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CRITICAL AREA REPORT

MONTGOMERIE
MUKILTEO, WASHINGTON

Prepared for

244-WLD Montgomerie, LLC

Prepared by

GREEN EARTH
OPERATIONS

Green Earth Operations, Inc
3201 1st Ave. S., Suite 212
Seattle, Washington 98134
Telephone: 206/323-1865

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Report Summary

Client:	244-WLD Montgomerie, LLC 1010 Market Street Kirkland, WA 98033
Project site:	3.26-acre site, Parcel No. 28042100103200 located at Harbour Place at the intersection of 99th Place SW, Mukilteo, Washington.
Critical Area Assessed:	Wetland K – Category IV; 0.01 AC; depressional Feature 1 – N/A; 0.48 AC; depressional Drainage 1 – Type 5 Stream
Regulatory Guidance:	MMC 17.52B.100 establishes the following wetland categories and standard buffers: Category I wetland – 75 to 225 feet Category II wetland – 75 to 225feet Category III wetland – 60 to 225 feet Category IV wetland – 40 feet MMC 17.52C.090 establishes the following stream types (based on WAC 222-16-030 water types) and standards buffer widths: Type 3 – 150 feet Type 4 – 50 to 75 feet Type 5 – 50 feet

Introduction

This Critical Area Report was prepared for 244-WLD Montgomerie, LLC., by Green Earth Operations, Inc. (GEO). GEO conducted site investigations to document the occurrence of regulated wetland and streams within and adjacent to the project site. This report is consistent with the requirements of Mukilteo Wetland Regulations (Mukilteo Municipal Code [MMC] 17.52B) and uses the 2014 Updated Version 2.0 *Washington State Wetland Rating System for Western Washington* (Hruby 2014). The report includes characterization of existing site conditions, review of existing information sources, wetland assessment, and drainage survey. The intent of this report is to get confirmation from the City of Mukilteo on the presence of critical areas documented in this report.

Field work and report preparation was led by Mark Merkelbach, GEO principal and professional wetland scientist (PWS - #001837).

Project Location

The project site ("Site") is in Mukilteo, Washington, and consists of one triangular parcel (No. 28042100103200) located at Harbour Place at the intersection of 99th Place SW in Section 16/Section 21 of Township 28N and Range 4E W.M. (**Appendix A/Figure 1**). The parcel is approximately 3.26 acres. This area is in Water Resource Inventory Area (WRIA) 8 (Cedar - Sammamish), in the Shell Creek – Frontal Puget Sound watershed (**Appendix A/Figure 3**).

Project Purpose and Description

Montgomerie is a new residential townhome community that will improve a vacant parcel with paved roadways, utility infrastructure, private yards, and open space areas in support of 36 attached single-family residential units within 8 townhome buildings.

Stormwater will be collected and conveyed to the detention vault for flow control prior to releasing into a Contech Stomfilter Manhole with a Phosphosorb cartridge filter for water quality treatment. Runoff from the Southeast subbasin will not be collected by the onsite stormwater infrastructure due to this area remaining undeveloped forested area. The release from the detention vault will be controlled by a standard flow control structure designed to control the peak runoff rates and durations of storm runoff from the site in accordance with City surface water design standards. The controlled release from the vault is conveyed west from the developed portion of the site to the western forested area via a tightline and will discharge directly at the surface. The topography of this area is comprised of a valleyed area which naturally directs the runoff into an onsite Type 5 stream which is tributary to Big Gulch Creek.

Study Area

The study area for this investigation is limited to the Site (**Appendix A/Figure 1**). The on-site investigation was performed strictly within the site property boundaries; however, this study includes wetlands and stream inventories within a 300-feet radius of the project site, background research on pre-existing critical areas studies, as well as observations of conditions on adjacent properties made from within the project

site. Within the Site, wetlands were flagged and classified by the guidance required by federal, state, and local agencies. See the Methods section below for further details.

Methods

Wetland Delineation, Identification, and Classification

Waters of the United States (U.S.), including wetlands, were delineated within the project site boundaries consistent with the technical approaches outlined in the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Washington State Wetland Identification and Delineation Manual* (Ecology 1997), and the *Regional Supplement to USACE Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (Environmental Laboratory 2010). The wetland definition provided in the Mukilteo Municipal Code (MMC) (MMC 17.08.020) was applied throughout the study.

In general, wetland delineation consisted of three main tasks: (1) assessing vegetation, soil, and hydrologic characteristics to identify areas meeting the wetland identification criteria, (2) evaluating constructed drainage features to determine if they would be regulated as wetlands, and (3) marking wetland boundaries.

Sampling locations were selected at sites representative of the area. Dominant plant species in each of the three strata (tree, sapling/shrub, and herb) were identified using northwest flora field guides (Cook 1997 and Pojar 1994). Unless otherwise noted in field data sheets due to local conditions, trees were identified within a 30-foot radius of an established data plot, scrub/shrub vegetation was identified within a 5-foot radius, and herbaceous vegetation was identified within a 5-foot radius. A determination of the presence of hydrophytic vegetation was made at each observation point in accordance with the USACE guidelines (Environmental Laboratory 2010).

The determination of the presence of hydric soils was consistent with the USACE Regional Supplement (Environmental Laboratory 2010). The Soil Survey of Snohomish County Area (NRCS 2020a) provided information regarding the general characterization of the soils in the area, the parent material, as well as series, taxonomy and subgroup information. Soils were examined to a depth of approximately 20 inches, or the depth at which it could be confirmed that positive indicators were either present or absent. Soil colors were described in data forms using the Munsell soil color charts' numbering system (Munsell Color 2000). This numeric color classification system is used by the USACE Regional Supplement in determining if hydric soil indicators are present in a sample.

Hydrology data was collected from field observations and reference documents. Annual climate records and monthly precipitation during the site visits were obtained from nearby weather stations located in Everett, WA (NOAA. 2025). Upon site inspection, the presence of direct and indirect hydrologic indicators was used to infer wetland hydrology. Field indicators of wetland hydrology were determined in accordance with the USACE guidelines (Environmental Laboratory 2010).

The wetland observed on the subject property was classified according to the USFWS classification system (Cowardin et al. 1979). This system is based on an evaluation of attributes such as vegetation class, hydrologic regime, salinity, and substrate. The wetland was also classified according to the hydrogeomorphic (HGM) wetland classification system, which is based on an evaluation of attributes such

as the position of the wetland within the surrounding landscape, the source and location of water just before it enters the wetland, and the pattern of water movement in the wetland (Brinson 1993).

Wetland Rating

MMC 17.52.090 requires the classification of wetlands using the *Washington State Wetland Rating System for Western Washington: 2014 Update Version 2.0* (Hruby 2014). The rating system assesses a wetland's potential to provide water quality, hydrologic, and habitat functions at a site-specific level as well as in relation to existing land use in the surrounding landscape. It also incorporates consideration of the wetland's hydrologic and geomorphic conditions into the system by assigning the wetland an hydrogeomorphic (HGM) classification. This allows for a more accurate rating of how well the wetland functions based on its position in the landscape, water source, and the flow and fluctuation of the water once in the wetland. The 2014 Rating System divides wetlands into four hierarchical categories based on specific attributes such as rarity, sensitivity to disturbance and our ability to replace them. The classification hierarchy ranges from Category I wetlands, which exhibit outstanding features (rare wetland type, relatively undisturbed or a high sensitivity to disturbance, high level of functions) to Category IV wetlands, which have the lowest levels of function and are often heavily disturbed. The rating categories are used to identify permitted uses in the wetland and its buffer, to determine the width of buffers needed to protect the wetland from adjacent development, and to identify the mitigation ratios required to compensate for potential impacts on wetlands.

Ratings forms were completed with information gathered in the field and through online research (**Appendix C**). Following determination of the wetland rating, the wetland buffer width was determined according to that rating, per MMC 17.52B.100.

Stream Classification

Streams were noted within the vicinity of the site. Washington State defines a watercourse, river, or stream as "any portion of a channel, bed, bank, or bottom waterward of the ordinary high-water line of waters of the state, including areas in which fish may spawn, reside, or pass, and tributary waters with defined bed or banks, which influence the quality of fish habitat downstream. This includes watercourses which flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, storm water run-off devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans" (WAC 2020; 220-660-030 [153]).

An unnamed drainage through the parcel was classified using the stream typing system in MMC 17.52C.080, which states, "Stream types shall be classified according to WAC 222-16-31". No Type 1 or Type 2 streams are located within the City of Mukilteo. Other stream types are described generally below:

> Type 3 Waters that have five or more feet between each bank's ordinary high-water mark, and a moderate to slight use and are moderately important from a water quality standpoint for domestic use, public recreation, and fish and wildlife habitat.

Type 4 Waters that are perennial non-fish habitat streams.

Type 5 Seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of the year and are not located downstream from any stream reach that is a Type 4 water.

Determination of Fish and Wildlife Habitat Conservation Areas

The presence of fish and wildlife habitats of importance on the site were determined based on the following criteria listed in MMC 17.52C.030:

(1) Areas with endangered, threatened, and sensitive species;

(2) Habitats and species of local importance that have been designated by the City;

(3) Waters of the state as defined by WAC 222-16-30;

(4) State natural area preserves and natural resource conservation areas;

(5) State Priority Habitats and Areas Associated with State Priority Species. Priority habitats and species are priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the state Department of Fish and Wildlife.

(6) Areas of rare plant species and high-quality ecosystems as identified by the Washington State Department of Natural Resources.

Results

Existing Information Review

Aerial photographs and project maps of the area were reviewed. Existing information concerning the project area was reviewed prior to fieldwork to identify vegetation patterns, topography, soils, streams, and other natural resources potentially located within the project boundaries.

Landscape Setting

The Site is located on a bluff overlooking the South Fork of Big Gulch, within the City of Mukilteo in Snohomish County, Washington. The Site occupies a transitional position between the developed urban uplands of Mukilteo and the steeply incised ravine of Big Gulch, a forested natural corridor that drains westward toward Possession Sound. The parcel features moderate to steep slopes along the west edge that descend toward the gulch, with localized areas of fill or surface disturbance likely resulting from past grading or land-clearing activities (described further in this report). Adjacent land uses include residential and commercial developments, with Harbour Place bordering the eastern edge (**Photo 1**).

Photo 1. East edge of the Site, looking north along Harbour Place. Photo taken on 12/11/2024.

Land Use Changes

Historical aerial imagery indicates that prior to 1990, the site was entirely forested (**Appendix A/Figure 2**). Between 1990 and 2002, the northeastern and eastern portions of the site were cleared, except for the steep slope along the west edge of the Site. By 2006, an unimproved access road from Harbour Place had been established along the eastern edge, and construction staging is observed—likely in support of adjacent development to the north. Additional soil disturbance and vegetation clearing

occurred in 2007, likely contributing to the formation of a depression on this bluff terrace. Subsequent aerial imagery from 2019 and 2025 shows gradual natural succession, with woody vegetation becoming reestablished in the previously disturbed area. The soil surface today contains tracks and cut marks from those past clearing and excavation activities (**Photo 2**).

Photo 2. Emergent plants and former scaring of the soil surface from past excavation actvities. Photo taken on 10/4/2024.

Watershed Description

The Site is located east of the South Fork of Big Gulch which lies in the Shell Creek – Frontal Puget Sound watershed (HUC 171100190203) and within the Water Resource Inventory Area (WRIA) 8 Cedar – Sammamish (Ecology 2025) (**Appendix A/Figure 3**). A water vector map was created using GIS and LIDAR data to produce a slope map that illustrates computed surface flow pathways (**Appendix A/Figure 4**). The drainage lines depicted in blue do not represent actual streams; rather, they indicate the general flow of surface water based on the topography. This figure demonstrates that water generally flows east to west towards the South Fork of Big Gulch.

Climate, Precipitation, and Growing Season

The Puget Sound plateaus and lowlands of Snohomish County experience a mild to moderate temperate climate with average annual rainfall that can vary widely with elevation, latitude, and proximity to the Puget Sound shoreline. The local growing season in the Puget Sound Basin (Everett, WA) is approximately 268 days in length using the 5 years in 10 criteria and 28° C. The nearest weather station Everett, WA

recorded 0.01 inches of precipitation in the 14 days preceding the site investigations on October 4, 2024, 2.21 inches of precipitation in the 14 days prior to the site visit on December 11 , 2024, 2.91 inches of precipitation in the 14 days prior to the site visit on December 20, 2024, and 0.00 inches of precipitation in the 14 days preceding June 18, 2025 (NOAA. 2025). Using the Antecedent Precipitation Tool, field work occurred during the wet and dry season, and site conditions were normal during all site visits (Gutenson and Deters 2025).

Critical Areas Overview

Wetland Inventory

The National Wetland Inventory (NWI) is compiled by the U.S. Department of Interior Fish and Wildlife Service (USFWS 2025). NWI relies upon visual aerial photo interpretation of wetland indicators including hydrologic, vegetation and topographic signatures. Wetland areas identified under NWI are also classified in accordance with the Cowardin classification system (Cowardin et al. 1979). The National Wetlands Inventory does not identify any mapped features on site but identified a riverine polygon which is associated with Big Gulch to the west. (**Appendix A/Figure 5a**).

The City of Mukilteo has compiled a map of streams, drainage basins, and potential wetlands (ESA 2011). This map was developed by the city to aid property owners, developers, and biologists with identifying potential critical areas within city limits and identifying appropriate mitigation sites. The map identifies a drainage pattern immediately to the south of the Site with an associated wetland polygon which extends on-site. A portion of this wetland is in the southeast corner of the Site (**Appendix A/Figure 5b**).

A boundary and easement map prepared by Mead Gilman (MG 2025) identifies a 50-foot wetland buffer in the southeast corner of the parcel (**Appendix A/Figure 5c**), no additional information was provided regarding the wetland itself, including its exact location and category. The current code (MMC 17.52B.100) specifies a 50-foot buffer, which exceeds the minimum requirement for a Category IV wetland but does not meet the standards for a Category III wetland. Based solely on this map, it is not possible to determine the rating of this wetland.

Soil Survey of Snohomish County

According to the Natural Resources Conservation Service (NRCS) Soil Survey (2025), soils within the Site are mapped as Alderwood and Everett (**Appendix A/Figure 6**). These soil series formed in glacial till and outwash, respectively, and are characterized by gravelly sandy loam surface horizons underlain by compact glacial till (Alderwood) or stratified sandy and gravelly outwash (Everett). Alderwood soils are moderately well-drained with slow to moderate permeability, while Everett soils are somewhat excessively drained with rapid permeability. Both soil types are classified as non-hydric; however, Alderwood soils may exhibit hydric characteristics in localized depressional areas where water accumulates seasonally. Perched or migrating subsurface water may also occur in low-lying portions of the site, particularly where drainage is impeded by compact till or buried restrictive layers.

Sensitive Plants, Fish, Wildlife, and Habitats

According to the Washington State Department of Natural Resources (WDNR) Washington Natural Heritage Program (WNHP) and Wetlands of High Conservation Value database, there are no known threatened or endangered plant species or high-quality ecosystems within the section, township, and range where the site is located (S16 and S21/T28N/R4E) (WDNR 2025a). The Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database shows no specific PHS records documented for this site.

Site Investigation

Overview of Site Conditions

As discussed above, the Site includes undisturbed natural areas associated with the forested Big Gulch ravine, as well as a vacant lot in the east central portion that was historically used for construction staging and barrow activities. An initial reconnaissance-level site visit was conducted on October 4, 2024, followed by a formal wetland delineation survey on December 11 and 20, 2024, and an additional site visit on June 18, 2025. Site access was obtained from Harbour Place.

Site Topography and Hydrology

The Site contains a previously cleared and generally flat central portion that is flanked by a forested edge to the northwest and southwest. Elevations at the site range from approximately 384 to 508 feet, with a general sloping east to west that becomes a steep slope ravine (**Appendix A/Figure 4**).

Site hydrology is primarily driven by direct precipitation, with no evidence of natural springs or seeps. A drainage (Drainage 1) is fed by an 18-inch corrugated metal pipe (CMP) culvert that discharges at the west edge of Harbour Place. The roadway side bank is armored with riprap along the start to this drainage. This culvert conveys seasonal surface flow westward, discharging into the adjacent ravine, where the topography drops sharply.

Vegetation Community

The disturbed depression in the central-east portion of the parcel contains vegetation which consists of tufted hairgrass (*Deschampsia caepitosa*) and soft rush (*Juncus effusu*s) with scattered young black cottonwoods (*Populus balsamifera*) and a few red alders (*Alnus rubra*). The composition of black cottonwood abruptly changes where it meets the undisturbed forest associated with Big Gulch to the west and south edges of the previously disturbed area. The east and north perimeter of the disturbed area is dominated by Scotch broom (*Cytisus scoparius*) and Himalayan Blackberry (*Rubus armeniacus*) (**Photo 3**). The forested portion of the site is dominated by red alder, salmonberry (*Rubus spectabilis*), western red cedar (*Thuja plicata*), sword fern (*Polystichum munitum*), Oregon grape (*Mahonia aquifolium*), fringe cups (*Tellima grandiflora*), herb-Robert (*Geranium robertianum*), and Himalayan blackberry (**Photo 4**).

	
Photo 3. Looking west from northeastern portion of parcel within Feature 1. Photo taken on 12/11/2024.	**Photo 4.** On-site undisturbed forested area connected to Big Gulch ravine. Photo taken on 12/11/2024.

Critical Area Summary

GEO identified one depressional flow-through Category IV wetland, an artificially created and unregulated depressional feature, and a Type 5 drainage. Normal circumstances were present during the field delineation (USACE 1990 and NRCS 2011). Refer to **Appendix A/Figure 7** for wetland mapping (including soil pit [SP-X] locations); **Appendix B** for wetland data sheets; **Appendix C** for wetland rating forms and figures.

Below is a summary of the wetland and depression feature identified within the project site (**Table 1**) (**Appendix A/Figure 7).**

Table 1. Critical Areas Summary Table

Critical Area	Area (SF)	Area (AC)	Habitat Score	Wetland/Stream Category[1,2]	Standard Buffers[3]
Wetland K	649	0.01	4	IV	40
Feature 1	756	0.48	--	--	--
Drainage 1	--	--	--	Type 5	50

[1]Wetland Categories based on Ecology 2014 wetland rating (2014 Hruby)
[2]Stream Classification (MMC 17.52C.090)
[3]Wetland/Stream Buffer based on MMC standard buffers

Wetland K

Wetland K is a depressional flow-through wetland that receives direct precipitation and seasonal hydrological inputs from flows associated with Drainage 1. This includes surface runoff from adjacent impervious surfaces. Its depressional landscape position is evident both in aerial imagery and during onsite observation, functioning as a collection area for nearby runoff. The wetland was delineated along a topographic break that abruptly ends at a 10-foot waterfall into the Drainage 1 ravine.

The mapped boundary of Wetland K matches a previously mapped wetland polygon in the City's wetland inventory (**Appendix A/Figure 5b**). This also corresponds to a wetland buffer which was identified in the boundary and easement map prepared by Mead Gilman (MG 2025), which included a 50-foot buffer (**Appendix A/Figure 5c**). However, based on the most recent delineation, Wetland K is classified as a Category IV wetland, for which code requires a standard 40-foot buffer (MMC 17.52B.100).

Table 2	Wetland Name	Wetland K
	Location	Southeastern corner of the parcel

***Photo 4**. Wetland K, facing east. (12/20/2024)*

Local jurisdiction	Snohomish County
Water Resource Inventory Area	8 Cedar-Sammamish
Wetland rating	Category IV
County Jurisdictional Buffer Width	40 feet
Cowardin Classification	PEM (Palustrine Emergent Wetland)/ Palustrine Scrub/Shrub (PSS)
Hydrogeomorphic Classification	Depressional flow through
Wetland data form(s)	Appendix B
Upland data form(s)	Appendix B

Size of wetland	**649 SF** (onsite).
Dominant vegetation	Wetland A is classified as a Palustrine Emergent (PEM) and Palustrine Scrub/Shrub (PSS) wetland under the Cowardin system. It is dominated by western red cedar, red alder, Himalayan blackberry, fringe cups, and herb-Robert.
Soils	The soil profile has a 0–9 inch matrix of 10YR 2/1 loam with no visible redox features. Although no individual hydric soil indicator is met, the presence of hydrophytic vegetation and wetland hydrology, combined with low-chroma soil in a concave landform with seasonal saturation, supports a hydric soil determination under the Problematic Hydric Soils procedure outlined in the Regional Supplement (ERDC/EL TR-10-3, 2010).
Hydrology	Surface water was not present during the December 2024 survey. During the June investigation, secondary indicators observed included Drainage Patterns (B10) and Geomorphic Position (D2). As such, the plot meets the wetland hydrology criterion. See data forms for more details (***Appendix B***).
Rationale for delineation	Two wetland indicators—vegetation and hydrology—are present. Although a hydric soil indicator is not met, the soil characteristics align with the criteria for hydric soils under the Problematic Hydric Soils approach described in the Regional Supplement (ERDC/EL TR-10-3, 2010). See wetland data form for details (***Appendix B***).
Rationale for local rating	Wetlands K is classified as Category IV wetland with a habitat score of 4, due to its location in a high land-use area, limited habitat features, and lacking plant diversity when applying the 2014 Wetland Rating System for Western Washington (Hruby 2004). (***Appendix C***).

Feature 1

Feature 1 is a depressional area characterized by vegetation, soils, and hydrological conditions typical of wetlands. This feature resulted from land modifications that took place between 1990 and 2007, as documented in the *Land Use Section* and **Appendix A/Figure 2**. Additionally, the site contours in this area exhibit a sudden elevation change from Harbour Place, followed by a uniform and gradually sloping grade that appears inconsistent with the natural topography, suggesting possible anthropogenic modification, as shown in **Appendix A/Figure 4.**

Evidence of site disturbance remains visible today. As shown in **Photo 2**, patches of exposed soil from tire tracks and presumed excavation activities are still present. Linear impressions on the soil surface—likely made by excavator bucket teeth—are evident throughout the clearing. Soils observed within the disturbed area exhibited a depleted matrix with redoximorphic concentrations (**Appendix B/SP-2W**), and clay was present within the upper 6 inches. Surface saturation was observed in the top 6 inches, with drier conditions beneath. During a follow-up site visit on December 11, 2024, shallow standing water was present in sparsely vegetated portions of the area. According to the Natural Resources Conservation Service (NRCS) soil survey, the eastern half of the property is mapped as Alderwood gravelly sandy loam (0 to 8 percent slopes), a non-hydric soil. However, the sampled soils differ from the mapped series, exhibiting clay content and lacking the sandy texture expected in the upper horizon.

Feature 1 meets all three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology; however, based on GEO's findings and best professional judgment, the on-site disturbed depression was artificially created through prior excavation and grading activities. Both aerial photographs and field observations indicate that this area was originally non-wetland (upland) prior to the clearing and grading activities conducted between 2002 and 2007. Additionally, this feature with wetlands conditions was not identified in the City wetland inventory (**Appendix A/Figure 5b**) nor in the boundary and easement map (**Appendix A/Figure 5c**). Most wetlands in the city inventory area are associated with ravine drainages rather than upland bluff terraces with well-drained soils where Feature 1 is situated.

The City of Mukilteo regulates wetlands under the Mukilteo Municipal Code (MMC) 17.52 – Critical Areas and defines them under MMC 17.08 – Definitions.

Wetlands are defined per MMC 17.08:

"…**Wetlands do not include those artificial wetlands intentionally created from non-wetland sites**, including but not limited to, irrigation and drainage ditches, grass-lined swales, canals, **detention facilities**, wastewater treatment facilities, farm ponds, and landscape amenities."

Site observations and land use changes since 2002 support that this is an artificially created wetland that was unintentionally created in a previously non-wetland area because of clearing, excavation, and/or grading construction activities. This wetland does not meet the definition of a regulated wetland and would therefore ***not*** be subject to the rules and restrictions of MMC 17. 52 nor subject to application of a wetland buffer.

Drainage 1

Drainage 1 is a seasonal, non-fish bearing stream, located offsite along the southern boundary of the parcel and flows through Wetland K. Flow was present during the December 2024 field visit but was absent during the June 2025 follow up visit. It is a feeder stream that flows into the South Fork of Big Gulch (**Appendix A/Figure 7**). The ordinary high-water mark (OHWM) was not flagged as the channel width was very narrow (**Photo 5**). A 50-foot standard buffer width is required for Type 5 streams (MMC 17.52C.090).

Photo 5. Drainage 1 is a narrow, confined channel overgrown with Himalayan blackberry. Photo taken on 12/20/2024.

This drainage feature, originating from the 18-inch culvert upstream of Wetland K, has a defined bed and bank with visible signs of bedload transport. The bed width generally remains under 2 feet. Due to steep slopes on both sides of this drainage west of Wetland K, access to the channel was restricted. LIDAR (**Appendix A/Figure 4**) was used to map the channel center line.

Buffer Conditions

Onsite *wetland* buffers **(Appendix A/Figure 7)** are forested and consist of western red cedar, red alder, sword fern, and Oregon grape. The *stream* buffer is densely vegetated with upland emergent, shrub, and forested vegetation communities present. It contains stands dominated by red alder and western red cedar, along with a woody understory of salmonberry and Himalayan blackberry. Sword fern was present along the channel side banks.

This forested buffer plays a key role in water quality protection by filtering sediment, nutrients, and pollutants from upland runoff before it enters the wetland and stream system. The dense vegetation promotes infiltration, reducing surface runoff and peak flows during storm events. Additionally, the forest provides high-quality wildlife habitat and movement corridors, supporting species that rely on both upland and aquatic environments. Litterfall and large woody debris from stream and wetland buffers contribute organic material and structural complexity to the Big Gulch ravine system, enhancing habitat downstream and maintaining ecological connectivity to Puget Sound.

Conclusions of Investigation

Wetland K met two key wetland parameters—hydrophytic vegetation and wetland hydrology. Although no single hydric soil indicator was conclusively identified, the presence of a low-chroma matrix within a seasonally saturated concave landform, along with the observed hydrology and vegetation indicators, supports a hydric soil determination using the Problematic Hydric Soils approach outlined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual (ERDC/EL TR-10-3, 2010). Based on this analysis, a positive wetland determination is appropriate. Wetland K received a total score of 15 points using the Washington State Department of Ecology Wetland Rating System (2014), classifying it as a Category IV wetland with low habitat function, which requires a standard buffer width of 40 feet under Mukilteo Municipal Code (MMC) 17.52B.100.

Feature 1, while exhibiting some wetland characteristics in the field, contains altered soils and vegetation as a result of past excavation activities. Due to its anthropogenic origin and lack of sustained ecological function, Feature 1 does not meet the definition of a regulated wetland under the City of Mukilteo's critical areas code.

Drainage 1 has been classified as a Type 5 stream, which requires a standard buffer of 50 feet.

Under MMC 17.52B.100(D), wetland buffer widths may be reduced through the implementation of mitigation measures such as buffer averaging, enhancement, or reduction with increased protection functions—provided that it can be demonstrated the overall buffer functions and values will be maintained or improved. For Category IV wetlands, buffer reductions of up to 25% may be allowed where site constraints or proposed mitigation justify the modification and where the buffer reduction will not result in a loss of wetland functions. Any proposed buffer reduction would require approval from the City and must be supported by a mitigation plan that meets the performance standards set forth in the municipal code.

Disclaimer

Green Earth Operations, Inc. (GEO) has prepared this Critical Area Report at the request of 244-WLD Montgomerie, LLC. The information contained herein is, to the best of our knowledge, accurate and reliable. It is important to recognize that establishing wetland boundaries is an imprecise science. Wetlands are, by definition, transition areas, and their boundaries can change over time. The presence of wetland indicators may also vary depending on the season. Furthermore, individual professionals may have differing opinions on the exact location of wetland boundaries and/or the functions and values of a wetland. All stream and wetland boundaries, classifications, and buffer widths should be considered subject to change until reviewed and approved by the appropriate regulatory agencies with jurisdiction. GEO recommends obtaining jurisdictional approval before finalizing site plans and/or commencing construction activities. The final determination of U.S. federal jurisdiction rests with the U.S. Army Corps of Engineers (Corps), Seattle District. Wetlands classified as "Waters of the State" are regulated by Washington State, with jurisdiction determined by the Washington State Department of Ecology (WDOE). Based on the final determinations of the Corps and WDOE, wetland buffer and mitigation requirements must adhere to Mukilteo Municipal Code (MMC) regulations. This report can be used in applying for state and/or federal permits. GEO is not liable for the accuracy of information provided by third parties.

Within the constraints of schedule, budget, and scope of work, GEO assures that this study was conducted in accordance with generally accepted environmental science practices, including the technical guidelines and criteria in effect at the time of this study. The results and conclusions of this report reflect the author's best professional judgment based on information provided by the project proponent and data collected during this study. No other warranty, expressed or implied, is provided.

Should there be any changes in the nature, design, or location of the project site features, the conclusions and recommendations in this report will not remain valid unless the changes are reviewed and the conclusions of this report are verified in writing by GEO. GEO is not responsible for any claims, damages, or liabilities arising from the interpretation of these findings or the reuse of the analysis without GEO's express written authorization.

GEO and project staff are not attorneys, and this report should not be interpreted as a legal representation or interpretation of environmental laws, rules, or regulations.

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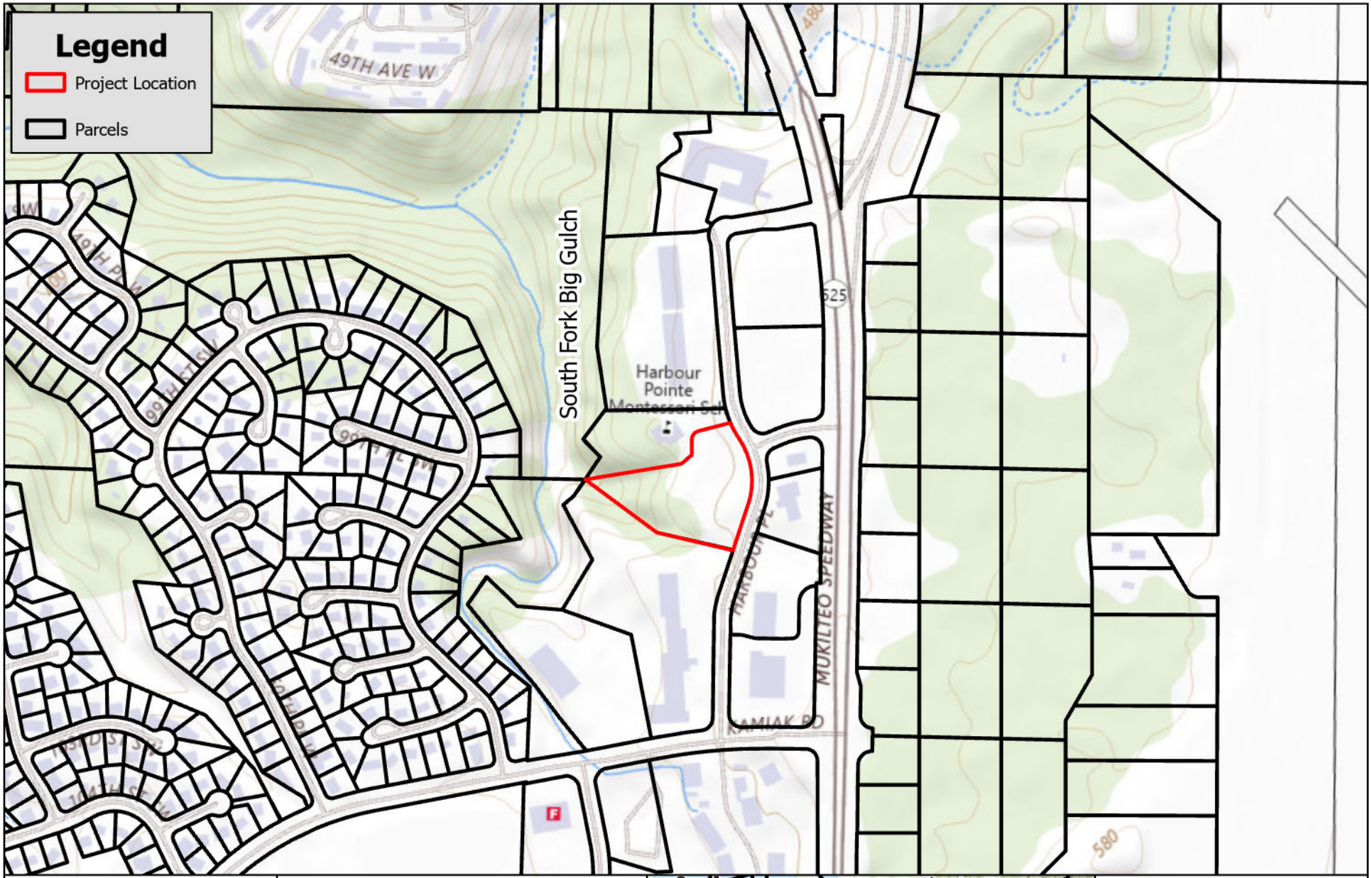
Appendix A – Report Figures

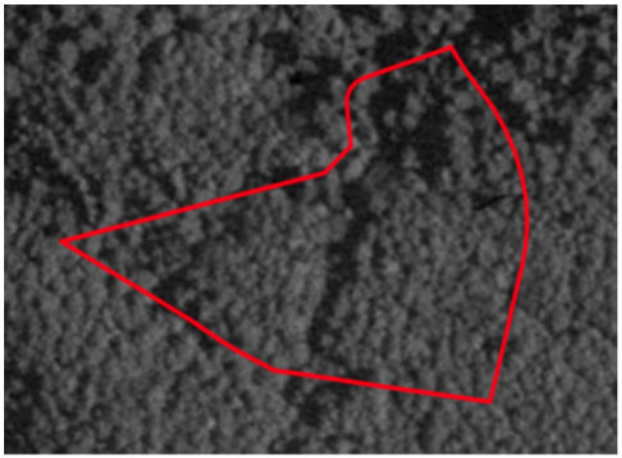


GREEN EARTH OPERATIONS

Figure 1 - Vicinity Map

Montgomerie
Critical Area Report
Snohomish County, WA

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet



07/1990

06/2002

07/2006

07/2007

05/2019

04/2025

GREEN EARTH OPERATIONS

Figure 2 - Historical Aerials

Montgomerie
Critical Area Report
Snohomish County, WA

Sources:
- GEO - Google Earth

N

0 0.05 0.1 Miles

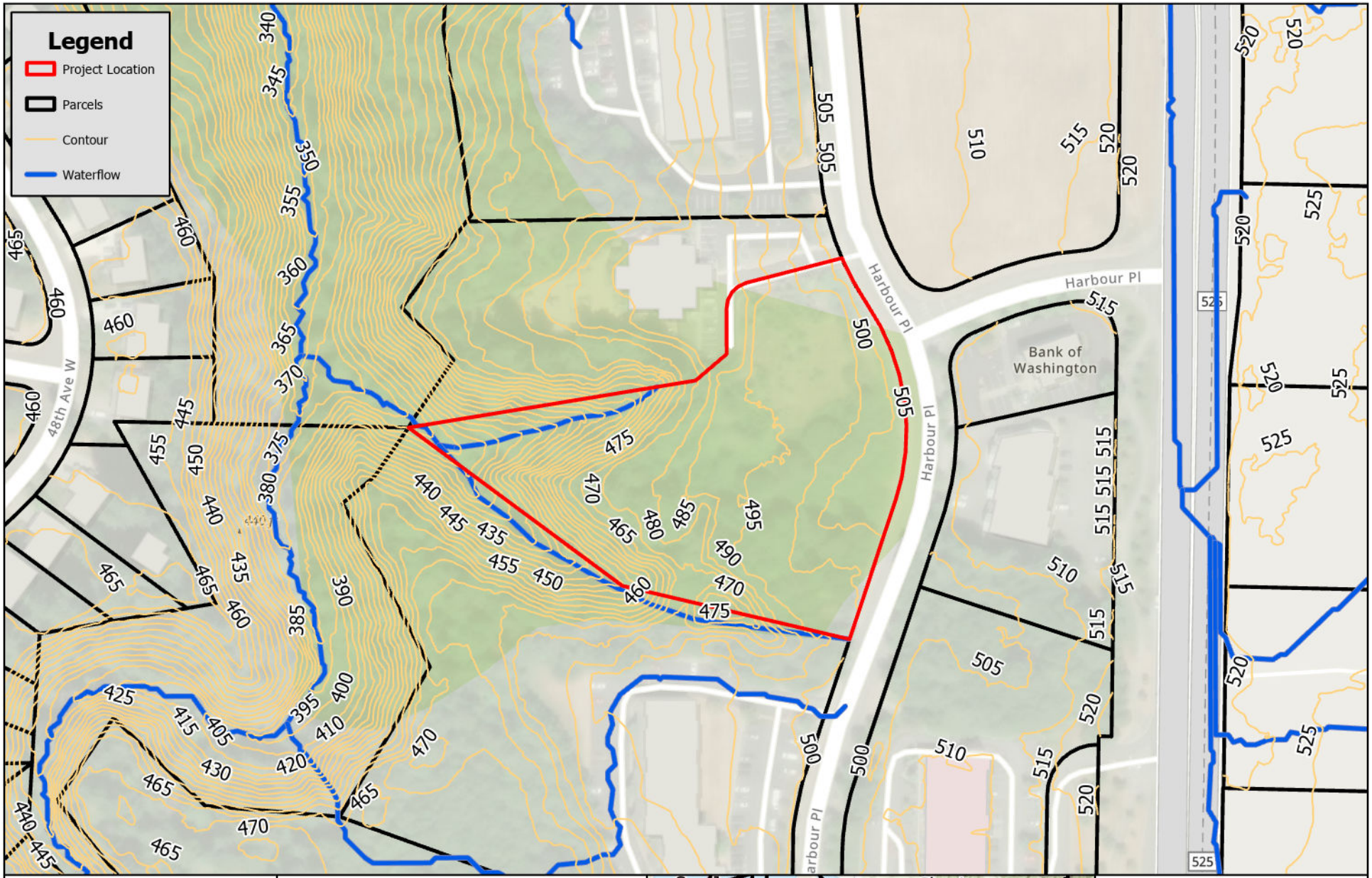
Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

GREEN EARTH OPERATIONS

Figure 3 - Watershed Map

Montgomerie
Critical Area Report
Snohomish County, WA

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet



GREEN EARTH OPERATIONS

Figure 4 - Water Vector Map

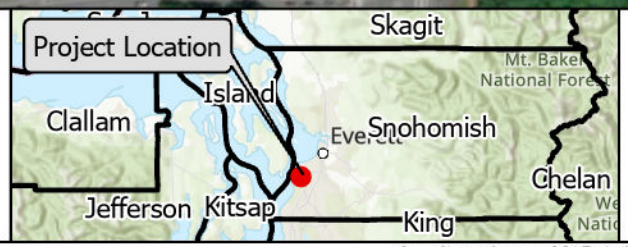
Montgomerie
Critical Area Report
Snohomish County, WA

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

GREEN EARTH OPERATIONS

Figure 5a - NWI Wetland Inventory Map

Montgomerie
Critical Area Report
Snohomish County, WA

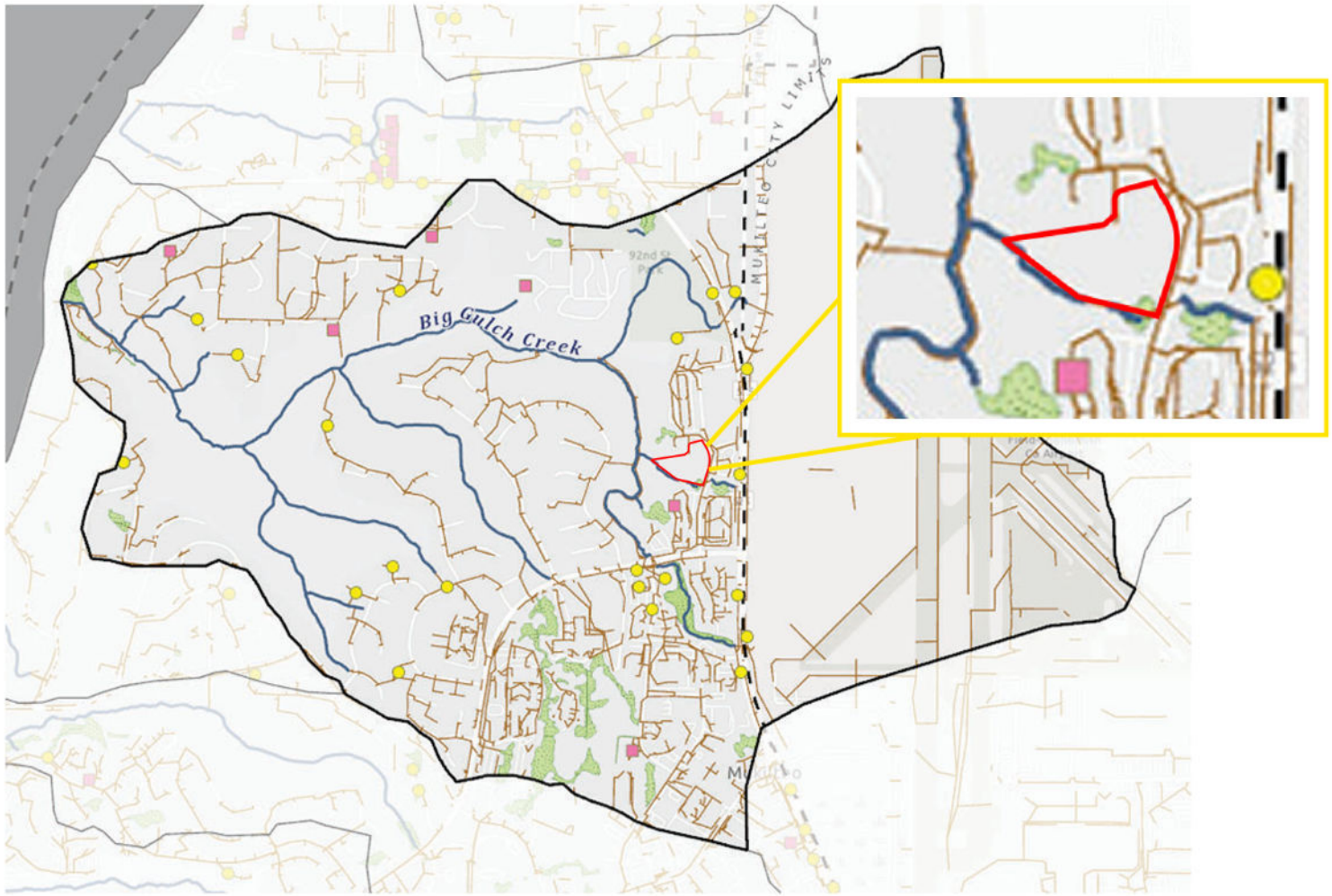


Sources:
- GEO - ESRI
- NWI

N

0 0.04 0.07 Miles

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet



GREEN EARTH OPERATIONS

Figure 5b - City of Mukilteo Wetland Inventory Map

Montgomerie
Critical Area Report
Snohomish County, WA

Sources:
- GEO - ESRI
- Mukilteo 2025

N

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

GREEN EARTH OPERATIONS

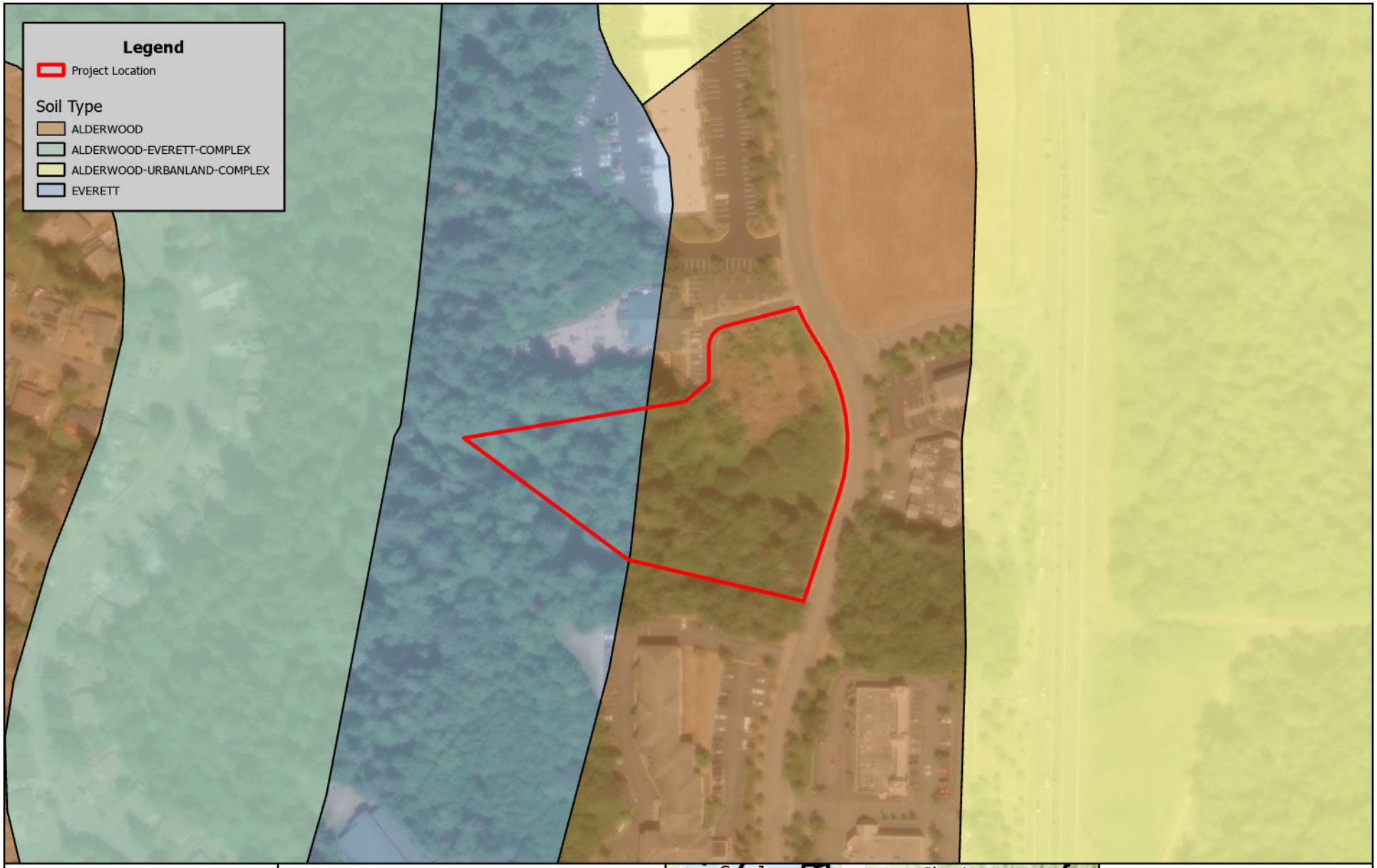
Figure 5c - Boundary and Easement Map

Montgomerie
Critical Area Report
Snohomish County, WA

Sources:
- GEO - ESRI
- MG 2025

N

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet



GREEN EARTH OPERATIONS

Figure 6 - Soil Survey Map

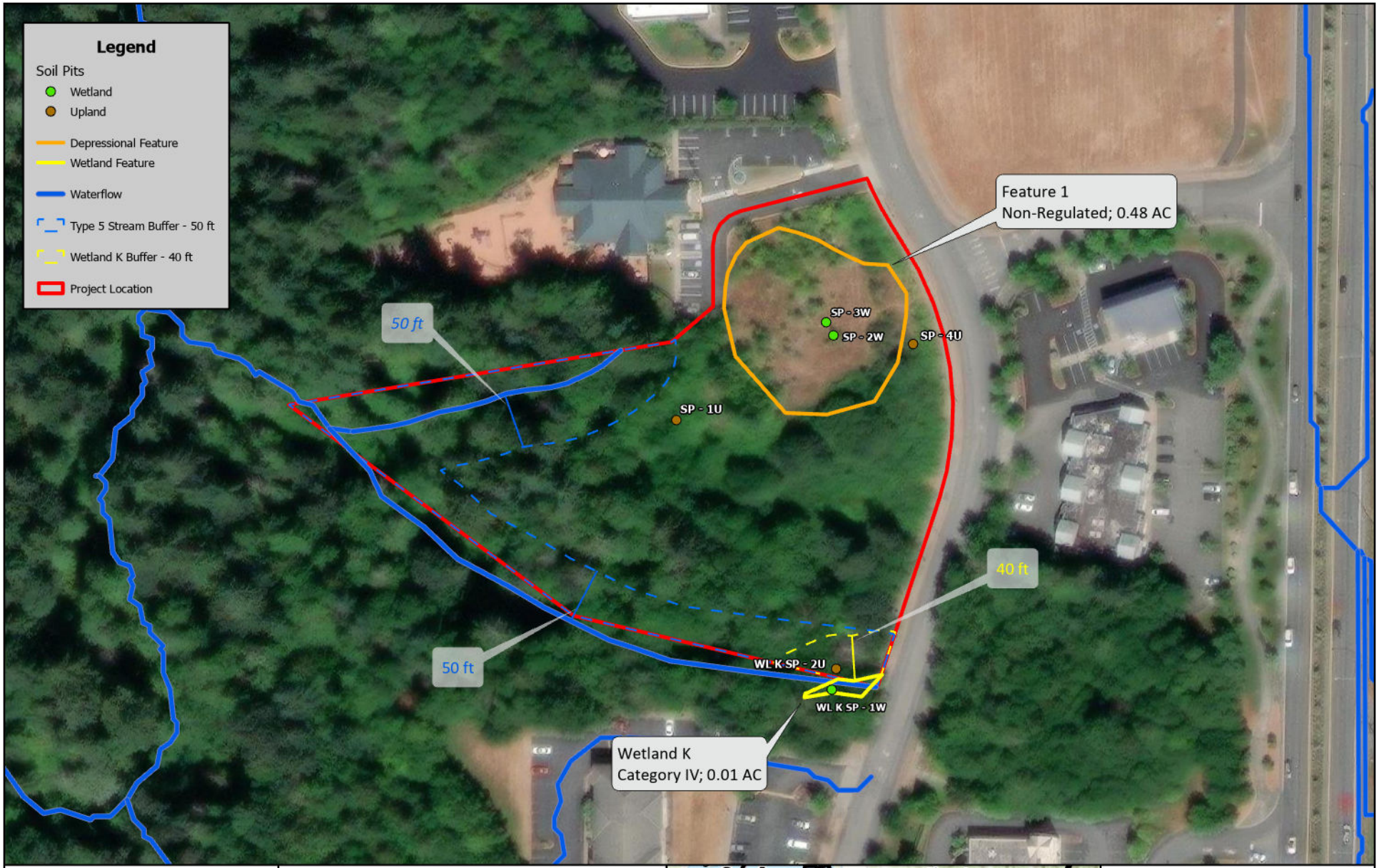
Montgomerie
Critical Area Report
Snohomish County, WA

Sources:
- GEO - ESRI
- NRCS

N

0 0.03 0.05 Miles

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet



GREEN EARTH OPERATIONS

Figure 7 - Critical Areas Map

Montgomerie
Critical Area Report
Snohomish County, WA

Sources:
- GEO - ESRI
- DNR - MMC 17.52B.100
- MMC 17.52C.090

N

0 0.01 0.03 Miles

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Appendix B – Field Data Sheets

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Harbour Pointe City/County: Mukilteo Sampling Date: 12/11/2024
Applicant/Owner: Westcott Homes State: WA Sampling Point: SP-1U
Investigator(s): Sihong Zhu Section, Township, Range:
Landform (hillslope, terrace, etc.): Top of Ravine Local relief (concave, convex, none): convex Slope (%): 2%
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

25/10

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Thuja plicata	40	✓	FAC
2. Alnus rubra	10	✓	FAC
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Rubus parviflorus	20	✓	FACU
2. Sala(Gaultheria Shallon)	20	✓	FACU
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Polystichum munitum	30	✓	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: ____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: Does not meet dominance test

SOIL

Sampling Point: SP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Sdlm	- A HORIZON
4-16	10YR 4/6	100					Sdlm	w/gravels.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

crumbly with red cedar chunks

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology present

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Harbour Pointe City/County: Mukilteo Sampling Date: 12/11/2024
Applicant/Owner: Westcott Homes State: WA Sampling Point: SP-2W
Investigator(s): Sihong Zhu Section, Township, Range:
Landform (hillslope, terrace, etc.): depressional Local relief (concave, convex, none): concave Slope (%): 1%
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks: AREA has been cleared and graded from past landuse activities

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	10	✓	FAC
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Juncus effusus	20	✓	FACW
2. Tufted hairgrass (Deschampsia cespitosa)	30	✓	FAC
3.			
4. Phalaris arundinacea	20	✓	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: Meets dominance test

SOIL

Sampling Point: SP-2W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5Y 6/1	90	10YR 5/4	10	C	M	Sd cly	No sand
6-14	10YR 6/1	80	10YR 5/2	20	D	M	Sd lm	w/ gravels

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Redox features present w/ depleted matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3) (surface saturation)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation present in the top 6 inches and dry below. Hydrology primarily from surface precipitation

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Harbour Point City/County: Mukilteo Sampling Date: 6/18/25

Applicant/Owner: Westcott State: WA Sampling Point: WLKSP1 WL

Investigator(s): AC / SZ Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ✓, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks: Narrow depressional flow through wetland. Wetland Starts @ 18" CMP culvert along Harbour Place

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Western Cedar Thuja plicata	20	✓	FAC
2. Alnus rubra	30	✓	FAC
3.			
4.			
	50 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15)			
1. Himalayan blackberry (Rubus armeniacus)	10	✓	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		

Herb Stratum (Plot size: 5)			
1.			
2. Oregon grape (Mahonia aquifolium)	5		FACU
3. Sword fern (Polystichum munitum)	5		FACU
4. Herb geranium (Geranium Robertianum)	10	✓	FACU
5. Tellima grandiflora (fringe cup)	25	✓	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: Dominance test met

SOIL

Sampling Point: Wetland SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					loam	
9-16	10YR 4/6	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

Hydrophytic vegetation and wetland hydrology present. Dark soil w/ low chroma lacks redox features but field conditions support saturation as observed on 12/11/24

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Harbour Point City/County: Mukilteo Sampling Date: 6/18/25

Applicant/Owner: Westcott State: WA Sampling Point: WLK SD2U

Investigator(s): AC/SZ Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 1%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: Upland area north of the wetland

VEGETATION – Use scientific names of plants.

25/10

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Western cedar (Thuja plicata)	10		FAC
2. Alnus rubra	40	✓	FAC
3.			
4.			
	50 = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1. Himalayan Blackberry (Rubus armeniacus)	30	✓	FAC
2.			
3.			
4.			
5.			
	30 = Total Cover		

Herb Stratum (Plot size: ____)			
1. Dicentra formosa	20	✓	FACU
2. Geranium Robertianum.	20	✓	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40 = Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 50%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: Wetland KSP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/3						loamy	tree debris / roots
5-10	10YR 4/4						Sandy loam	
10-16	10YR 6/6						Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

Small to large gravels throughout / high chroma

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology observed today and in previous field trips.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Harbour Point City/County: Mukilteo Sampling Date: 6/18/25

Applicant/Owner: Westcott State: WA Sampling Point: WLC SP-3W

Investigator(s): AC / SZ Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0%

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: PEM / PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil ✓, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks: Area has been cleared and excavated. Soil scars / tracks from equipment present. No A horizon present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus spp.	25	✓	FAC
2. Salix scouleriana	10	✓	FAC
3.			
4.			
	35 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Leontodon saxatilis	<5		FACU
2. Yellow Glandweed (Bellardia viscosa)	5	weed	
3. White clover (Trifolium repens)	15	✓	FAC
4. Velvet grass (Holcus lanatus)	40	✓	FAC
5. oxeye Daisy	<5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: wetland SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	100					Sandy	
5-10	10YR 4/2	90	10YR 4/6	10			Sandy	
Restricted layer with packed gravels at 10 inch								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks: - Soils are disturbed from previous grading / excavation 5 inch, - mottling stand. / very compact soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✗ Surface Water (A1) (12/11/24)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Observed water ponding in small pockets throughout depression on 12/11/24

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Harbour Pointe City/County: Mukilteo Sampling Date: 6/18/25

Applicant/Owner: Westcott State: WA Sampling Point: WLC SP-4U

Investigator(s): ACIST Section, Township, Range: _____

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Scotch broom (Cytisus scoparius)	25	✓	UPL
2. Himalayan Blackberry	15	✓	FAC
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: _____)			
1. oxeye Daisy (Leucanthemum vulgare)	60	✓	FACU
2. Velvet grass (Holcus lanatus)	20		FAC
3. Rumex acetosella	25	✓	FACU
4. Centaurium erythraea	5		FAC
5. Yellow Glandweed	<5	weed	
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

20/8

110/22

SOIL

Sampling Point: Wetland C SP-4.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2						Sandy loam	sprayed with water. W/O water 10YR 5/2
5-9.	10YR 4/2.		10YR 5/6	2%	C		Sandy loam	only around rocks, roots

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

- root penetration at 5 In

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix C – Wetland Rating Forms

Wetland name or number wetland K.

RATING SUMMARY – Western Washington

Name of wetland (or ID #): wetland K. Date of site visit: _____

Rated by Mark Merkelbach Trained by Ecology? ✓Yes ___No Date of training 2019

HGM Class used for rating_____ Wetland has multiple HGM classes?___Y ✓N

NOTE: Form is not complete without the required figures (figures can be combined).

Source of base aerial photo/map Google Earth 2025

OVERALL WETLAND CATEGORY IV (based on functions___ or special characteristics__)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 23 - 27

_____**Category II** – Total score = 20 - 22

_____**Category III** – Total score = 16 - 19

✓ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H (M) L	H M (L)	H M (L)	
Landscape Potential	H (M) L	(H) M L	H M (L)	
Value	H M (L)	H M (L)	H (M) L	TOTAL
Score Based on Ratings	5	5	4	14

Score for each function based on three ratings (order of ratings is not important)

9 = H, H, H
8 = H, H, M
7 = H, H, L
7 = H, M, M
6 = H, M, L
6 = M, M, M
5 = H, L, L
5 = M, M, L
4 = M, L, L
3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	

Wetland name or number K

Maps and figures required to answer questions correctly for Western Washington

✳Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	K1
Hydroperiods	D 1.4, H 1.2	K1
Location of outlet *(can be added to map of hydroperiods)*	D 1.1, D 4.1	K1
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	K1
Map of the contributing basin	D 4.3, D 5.3	K1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	K2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	R1
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	R2

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number K

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
   If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe, it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.

2. The entire wetland unit is flat, and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size,
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   NO – go to 4 **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   ____The wetland is on a slope (slope can be very gradual),
   ____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, or in a swale without distinct banks,
   ____The water leaves the wetland **without being impounded.**

   NO – go to 5 **YES –** The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

Wetland name or number K

5. Does the entire wetland unit **meet all** of the following criteria?
   ____The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ____The overbank flooding occurs at least once every 2 years.

   NO – go to 6 **YES** – The wetland class is **Riverine**
   NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number K

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic *(use NRCS definitions).* Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed plants > 95% of area points = 5 Wetland has persistent, ungrazed plants > ½ of area points = 3 Wetland has persistent, ungrazed plants ≥ $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is ≥ ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	7

Rating of Site Potential If score is: __**12-16 = H** ✓**6-11 = M** ___**0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: __**3 or 4 = H** ✓**1 or 2 = M** ___**0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	0

Rating of Value If score is: __**2-4 = H** ___**1 = M** ✓**0 = L** *Record the rating on the first page*

Wetland name or number K

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: — **2**

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) — points = 4
- Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet — points = 2
- Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch — points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing — points = 0

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. — **3**

- Marks of ponding are 3 ft or more above the surface or bottom of outlet — points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet — points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet — points = 3
- The wetland is a "headwater" wetland — points = 3
- Wetland is flat but has small depressions on the surface that trap water — points = 1
- Marks of ponding less than 0.5 ft (6 in) — points = 0

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the area of the wetland unit itself. — **0**

- The area of the basin is less than 10 times the area of the unit — points = 5
- The area of the basin is 10 to 100 times the area of the unit — points = 3
- The area of the basin is more than 100 times the area of the unit — points = 0
- Entire wetland is in the Flats class — points = 5

Total for D 4 — Add the points in the boxes above — **5**

Rating of Site Potential If score is: ___**12-16 = H** ___**6-11 = M** ✓**0-5 = L** — *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	3

Rating of Landscape Potential If score is: ✓**3 = H** ___**1 or 2 = M** ___**0 = L** — *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. — **0**

The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately downgradient of unit. — points = 2
- Surface flooding problems are in a sub-basin farther downgradient. — points = 1
- Flooding from groundwater is an issue in the sub-basin. — points = 1
- The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____ — points = 0
- There are no problems with flooding downstream of the wetland. — points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 — **0**

Total for D 6 — Add the points in the boxes above — **0**

Rating of Value If score is: ___**2-4 = H** ___**1 = M** ✓**0 = L** — *Record the rating on the first page*

Wetland name or number K

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac.

___ Aquatic bed	4 structures or more: points = 4
X Emergent	3 structures: points = 2
X Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
___ Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

___ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/groundcover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

___ Permanently flooded or inundated	4 or more types present: points = 3
X Seasonally flooded or inundated	3 types present: points = 2
___ Occasionally flooded or inundated	2 types present: points = 1
___ Saturated only	1 type present: points = 0
___ Permanently flowing stream or river in, or adjacent to, the wetland	
X Intermittently or seasonally flowing stream in, or adjacent to, the wetland	
___ **Lake Fringe wetland**	**2 points**
___ **Freshwater tidal wetland**	**2 points**

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canada thistle**

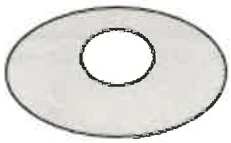
If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

1

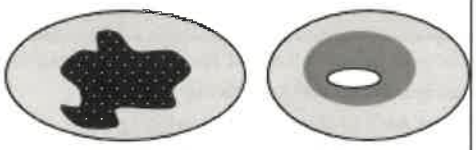
H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.

None = 0 points



Low = 1 point



Moderate = 2 points

All three diagrams in this row are **High** = 3 points

1

Wetland name or number K

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. ____Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). ____Standing snags (dbh > 4 in.) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) X Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	1
Total for H 1 — Add the points in the boxes above	5

Rating of Site Potential If score is: __**15-18 = H** ___**7-14 = M** X**0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. *Calculate:* % relatively undisturbed habitat 14 + [(% moderate and low intensity land uses)/2] 0 = 14 % 14 0 Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1 km Polygon — points = 2 10-19% of 1 km Polygon — points = 1 < 10% of 1 km Polygon — points = 0	1
H 2.2. Total habitat in 1 km Polygon around the wetland. *Calculate:* % relatively undisturbed habitat 26 + [(% moderate and low intensity land uses)/2] 3 = 29 % Total habitat > 50% of Polygon — points = 3 Total habitat 10-50% and in 1-3 patches — points = 2 Total habitat 10-50% and > 3 patches — points = 1 Total habitat < 10% of 1 km Polygon — points = 0	1
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use — points = (- 2) ≤ 50% of 1 km Polygon is high intensity — points = 0	-2
Total for H 2 — Add the points in the boxes above	0

Rating of Landscape Potential If score is: __**4-6 = H** ___**1-3 = M** X**< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: — points = 2 — It has 3 or more Priority Habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW Priority Species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 Priority Habitats (listed on next page) within 100 m — points = 1 Site does not meet any of the criteria above — points = 0	1

Rating of Value If score is: __**2 = H** X**1 = M** ___**0 = L** *Record the rating on the first page*

Wetland name or number K

An aquatic habitat is mapped approximately 740 feet south of wetland K. based on PHS online tool. But a ravine begins about 70 feet west of the wetland

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.[133] This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

X **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

X **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present. A Type 5 stream past through wetland K.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in. (81 cm) diameter at breast height (dbh) or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in. (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number K

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

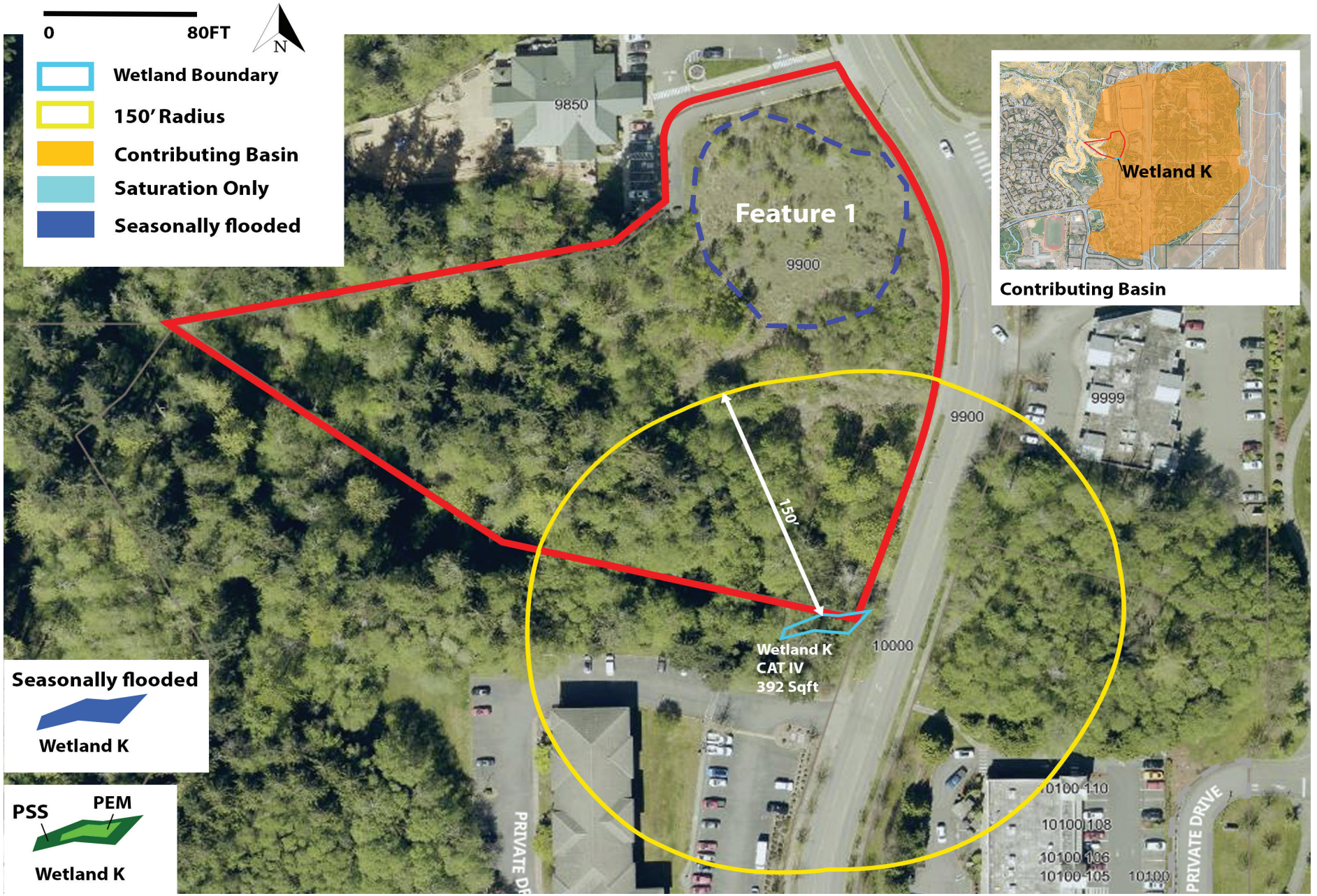
— **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in. (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in. (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

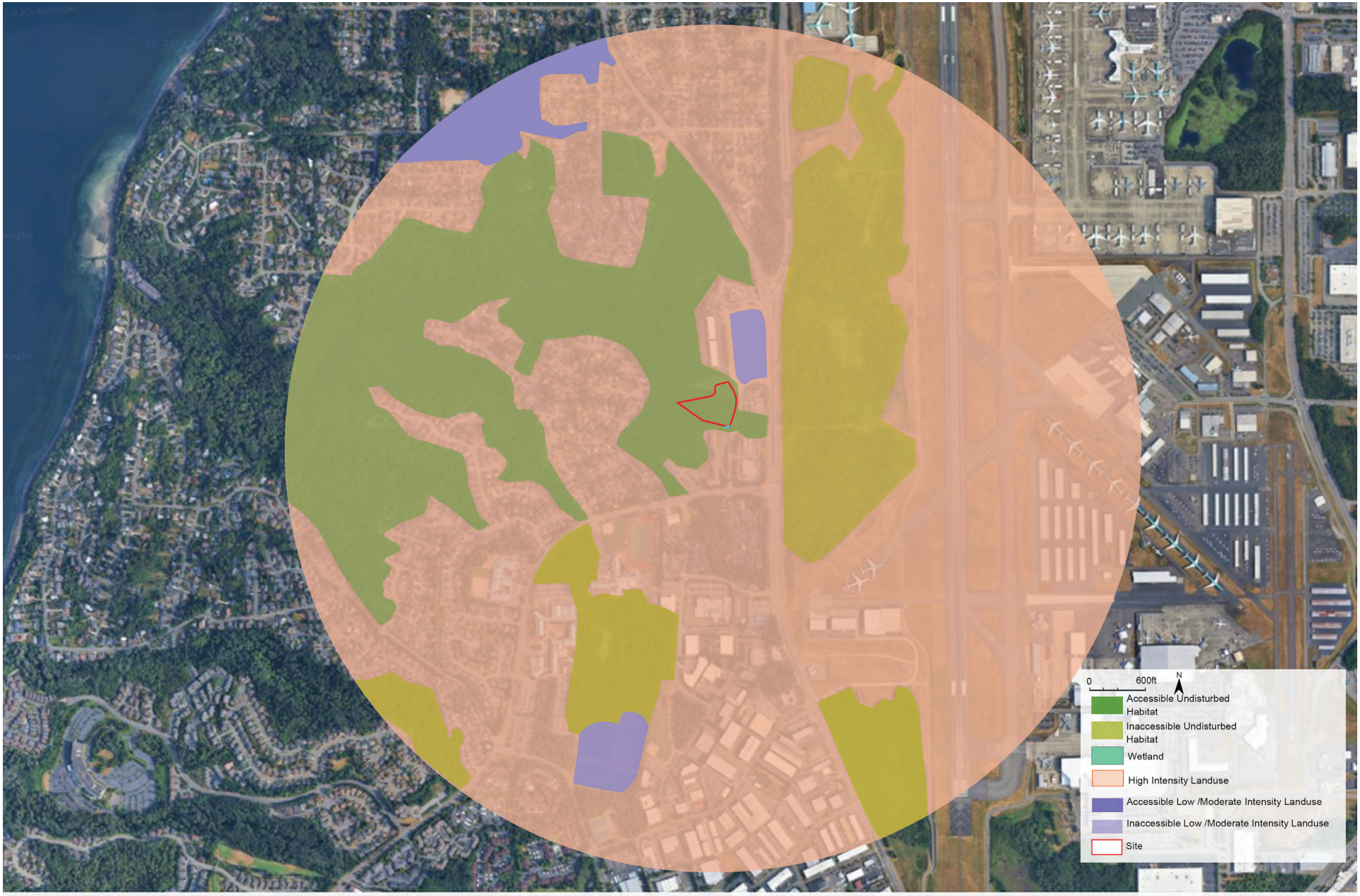


GREEN EARTH
OPERATIONS

RATING FIGURE K1: WETLAND K

150' RADIUS / PLANT CLASS / HYDROPERIOD

Montgomerie, Mukilteo,Snohomish County



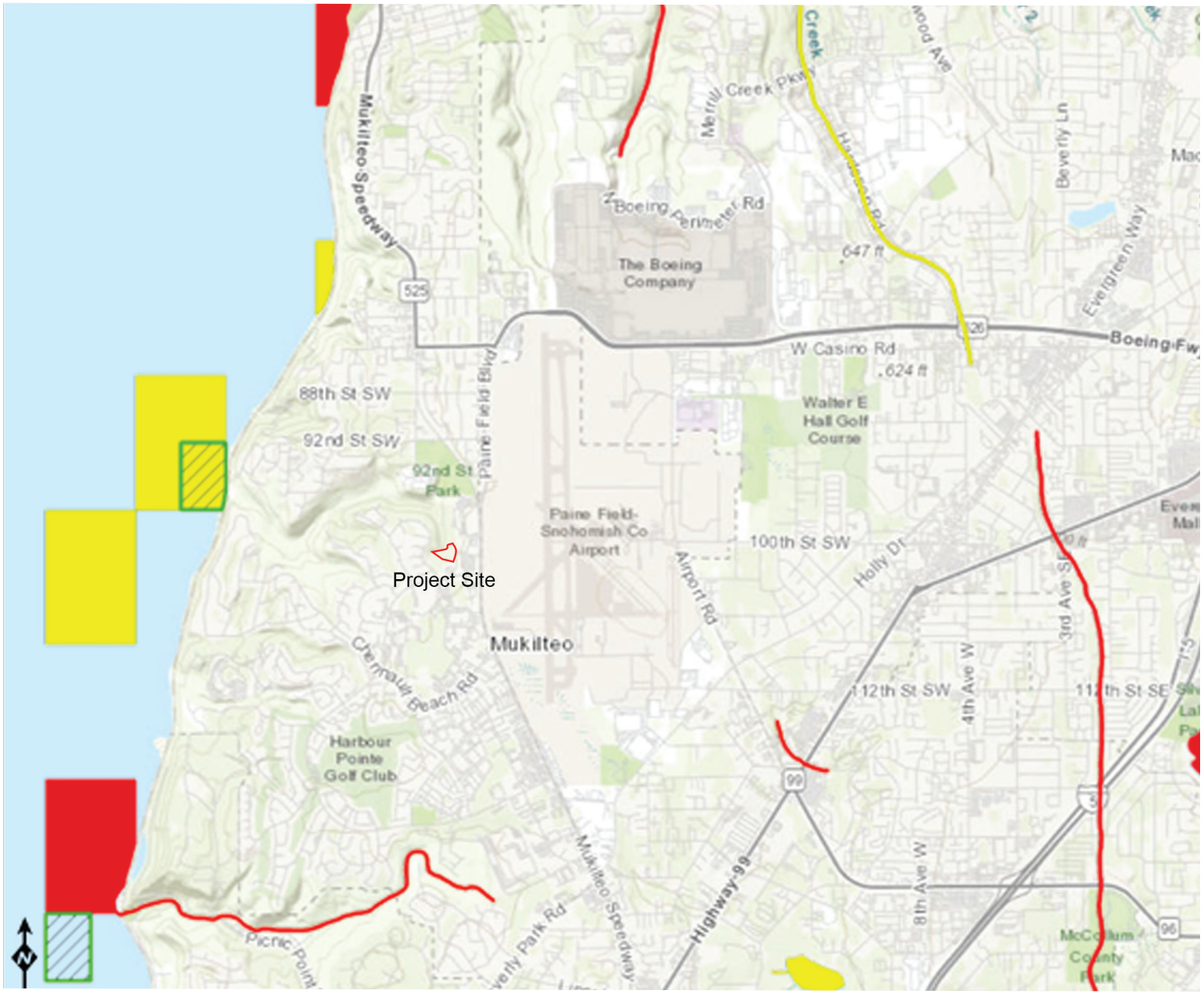
Source: Google Earth Image 2025

GREEN EARTH OPERATIONS

68 % High Intensity Landuse
6% Inaccessible Low / Moderate Intensity Landuse
0 % Accessible Low / Moderate Intensity Landuse
14 % Inaccessible Undisturbed Habitat
12% Accessible Undisturbed Habitat
0 % Wetland
1km Area (Orange cicrle) =34,179,811Sq ft

RATING FIGURE K2: WETLAND K

Montgomerie, Mukilteo,Snohomish County



Assessed Water/Sediment

Water
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

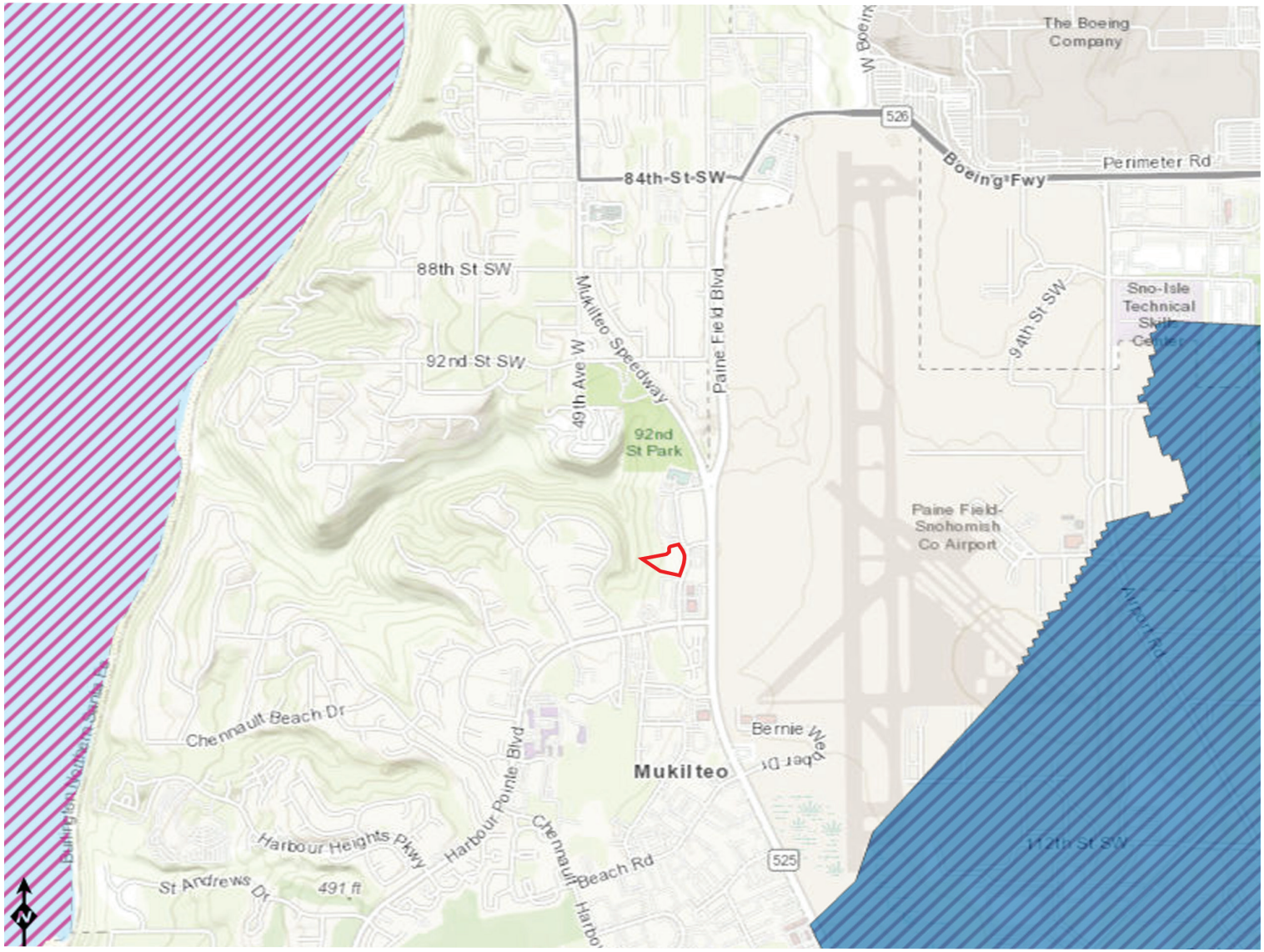
Project Site

Source: WA Department of Ecology Water Altas Map 2025

Miles
0 0.5 1 2

GREEN EARTH OPERATIONS

RATING FIGURE 1
WATER/SEDIMENT ASSESSMENT
Montgomerie, Mukilteo,Snohomish County



Source: WA Department of Ecology Water Altas Map 2025

GREEN EARTH
OPERATIONS

RATING FIGURE 2
WATER QUALITY IMPROVEMENT PROJECTS
Montgomerie, Mukilteo,Snohomish County