

- a) Wetland impacts have been rounded to the nearest tenth. Totals may differ from the above rows due to rounding
- b) Wetlands may be determined to be stormwater features constructed in historic uplands.

### Operational Impacts

Both Build Alternatives within the SR 99/Airport Road Segment would result in similar total operational impacts to wetlands.

Alternative AIR-1A would result in operational impacts to one wetland, Wetland WEV1, which is located on the Station AIR-A site. This wetland, which York Creek Tributary flows through, would be impacted through wetland fill associated with a column placed within the wetland to support the aerial guideway over parts of Wetland WEV1. Further, the elevated guideway would result in new shading to the wetland and result in long-term vegetation management along the

guideway (Figure 4-10 and Figure 4-11). Additional operational impacts to Wetland WEV1 may occur as design of the stream daylighting advances and potential opportunities for wetland and stream conceptual mitigation is more fully understood.

Alternative AIR-1A would impact two wetlands. However, one of these wetlands, Wetland WSC20, may be a constructed stormwater facility in what was historically upland based on spatial data provided by Snohomish County and signage on-site (Figure 4-9). Therefore, this wetland may not be regulated as a wetland. Alternative AIR-2B would also have operational impacts to Wetland WSC19 (Figure 4-9). The operational impacts would be in addition to the operational impacts to Wetland WSC19 associated with the Mariner Segment alternatives. Wetland WSC19 is a large wetland system with a large (2+ acre) open water unit that supports waterfowl and where a bald eagle was observed during field surveys in 2023. Operational impacts to Wetland WSC19 include wetland fill associated with columns necessary to support the aerial guideway. Further, the elevated guideway would result in additional shading and long-term vegetation maintenance along the guideway.

Along with anticipated permanent fill placement, shading, and vegetation management within wetlands associated with the Build Alternatives within the SR 99/Airport Road Segment, project-related improvements would result in changes to impervious surface areas and new or replaced stormwater outfalls, resulting in operational impacts to the wetland hydroperiods within the study area, as described in the Water Resources Technical Report (Draft EIS Appendix G.9). The location and extent of these operational impacts within the SR 99/Airport Road Segment will become more clear as design advances.

### ***Construction Impacts***

Both Build Alternatives within the SR 99/Airport Road Segment would be expected to result in construction impacts to wetlands, as summarized in Table 4-14, from construction staging or other similar activities that occur within the limits of the Build Alternative but outside the assumed area of operational impact.

With the stated assumptions, Alternative AIR-1A would result in substantially more construction impacts to wetlands than Alternative AIR-2B. Much of these estimated construction impacts are to Wetlands WEV2 and WEV3 located between 112th Street SW and the Station AIR-A site. It is likely that these construction impacts can be reduced through mitigation sequencing as design advances. It is possible, as design advances and conceptual wetland and stream mitigation is more fully understood, that on-site wetland and stream mitigation would occur along Alternative AIR-1A and result in beneficial impacts.

#### **4.1.4.3 Upland Habitat and Species**

Operational and construction impacts are anticipated to upland habitat and species in the SR 99/Airport Road Segment as summarized in Table 4-15 and Table 4-16.

### ***Operational Impacts***

The SR 99/Airport Road Segment is dominated by urban and mixed land cover types but does contain patches of open space along the east side of Airport Road, between Station AIR-A and Holly Drive. This open space corresponds to the western edge of the forested and scrub-shrub riparian habitat through which York Creek Tributary flows and where Wetlands WEV2 and WEV3 occur.

Alternative AIR-2B would result in slightly less total operational impact to open spaces than Alternative AIR-1A (Table 4-15). However, both alternatives would result in similar operational impacts to land cover types.

A bald eagle nest is located less than 500 feet north of the Station AIR-A site and approximately 800 feet northeast of Alternative AIR-2B. The nest is outside the project limits of both Build Alternatives and would not be physically impacted by the EVLE Project. It is not known whether this nest is active but given the observation of a bald eagle at Wetland WSC19 it is presumed to be active or may be active in future years. Therefore, it is presumed that this nest would be considered active by the USFWS and would require coordination with USFWS for construction impacts.

**Table 4-15 Operational Impacts to Upland Habitats – SR 99/Airport Road Segment**

| Build Alternative | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| AIR-1A            | 6.5                         | 4.3              | 1.3         | 0.7                   | 0      | 12.8                                     |
| AIR-2B            | 6.0                         | 3.9              | 1.0         | 0.5                   | 0      | 11.4                                     |

### **Construction Impacts**

Both Build Alternatives within the SR 99/Airport Road Segment would also result in construction impacts to upland habitats. These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project.

Given the current design and stated impact assumptions, Alternative AIR-1A would result in more construction impact to upland habitats than Alternative AIR-2B (Table 4-16). This includes greater impacts to shrubland/grassland cover types in comparison to Alternative AIR-2B. As design advances, it is expected that these construction impacts may be reduced through avoidance or minimization measures and may provide opportunity for on-site compensatory wetland and stream mitigation. This will be evaluated further as design advances and conceptual mitigation is more fully developed.

**Table 4-16 Construction Impacts to Upland Habitats – SR 99/Airport Road Segment**

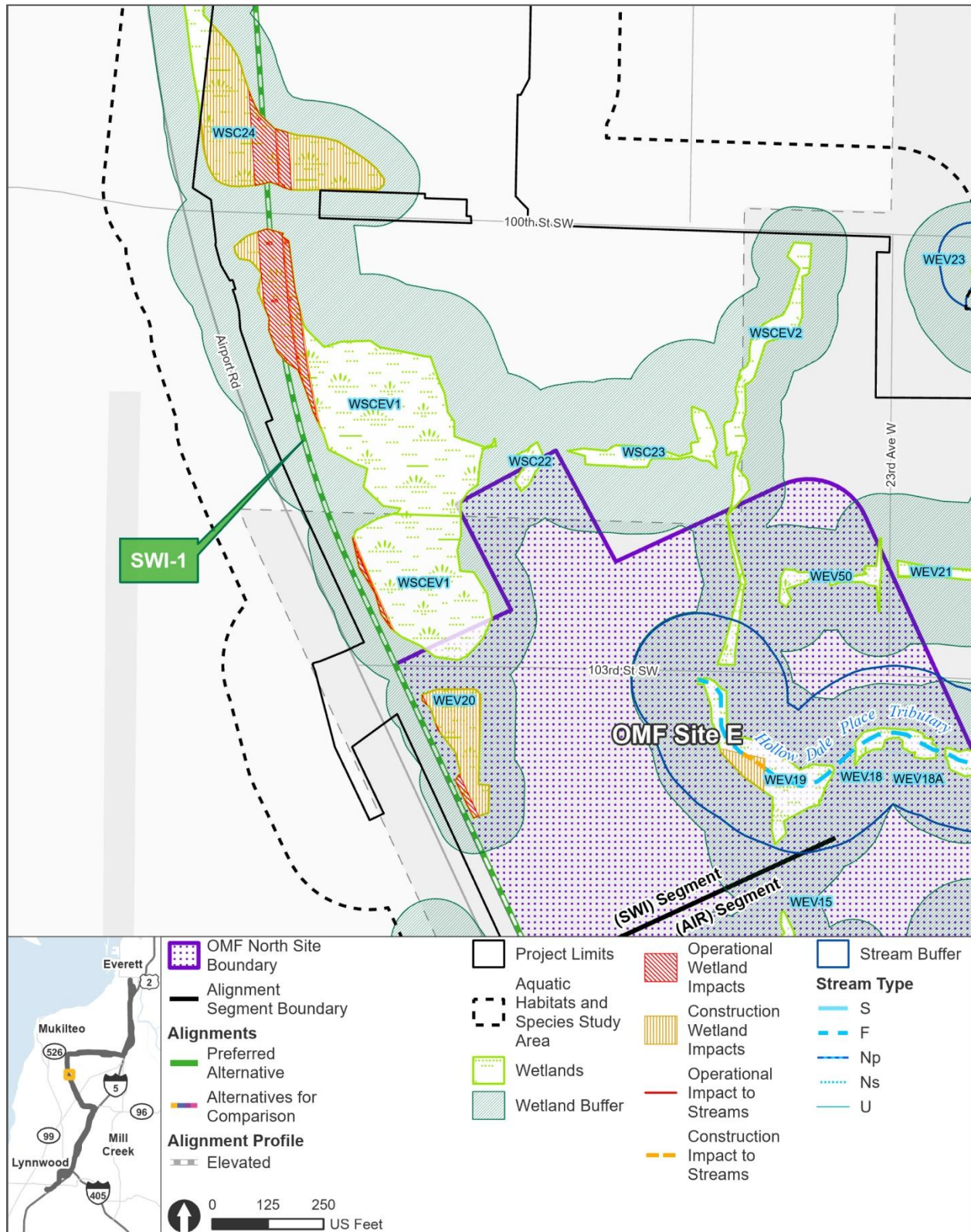
| Build Alternative | Construction Impact (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------|-----------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                           |
|                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| AIR-1A            | 15.3                        | 9.7              | 7.0         | 7.8                   | 0      | 39.8                                      |
| AIR-2B            | 14.5                        | 15.0             | 2.5         | 1.1                   | 0      | 33.1                                      |

#### **4.1.5 SW Everett Industrial Center Segment**

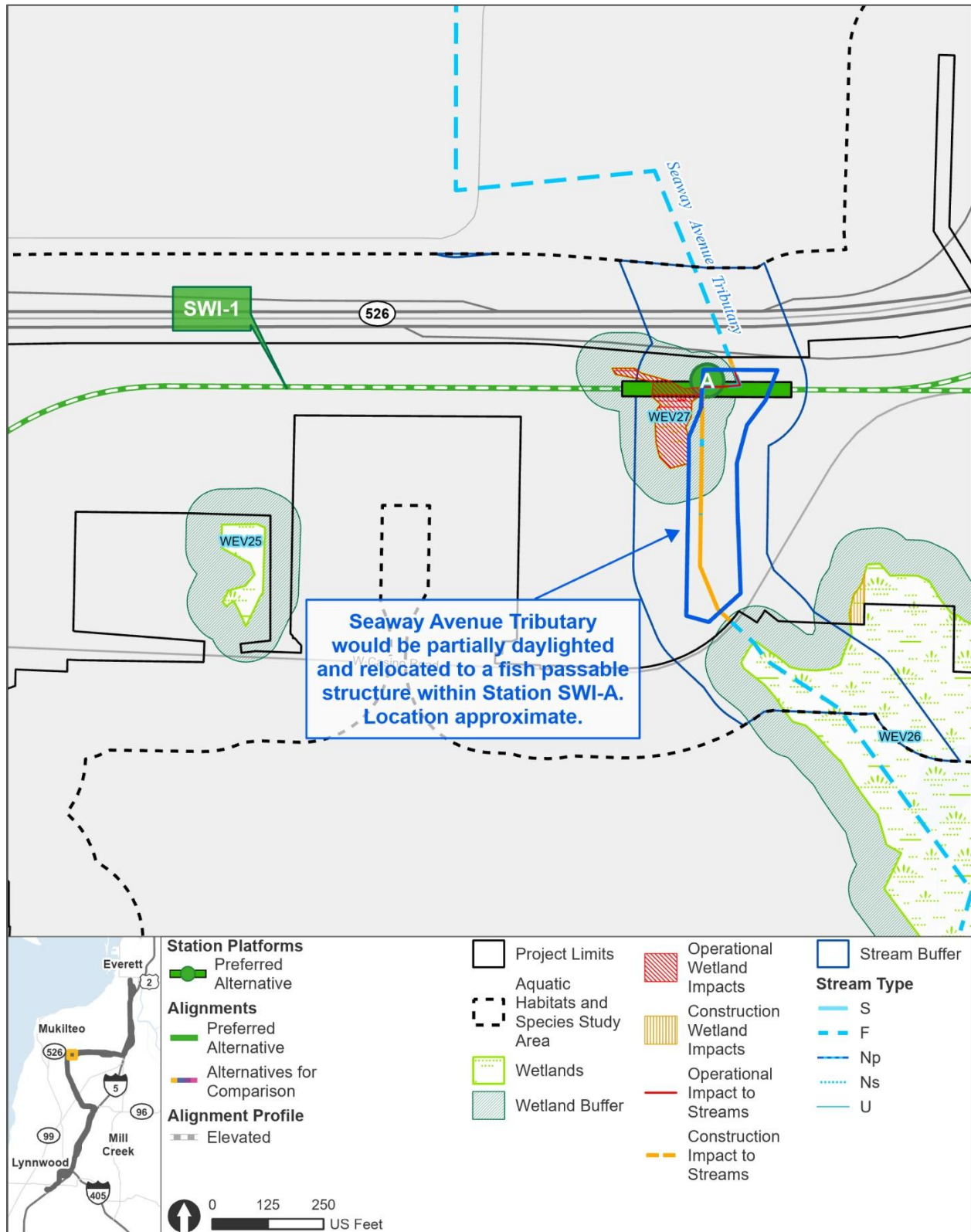
Ecosystems impacts in the SW Everett Industrial Center Segment would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-13 and Figure 4-14 and described in subsequent sections. Alternative SWI-1A with Lower Design Option would generally have the most impacts to streams, wetlands, and open space habitats, and Alternatives SWI-1A and SWI-1B would have the least impacts, as detailed below.



**Figure 4-13 Operational and Construction Impacts to Aquatic Resources and Wetlands – SW Everett Industrial Center Segment (Part 1 of 2)**



**Figure 4-14 Operational and Construction Impacts to Aquatic Resources and Wetlands – SW Everett Industrial Center Segment (Part 2 of 2)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

#### 4.1.5.1 Aquatic Habitats and Species

Operational and construction impacts to up to three streams are anticipated in the SW Everett Industrial Center Segment as summarized in Table 4-17.

**Table 4-17 Impacts to Streams – SW Everett Industrial Center Segment**

| Build Alternative               | Stream(s)                   | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|---------------------------------|-----------------------------|---------------|------------------------------------------------|-------------------------------------------------|
| SWI-1A                          | Seaway Avenue Tributary     | F             | 150                                            | 550                                             |
|                                 | Hollow Dale Place Tributary | F             | 0                                              | 50                                              |
|                                 | <b>Total Impacts</b>        |               | <b>150</b>                                     | <b>600</b>                                      |
| SWI-1A with Lower Design Option | Seaway Avenue Tributary     | F             | 150                                            | 550                                             |
|                                 | Narbeck Creek <sup>b</sup>  | F             | 50                                             | 50                                              |
|                                 | Hollow Dale Place Tributary | F             | 0                                              | 50                                              |
|                                 | <b>Total Impacts</b>        |               | <b>200</b>                                     | <b>650</b>                                      |
| SWI-1B, SWI-1C                  | Seaway Avenue Tributary     | F             | 150                                            | 50                                              |
|                                 | Hollow Dale Place Tributary | F             | 0                                              | 50                                              |
|                                 | <b>Total Impacts</b>        |               | <b>150</b>                                     | <b>100</b>                                      |

NOTES:

- a) Stream impacts have been rounded to the nearest 50 feet.
- b) Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031. Per EMC 19.37.160.A.2, both Narbeck Creek and Merrill & Ring Creek are not considered Type F streams by the City of Everett where they occur in the study area.

#### Operational Impacts

The Build Alternatives in the SW Everett Industrial Center Segment would follow Airport Road to the north before turning east, south of SR 526. This segment begins within the Swamp Creek subbasin before extending across the Japanese Gulch subbasin and the Powder Mill Gulch subbasin. Alternative SWI-1A with Lower Design Option would also extend further east into the Narbeck Creek subbasin. Of the Build Alternatives in this segment, Alternative SWI-1A with Lower Design Option would have the most operational impacts to streams.

All Build Alternatives would result in the same expected operational impacts to Seaway Avenue Tributary, a tributary to Powder Mill Gulch located at the north end of the segment (Figure 4-13 and Figure 4-14). Seaway Avenue Tributary originates from a large, beaver-influenced wetland (Wetland WEV26) south of Casino Road. The Seaway Avenue Tributary channel begins downstream of an existing beaver dam and flows north before entering a piped conveyance under Casino Road (Stream Crossing 33) and through the SWI-A Station site towards a culvert under SR 526 (Stream Crossing 34).

The Station SWI-A design proposes to daylight a portion of Seaway Avenue Tributary on the Station SWI-A site. Where the stream channel is not daylighted, it would be placed in a fish passable structure that ties into the culvert under SR 526. Those areas along this reach of Seaway Avenue Tributary determined to be operational impacts are those portions of the stream channel where it occurs below the elevated guideway and station facility. The remainder of the stream daylighting and fish passage structure is described under Construction Impacts.



Along with the physical impacts to Seaway Avenue Tributary within the Station SWI-A site, operational impacts to water quality and water quantity within Seaway Avenue Tributary are anticipated due to the alteration of existing drainage patterns, changes to land cover types, and the proposed stormwater treatment and detention infrastructure. These operational impacts are more thoroughly described within the Water Resources Technical Report (Draft EIS Appendix G.9).

The project limits of Alternative SWI-1A with Lower Design Option extend into the Narbeck Creek subbasin due to realignment of Casino Road. As a result, Alternative SWI-1A with Lower Design Option would include operational impacts to Narbeck Creek where the guideway extends over the stream (Figure 4-15). No other Build Alternative in this segment would include operational impacts to Narbeck Creek.

For Alternatives SWI-1B and SWI-1C, operational impacts to Seaway Avenue Tributary would be limited to a new crossing by the aerial guideway and the potential to increase shade and long-term vegetation management along the guideway.

### **Construction Impacts**

All Build Alternatives within the SW Everett Industrial Center Segment would result in construction impacts to Seaway Avenue Tributary and Hollow Dale Place Tributary as summarized in Table 4-17. South of 103rd Avenue, the Build Alternatives extend east of Airport Road and would result in construction impacts to Hollow Dale Place Tributary. The impacts to Hollow Dale Place Tributary are related to clearing and grubbing within the project limits. Alternative SWI-1A and its Lower Design Option would result in substantially greater construction impacts to Seaway Avenue Tributary than either Alternative SWI-1B or SWI-1C given the location of Seaway Avenue Tributary on the Station SWI-A site. These construction impacts would include temporary stream bypass, stream daylighting, and other similar impacts. Construction activities may temporarily affect fish and aquatic organisms through habitat disturbance, removal of riparian and in-stream vegetation, and reduced prey availability.

Alternative SWI-1A with Lower Design Option would also be expected to result in construction impacts to Narbeck Creek associated with necessary site grading to realign Casino Road.

#### **4.1.5.2 Wetlands**

As the SW Everett Industrial Center Segment continues north along the east side of Airport Road, the Build Alternatives would result in operational and construction impacts to multiple wetlands within the Swamp Creek, Japanese Gulch, and Powder Mill Gulch subbasins, as summarized in Table 4-18.



**Table 4-18 Impacts to Wetlands – SW Everett Industrial Center Segment**

| Build Alternative               | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|---------------------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| SWI-1A                          | WSC24                    | III                        | 2.7                  | 0.3                                      | 1.0                                       |
|                                 | WSCEV1                   | II                         | 4.6                  | 0.4                                      | 0.1                                       |
|                                 | WEV15B                   | III                        | <0.1                 | <0.1                                     | 0                                         |
|                                 | WEV19                    | II                         | 0.7                  | 0                                        | 0.1                                       |
|                                 | WEV20                    | III                        | 0.5                  | <0.1                                     | 0.5                                       |
|                                 | WEV26                    | III                        | 6.3                  | 0                                        | 0.1                                       |
|                                 | WEV27                    | III                        | 0.4                  | 0.4                                      | 0                                         |
|                                 | <b>Total Impacts</b>     |                            |                      | <b>1.1</b>                               | <b>1.8</b>                                |
| SWI-1A with Lower Design Option | WSC24                    | III                        | 2.7                  | 0.3                                      | 1.0                                       |
|                                 | WSCEV1                   | II                         | 4.6                  | 0.4                                      | 0.1                                       |
|                                 | WEV15B                   | III                        | <0.1                 | <0.1                                     | 0                                         |
|                                 | WEV19                    | II                         | 0.7                  | 0                                        | 0.1                                       |
|                                 | WEV20                    | III                        | 0.5                  | <0.1                                     | 0.5                                       |
|                                 | WEV26                    | III                        | 6.3                  | 0                                        | 0.1                                       |
|                                 | WEV27                    | III                        | 0.4                  | 0.4                                      | 0                                         |
|                                 | WEV29                    | III                        | 0.3                  | 0.1                                      | <0.1                                      |
|                                 | <b>Total Impacts</b>     |                            |                      | <b>1.2</b>                               | <b>1.8</b>                                |
| SWI-1B                          | WSC24                    | III                        | 2.7                  | 0.3                                      | 0.8                                       |
|                                 | WSCEV1                   | II                         | 4.6                  | 0.4                                      | 0.1                                       |
|                                 | WEV15B                   | III                        | <0.1                 | <0.1                                     | 0                                         |
|                                 | WEV19                    | II                         | 0.7                  | 0                                        | 0.1                                       |
|                                 | WEV20                    | III                        | 0.5                  | <0.1                                     | 0.5                                       |
|                                 | WEV27                    | III                        | 0.4                  | 0.1                                      | <0.1                                      |
|                                 | <b>Total Impacts</b>     |                            |                      | <b>0.8</b>                               | <b>1.5</b>                                |
| SWI-1C                          | WSC24                    | III                        | 2.7                  | 0.3                                      | 1.5                                       |
|                                 | WSCEV1                   | II                         | 4.6                  | 0.5                                      | 0.1                                       |
|                                 | WEV15B                   | III                        | <0.1                 | <0.1                                     | 0                                         |
|                                 | WEV19                    | II                         | 0.7                  | 0                                        | 0.1                                       |
|                                 | WEV20                    | III                        | 0.5                  | <0.1                                     | 0.5                                       |
|                                 | WEV27                    | III                        | 0.4                  | 0.1                                      | <0.1                                      |
|                                 | <b>Total Impacts</b>     |                            |                      | <b>0.9</b>                               | <b>2.2</b>                                |

NOTES:

a) Wetland impacts have been rounded to the nearest tenth.

## Operational Impacts

All Build Alternatives in this segment would have similar operational impacts to wetlands, although Alternative SWI-1A with Lower Design Option would have the most impacts, while Alternative SWI-1C would have the least.

All Build Alternatives would have operational impacts to Wetlands WEV20 and WSCEV1 located in the Swamp Creek subbasin (Figure 4-13 and Figure 4-14). Each alternative would have the same impacts to Wetland WEV20, and Alternative SWI-1C would have slightly more impacts to Wetland WSEV1 than the other alternatives. Wetland WSCEV1 is a large wetland system that receives stormwater from Paine Field and functions as the headwater for Hollow Dale Place Tributary. Wetland WEV20 as well as parts of the southwest corner of Wetland WSCEV1 are wetland mitigation sites constructed to compensate for wetland impacts associated with the widening of Airport Road. Operational impacts to these wetlands would be associated with wetland fill from columns necessary for the elevated guideway. This elevated guideway would be approximately 20 feet above the existing ground surface and would result in shading of the wetland and long-term vegetation management along the guideway. Coordination is ongoing with Snohomish County and the FAA to determine mitigation measures that minimize the risk of wildlife to the adjoining airport activities. Through this coordination, the extent of operational impacts may expand. Additional operational impacts to Wetland WSCEV1 may occur as design for conceptual wildlife mitigation is more fully understood.

Once the guideway crosses 100th Street SW, the footprint of the Build Alternatives enters the Japanese Gulch subbasin. Wetland WSC24 is located northeast of Airport Road and 100th Street SW (Figure 4-13). This wetland is the headwaters of Japanese Gulch and is also partly mitigation for the Airport Road widening project. Surface water within Wetland WSC24 drains into multiple culverts under Airport Road that generally drain to the west-northwest through Paine Field. The aerial guideway for all Build Alternatives would cross over Wetland WSC24, approximately 30 feet above the existing ground surface, and result in new wetland fill associated with columns necessary for the elevated guideway, shading to the wetland, and long-term vegetation management along the guideway.

As the Build Alternatives turn east and follow Casino Road, their footprints enter the Powder Mill Gulch subbasin. Here, the guideway would cross Wetland WEV27, which is located within the footprint of the Station SWI-A site (Figure 4-14). Operational impacts to Wetland WEV27 associated with Alternatives SWI-B and SWI-C would be limited to new shading and long-term vegetation management from the elevated guideway that would span the wetland. However, Wetland WEV27 is located on the Station SWI-A site and would be permanently filled to allow for Station SWI-A.

All the Build Alternatives would result in the same additional operational impacts to Wetland WEV15B. Wetland WEV15B would be operationally impacted by a drainage facility that extends into the SR 99/Airport Road Segment (Figure 4-12). The project limits for Alternative SWI-A with Lower Design Option would extend farther east than the other alternatives due to realignment of Casino Road, so that alternative would also result in operational impacts to Wetland WEV29, which is the headwaters of Narbeck Creek (Figure 4-15). The operational impacts to these wetlands are expected to be new shading from the elevated guideway and long-term vegetation management. Columns associated with the elevated guideway are not currently proposed within these wetlands.

Along with anticipated permanent fill placement, shading, and vegetation management within wetlands associated with the Build Alternatives within the SW Everett Industrial Center

Segment, project-related improvements would result in changes to impervious surface areas and new or replaced stormwater outfalls, resulting in operational impacts to the wetland hydroperiods within the study area, as described in the Water Resources Technical Report (Draft EIS Appendix G.9). The location and extent of these operational impacts within the SW Everett Industrial Center Segment will become more clear as design advances. Mitigation for operational impacts to wetlands would result in a no-net loss of ecosystem functions and acreages as described in Section 5.

### **Construction Impacts**

All Build Alternatives within the SW Everett Industrial Center Segment would be expected to result in construction impacts to wetlands due to construction staging or other similar activities that occur within the limits of the Build Alternative but outside the assumed area of operational impacts. Alternative SWI-1C would have the most construction impacts because of its increased impact to Wetland WSC24 when compared to the other alternatives, and Alternative SWI-1B would have the least construction impacts.

#### **4.1.5.3 Upland Habitat and Species**

Operational and construction impacts are anticipated to upland habitat and species in the SW Everett Industrial Center Segment.

### **Operational Impacts**

The SW Everett Industrial Center Segment is dominated by urban and mixed land cover types but does contain patches of open space along the east side of Airport Road, north of 100th Street SW. All Build Alternatives would have similar operational impacts to open space habitats (Table 4-19). These operational impacts to open space are due to the guideway being located along vegetated areas adjacent to Airport Road.

**Table 4-19 Operational Impacts to Upland Habitats – SW Everett Industrial Center Segment**

| Build Alternative               | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|---------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                 | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                 | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| SWI-1A                          | 5.0                         | 9.4              | 2.3         | 0.8                   | 0      | 17.4                                     |
| SWI-1A with Lower Design Option | 6.5                         | 12.0             | 2.4         | 0.8                   | 0.1    | 21.8                                     |
| SWI-1B                          | 4.6                         | 9.0              | 2.5         | 0.8                   | 0      | 16.9                                     |
| SWI-1C                          | 4.4                         | 9.3              | 2.5         | 0.9                   | 0      | 17.1                                     |

### **Construction Impacts**

All Build Alternatives within the SW Everett Industrial Center Segment would result in construction impacts to upland habitats due to clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project (Table 4-20). Alternative SWI-1A with Lower Design Option would result in the greatest

construction impacts to open space habitats primarily due to the regrading and realignment of Casino Road, south and east of Station SWI-A.

**Table 4-20 Construction Impacts to Upland Habitats – SW Everett Industrial Center Segment**

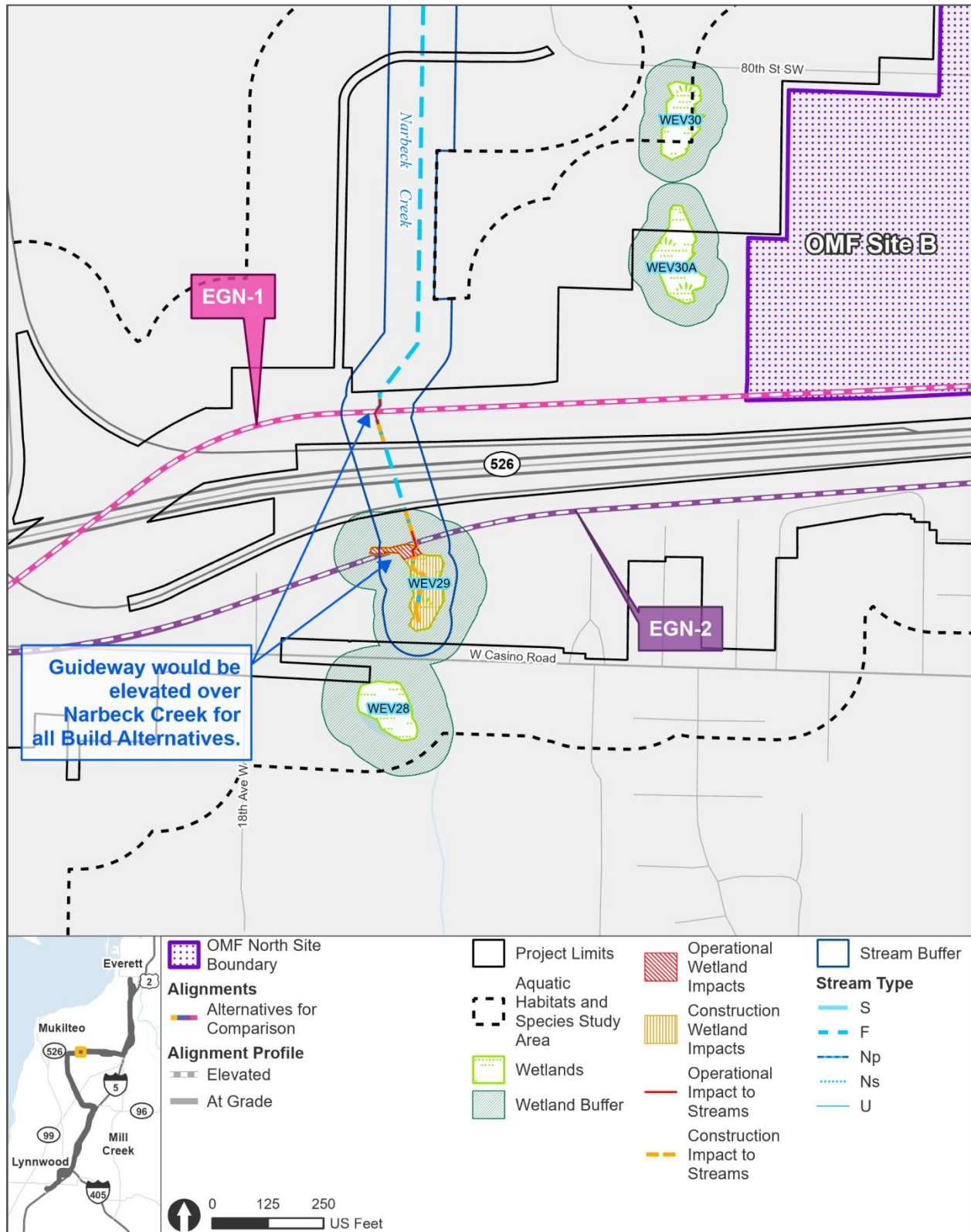
| Build Alternative               | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|---------------------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                 | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                                 | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| SWI-1A                          | 15.1                         | 17.9             | 4.1         | 1.1                   | 0      | 38.2                                      |
| SWI-1A with Lower Design Option | 16.2                         | 21.7             | 4.7         | 1.1                   | 1.0    | 44.7                                      |
| SWI-1B                          | 13.2                         | 15.0             | 3.5         | 1.2                   | 0      | 32.9                                      |
| SWI-1C                          | 22.1                         | 15.3             | 4.9         | 1.2                   | 0      | 43.4                                      |

#### 4.1.6 SR 526/Evergreen Segment

Ecosystems impacts in the SR 526/Evergreen Segment would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-15 through Figure 4-19 and described in subsequent sections. The alternative with the most and least impacts to streams, wetlands, and open space habitats varies across these resources, although Alternatives EGN-3E and EGN-1A would most often have the most impacts, and Alternative EGN-2B with North Side of SR 526 Design Option would generally have the least impacts.

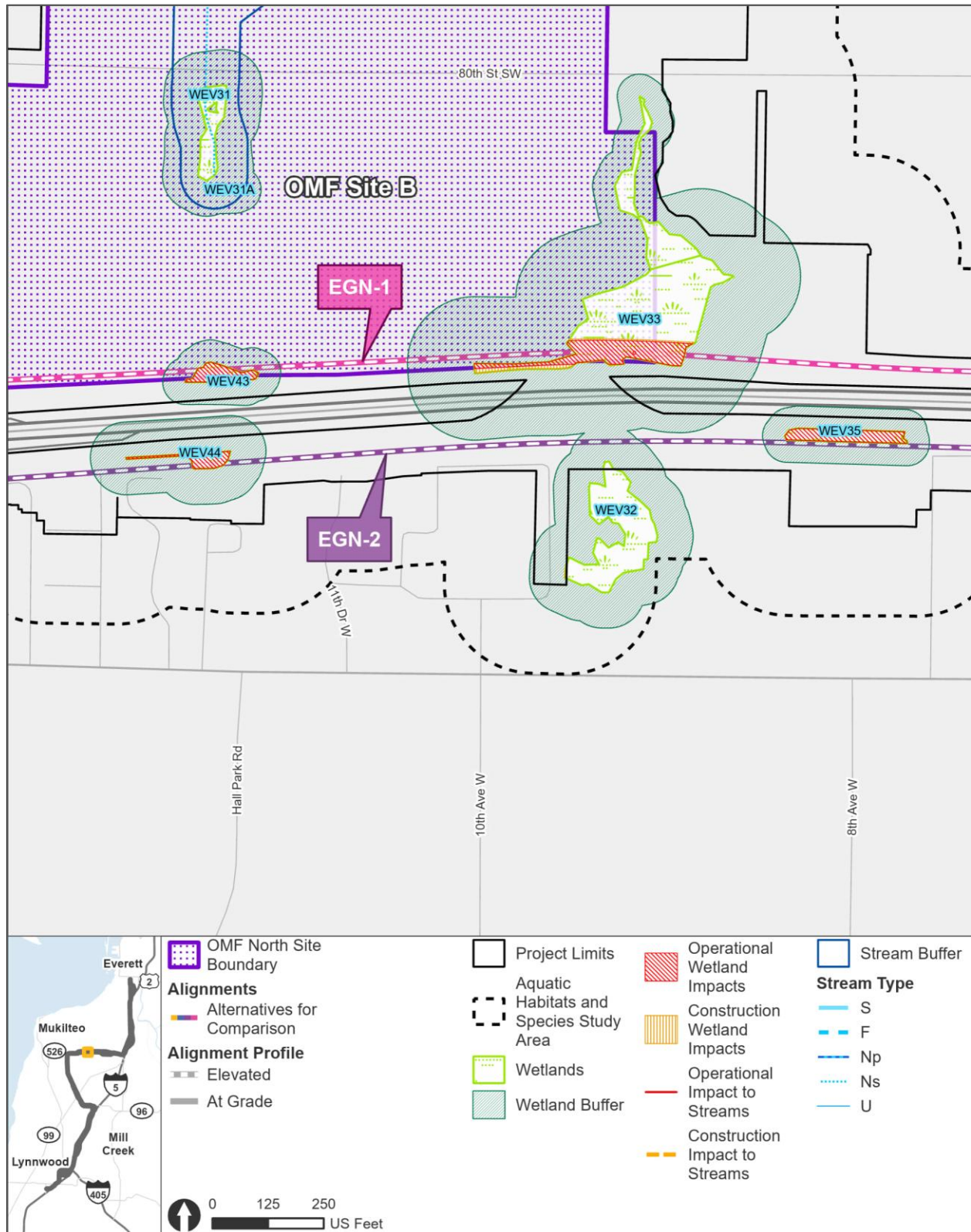


**Figure 4-15 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 526/Evergreen Segment (Part 1 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

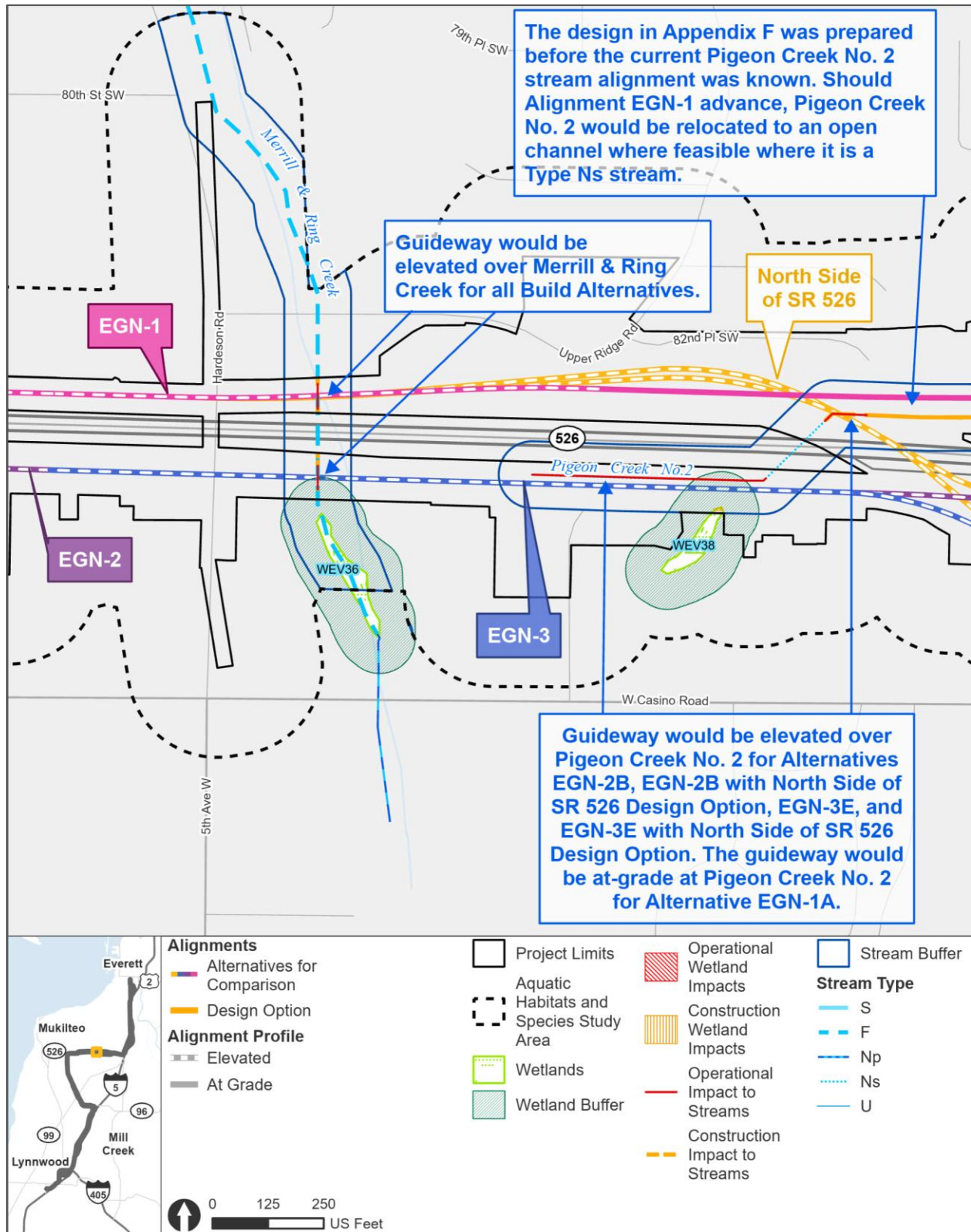
**Figure 4-16 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 526/Evergreen Segment (Part 2 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

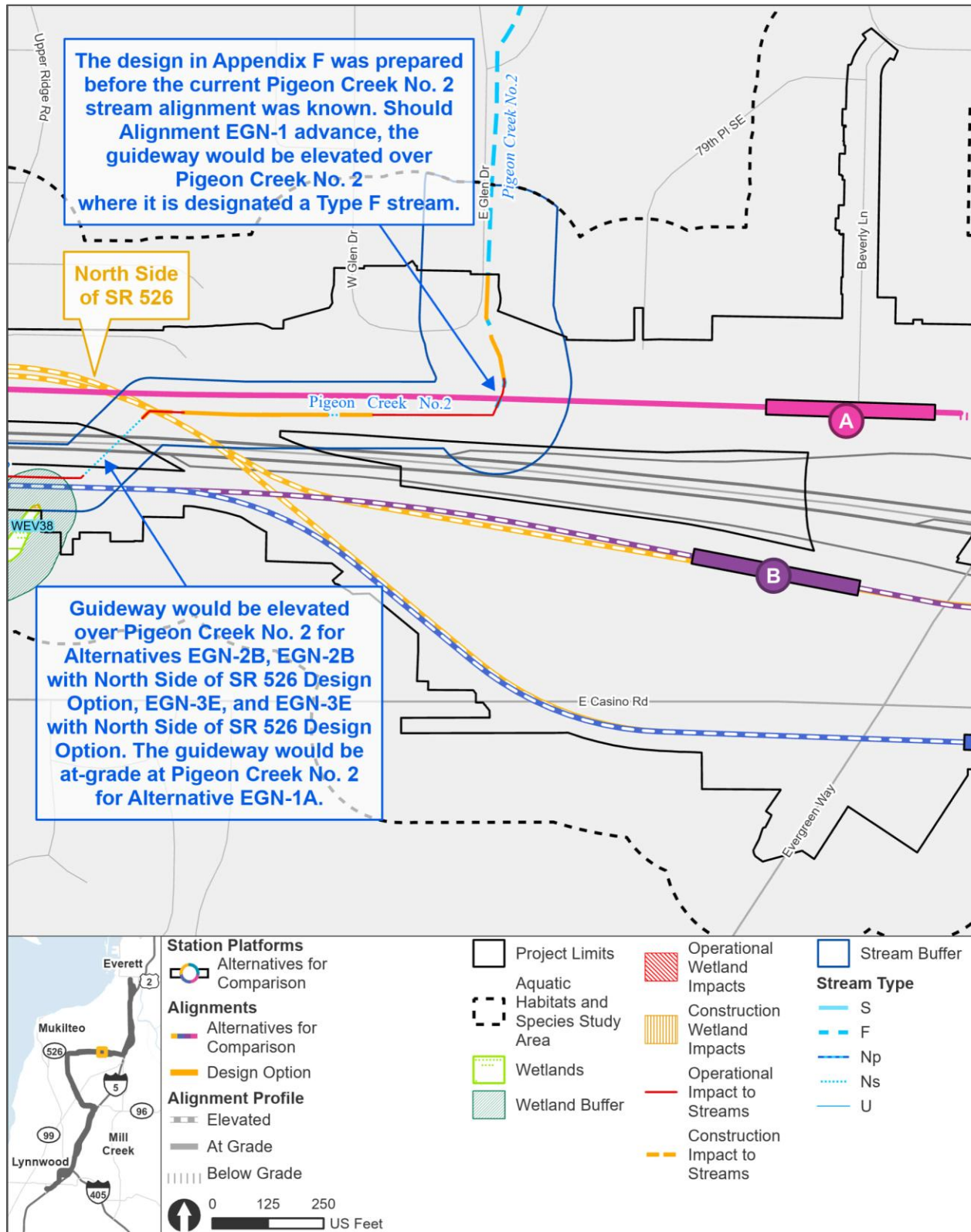


**Figure 4-17 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 526/Evergreen Segment (Part 3 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

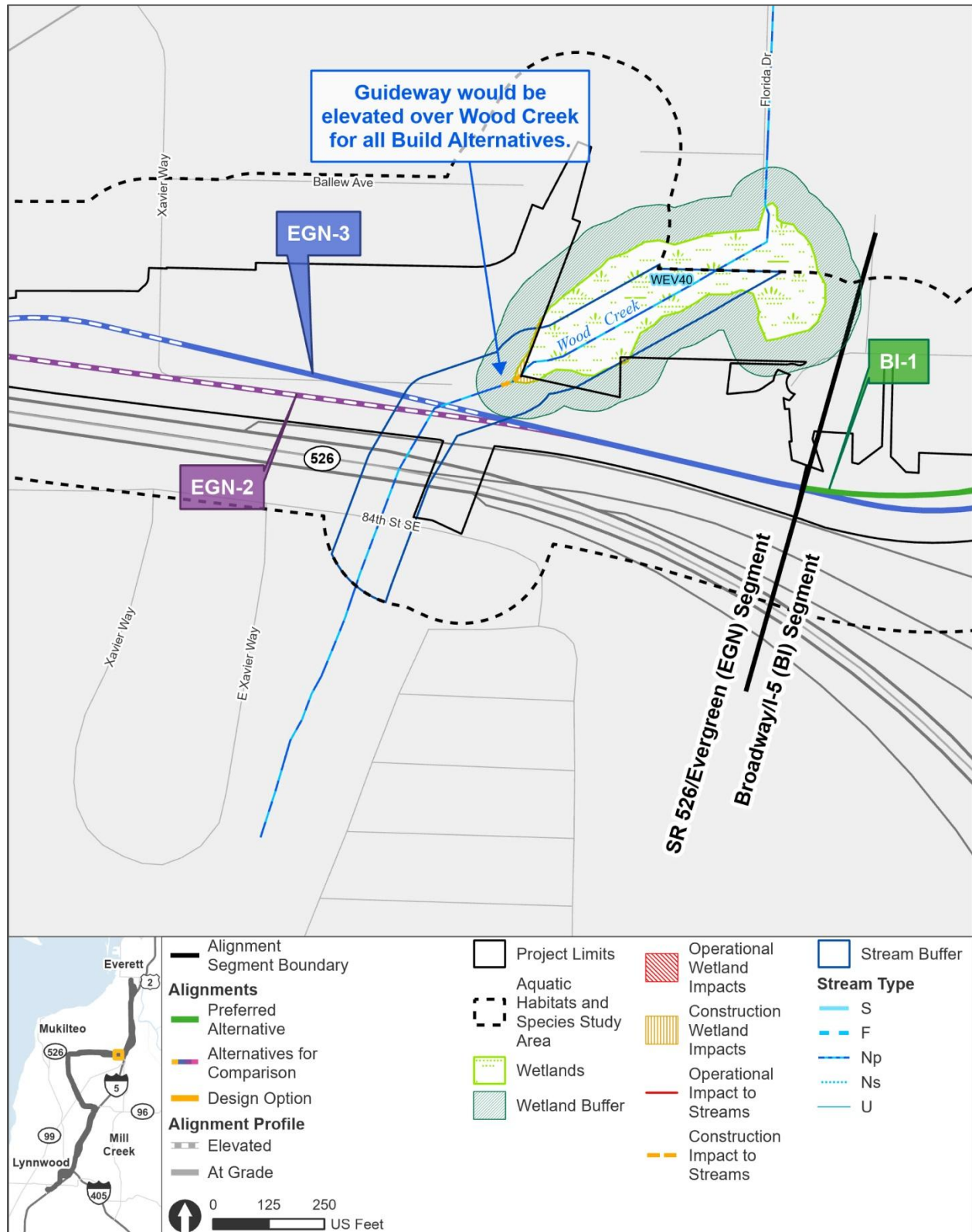
**Figure 4-18 Operational and Construction Impacts to Aquatic Resources and Wetlands – SR 526/Evergreen Segment (Part 4 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).



**Figure 4-19 Operational Impacts to Aquatic Resources and Wetlands – SR 526/Evergreen Segment (Part 5 of 5)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

#### 4.1.6.1 Aquatic Habitats and Species

Operational and construction impacts to streams are anticipated in the SR 526/Evergreen Segment as summarized in Table 4-21.

**Table 4-21 Impacts to Streams – SR 526/Evergreen Segment**

| Build Alternative                              | Stream(s)                         | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|------------------------------------------------|-----------------------------------|---------------|------------------------------------------------|-------------------------------------------------|
| EGN-1A                                         | Narbeck Creek <sup>b</sup>        | F             | 50                                             | 50                                              |
|                                                | Merrill & Ring Creek <sup>b</sup> | F             | 50                                             | 50                                              |
|                                                | Pigeon Creek No. 2                | F             | 50                                             | 250                                             |
|                                                |                                   | Ns            | 350                                            | 550                                             |
|                                                | Wood Creek                        | Np            | 0                                              | 50                                              |
|                                                | <b>Total Impacts</b>              |               | <b>500</b>                                     | <b>950</b>                                      |
| EGN-2B                                         | Narbeck Creek <sup>b</sup>        | F             | 50                                             | 200                                             |
|                                                | Merrill & Ring Creek <sup>b</sup> | F             | 50                                             | 50                                              |
|                                                | Pigeon Creek No. 2                | Ns            | 550                                            | 0                                               |
|                                                | Wood Creek                        | Np            | 0                                              | 50                                              |
|                                                | <b>Total Impacts</b>              |               | <b>650</b>                                     | <b>300</b>                                      |
| EGN-2B with North Side of SR 526 Design Option | Narbeck Creek <sup>b</sup>        | F             | 50                                             | 50                                              |
|                                                | Merrill & Ring Creek <sup>b</sup> | F             | 50                                             | 50                                              |
|                                                | Pigeon Creek No. 2                | Ns            | 100                                            | 150                                             |
|                                                | Wood Creek                        | Np            | 0                                              | 50                                              |
|                                                | <b>Total Impacts</b>              |               | <b>200</b>                                     | <b>300</b>                                      |
| EGN-3E                                         | Narbeck Creek <sup>b</sup>        | F             | 50                                             | 200                                             |
|                                                | Merrill & Ring Creek <sup>b</sup> | F             | 50                                             | 50                                              |
|                                                | Pigeon Creek No. 2                | Ns            | 550                                            | 0                                               |
|                                                | Wood Creek                        | Np            | 0                                              | 50                                              |
|                                                | <b>Total Impacts</b>              |               | <b>650</b>                                     | <b>300</b>                                      |
| EGN-3E with North Side of SR 526 Design Option | Narbeck Creek <sup>b</sup>        | F             | 50                                             | 50                                              |
|                                                | Merrill & Ring Creek <sup>b</sup> | F             | 50                                             | 50                                              |
|                                                | East ForkPigeon Creek No. 2       | Ns            | 100                                            | 200                                             |
|                                                | Wood Creek                        | Np            | 0                                              | 50                                              |
|                                                | <b>Total Impacts</b>              |               | <b>200</b>                                     | <b>350</b>                                      |

NOTES:

- Stream impacts have been rounded to the nearest 50 feet.
- Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031. Per EMC 19.37.160.A.2, both Narbeck Creek and Merrill & Ring Creek are not considered Type F streams by the City of Everett where they occur in the study area.

## Operational Impacts

The SR 526/Evergreen Segment extends west to east along the north and/or south sides of SR 526 to the proposed SR 526/Evergreen Station before continuing east along the north side of SR 526 (Figure 4-15 to Figure 4-19). The footprints for all Build Alternatives in the SR 526/Evergreen Segment begin south of SR 526 and extend into parts of the Powder Mill Gulch, Narbeck Creek, Merrill & Ring Creek, Pigeon Creek No. 2, North Creek, and Wood Creek subbasins. All Build Alternatives would result in operational impacts to streams. Alternatives EGN-3E and EGN-2B would have the most impacts, whereas Alternative EGN-3E with North Side of SR 526 Design Option and EGN-2B with North Side of SR 526 Design Option would have the least amount of impacts.

Alternatives EGN-1A, EGN-2B with North Side of SR 526 Design Option, and EGN-3E with North Side of SR 526 Design Option would cross SR 526 at the west end of the segment before spanning both Narbeck Creek (Figure 4-15) and Merrill & Ring Creek (Figure 4-16) as their footprints extend east. The aerial guideway would be approximately 30-40 feet above the Narbeck Creek stream channel and approximately 20-25 feet above the Merrill & Ring Creek channel. Operational impacts associated with these stream crossings would be limited to shading of the stream and long-term vegetation management along the guideway.

Alternative EGN-1A would remain north of SR 526 as it continues east towards the Station EGN-A site along Evergreen Way, along which it would span parts of Pigeon Creek No. 2 and underground, piped sections of Wood Creek (Figure 4-18 and Figure 4-19).

Both Alternative EGN-2B with North Side of SR 526 Design Option and Alternative EGN-3E with North Side of SR 526 Design Option would cross back to the south side of SR 526 as they approach Evergreen Way. As the guideway crosses SR 526, both alternatives would span Pigeon Creek No. 2 where it occurs in an open ditch and/or within a WSDOT culvert (Stream Crossing 46). These two alternatives then cross back to the north side of SR 526, east of Evergreen Way, spanning Wood Creek where it occurs within a WSDOT culvert under SR 526 (Stream Crossing 51) (Figure 4-18 and Figure 4-19). Due to the crossing location of Pigeon Creek No. 2 (where Pigeon Creek No. 2 is largely within a WSDOT culvert), these two alternatives would have the least amount of operational impacts to streams.

Both Alternatives EGN-2B and EGN-3E would remain along the south side of SR 526 as it extends east towards Evergreen Way. Both alternatives would run parallel to Pigeon Creek No. 2 along the south side of SR 526 and would have more impacts to the stream than the alternatives that only cross the stream, or Alternative EGN-1A that would run parallel to the stream on the north side of SR 526. Both Alternatives EGN-2B and EGN-3E would then span Narbeck Creek, Merrill & Ring Creek, and Pigeon Creek No. 2 as they approach Evergreen Way. These Build Alternatives would then cross over to the north side of SR 526 east of Evergreen Way and span Wood Creek where it occurs within a WSDOT culvert under SR 526 (Stream Crossing 51) (Figure 4-19). All SR 526/Evergreen Way Build Alternatives would cross Wood Creek where it is within a WSDOT culvert; therefore, no operational impacts to Wood Creek are expected.

While all Build Alternatives would result in operational impacts to these streams, no direct physical impacts to streams would occur. Operational impacts would be limited to new shading and long-term vegetation management where the elevated guideway spans open stream channels. Overwater shading could affect fish habitat, including changes in water temperature, alterations in riparian and in-stream vegetation, shifts in fish behavior, and reductions in prey species availability. Long-term vegetation management of riparian areas and the removal of

riparian vegetation could result in decreased stream shading, increased water temperatures, reduced fish habitat, changes in fish behavior, and a reduction of prey availability.

### Construction Impacts

All Build Alternatives within the SR 526/Evergreen Segment would result in construction impacts to streams due to temporary stream bypass, stream daylighting, and other similar impacts that occur within the limits of the Build Alternative but outside the assumed area of permanent impacts. Construction impacts associated with stream daylighting and stream bypass could include dewatering of streams, fish exclusion, disturbances to the streambed, and reduced water quality from increased turbidity and suspended sediments. Alternative EGN-1A would have the most construction impacts, and the other alternatives would have similar construction impacts.

#### 4.1.6.2 Wetlands

Operational and construction impacts are anticipated to wetlands in the SR 526/Evergreen Segment as summarized in Table 4-22.

**Table 4-22 Impacts to Wetlands – SR 526/Evergreen Segment**

| Build Alternative                                                           | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-----------------------------------------------------------------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| EGN-1A                                                                      | WEV33                    | III                        | 1.7                  | 0.3                                      | 0.1                                       |
|                                                                             | WEV40                    | III                        | 2.9                  | 0                                        | <0.1                                      |
|                                                                             | WEV43                    | IV                         | 0.1                  | 0.1                                      | <0.1                                      |
|                                                                             | <b>Total Impacts</b>     |                            |                      | <b>0.4</b>                               | <b>0.1</b>                                |
| EGN-2B                                                                      | WEV29                    | III                        | 0.3                  | <0.1                                     | 0.3                                       |
|                                                                             | WEV32                    | III                        | 0.6                  | 0                                        | <0.1                                      |
|                                                                             | WEV35                    | IV                         | 0.2                  | 0.2                                      | 0                                         |
|                                                                             | WEV40                    | III                        | 2.9                  | 0                                        | <0.1                                      |
|                                                                             | WEV44                    | III                        | 0.1                  | 0.1                                      | 0                                         |
|                                                                             | <b>Total Impacts</b>     |                            |                      | <b>0.3</b>                               | <b>0.3</b>                                |
| EGN-3E                                                                      | WEV29                    | III                        | 0.3                  | <0.1                                     | 0.3                                       |
|                                                                             | WEV32                    | III                        | 0.6                  | 0                                        | <0.1                                      |
|                                                                             | WEV35                    | IV                         | 0.2                  | 0.2                                      | 0                                         |
|                                                                             | WEV40                    | III                        | 2.9                  | 0                                        | <0.1                                      |
|                                                                             | WEV44                    | III                        | 0.1                  | 0.1                                      | 0                                         |
|                                                                             | WEV38                    | III                        | 0.1                  | 0                                        | <0.1                                      |
|                                                                             | <b>Total Impacts</b>     |                            |                      | <b>0.3</b>                               | <b>0.3</b>                                |
| EGN-2B with North Side of SR 526 Design Option<br>EGN-3E with North Side of | WEV33                    | III                        | 1.7                  | 0.3                                      | 0.1                                       |
|                                                                             | WEV40                    | III                        | 2.9                  | 0                                        | <0.1                                      |
|                                                                             | WEV43                    | IV                         | 0.1                  | 0.1                                      | <0.1                                      |
|                                                                             | <b>Total Impacts</b>     |                            |                      | <b>0.4</b>                               | <b>0.1</b>                                |



| Build Alternative    | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|----------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| SR 526 Design Option |                          |                            |                      |                                          |                                           |

NOTES:

- a) Wetland impacts have been rounded to the nearest tenth. The totals may not add up using the rows above because of rounding.

### Operational Impacts

All Build Alternatives in the SR 526/Evergreen Segment would result in similar operational impacts to wetlands as summarized in Table 4-22. Alternatives EGN-2B and EGN-3E would have the least impacts, and the other alternatives would have the same slightly higher expected operational impact.

The most impacts are expected from Alternatives EGN-1A, EGN-2B with North Side of SR 526 Design Option, and EGN-3E with North Side of SR 526 Design Option, which would extend from the terminus of the SW Everett Industrial Center Segment toward the east after crossing to the north side of SR 526, then to their respective proposed station locations before continuing along the north side of SR 526. These Build Alternatives have similar alignments that would result in similar operational impacts to Wetlands WEV33 and WEV43. Operational impacts to these wetlands would include wetland fill for columns necessary to support the elevated guideway, new shading of the wetlands, and long-term vegetation management along the guideway.

Alternatives EGN-2B and EGN-3E would extend west to east along the south side of SR 526 and would result in similar impacts to Wetlands WEV29, WEV35, and WEV44 (Figure 4-15 to Figure 4-19). These operational impacts would include wetland fill for columns necessary to support the elevated guideway, new shading of the wetlands, and long-term vegetation management along the guideway.

Along with anticipated permanent fill placement, shading, and vegetation management within wetlands associated with the Build Alternatives within the SR 526/Evergreen Segment, project-related improvements would result in changes to impervious surface areas and new or replaced stormwater outfalls, resulting in operational impacts to the wetland hydroperiods within the study area, as described in the Water Resources Technical Report (Draft EIS Appendix G.9). The location and extent of these operational impacts within the SR 526/Evergreen Segment will become more clear as design advances. Mitigation for operational impacts to wetlands would result in a no-net loss of ecosystem functions and acreages as described in Section 5.

### Construction Impacts

All Build Alternatives within the SR 526/Evergreen Segment would result in construction impacts to wetlands due to construction staging or other similar activities that occur within the limits of the Build Alternative but outside the assumed area of permanent impacts. Alternatives EGN-2B and EGN-3E would have the most construction impacts, and the other alternatives would have the least impacts.

#### 4.1.6.3 Upland Habitat and Species

Operational and construction impacts are anticipated to upland habitat and species in the SR 526/Evergreen Segment.

### Operational Impacts

The SR 526/Evergreen Way Segment is dominated by urban and mixed land cover types but does contain some patches of shrublands/grasslands along the north side of SR 526 that correspond to undeveloped areas adjacent to the Interurban Trail and WSDOT maintenance areas in the vicinity of the Wood Creek.

All Build Alternatives would have similar operational impacts to open space habitats, although Alternative EGN-1A would have the most, and Alternative EGN-3E would have the least.

Operational impacts are summarized in Table 4-23.

**Table 4-23 Operational Impacts to Upland Habitats – SR 526/Evergreen Segment**

| Build Alternative                              | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                                | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                                | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| EGN-1A                                         | 7.4                         | 8.3              | 5.0         | 1.0                   | 0      | 21.7                                     |
| EGN-2B                                         | 9.8                         | 10.7             | 1.9         | 0.6                   | 0      | 23.0                                     |
| EGN-2B with North Side of SR 526 Design Option | 9.9                         | 7.9              | 3.5         | 0.8                   | 0      | 22.0                                     |
| EGN-3E                                         | 7.9                         | 12.6             | 2.6         | 0.4                   | 0      | 23.5                                     |
| EGN-3E with North Side of SR 526 Design Option | 7.9                         | 9.1              | 4.1         | 0.7                   | 0      | 21.8                                     |

### Construction Impacts

All Build Alternatives within the SR 526/Evergreen Segment would result in construction impacts to open space habitats due to clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project. Alternatives EGN-2B and EGN-3E would have the most impacts, whereas Alternatives EGN-2B with North Side of SR 526 Design Option and EGN-3E with North Side of SR 526 Design Option would have the least amount of impacts.

Construction impacts are summarized in Table 4-24.

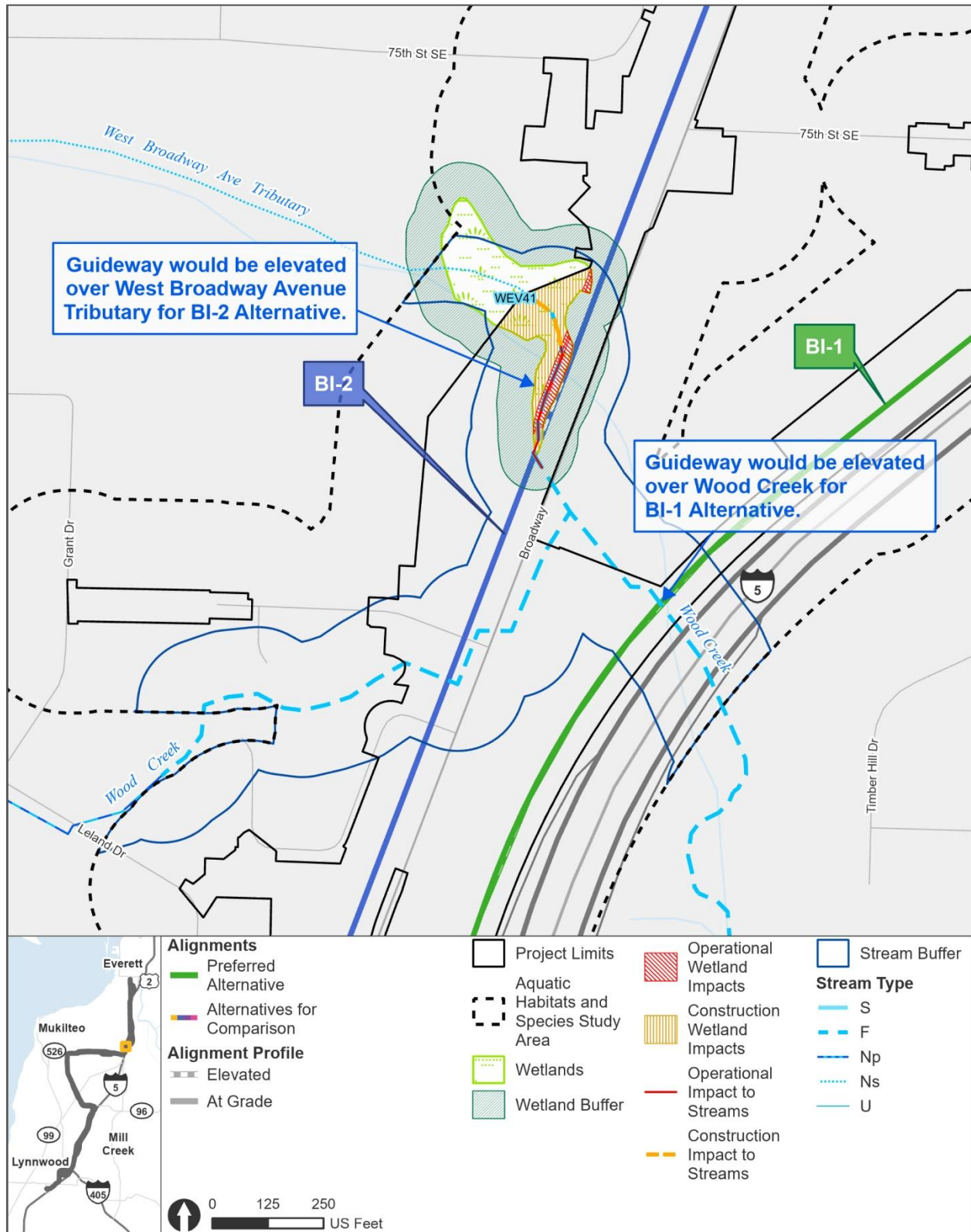
**Table 4-24 Construction Impacts to Upland Habitats – SR 526/Evergreen Segment**

| Build Alternative                              | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|------------------------------------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                                | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                                                | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| EGN-1A                                         | 14.9                         | 19.2             | 10.3        | 2.5                   | 0      | 46.8                                      |
| EGN-2B                                         | 19.7                         | 12.0             | 5.9         | 2.7                   | 0      | 40.3                                      |
| EGN-2B with North Side of SR 526 Design Option | 20.4                         | 14.7             | 7.3         | 2.1                   | 0      | 44.4                                      |
| EGN-3E                                         | 12.9                         | 14.4             | 6.5         | 2.7                   | 0      | 36.5                                      |
| EGN-3E with North Side of SR 526 Design Option | 13.5                         | 17.8             | 8.0         | 2.1                   | 0      | 41.3                                      |

#### 4.1.7 Broadway/I-5 Segment

Ecosystems impacts in the Broadway/I-5 Segment would include operational and construction impacts to one stream, one wetland, and uplands as shown on Figure 4-20 and described in subsequent sections. Alternative BI-1 would generally cause less impacts to streams, wetlands, and open space habitats than Alternative BI-2, as detailed below.

**Figure 4-20 Operational and Construction Impacts to Aquatic Resources and Wetlands – Broadway/I-5 Segment**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).



#### 4.1.7.1 Aquatic Habitats and Species

Operational and construction impacts to streams are anticipated in the Broadway/I-5 Segment as summarized in Table 4-25. All stream impacts are associated with Alternative BI-2.

**Table 4-25 Impacts to Streams – Broadway/I-5 Segment**

| Build Alternative | Stream(s)                      | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|-------------------|--------------------------------|---------------|------------------------------------------------|-------------------------------------------------|
| BI-1              | Wood Creek                     | F             | 0                                              | 0                                               |
|                   | <b>Total Impacts</b>           |               | <b>0</b>                                       | <b>0</b>                                        |
| BI-2              | Wood Creek                     | F             | 0                                              | 0                                               |
|                   | West Broadway Avenue Tributary | F             | 300                                            | 50                                              |
|                   |                                | Np            | 0                                              | 150                                             |
|                   | <b>Total Impacts</b>           |               | <b>300</b>                                     | <b>200</b>                                      |

NOTES:

a) Stream impacts have been rounded to the nearest 50 feet.

#### **Operational Impacts**

The Broadway/I-5 Segment turns north from SR 526 and would either follow the west side of the I-5 (Alternative BI-1) or the west side of Broadway (Alternative BI-2). This segment begins within the Wood Creek subbasin before extending north into the Lowell subbasin. No aquatic habitats or species were observed within the study area within the Lowell subbasin. Alternative BI-2 would have stream impacts. Alternative BI-1 is not expected to impact streams.

Alternative BI-1 would be located along the west side of the WSDOT right-of-way and is not expected to have stream impacts because this alternative would span a piped section of Wood Creek with an aerial guideway elevated approximately 16 feet above the ground surface. Wood Creek occurs within a buried culvert under I-5 (Stream Crossing 53). The depth to the piped stream crossing at this location is not currently known. The elevated guideway follows design guidelines provided by WSDOT to accommodate a future WSDOT fish passage project at this location. Therefore, while Alternative BI-1 would result in a new stream crossing, no stream impacts are expected to Wood Creek.

Alternative BI-2 would generally be at-grade along the west side of Broadway. An aerial guideway condition along Broadway is not generally feasible due to existing overhead utilities that limit vertical clearance. As the at-grade guideway would extend north from its proposed at-grade crossing of Beverly Boulevard, it would extend across the culvert that conveys Wood Creek, approximately 80 feet downstream from its inlet (Stream Crossing 51). As the at-grade guideway would continue north towards the existing West Broadway Avenue Tributary culvert, the existing topography and grades adjacent to the culvert would allow the at-grade guideway to be bridged over the culvert. This bridge would avoid physical disturbance to the existing West Broadway Avenue Tributary culvert while accommodating a future fish passage project. However, as the guideway transitions back to an at-grade condition north of this bridged section, West Broadway Avenue Tributary would be physically impacted. Therefore, West Broadway Avenue Tributary at this location would be realigned into a new open channel shifted further west from its existing piped location.

## Construction Impacts

Alternative BI-1 would not result in any potential construction impacts to streams. Alternative BI-2 would be expected to result in potential construction impacts to West Broadway Avenue Tributary due to temporary stream crossings, temporary stream bypasses, additional shading, or other similar stream impacts within the limits of the Build Alternative but outside the area of operational impacts. Construction impacts could include the dewatering of streams, fish exclusion, disturbances to the streambed, and reduced water quality from increased turbidity and suspended sediments. Additional temporary shading of streams during construction could result in impacts to riparian and in-stream vegetation, alteration of fish behavior, and impacts to prey species availability.

### 4.1.7.2 Wetlands

Operational and construction impacts are anticipated to wetlands in the Broadway/I-5 Segment as summarized in Table 4-26. All operational impacts are expected to be associated with Alternative BI-2.

**Table 4-26 Impacts to Wetlands – Broadway/I-5 Segment**

| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| BI-1              | None                     | N/A                        | N/A                  | 0                                        | 0                                         |
|                   | <b>Total Impacts</b>     |                            |                      | <b>0</b>                                 | <b>0</b>                                  |
| BI-2              | WEV41                    | III                        | 1.50                 | 0.2                                      | 0.5                                       |
|                   | <b>Total Impacts</b>     |                            |                      | <b>0.2</b>                               | <b>0.5</b>                                |

NOTES:

a) Wetland impacts have been rounded to the nearest tenth

## Operational Impacts

Wetland WEV41 is associated with West Broadway Avenue Tributary and is present on the west side of Broadway, which is in the study area for one of the two alternatives in this segment (Alternative BI-2). No operational impacts to wetlands are expected with Alternative BI-1. However, Alternative BI-1 would be largely located within the WSDOT right-of-way and other private properties that are otherwise limited in view from public rights-of-way. Therefore, much of the Alternative BI-1 footprint has not been observed at this stage of design and additional wetlands may be present.

Alternative BI-2 is expected to result in operational impacts to Wetland WEV41. Operational impacts to Wetland WEV41 would include impacts from construction of an at-grade guideway fill prism, physical disturbance associated with the realignment of the West Broadway Avenue Tributary, and long-term vegetation management along the guideway.

## Construction Impacts

No temporary construction impacts to wetlands from construction activities are expected with Alternative BI-1. Alternative BI-2 is expected to result in temporary construction impacts to wetlands as summarized in Table 4-26. These construction impacts may include temporary fill for construction staging, West Broadway Avenue Tributary realignment, or other similar

activities that occur within the limits of the Build Alternative but outside the area of operational impacts.

#### 4.1.7.3 Upland Habitat and Species

Operational and construction impacts are anticipated to upland habitat and species in the Broadway/I-5 Segment.

##### **Operational Impacts**

The Broadway/I-5 Segment is dominated by urban and mixed land cover types but does contain some patches of shrublands/grassland open space areas at gaps in residential uses along the I-5 corridor. These gaps appear within the Alternative BI-1 footprint and in the vicinity of the West Broadway Avenue Tributary, west of Broadway, in a regional utility corridor within the Alternative BI-2 footprint. The expected impacts from both alternatives are similar, although the impacts expected from Alternative BI-1 are slightly higher.

Operational impacts are summarized in Table 4-27.

**Table 4-27 Operational Impacts to Upland Habitats – Broadway/I-5 Segment**

| Build Alternative | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| BI-1              | 3.6                         | 11.8             | 5.9         | 0.5                   | 0      | 21.8                                     |
| BI-2              | 3.4                         | 8.8              | 6.4         | 0.4                   | 0      | 19.0                                     |

##### **Construction Impacts**

Both Build Alternatives within the Broadway/I-5 Segment would result in construction impacts to open space habitats. These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project.

Construction impacts associated with Alternative BI-1 would include small patches of shrubland/grassland open space along parts of the undeveloped WSDOT right-of-way. Alternative BI-2 has more expected construction impacts to shrubland/grassland land cover types, which generally corresponds to the undeveloped open space along West Broadway Avenue Tributary. Construction impacts are summarized in Table 4-28.

**Table 4-28 Construction Impacts to Upland Habitats – Broadway/I-5 Segment**

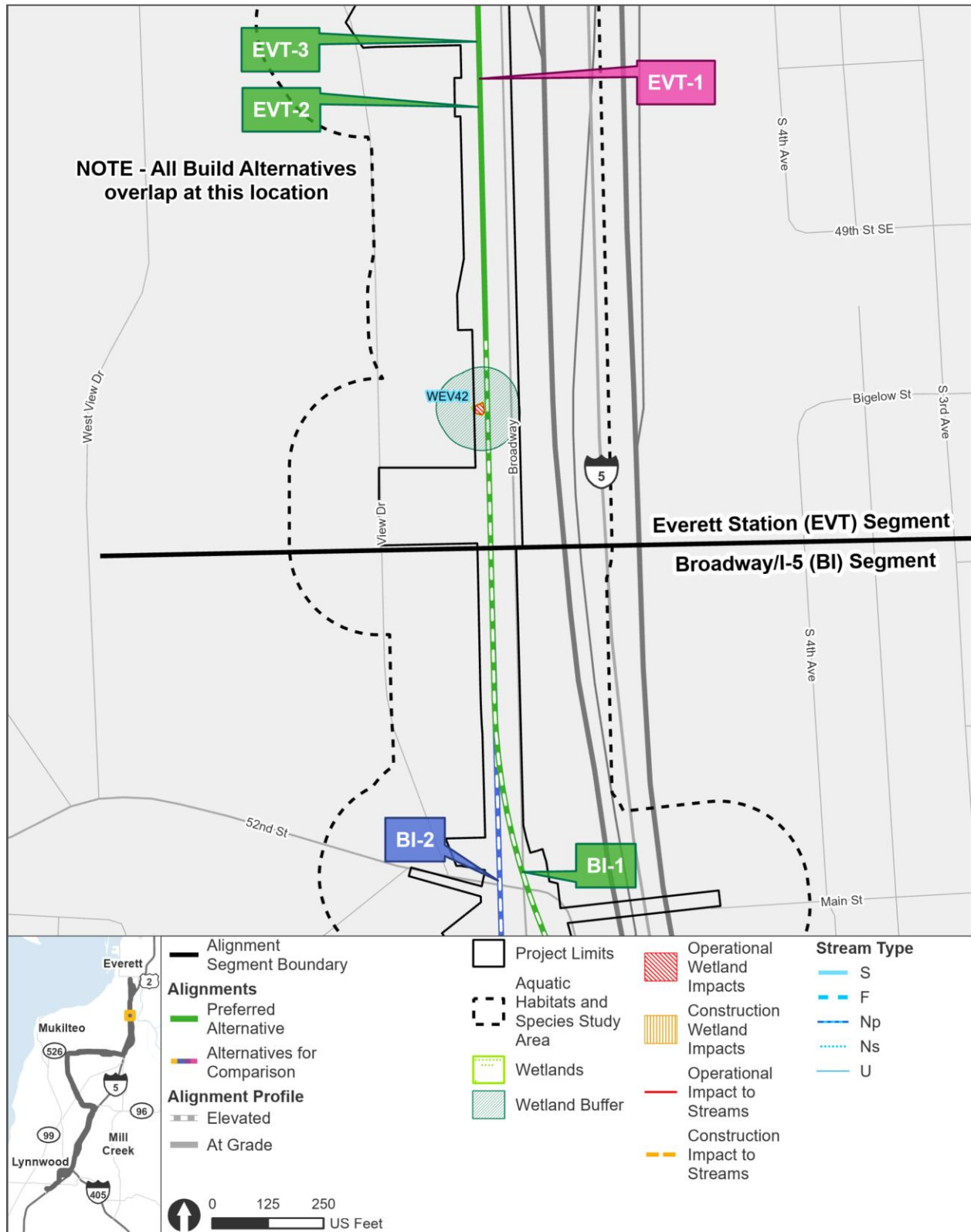
| Build Alternative | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                   | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                   | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| BI-1              | 6.9                          | 19.2             | 8.1         | 1.3                   | 0      | 35.5                                      |
| BI-2              | 6.6                          | 20.1             | 8.5         | 2.5                   | 0      | 37.7                                      |

#### 4.1.8 Everett Station Segment

Ecosystems impacts in the Everett Station Segment would include operational and construction impacts to one wetland and uplands, as shown on Figure 4-21 and described in subsequent sections. There are no known streams within the Everett Station Segment study area. The three Build Alternatives in this segment would each have the same impacts to the wetland and open space habitats, as detailed below.



**Figure 4-21 Operational and Construction Impacts to Aquatic Resources and Wetlands – Everett Station Segment**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

#### 4.1.8.1 Aquatic Habitats and Species

There are no known streams within the Everett Station Segment. Therefore, no operational or construction impacts would occur to streams in this segment from any of the Build Alternatives.

#### 4.1.8.2 Wetlands

Operational impacts are anticipated to Wetland WEV42 within the Everett Station Segment as summarized in Table 4-29. All Build Alternatives would result in the same operational impacts to this wetland. There would be no construction impacts to wetlands within the Everett Station Segment.

**Table 4-29 Impacts to Wetlands – Everett Station Segment**

| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| EVT-1A            | WEV42                    | III                        | <0.1                 | <0.1                                     | 0                                         |
| EVT-2C            | <b>Total Impacts</b>     |                            |                      | <b>&lt;0.1</b>                           | <b>0</b>                                  |
| EVT-3D            |                          |                            |                      |                                          |                                           |

NOTES:

a) Wetland impacts have been rounded to the nearest tenth.

#### **Operational Impacts**

All Build Alternatives in the Everett Station Segment are expected to result in the same limited operational impacts to Wetland WEV42, a small depressional wetland that has established adjacent to a gravel shoulder along the west side of Broadway. Under all Everett Station Build Alternatives, the aerial guideway west of Broadway would span Wetland WEV42 with approximately 30 feet of clearance and columns placed as far from the wetland as allowed. Therefore, the operational impacts to Wetland WEV42 would include new shading and long-term vegetation management along the guideway.

#### **Construction Impacts**

There are no construction impacts expected within the Everett Station Segment.

#### 4.1.8.3 Upland Habitat and Species

Operational and construction impacts are anticipated to upland habitat and species in the Everett Station Segment.

#### **Operational Impacts**

The Everett Station Segment is dominated by urban and mixed land cover types but does contain some small patches of shrubland/grassland open spaces within and near the Evergreen Cemetery property. There are no forest land covers present in the segment. All alternatives would have the same limited impacts to shrublands/grasslands. Operational impacts are summarized in Table 4-30.

**Table 4-30 Operational Impacts to Upland Habitats – Everett Station Segment**

| Build Alternative | Operational Impacts [acres (percent)] |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------|---------------------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                   | Urban and Mixed:                      |                  |             | Open Space:           |        |                                          |
|                   | High-Density                          | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| EVT-1A            | 7.0                                   | 4.8              | 3.0         | 0.5                   | 0      | 15.3                                     |
| EVT-2C            | 7.1                                   | 4.3              | 3.0         | 0.5                   | 0      | 14.9                                     |
| EVT-3D            | 8.3                                   | 4.3              | 3.1         | 0.5                   | 0      | 16.2                                     |

### **Construction Impacts**

All Build Alternatives within the Everett Station Segment would result in the same limited construction impacts to open space habitats due to clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project.

Construction impacts are summarized in Table 4-31.

**Table 4-31 Construction Impacts to Upland Habitats – Everett Station Segment**

| Build Alternative | Construction Impacts [acres (percent)] |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------|----------------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                   | Urban and Mixed:                       |                  |             | Open Space:           |        |                                           |
|                   | High-Density                           | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| EVT-1A            | 31.4                                   | 10.4             | 2.2         | 0.3                   | 0      | 44.3                                      |
| EVT-2C            | 31.7                                   | 9.8              | 2.2         | 0.3                   | 0      | 44.0                                      |
| EVT-3D            | 36.0                                   | 9.4              | 2.4         | 0.3                   | 0      | 48.0                                      |

### **4.1.9 OMF North Site Alternatives**

Impacts from the OMF North site alternatives would include operational and construction impacts to streams, wetlands, and uplands as summarized in Table 4-32 to Table 4-35. The impacts from the OMF North site alternatives are described in subsequent sections and shown on Figure 4-22 to Figure 4-25.

Overall, OMF Site F and its design option would have the least impacts to ecosystems, including streams, wetlands, and upland habitats as shown in Table 4-32 to Table 4-35. OMF Site E would have the greatest wetland and upland habitat impacts of the OMF North site alternatives and the greatest extent of impacts to Type F streams. OMF Site B would have the greatest total impact to streams.

**Table 4-32 Impacts to Streams – OMF North Site Alternatives Summary**

| Build Alternative                                                      | Stream Type          | Total Operational Impacts (linear feet) <sup>a</sup> | Total Construction Impacts (linear feet) <sup>a</sup> |
|------------------------------------------------------------------------|----------------------|------------------------------------------------------|-------------------------------------------------------|
| OMF Site F                                                             | F                    | 100                                                  | 0                                                     |
|                                                                        | <b>Total Impacts</b> | <b>100</b>                                           | <b>0</b>                                              |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | N/A                  | 0                                                    | 0                                                     |
|                                                                        | <b>Total Impacts</b> | <b>0</b>                                             | <b>0</b>                                              |
| OMF Site E                                                             | Np                   | 0                                                    | 250                                                   |
|                                                                        | F                    | 850                                                  | 550                                                   |
|                                                                        | <b>Total Impacts</b> | <b>850</b>                                           | <b>800</b>                                            |
| OMF Site B                                                             | Ns                   | 1,850                                                | 0                                                     |
|                                                                        | F                    | 100                                                  | 0                                                     |
|                                                                        | <b>Total Impacts</b> | <b>1,950</b>                                         | <b>0</b>                                              |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option      | Ns                   | 2,400                                                | 0                                                     |
|                                                                        | F                    | 250                                                  | 0                                                     |
|                                                                        | <b>Total Impacts</b> | <b>2,650</b>                                         | <b>0</b>                                              |

NOTES:

a) Stream impacts have been rounded to the nearest 50 feet.

**Table 4-33 Impacts to Wetlands – OMF North Site Alternatives Summary**

| Build Alternative                                                      | Preliminary Wetland Rating | Total Operational Impacts (acres) <sup>a</sup> | Total Construction Impacts (acres) <sup>a</sup> |
|------------------------------------------------------------------------|----------------------------|------------------------------------------------|-------------------------------------------------|
| OMF Site F                                                             | IV                         | 0.2                                            | 0                                               |
|                                                                        | III                        | 0.1                                            | 0                                               |
|                                                                        | <b>Total Impacts</b>       | <b>0.3</b>                                     | <b>0</b>                                        |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | IV                         | 0.2                                            | 0                                               |
|                                                                        | III                        | 1.0                                            | 0                                               |
|                                                                        | <b>Total Impacts</b>       | <b>1.2</b>                                     | <b>0</b>                                        |
| OMF Site E                                                             | II                         | 4.0                                            | 6.1                                             |
|                                                                        | III                        | 1.2                                            | 0.5                                             |
|                                                                        | <b>Total Impacts</b>       | <b>5.2</b>                                     | <b>6.6</b>                                      |
| OMF Site B                                                             | III                        | 1.0                                            | 2.0                                             |
|                                                                        | IV                         | 0.1                                            | 0.6                                             |
|                                                                        | <b>Total Impacts</b>       | <b>1.1</b>                                     | <b>2.6</b>                                      |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option      | III                        | 1.2                                            | 2.0                                             |
|                                                                        | IV                         | 0.1                                            | 0.3                                             |
|                                                                        | <b>Total Impacts</b>       | <b>1.3</b>                                     | <b>2.3</b>                                      |

NOTES:

a) Wetland impacts have been rounded to the nearest tenth



**Table 4-34 Operational Impacts to Uplands – OMF North Site Alternatives Summary**

| Build Alternative                                                                   | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------------------------------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                                                                     | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                                                                     | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| OMF Site F                                                                          | 29.1                        | 22.6             | 9.5         | 0.5                   | 0      | 61.8                                     |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option              | 28.5                        | 21.7             | 9.4         | 1.0                   | 0      | 60.5                                     |
| OMF Site E                                                                          | 12.0                        | 15.5             | 10.3        | 16.6                  | 3.1    | 57.5                                     |
| OMF Site B<br><br>OMF Site B with Lead Tracks to South Side of SR 526 Design Option | 12.4                        | 2.4              | 5.5         | 2.8                   | 0.1    | 23.2                                     |

**Table 4-35 Construction Impacts to Upland Habitats – OMF North Site Alternatives Summary**

| Build Alternative                                                      | Operational Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|------------------------------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                                                        | Urban and Mixed:            |                  |             | Open Space:           |        |                                           |
|                                                                        | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| OMF Site F                                                             | 11.4                        | 9.5              | 1.1         | 0.3                   | 0      | 22.3                                      |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | 11.1                        | 8.8              | 2.3         | 0.3                   | 0      | 22.5                                      |
| OMF Site E                                                             | 4.8                         | 0                | 17.3        | 14.0                  | 3.3    | 39.4                                      |
| OMF Site B                                                             | 23.0                        | 22.3             | 5.2         | 10.8                  | 4.9    | 66.2                                      |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option      | 24.9                        | 33.2             | 5.2         | 10.4                  | 4.9    | 78.6                                      |

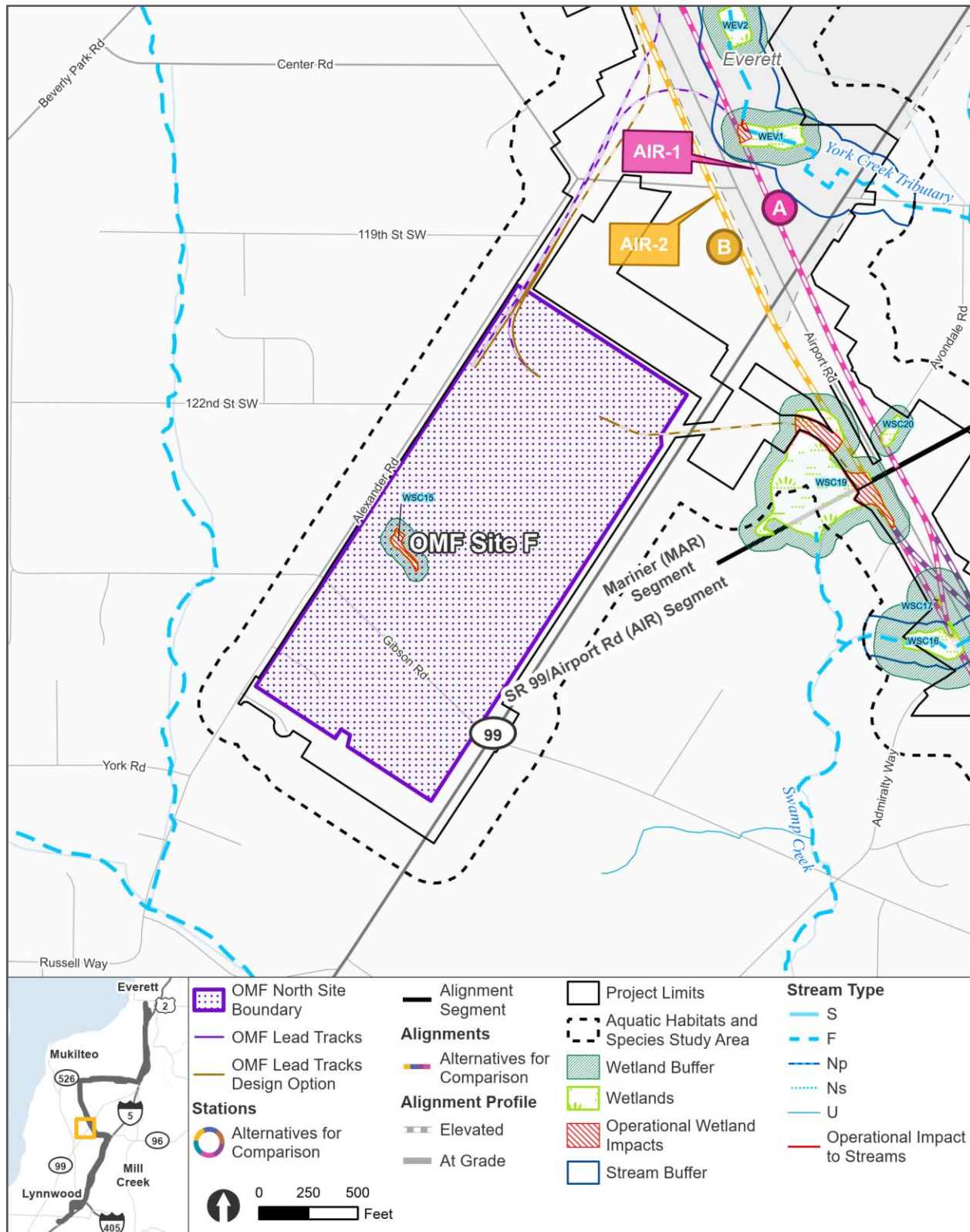
An analysis of ecosystem impacts of each OMF North site alternative is provided in the following sections.

#### **4.1.9.1 OMF Site F**

Ecosystems impacts from OMF Site F would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-22 and described in subsequent sections. OMF Site F would have less impacts to wetlands and open space habitats, and more impacts to streams and urban and mixed habitats compared its Lead Tracks to West Side of Airport Road Design Option, as detailed below.

OMF Site F has the fewest impacts on streams, wetlands, and open space habitats of the three OMF North site alternatives, as described in the following sections.

**Figure 4-22 Operational and Construction Impacts to Aquatic Resources and Wetlands – OMF Site F**



### ***Aquatic Habitats and Species***

Operational impacts streams are anticipated from OMF Site F as summarized in Table 4-36. No construction impacts are anticipated.

**Table 4-36 Impacts to Streams – OMF Site F**

| Build Alternative                                                      | Stream(s)            | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|------------------------------------------------------------------------|----------------------|---------------|------------------------------------------------|-------------------------------------------------|
| OMF Site F                                                             | York Creek Tributary | F             | 100                                            | 0                                               |
|                                                                        | <b>Total Impacts</b> |               | <b>0</b>                                       | <b>0</b>                                        |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | None                 | N/A           | 0                                              | 0                                               |
|                                                                        | <b>Total Impacts</b> |               | <b>0</b>                                       | <b>0</b>                                        |

NOTES:

a) Stream impacts have been rounded to the nearest 50 feet.

### ***Operational Impacts***

OMF Site F is located within the Swamp Creek subbasin. No aquatic resources are mapped within OMF Site F itself. However, the OMF Site F lead tracks would connect to Alternative AIR-1A, east of Airport Road and north of Station AIR-A, and would result in operational impacts to York Creek Tributary. As a result of the lead track connections to Alternative AIR-1A from OMF Site F, new shading to Wetland WEV1 would be expected. As York Creek Tributary flows through Wetland WEV1, this would also be considered an operational impact to York Creek Tributary. These operational impacts to aquatic habitats would only occur if Alternative AIR-1A is selected as the preferred alternative and are described in the Alternative AIR-1A operational impacts analysis (Section 4.1.4) and in Table 4-36 above.

The OMF Site F with Lead Tracks to West Side of Airport Road Design Option would connect with lead tracks to Alternative AIR-2B, west of Airport Road, where there are no aquatic habitats. Therefore, the OMF Site F with Lead Tracks to West Side of Airport Road Design Option has no operational impacts to streams.

### ***Construction Impacts***

OMF Site F would not result in construction impacts to streams. OMF Site F with Lead Tracks to West Side of Airport Road Design Option may result in construction impacts to York Creek Tributary. However, these construction impacts are expected to be the same as those described for Alternative AIR-1A in Section 4.1.4 and are therefore not described further or included in Table 4-36.

### ***Wetlands***

Operational impacts are anticipated to wetlands from OMF Site F as summarized in Table 4-37. There would be no construction impacts to wetlands expected from OMF Site F.



**Table 4-37 Impacts to Wetlands – OMF Site F**

| Build Alternative                                                      | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|------------------------------------------------------------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| OMF Site F                                                             | WSC15                    | IV                         | 0.2                  | 0.2                                      | 0                                         |
|                                                                        | WEV1                     | III                        | 0.8                  | 0.1                                      | 0                                         |
|                                                                        | <b>Total Impacts</b>     |                            |                      | <b>0.3</b>                               | <b>0</b>                                  |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | WSC15                    | IV                         | 0.2                  | 0.2                                      | 0                                         |
|                                                                        | WEV19                    | III                        | 4.9                  | 1.0                                      | 0                                         |
|                                                                        | <b>Total Impacts</b>     |                            |                      | <b>1.2</b>                               | <b>0</b>                                  |

NOTES:

a) Wetland impacts have been rounded to the nearest tenth

### *Operational Impacts*

OMF Site F with Lead Tracks to the West Side of Airport Road Design Option would have more operational impacts to wetlands than OMF Site F. Both OMF Site F and OMF Site F with Lead Tracks to West Side of Airport Road Design Option would result in similar operational impacts on Wetland WSC15. This wetland is located within the footprint of the OMF Site F facility and would be permanently filled as part of the site grading. Mitigation for operational impacts to wetlands would result in a no-net loss of ecosystem functions and acreages as described in Section 5. OMF Site F would tie into Alternative AIR-1A, resulting in operational impacts to Wetland WEV1 north of the Station AIR-A site. These impacts would be similar to those described for the Alternative AIR-1A operational impact analysis (Section 4.1.4). However, these operational impacts would include new shade to Wetland WEV1 and long-term vegetation management along the guideway.

OMF Site F with Lead Tracks to West Side of Airport Road Design Option would result in approximately 1.0 acres of operational impacts to Wetland WSC19, where the lead tracks would connect with Alternative AIR-2B. These operational impacts to Wetland WSC19 would occur from the aerial guideway and lead tracks creating new shade on the wetland and limiting the vegetated condition within the required vegetation clear zone. The aerial guideway ranges from 50 to 60 feet above the ground surface of Wetland WSC19. Additionally, columns necessary to support the aerial guideway would be unavoidably located within Wetland WSC19.

### *Construction Impacts*

There are no anticipated construction impacts to wetlands as part of OMF Site F or OMF Site F with Lead Tracks to West Side of Airport Road Design Option. All impacts to wetlands from this OMF site are considered operational impacts.

### *Upland Habitat and Species*

Operational and construction impacts are anticipated to upland habitat and species from OMF Site F.

### Operational Impacts

OMF Site F is dominated by urban and mixed land covers but does contain some small patches of open space habitat between housing developments and within disturbed spaces between roads and commercial development. There are no forest land covers present within OMF Site F. OMF Site F and its Lead Tracks to West Side of Airport Road Design Option would have more operational impacts to open space habitats than OMF Site F.

Operational impacts are summarized in Table 4-38.

**Table 4-38 Operational Impacts to Upland Habitats – OMF Site F**

| Build Alternative                                                      | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|------------------------------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                                                        | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                                                        | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| OMF Site F                                                             | 29.1                        | 22.6             | 9.5         | 0.5                   | 0      | 61.8                                     |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | 28.5                        | 21.7             | 9.4         | 1.0                   | 0      | 60.5                                     |

### Construction Impacts

OMF Site F and OMF Site F with Lead Tracks to West Side of Airport Road Design Option would result in construction impacts to open space habitats. These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project. OMF Site F with Lead Tracks to West Side of Airport Road Design Option would have slightly more total construction impacts than OMF Site F.

Construction impacts are summarized in Table 4-39.

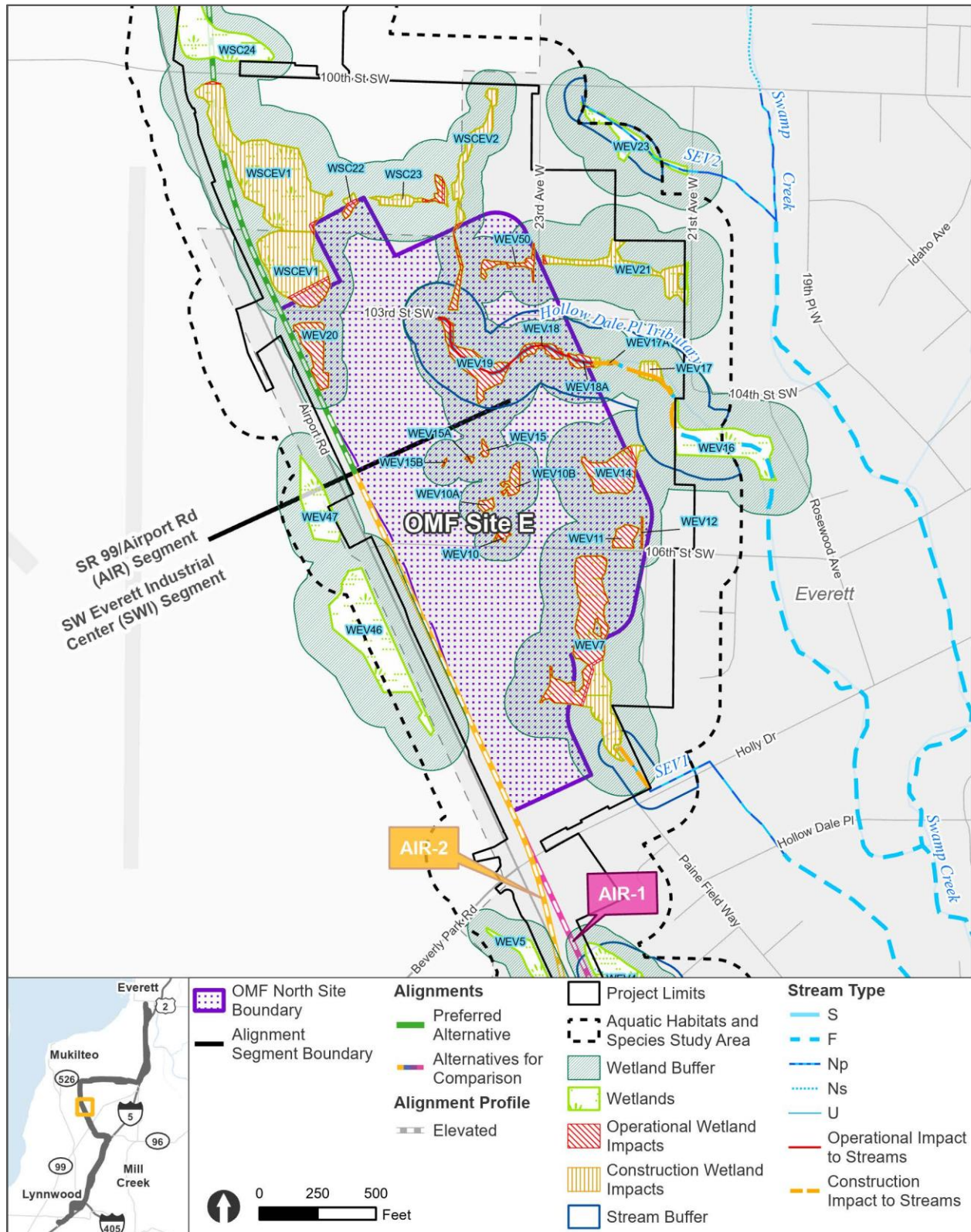
**Table 4-39 Construction Impacts to Upland Habitats – OMF Site F**

| Build Alternative                                                      | Operational Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|------------------------------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                                                        | Urban and Mixed:            |                  |             | Open Space:           |        |                                           |
|                                                                        | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| OMF Site F                                                             | 11.4                        | 9.5              | 1.1         | 0.3                   | 0      | 22.3                                      |
| OMF Site F with Lead Tracks to West Side of Airport Road Design Option | 11.1                        | 8.8              | 2.3         | 0.3                   | 0      | 22.5                                      |

#### **4.1.9.2 OMF Site E**

Ecosystems impacts from OMF Site E would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-23 and described in subsequent sections. OMF Site E would have the greatest wetland and open space habitat impacts of the three OMF North site alternatives.

**Figure 4-23 Operational and Construction Impacts to Aquatic Resources and Wetlands – OMF Site E**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).



### Aquatic Habitats and Species

Operational and construction impacts to streams are anticipated from OMF Site E as summarized in Table 4-40.

**Table 4-40 Impacts to Streams – OMF Site E**

| Build Alternative | Stream(s)                   | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|-------------------|-----------------------------|---------------|------------------------------------------------|-------------------------------------------------|
| OMF Site E        | SEV1                        | Np            | 0                                              | 250                                             |
|                   | Hollow Dale Place Tributary | F             | 850                                            | 550                                             |
|                   | <b>Total Impacts</b>        |               | <b>850</b>                                     | <b>800</b>                                      |

NOTES:

a) Stream impacts have been rounded to the nearest 50 feet.

#### Operational Impacts

OMF Site E is located within the Swamp Creek subbasin. The site spans across portions of Everett and unincorporated Snohomish County. Hollow Dale Place Tributary, located within OMF Site E, would experience operational impacts.

The Hollow Dale Place Tributary begins south of 103rd Street SW and flows generally southeast. Wetland WSCEV1 is a headwater wetland to Hollow Dale Place Tributary, which receives stormwater discharge from Paine Field. This wetland drains through a culvert under 103rd Street SW to Hollow Dale Place Tributary. Approximately 835 linear feet of Hollow Dale Place Tributary is located within the OMF Site E facility and would be permanently filled as part of the site grading. Sound Transit would realign Hollow Dale Place Tributary around the OMF Site E facility and tie into Wetland WSCEV1 to reconnect its headwater wetland and maintain positive drainage through the wetland. Additional operational impacts to Hollow Dale Place Tributary may occur as design of the stream realignment advances and potential opportunities for wetland and stream conceptual mitigation are more fully understood.

Along with the physical impacts to Hollow Dale Place Tributary described above, OMF Site E would have operational impacts to the water quality and water quantity within Hollow Dale Place Tributary and Stream SEV1 from the alteration of existing drainage patterns, changes to land cover types, and the proposed stormwater treatment and detention infrastructure. These operational impacts are more thoroughly described within the Water Resources Technical Report (Draft EIS Appendix G.9).

#### Construction Impacts

OMF Site E would result in construction impacts to both Hollow Dale Place Tributary and Stream SEV1. These construction impacts may include temporary stream crossings, temporary stream bypasses, additional shading, or other similar stream impacts within the limits of this site alternative but outside the area of operational impacts. Construction impacts could include the dewatering of streams, fish exclusion, disturbances to the streambed, and reduced water quality from increased turbidity and suspended sediments. Additional temporary shading of streams during construction activities could result in construction impacts to riparian and in-stream vegetation, alteration of fish behavior, and impacts to prey species availability.

## Wetlands

Operational and construction impacts are anticipated to wetlands from OMF Site E as summarized in Table 4-41.

**Table 4-41 Impacts to Wetlands – OMF Site E**

| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| OMF Site E        | WSC22                    | III                        | 0.1                  | 0.1                                      | <0.1                                      |
|                   | WSC23                    | II                         | 0.3                  | 0.1                                      | 0.2                                       |
|                   | WEV7                     | II                         | 2.4                  | 1.7                                      | 0.7                                       |
|                   | WEV10                    | III                        | <0.1                 | <0.1                                     | 0                                         |
|                   | WEV10A                   | III                        | 0.1                  | 0.1                                      | 0                                         |
|                   | WEV10B                   | III                        | 0.2                  | 0.2                                      | 0                                         |
|                   | WEV11                    | III                        | 0.2                  | 0.2                                      | 0                                         |
|                   | WEV12                    | III                        | <0.1                 | <0.1                                     | 0                                         |
|                   | WEV14                    | II                         | 0.7                  | 0.7                                      | <0.1                                      |
|                   | WEV15                    | III                        | <0.1                 | <0.1                                     | 0                                         |
|                   | WEV15A                   | III                        | <0.1                 | <0.1                                     | 0                                         |
|                   | WEV15B                   | III                        | <0.1                 | <0.1                                     | 0                                         |
|                   | WEV16                    | II                         | 1.2                  | 0                                        | <0.1                                      |
|                   | WEV17                    | II                         | 0.2                  | 0                                        | 0.2                                       |
|                   | WEV17A                   | II                         | <0.1                 | <0.1                                     | 0                                         |
|                   | WEV18                    | II                         | 0.2                  | 0.2                                      | 0                                         |
|                   | WEV18A                   | II                         | 0.1                  | 0.1                                      | 0                                         |
|                   | WEV19                    | II                         | 0.7                  | 0.7                                      | 0                                         |
|                   | WEV20                    | III                        | 0.5                  | 0.5                                      | 0                                         |
|                   | WEV21                    | II                         | 0.7                  | <0.1                                     | 0.7                                       |
|                   | WEV50                    | II                         | 0.2                  | 0.2                                      | 0                                         |
|                   | WSCEV1                   | II                         | 4.6                  | 0.3                                      | 4.3                                       |
|                   | WSCEV2                   | III                        | 0.6                  | 0.1                                      | 0.5                                       |
|                   | <b>Total Impacts</b>     |                            |                      | <b>5.2</b>                               | <b>6.6</b>                                |

NOTES:

- a) Wetland impacts have been rounded to the nearest tenth. Totals may not appear to add up using the rows above due to rounding.

## Operational Impacts

OMF Site E extends northwest to southeast along the east side of Airport Road. The footprint of OMF Site E would result in operational wetland impacts to 22 wetlands located within the OMF Site E site boundary, as shown on Figure 4-23 and summarized in Table 4-41.

Wetlands WEV10, WEV10A, WEV10B, WEV11, WEV12, WEV15, WEV15A, WEV15B, WEV17A, WEV18, WEV18A, WEV19, and WEV50 are located entirely within the OMF Site E

facility. Wetlands WEV7, WEV14, WEV17, WEV20, WEV21, WSC22, WSC23, WSCEV1, and WSCEV2 are partially within the OMF Site E footprint. For the purpose of this analysis, all wetlands within the OMF Site E facility footprint were assumed to be permanently filled as part of site grading activities. Mitigation for operational impacts to wetlands would result in a no-net loss of ecosystem functions and acreages as described in Section 5.

Additional operational impacts to wetlands may occur as design of the stream realignment advances and potential opportunities for wetland and stream conceptual mitigation are more fully understood. Further, coordination is ongoing with Snohomish County and the FAA to determine mitigation measures that minimize the risk of wildlife to the adjoining airport activities. Through this coordination, the extent of operational impacts may also expand.

### *Construction Impacts*

OMF Site E would result in construction impacts to Wetlands WEV7, WEV14, WEV16, WEV17, WEV21, WSC22, WSC23, WSCEV1, and WSCEV2 due to construction staging, wetland and stream mitigation, or other similar activities that occur within the limits of the site alternative but outside the area of operational impacts.

### *Upland Habitat and Species*

Operational and construction impacts are anticipated to upland habitat and species from OMF Site E.

### *Operational Impacts*

The OMF Site E area is made up primarily of urban and mixed land covers, although operational impacts to open space habitats would include a combined 19.7 acres of impacts to shrublands/grasslands and forest (Table 4-42), which make up about 34% of the operational impact area.

Operational impacts are summarized in Table 4-42.

**Table 4-42 Operational Impacts to Upland Habitats – OMF Site E**

| Build Alternative | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| OMF Site E        | 12.0                        | 15.5             | 10.3        | 16.6                  | 3.1    | 57.5                                     |

### *Construction Impacts*

OMF Site E would result in construction impacts to upland habitats, including 17.7 acres of open space habitat (Table 4-43). These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project.

**Table 4-43 Construction Impacts to Upland Habitats – OMF Site E**

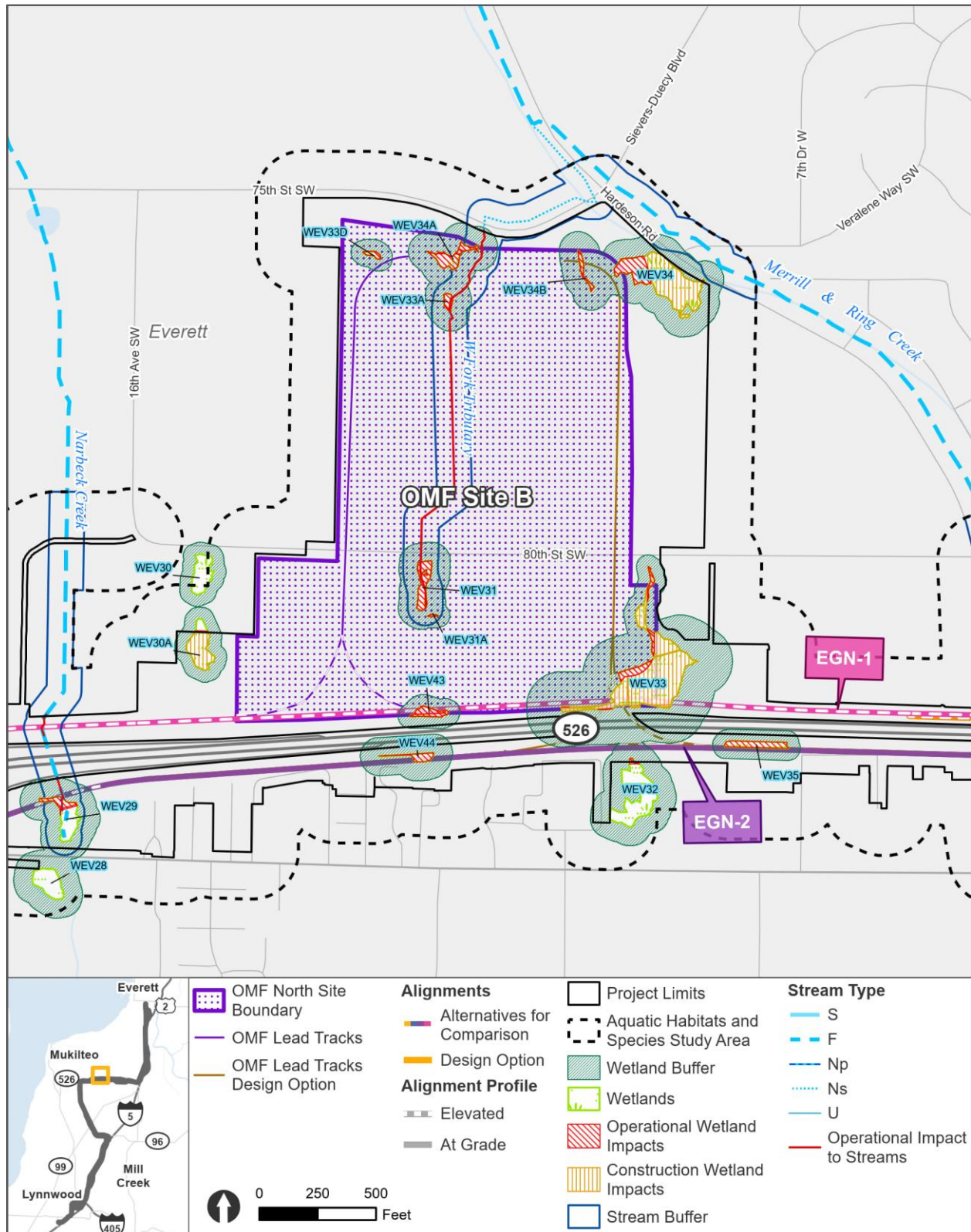
| Build Alternative | Construction Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------|------------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                   | Urban and Mixed:             |                  |             | Open Space:           |        |                                           |
|                   | High-Density                 | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| OMF Site E        | 4.8                          | 0                | 17.3        | 14.0                  | 3.3    | 39.4                                      |

#### 4.1.9.3 OMF Site B

Ecosystems impacts from OMF Site B would include operational and construction impacts to streams, wetlands, and uplands as shown on Figure 4-24 and Figure 4-25 and described in subsequent sections. OMF Site B and its Lead Tracks to South Side of SR 526 Design Option would have similar impacts to streams, wetlands, and open space habitats although OMF Site B with Lead Tracks to South Side of SR 526 Design Option would generally have less impacts, as detailed below. OMF Site B has the greatest stream impacts of the three OMF North site alternatives.

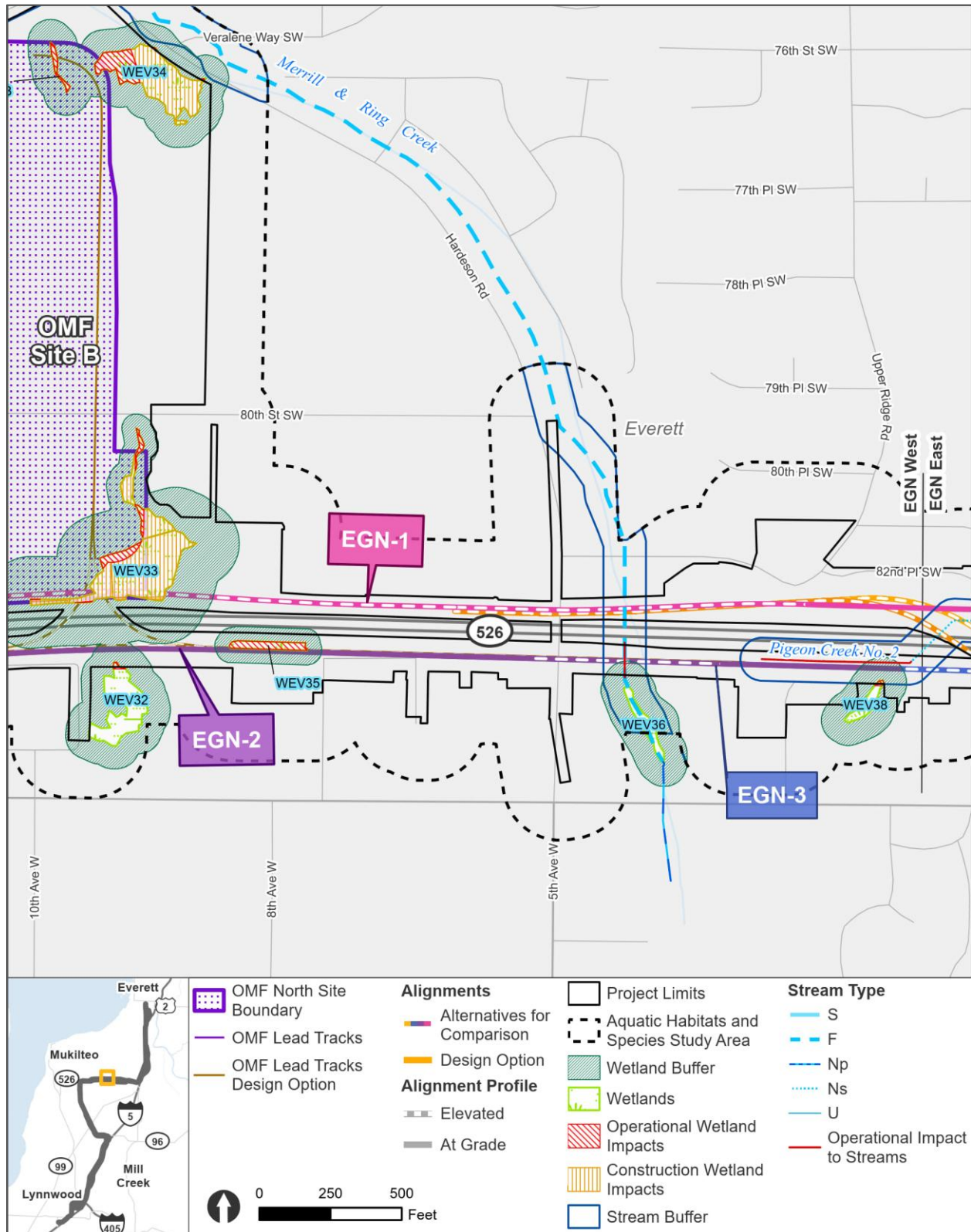


**Figure 4-24 Operational and Construction Impacts to Aquatic Resources and Wetlands – OMF Site B (Part 1 of 2)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

**Figure 4-25 Operational and Construction Impacts to Aquatic Resources and Wetlands – OMF Site B (Part 2 of 2)**



SOURCE: City of Everett (2023), City of Everett (2024), Snohomish County (2024b), WDFW (2024a).

### Aquatic Habitats and Species

Operational impacts to streams are anticipated from OMF Site B as summarized in Table 4-44. There would be no construction impacts to streams from OMF Site B or its design option.

**Table 4-44 Impacts to Streams – OMF Site B**

| Build Alternative                                                 | Stream(s)                         | Stream Typing | Operational Impacts (linear feet) <sup>a</sup> | Construction Impacts (linear feet) <sup>a</sup> |
|-------------------------------------------------------------------|-----------------------------------|---------------|------------------------------------------------|-------------------------------------------------|
| OMF Site B                                                        | West Fork Tributary               | Ns            | 1,850                                          | 0                                               |
|                                                                   | Narbeck Creek <sup>b</sup>        | F             | 100                                            | 0                                               |
|                                                                   | <b>Total Impacts</b>              |               | <b>1,950</b>                                   | <b>0</b>                                        |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option | West Fork Tributary               | Ns            | 1,850                                          | 0                                               |
|                                                                   | Merrill & Ring Creek <sup>b</sup> | F             | 100                                            | 0                                               |
|                                                                   | Narbeck Creek <sup>b</sup>        | F             | 150                                            | 0                                               |
|                                                                   | Pigeon Creek No. 2                | Ns            | 550                                            | 0                                               |
|                                                                   | <b>Total Impacts</b>              |               | <b>2,650</b>                                   | <b>0</b>                                        |

NOTES:

- Stream impacts have been rounded to the nearest 50 feet. Totals may not appear to add up using the rows above due to rounding.
- Stream typing based on the presence of suitable fish habitat as defined by WAC 222-16-031. Per EMC 19.37.160.A.2, both Narbeck Creek and Merrill & Ring Creek are not considered Type F streams by the City of Everett where they occur in the study area.

### Operational Impacts

The OMF Site B site boundary is located within the Merrill & Ring Creek subbasin, although the lead tracks for OMF Site B and OMF Site B with Lead Tracks to the South Side of SR 526 Design Option would extend into adjacent subbasins. The lead tracks associated with OMF Site B would extend into the Narbeck Creek subbasin, and both OMF Site B and its design option would result in operational impacts on aquatic habitats, including the West Fork Tributary and Narbeck Creek. The West Fork Tributary, located within the OMF Site B site boundary, would be permanently filled as part of site grading activities. The lead tracks for OMF Site B and its design option would extend over Narbeck Creek, although on different sides of SR 526, resulting in new shade and long-term vegetation management along the elevated guideway.

OMF Site B and its Lead Tracks to South Side of SR 526 Design Option would have the same impact to the West Fork Tributary and would have similar operational impacts to Narbeck Creek. OMF Site B with Lead Tracks to South Side of SR 526 Design Option would have more overall operational impacts, however, because it would also impact Merrill & Ring Creek and Pigeon Creek No. 2 (Figure 4-25). The additional impact stems from the lead tracks associated with the design option, which would extend into the Narbeck Creek and Pigeon Creek No. 2 subbasins. Lead tracks for the OMF Site B with Lead Tracks to South Side of SR 526 Design Option also extend east to cross Merrill & Ring Creek, resulting in additional stream impacts. Similarly, the lead tracks associated with the design option would span parts of Pigeon Creek No. 2 where it occurs in an open ditch. The operational impacts associated with this would also include new shade of the stream and long-term vegetation management along the guideway.

Along with the physical impacts to the streams described above, OMF Site B would have operational impacts to the water quality and water quantity within the remaining downstream



reach of the West Fork Tributary and within the mainstem of Merrill & Ring Creek from the alteration of existing drainage patterns, changes to land cover types, and the proposed stormwater treatment and detention infrastructure. These operational impacts are more thoroughly described within the Water Resources Technical Report (Draft EIS Appendix G.9).

### Construction Impacts

There are no anticipated construction impacts to streams as part of OMF Site B or OMF Site B with Lead Tracks to South Side of SR 526 Design Option.

### Wetlands

Operational and construction impacts are anticipated to wetlands from OMF Site B as summarized in Table 4-45.

**Table 4-45 Impacts to Wetlands – OMF Site B**

| Build Alternative                                                 | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------------------------------------------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
| OMF Site B                                                        | WEV30A                   | IV                         | 0.4                  | 0                                        | 0.3                                       |
|                                                                   | WEV31                    | III                        | 0.2                  | 0.2                                      | 0                                         |
|                                                                   | WEV31A                   | IV                         | <0.1                 | <0.1                                     | 0                                         |
|                                                                   | WEV33 <sup>b</sup>       | III                        | 1.3                  | 0.1                                      | 1.2                                       |
|                                                                   |                          | IV                         | 0.3                  | <0.1                                     | 0.3                                       |
|                                                                   | WEV33A                   | III                        | 0.1                  | 0.1                                      | 0                                         |
|                                                                   | WEV33D                   | IV                         | <0.1                 | <0.1                                     | 0                                         |
|                                                                   | WEV34                    | III                        | 1.1                  | 0.3                                      | 0.8                                       |
|                                                                   | WEV34A                   | III                        | 0.2                  | 0.2                                      | 0                                         |
|                                                                   | WEV34B                   | III                        | 0.1                  | 0.1                                      | 0                                         |
|                                                                   | WEV43                    | IV                         | 0.1                  | 0.1                                      | 0                                         |
|                                                                   | <b>Total Impacts</b>     |                            |                      | <b>1.1</b>                               | <b>2.6</b>                                |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option | WEV29                    | III                        | 0.3                  | 0.1                                      | 0                                         |
|                                                                   | WEV31                    | III                        | 0.2                  | 0.2                                      | 0                                         |
|                                                                   | WEV31A                   | IV                         | <0.1                 | <0.1                                     | 0                                         |
|                                                                   | WEV32                    | III                        | 0.6                  | <0.1                                     | 0                                         |
|                                                                   | WEV33 <sup>b</sup>       | III                        | 1.3                  | 0.1                                      | 1.2                                       |
|                                                                   |                          | IV                         | 0.3                  | <0.1                                     | 0.3                                       |
|                                                                   | WEV33A                   | III                        | 0.1                  | 0.1                                      | 0                                         |
|                                                                   | WEV33D                   | IV                         | <0.1                 | <0.1                                     | 0                                         |
|                                                                   | WEV34                    | III                        | 1.1                  | 0.3                                      | 0.8                                       |
|                                                                   | WEV34A                   | III                        | 0.2                  | 0.2                                      | 0                                         |
|                                                                   | WEV34B                   | III                        | 0.1                  | 0.1                                      | 0                                         |
|                                                                   | WEV35                    | IV                         | 0.2                  | 0.2                                      | 0                                         |
|                                                                   | WEV38                    | III                        | 0.1                  | <0.1                                     | 0                                         |



| Build Alternative | Wetland(s) in Study Area | Preliminary Wetland Rating | Wetland Size (acres) | Operational Impacts (acres) <sup>a</sup> | Construction Impacts (acres) <sup>a</sup> |
|-------------------|--------------------------|----------------------------|----------------------|------------------------------------------|-------------------------------------------|
|                   | WEV43                    | IV                         | 0.1                  | 0.1                                      | 0                                         |
|                   | WEV44                    | III                        | 0.1                  | 0.1                                      | 0                                         |
|                   | <b>Total Impacts</b>     |                            |                      | <b>1.4</b>                               | <b>2.3</b>                                |

NOTES:

- a) Wetland impacts have been rounded to the nearest tenth. The totals may appear to not add up using the rows above due to rounding.
- b) Wetland WEV33 is split into two wetland units by a concrete weir.

### *Operational Impacts*

OMF Site B would result in operational wetland impacts to Wetlands WEV31, WEV31A, WEV33, WEV33A, WEV33D, WEV34, WEV34A, WEV34B, and WEV43. All or part of these wetlands are within the OMF Site B footprint.

Wetland WEV34 is located along the northeast corner of the OMF Site B site. Given the approximately 80-foot grade difference from the proposed OMF Site B facility and existing grade west of Wetland WEV34, retained fill structures would be needed that would permanently fill part of this wetland.

Wetland WEV33 is located along the southeast corner of OMF Site B. A site access road off of 80th Street SW and lead tracks into the OMF Site B facility would result in operational impacts to Wetland WEV33 through wetland fill, shading, and changes to vegetation communities.

Wetlands WEV43 and WEV33 are within the OMF Site B lead tracks on the north side of SR 526. Operational impacts to these wetlands would occur from the lead tracks and elevated guideway, including potential shading and long-term vegetation management along the guideway.

OMF Site B with Lead Tracks to South Side of SR 526 Design Option would result in operational impacts to Wetlands WEV29, WEV31, WEV31A, WEV32, WEV33, WEV33A, WEV33D, WEV34, WEV34A, WEV34B, WEV35, WEV38, WEV43, and WEV44. This design option would have more operational impacts and would impact more wetlands than OMF Site B.

Wetlands WEV29, WEV32, WEV33, WEV35, WEV43, and WEV44 are within the lead tracks of OMF Site B with Lead Tracks to South Side of SR 526. Wetlands WEV43 and WEV33 are located on the north side of SR 526 while Wetlands WEV29, WEV32, WEV35, and WEV44 are located on the south side of SR 526. OMF Site B with Lead Tracks to the South Side of SR 526 Design Option would result in operational impacts to these wetlands from the lead tracks and guideway, including potential shading and long-term vegetation management.

### *Construction Impacts*

OMF Site B and OMF Site B with Lead Tracks to South Side of SR 526 Design Option would result in construction impacts to Wetlands WEV33 and WEV34 due to construction access and staging. OMF Site B would also result in construction impacts to Wetland WEV30A.

### *Upland Habitat and Species*

Operational and construction impacts are anticipated to upland habitat and species from OMF Site B.

### Operational Impacts

The OMF Site B area is made up primarily of urban and mixed land covers, although 2.8 acres of the OMF Site B facility footprint is mapped as shrubland/grassland, making the shrubland/grassland upland habitat type the third largest habitat type. However, much of the mapped shrubland/grassland habitat has recently been developed into urban and mixed land uses (e.g., distribution center). The remaining open space habitat within OMF Site B includes undeveloped areas around Wetlands WEV33 and WEV34 in the southeast and northeast corner of the site. OMF Site B and its Lead Tracks to South Side of SR 526 Design Option would have the same operational impacts to open space habitats.

Operational impacts are summarized in Table 4-46.

**Table 4-46 Operational Impacts to Upland Habitats – OMF Site B**

| Build Alternative                                                 | Operational Impacts (acres) |                  |             |                       |        | Total Area of Operational Impact (acres) |
|-------------------------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|------------------------------------------|
|                                                                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                          |
|                                                                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                          |
| OMF Site B                                                        | 12.4                        | 2.4              | 5.5         | 2.8                   | 0.1    | 23.2                                     |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option |                             |                  |             |                       |        |                                          |

### Construction Impacts

OMF Site B and OMF Site B with Lead Tracks to South Side of SR 526 Design Option would result in construction impacts to open space habitats. These construction impacts may include clearing and grading, demolition of existing structures, and construction of new structures and facilities associated with the EVLE Project. OMF Site B would have slightly more shrubland/grassland impacts than OMF Site B with Lead Tracks to South Side of SR 526 Design Option.

Construction impacts are summarized in Table 4-47.

**Table 4-47 Construction Impacts to Upland Habitats – OMF Site B**

| Build Alternative                                                 | Operational Impacts (acres) |                  |             |                       |        | Total Area of Construction Impact (acres) |
|-------------------------------------------------------------------|-----------------------------|------------------|-------------|-----------------------|--------|-------------------------------------------|
|                                                                   | Urban and Mixed:            |                  |             | Open Space:           |        |                                           |
|                                                                   | High-Density                | Moderate-Density | Low-Density | Shrublands/Grasslands | Forest |                                           |
| OMF Site B                                                        | 23.0                        | 22.3             | 5.2         | 10.8                  | 4.9    | 66.2                                      |
| OMF Site B with Lead Tracks to South Side of SR 526 Design Option | 24.9                        | 33.2             | 5.2         | 10.4                  | 4.9    | 78.6                                      |

#### 4.1.10 Potential Design Refinements

As mentioned in Section 1.2, Sound Transit is considering potential design refinements in each alignment segment. Potential changes to ecosystem impacts resulting from the potential design refinements are described in Table 4-48.

**Table 4-48 Potential Changes in Ecosystem Impacts**

| Potential Design Refinement                                                                                              | Applicable Alternatives                                                  | Potential Changes to Impacts                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shift the guideway near the intersection of 184th Street SW and Alderwood mall Parkway north to reduce building impacts. | ALD-2D, ALD-2D with Design Option, ALD-2F, and ALD-2F with Design Option | Wetland impacts would be similar in scale but may affect different locations within the segment.                                                                                                  |
| Cross I-5 further south and shift Station ASH-D and the 164th Street SW crossing further east.                           | ASH-2D                                                                   | Would avoid some higher value wetlands located on the west side of I-5 and a crossing over a fish passable stream but would impact some lower quality, isolated wetlands on the east side of I-5. |

#### 4.2 No Build Alternative

The No Build Alternative would have no operational impacts or construction impacts to ecosystem resources. Additionally, the No Build Alternative would result in an absence of beneficial impacts associated with expanding regional transit infrastructure that would reduce vehicular traffic and associated impacts to ecosystem resources. Further, under the No Build Alternative, there would not be opportunities to reconnect and restore important ecosystems currently degraded within the highly urbanized and industrialized project corridor.

## 5 POTENTIAL MITIGATION MEASURES

Sound Transit's policy on ecosystem mitigation is to "avoid impacts to environmentally sensitive resources and to provide adequate mitigation to ensure there is no net loss of ecosystem function and acreage as a result of Agency projects" (Sound Transit 2015). As a result, measures to avoid impacts are reflected in the design of Build Alternatives. The following sections identify additional potential mitigation measures that would further reduce or eliminate adverse effects. Final mitigation measures will be based on advanced design and will be included in the Final EIS and in FTA's Record of Decision as environmental commitments for the project.

Mitigation for ecosystem impacts would follow the mitigation sequencing requirements defined under NEPA and SEPA rules, whereby impacts to ecosystem resources are avoided and minimized where practicable, and then unavoidable impacts are compensated for as applicable. Sound Transit will incorporate this mitigation sequencing into the project throughout development of Build Alternatives and selection of a preferred alternative.

Where impacts are unavoidable, Sound Transit would provide compensatory mitigation that would result in a no net loss of ecosystem functions, consistent with agency policy and federal, state, and local regulations.

## 5.1 Aquatic Habitats and Species

Mitigation measures specific to study area aquatic habitats and species may include the following design features and construction actions, where practicable:

- Avoiding placement of guideway columns within streams and/or elevating the guideway over open channels or building on existing impervious surfaces for at-grade portions.
- Designing bridges and other structures to avoid and/or minimize impacts to streams.
- Designing stormwater structures to minimize impacts to stream flow and water quality. Stormwater structures may include detention ponds, infiltration facilities, and water quality treatment facilities, such as bioretention or media filter vaults.
- Sweeping station and OMF site parking areas regularly to remove contaminants before they have a chance to enter stormwater.
- Directing construction and operational lighting away from streams to avoid affecting aquatic or semi-aquatic species (e.g., amphibians).
- Avoiding and minimizing impacts according to recovery plans for Pacific salmon (PFMC 2023) and steelhead (NMFS 2019) in aquatic areas that contain ESA-listed salmonids, namely Swamp Creek near the I-5/I-405 interchange. A BA will be completed for the preferred alternative to assess project impacts and provide appropriate avoidance and minimization measures for ESA-listed species.
- Where stream impacts are unavoidable, such as installation of temporary stream bypasses, installation of fish passable structures, and realignment or daylighting of streams, in-water work would be limited to approved in-water work windows, when practicable, and BMPs would be implemented to minimize impacts to water quality downstream.

Compensatory mitigation would also be required to offset any temporary or permanent impacts. Compensatory mitigation for impacts to streams would be required by the Corps, Ecology, and local agencies (Corps 2024) and would need to occur within the same WRIA where impacts occur and demonstrate a no net loss of stream length, functions and habitat value. Should compensatory stream mitigation be required, Sound Transit would provide site-specific mitigation (e.g., realigning streams to provide no net loss of stream length, adding large woody material and other habitat features). Mitigation would be completed during construction and within approved in-water work windows where required.

A BA will be completed to assess project impacts and propose appropriate conservation measures for impacts to ESA-listed aquatic species.

## 5.2 Wetlands

Avoidance and minimization measures specific to wetlands within the study area may include the following design features and construction actions, where practicable:

- Avoiding placement of guideway columns, stormwater structures, and other project infrastructure within wetlands.



- Minimizing placement of temporary construction areas (i.e., staging areas) within wetlands.
- Delineating and marking construction limits with flagging, fencing, and signage to prevent unintended impacts to wetland areas.
- Directing construction and operational lighting away from wetlands to avoid affecting aquatic or semi-aquatic species (e.g., amphibians).

Compensatory mitigation would be required to offset all permanent and temporary impacts, as defined under federal, state, and local regulations. The preferred alternative would adhere to the interagency wetland mitigation guidance described in *Wetland Mitigation in Washington State* (Ecology et al. 2021).

Sound Transit anticipates providing compensatory wetland mitigation through a variety of measures. Compensatory mitigation measures would be selected to meet no net loss of wetland functions and values. It is the hierarchical preference of the Corps that compensatory mitigation for impacts to Waters of the U.S. occur through 1) approved mitigation banks, 2) in-lieu fee programs, 3) permittee-responsible using a watershed approach, 4) permittee-responsible on-site and in-kind, then 5) permittee responsible off-site and/or out-of-kind (Corps 2024).

Sound Transit plans to restore temporarily impacted wetlands and buffers where possible and mitigate the remaining temporary construction and long term operational impacts using one or more of the following methods.

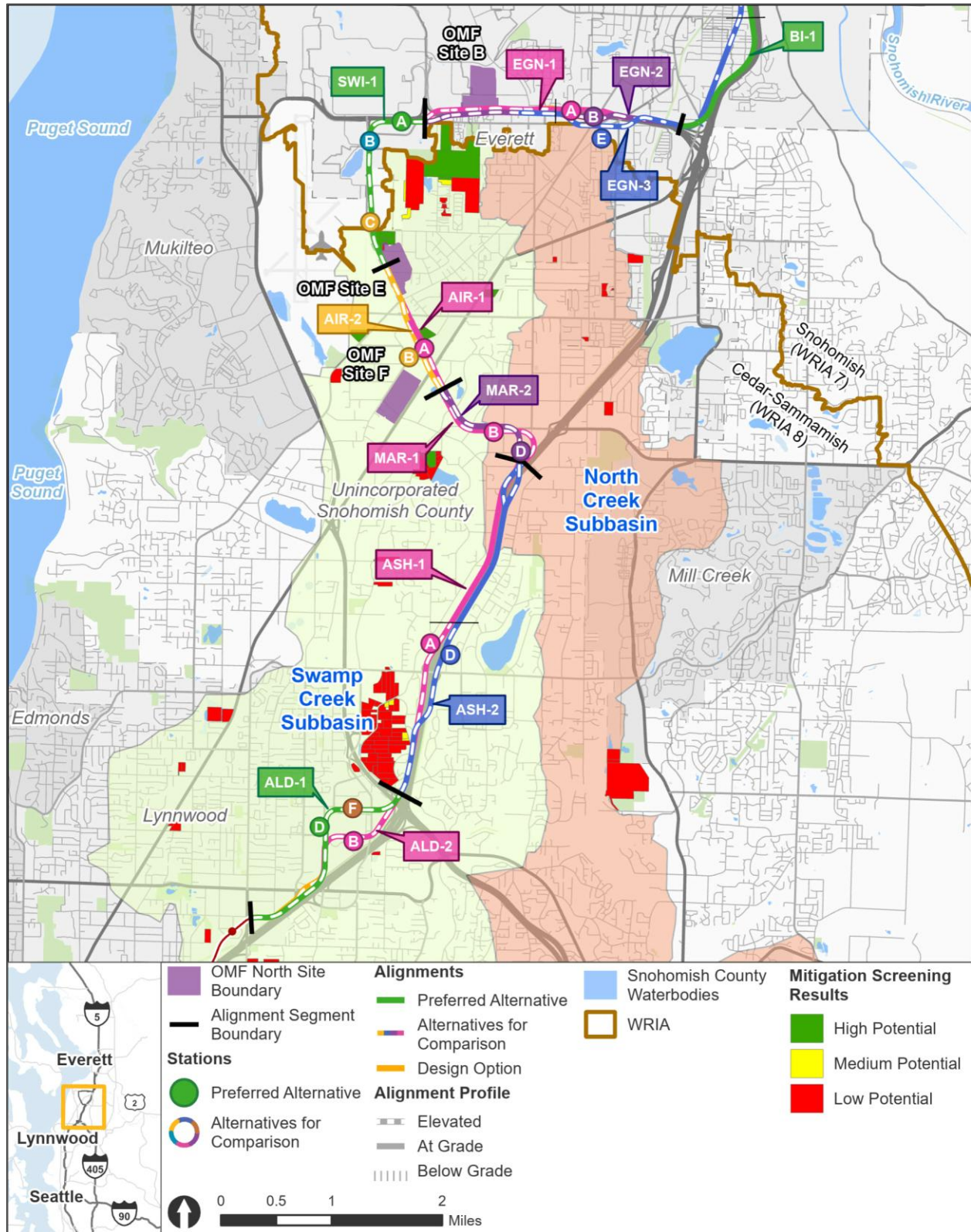
- Within the Cedar-Sammamish watershed (WRIA 8):
  - Approved mitigation banks, such as the Keller Farm Mitigation Bank.
  - Approved in-lieu fee program, such as King County's Mitigation Reserve Program.
  - Advanced mitigation, such as wetland restoration, creation, preservation, or enhancement.
  - Site-specific mitigation, such as wetland restoration, creation, preservation, or enhancement.
- Within the Snohomish watershed (WRIA 7):
  - Approved mitigation banks, such as the Skykomish Habitat Mitigation Bank and Snohomish Basin Mitigation Bank.
  - Advanced mitigation, such as wetland restoration, creation, preservation, or enhancement.
  - Site-specific mitigation, such as wetland restoration, creation, preservation, or enhancement.

To identify suitable locations for site-specific mitigation to occur, Sound Transit has performed an analysis to identify potential suitable mitigation sites within the impacted subbasins within WRIA 8 and WRIA 7. This analysis has identified numerous parcels on-site (e.g., within the project limits of the Build Alternatives) and off-site that range in their potential (low, medium, high) of supporting successful compensatory wetland mitigation. Those potential mitigation sites are shown on Figure 5-1 and Figure 5-2.

Sound Transit will continue to evaluate these potential mitigation sites for their feasibility as Sound Transit's mitigation need becomes more apparent. Impacts associated with site-specific permittee-responsible on-site and off-site wetland mitigation may include removal of structures,

soil disturbance (e.g., grading and soil amendment), vegetation disturbance or removal, and replanting. Maintenance activities typically occur within wetland restoration sites for up to 10 years and would be protected through conservation easements to preclude future development and disturbances. Sound Transit intends to identify selected on-site and off-site wetland mitigation sites for the preferred alternative within the Final EIS.

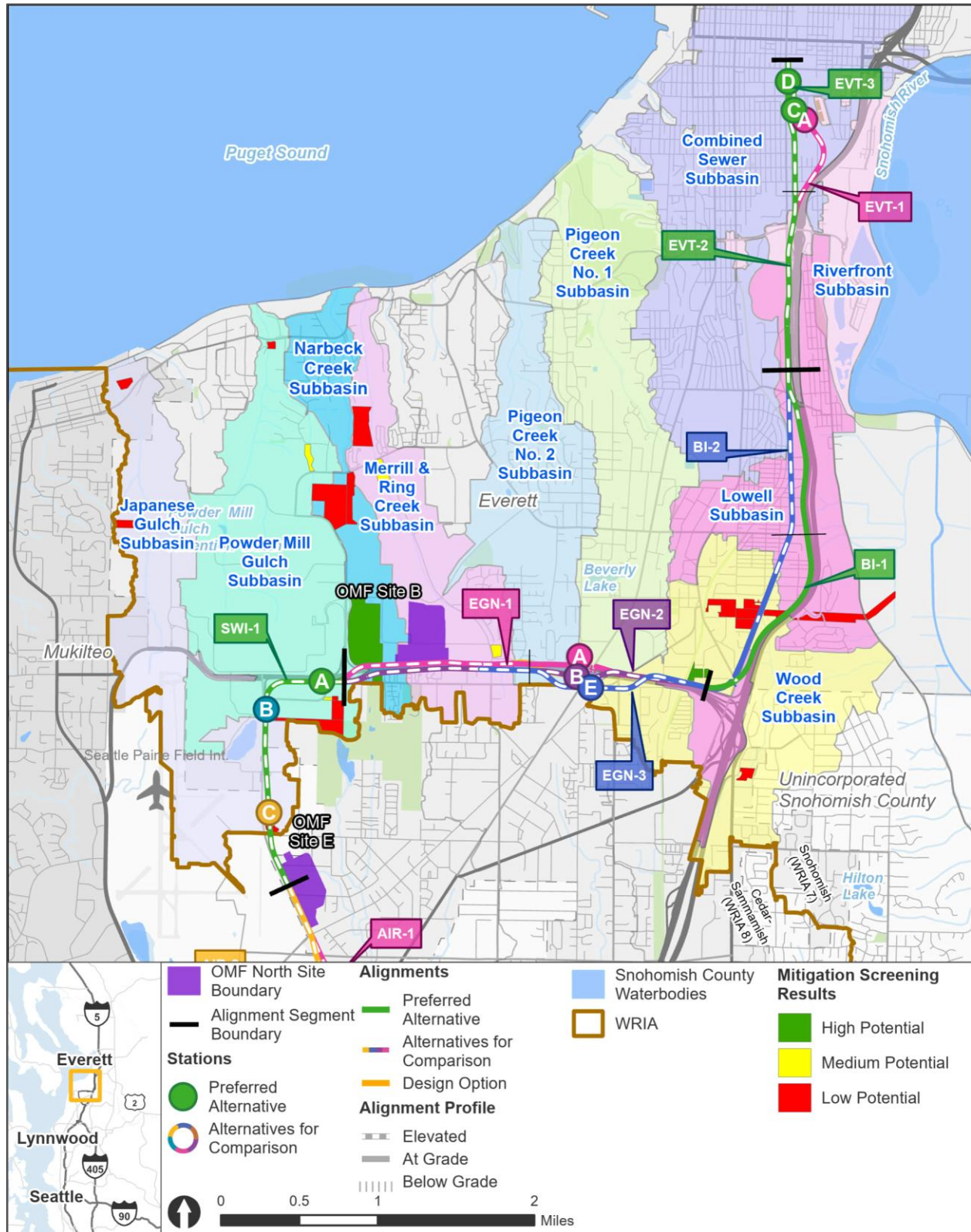
Figure 5-1 Mitigation Screening Identified Parcels Within WRIA 8



SOURCE: City of Everett (2023), Ecology (2024c), USGS (2024).



Figure 5-2 Mitigation Screening Identified Parcels Within WRIA 7



SOURCE: City of Everett (2023), Ecology (2024c), USGS (2024).



Sound Transit would implement compensatory mitigation in accordance with applicable federal, state, and local requirements and guidelines. Where on-site or off-site permittee-responsible wetland mitigation is proposed, Sound Transit would construct wetland mitigation as part of the project and as early as practicable to minimize temporal loss. Sound Transit would determine final mitigation actions during final design and permitting.

### 5.3 Upland Habitats and Species

Mitigation measures specific to study area upland habitats and species, including riparian and wetland buffer areas, may include the following design features and construction actions, where practicable:

- Siting project infrastructure and construction staging areas outside of grasslands/shrublands and forested uplands.
- Delineating and marking construction limits with flagging, fencing, and signage to prevent unintended impacts to upland habitat areas.
- Directing construction lighting away from upland habitat areas to avoid affecting terrestrial or semi-aquatic species (e.g., amphibians).
- Restricting clearing activities to outside of the active bird nesting period to comply with the MBTA. If avoidance scheduling is infeasible, Sound Transit would engage staff at the USFWS to conduct pre-construction surveys to determine presence or absence of nesting migratory birds and assist Sound Transit in complying with the MBTA.
- Avoiding and/or minimizing tree removal, especially significant or heritage trees. If tree removal is proposed, coordination with the City of Everett, the City of Lynnwood, Snohomish County, and WSDOT would occur to ensure proper tree removal permits are obtained, local regulations are adhered to, and appropriate tree replacement occurs.
- Coordinating with local jurisdictions to create landscaping plans, restoration plans, and habitat conservation plans to maximize protection and benefits to upland species.
- When restoring temporarily impacted upland habitat areas, using mulching ground cover or other planting strategies to control re-growth of invasive species and avoiding use of herbicides and fertilizers to the extent practicable.

Priority habitats and species within the study area are limited due to the high levels of development. The study area is largely comprised of high- and moderate-density land use activities. However, habitats for waterfowl concentrations, Yuma myotis, little brown bat, great blue heron breeding areas, and biodiversity areas and corridors may be present. Habitat management plans or habitat assessments may be required by the City of Lynnwood, City of Everett, Snohomish County, WDFW, and/or USFWS to address impacts to fish and wildlife habitat critical areas, priority habitats and species areas, and species of local importance. This would likely include work within a bald eagle management zone associated with the bald eagle nest described in Sections 3.1.6.3 and 3.1.6.5. In addition to following Bald and Golden Eagle Protection Act requirements a habitat management plan developed for this bald eagle nest in Snohomish County would likely limit site development activities within 800 feet of the nest tree or roost habitat.

To the extent that impacts cannot be avoided to grasslands/shrublands and upland forested areas, Sound Transit would provide compensatory mitigation to achieve no net loss of

ecosystems function. Sound Transit would mitigate for impacts on forested vegetation using applicable policy and regulations and would coordinate with local agencies on tree replacement requirements.

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