

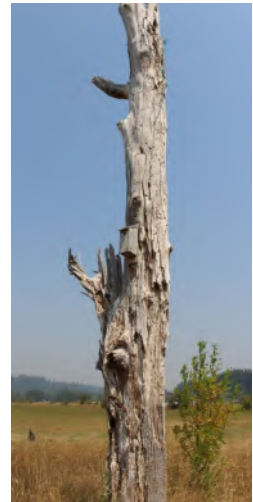


7. Critical Areas Reports



CRITICAL AREAS REPORT

May 19, 2025



ICG 252nd Property
Camas, Washington

Prepared for
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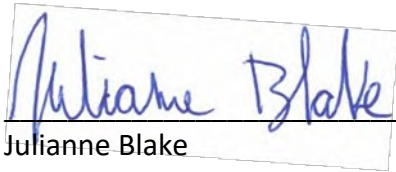
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The information and data in this report was compiled and prepared under the supervision and direction of the undersigned.



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INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by HSR Capital, LLC to complete a critical areas report for Clark County Tax Parcel Number 178175000, located at 305 SE 252nd Avenue in Camas, Washington. The site is approximately 15 acres and is located within Section 35, Township 2 North, Range 3 East of the Willamette Meridian (Figure 1). ELS biologists conducted a site visit on August 15, 2024 to determine the presence and extent of wetlands and fish and wildlife habitat conservation areas onsite. This critical areas report summarizes ELS findings in accordance with *City of Camas Municipal Code (CMC) Chapter 16.53 Wetlands* and *Chapter 16.61 Fish and Wildlife Habitat Conservation Areas* (March 2025).

SITE DESCRIPTION

The approximately 15-acre site consists of Clark County Tax Parcel Number 178175000 and is accessed by a gravel road off SE 252nd Avenue from the north. The site is zoned as North Shore Lower Density Residential (LD-NS), Mixed Use (MX-NS), and North Shore Commercial (C-NS). The properties surrounding the site consist of single-family homes, farmland, and undeveloped forested land. The northwest portion of the site has a single-family residence and fenced area for livestock. Two wetlands (Wetland A and Wetland B) and one stream (Stream A) were located onsite. A cluster of 16 Oregon white oak trees (*Quercus garryana*, FACU) is present in the central western portion, with 3 of the oaks existing onsite and the remaining 13 located on the western adjacent parcel (Figure 2). One wetland is located in the northeastern portion of the site and continues offsite to the north, east, and south. A small portion of a second wetland is located in the northwest corner of the site and continues offsite to the southwest. The southern portion of the site consists of undeveloped forested land. Topography varies, as it is generally level in the north and northeast portions with a depression in the northwest corner corresponding to the location of Wetland B. Topography in the remainder of the site consists of moderate to steep slopes that descend towards the onsite portions of Wetland A and Stream A. General vegetation consists of grasses, weedy herbs, and forbs in the northwest portion, and the remainder of the site consists of forested canopy containing a mix of coniferous and deciduous trees and an herbaceous layer.

METHODOLOGY

The property was evaluated for the presence of wetlands using the Routine Determination Method according to the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers' Wetland Delineation Manual* (Environmental Laboratory 1987); *Western Mountains, Valleys, and Coast Region* (Version 2.0) (Corps 2010). The Routine Determination Method and defining wetland criteria are discussed further in Appendix A. Wetlands are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (Corps) and as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the City of Camas. The ordinary high water mark (OHWM) delineation was conducted following *RCW 90.58.030* and *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Ecology 2016).

ELS biologists evaluated the property on August 15, 2024, for the presence of critical areas including streams, wetlands, and other fish and wildlife habitat conservation areas within or near the site. Two wetlands (Wetlands A and B) were delineated onsite. The onsite boundaries of Wetlands A and B were determined through changes in topography, vegetation, and evidence of wetland hydrology. Vegetation, soil, and hydrology data were collected from test plots to determine the location and extent of wetlands onsite. The offsite portion of Wetland A's boundaries on parcel 178171000 to the east were delineated by ELS biologists in November 2023 and are described in the *Revised Critical Areas Report for Enclave Property* (ELS 2025). The offsite portion of Wetland B's boundaries that extend onto parcel 177885000 to the west were delineated by ELS biologists on November 11, 2022, and are described in the *Critical Areas Report for Mills Property* (ELS 2025). The remaining offsite portions of Wetlands A and B were approximated using aerial images, topographic maps, and visual observations.

One stream (Stream A) was delineated onsite. The OHWM of Stream A was demarcated with orange flagging based on obvious changes in topography, vegetation, and indicators of seasonal flow. Both sides of the stream onsite were delineated, and the stream centerline was mapped. An agricultural ditch (Ditch A) was also delineated in the northeast corner of the site and its centerline was mapped. The locations of test plots, wetland flags, and OHWM flagging were recorded using a hand-held GPS unit capable of sub-meter accuracy under ideal conditions (Figure 2).

VEGETATION

General vegetation in the northwest portion of the property consists of weedy herbs and forbs. The remainder of the site consists of deciduous and coniferous trees and shrubs with a multi-layered subcanopy. Himalayan blackberry (*Rubus armeniacus*, FAC) was very dense in some portions of the site. The plant indicator status following the plant scientific name is defined by the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012) and is in Appendix A.

WETLANDS

Dominant vegetation consists of **trees:** Oregon Ash (*Fraxinus latifolia*, FACW) and black cottonwood (*Populus balsamifera*, FAC); **shrubs:** Scouler's willow (*Salix scouleriana*, FAC) and Nootka rose (*Rosa nutkana*, FAC) and **herbs:** reed canarygrass (*Phalaris arundinacea*, FACW), common rush (*Juncus effusus*, FACW), water smartweed (*Polygonum amphibium*, OBL), and creeping buttercup (*Ranunculus repens*, FAC).

UPLANDS

Dominant vegetation consists of **trees:** Douglas fir (*Pseudotsuga menzeisii*, FACU); **shrubs:** osoberry (*Oemleria cerasiformis*, FACU), snowberry (*Symphoricarpos albus*, FACU), and thimbleberry (*Rubus parviflorus*, FAC); and **herbs:** perennial ryegrass (*Lolium perenne*, FAC), trailing blackberry (*Rubus ursinus*, FACU), and western sword fern (*Polystichum munitum*, FACU).

SOILS

Soils onsite are mapped as Tisch silt loam, 0 to 3 percent slopes (ThA), Olympic stony clay loam, 3 to 30 percent slopes (OmE), Vader silt loam, 3 to 8 percent slopes (VaB), and Lauren very gravelly loam, 0 to 8 percent slopes (LIB) as referenced on the Natural Resources Conservation Service (NRCS) Web Soil Survey website (2025a; Figure 3). Appendix B contains the Wetland Determination Data Forms with soil descriptions.

Tisch silt loam, 0 to 3 percent slopes is characterized as very poorly drained with a depth to water table of about 0 to 12 inches below ground surface (BGS). ThA is formed within depressions with a parent material of volcanic ash, alluvium and diatomaceous earth. A typical profile of ThA consists of 0 to 31 inches of medial silt loam and 31 to 60 inches of muck BGS (NRCS, 2025a). ThA is rated as hydric by the NRCS (NRCS 2025b).¹

Olympic stony clay loam, 3 to 30 percent slopes is characterized as well drained with a depth to water table of more than 80 inches BGS. OmE is formed on mountain slopes with parent material consisting of residuum and colluvium from igneous rock. A typical profile of OmE consists of 0 to 13 inches of stony clay loam, 13 to 44 inches of clay loam, and 44 to 60 inches of gravelly clay loam BGS (NRCS 2025a). OmE is not rated as hydric by the NRCS (NRCS 2025b).

Vader silt loam, 3 to 8 percent slopes is characterized as well drained with a depth to water table of more than 80 inches BGS. VaB has parent material consisting of residuum and colluvium from sandstone with a mixture of volcanic ash in the upper part. A typical profile of VaB consists of 0 to 6 inches of ashy silt loam, 6 to 30 inches of ashy loam, and 30 to 34 inches of weathered bedrock BGS (NRCS 2025a). VaB is not rated as hydric by the NRCS (NRCS 2025b).

Lauren very gravelly loam, 0 to 8 percent slopes is characterized as well drained with a depth to water table of more than 80 inches BGS. LIB is formed on terraces with parent material consisting of alluvium with volcanic ash. A typical profile of LIB consists of 0 to 27 inches of very gravelly medial loam, 27 to 30 inches of very gravelly coarse sandy loam, and 30 to 60 inches of very gravelly loamy coarse sand BGS (NRCS 2025a). LIB is not rated as hydric by the NRCS (NRCS 2025b).

Table 1. Mapped Soils

Soil Series ¹	Percent Slope ¹	Landform ¹	Drainage Class ¹	Hydric Soil ²	Test Plots per Soil Series
Tisch silt loam (ThA)	0 to 3	Depressions	Very poorly drained	Yes	A1, A2, A5, A6
Olympic stony clay loam (OmE)	3 to 30	Mountain Slopes	Well drained	No	A3, A4
Vader silt loam (VaB)	3 to 8	--	Well drained	No	--
Lauren very gravelly loam (LIB)	0 to 8	Terraces	Well drained	No	--

¹NRCS 2025a; ²NRCS 2025b.

¹Areas mapped with hydric soils do not necessarily mean that an area is or is not a wetland—hydrology, hydrophytic vegetation, and hydric soils must all be present to classify an area as a wetland.

WETLAND SOILS

Evaluated wetland soils consist of mucky clays and silty clay loams with very dark brown, very dark gray, dark gray, and gray (10YR 2/2, 3/1, 4/1, 5/1) matrix colors. Redoximorphic features were observed as concentrations in the matrix with dark brown, reddish yellow, and yellowish brown (7.5YR 3/4, 7/6; 10YR 5/4) matrix colors. Primary hydric soil indicators Depleted Matrix (F3), and Depleted Below Dark Surface (A11) were observed within Wetland A (Appendix B). Test plot data for Wetland B are in the *Critical Areas Report for Mills Property* (ELS 2025).

UPLAND SOILS

Evaluated upland soils consist of silty loams and clays with very dark gray, very dark grayish brown, dark brown, brown, and grayish brown (10YR 3/1, 3/2, 3/3, 4/3, 5/2) matrix colors. Evaluated upland soils did not meet any hydric soil indicators.

HYDROLOGY

WETLAND A

Wetland A is a large, depressional, seasonally flooded, saturated only wetland with a seasonally flowing stream (Stream A) within the wetland. Observed wetland hydrology consisted of primary hydrology indicators High Water Table (A2) and Saturation (A3) and secondary hydrology indicators Geomorphic Position (D2) and FAC Neutral Test (D5). Hydrology is supported by precipitation, surface runoff, a shallow groundwater table, and seasonal overbank flooding from Stream A, which serves as Wetland A's outlet.

WETLAND B

Wetland B is a seasonally flooded wetland located primarily offsite to the west in a topographical depression. Surface water was observed in Wetland B during site visits that took place between November 2022 and January 2023, however, it should be noted that no surface hydrology was observed during the September 2022 site visits. During the November 11, 2022 site visit, 12 to 18 inches of surface water was documented in the wetland. Wetland B provides flood storage and delay and groundwater recharge functions. Hydrology is supported by a shallow groundwater table, precipitation, and runoff from adjacent uplands, and the wetland does not have an outlet.

STREAM A

The onsite portion of Stream A is mapped by WDNR as a Type-U stream (unknown; WDNR 2025). Stream A originates and enters Wetland A near the central portion of the site and flows approximately 560 feet northeasterly to the site boundary. Offsite, Stream A mapping changes to a Type-N (non-fish-bearing) water and flows south for approximately 0.20 miles and then southwesterly for approximately 0.42 miles before discharging into Lacamas Lake (WDNR 2025; Figure 2). According to WAC 222-16-031, Stream A meets the definition of a Type 3 water based on having a defined channel of 2 feet or greater within the bankfull width, a gradient of 16 percent or less, and the absence of any fish passage barriers. As such, Stream A is considered a Type-F (fish-bearing) stream. Onsite hydrology is supported by precipitation, a shallow groundwater table, and runoff from upslope areas. According to the Washington State

Department of Ecology’s Water Quality Atlas, the site is in the Lacamas Creek 12-digit hydrologic unit code (HUC) 170800050305 and Watershed Resource Inventory Area (WRIA) 28 Salmon – Washougal.

PRECIPITATION

Precipitation data were gathered from the NOAA Regional Climate Centers *Multnomah County, Oregon, WETS Station: Troutdale*, which is the closest station to the project site with the most complete set of precipitation data. Precipitation two weeks prior to the site visit in August 2024 totaled 0.00 inches. While June and August precipitation levels were normal, July precipitation was below normal levels. Furthermore, the Corps Antecedent Precipitation Tool (APT) indicates rainfall two months prior to the site visit was normal (Corps 2024). A copy of the APT data is provided in Appendix D and precipitation data is summarized in Table 2. Precipitation data surrounding the November 2022 offsite delineation of Wetland B are described in the *Critical Areas Report for Mills Property* (ELS 2025).

Table 2. Precipitation Data

Precipitation (inches)								
Date of Visit	Two Weeks Prior	30 Days Ending	Observed	30%	70%	DAREM ¹		
						Value	Weight	Total
08/15/2024 0.00	0.00	08/2024	0.15	0.08	0.56	2	3	6
		07/2024	0.10	0.37	0.10	1	2	2
		06/2024	3.55	1.98	3.95	2	1	2
Rainfall 3 months prior was: drier than normal (sum 6-9), normal (sum 10-14), wetter than normal (sum 15-18).								10
Year to Date Mean Rainfall ^{2,3} : 38.24 inches								
Year to Date Actual Rainfall ³ : 40.71 inches								

¹Direct Antecedent Rainfall Evaluation Methods (Sumner et al 2009); ²Based on 2004-2024 precipitation data; ³Based on a water year, which starts on October 1.

CRITICAL AREAS INVENTORIES

NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory (NWI; USFWS 2025) mapping indicates the presence of one R4SBC² riverine waterbody offsite to the east (Figure 4). ELS partially agrees with the NWI, as mapping of the R4SBC waterbody corresponds with the location of a portion of Stream A; however, ELS delineated two wetlands onsite, which NWI mapping does not identify. Critical area inventory maps are typically used to gather information about a region and due to the large scale necessary for regional mapping, are limited in accuracy for localized analyses.

CLARK COUNTY CRITICAL AREAS

The Clark County Critical Areas (CCCA) map indicates potential and permitted wetland presence and hydric soils onsite (Figure 5). ELS partially agrees with the mapping of permitted and potential

²Riverine, intermittent, streambed, seasonally flooded.

wetlands as they generally correspond with the location of Wetland A; however, hydric soils are not mapped in the northwest corner of the site where Wetland B is located.

PRIORITY HABITATS AND SPECIES

The Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) maps indicate an oak woodland is present onsite along the central-western boundary of the parcel (WDFW 2025a; Figure 6). ELS generally agrees with the PHS mapping, as a cluster of 16 oak trees were observed in the central-western portion of the parcel extending offsite to the west in the general vicinity of the PHS mapped oaks.

WDNR FOREST PRACTICES

The Washington Department of Natural Resources (WDNR) Forest Practices Application Mapping Tool (FPAMT) indicates a Type-U stream at the location of Stream A onsite and a Type-U stream offsite to the northeast flowing into the Type-N stream that runs along the eastern site boundary (Figure 7). ELS investigations generally agree with the location of the mapped streams as they generally correspond to the location of Stream A. However, ELS does not agree with the stream typing as Stream A meets the criteria of a Type-F water according to WAC 222-16-031.

CRITICAL AREAS SUMMARY

WETLAND A

Wetland A is Category III, depressional, emergent (EM), forested (FO), seasonally flooded (SF) and saturated only (SO) wetland with a seasonally flowing stream (SFS) within the wetland, with approximately 2.26 acres onsite and a total area of approximately 10.06 acres (Figure 8). Portions of Wetland A's offsite boundary were approximated by utilizing lidar and topographic maps to determine obvious changes in elevation as well as observing changes in vegetation while onsite. Wetland A's onsite vegetation is dominated by Oregon ash, common rush, and reed canarygrass. Hydrology is supported by precipitation, surface runoff, a shallow groundwater table, and seasonal overbank flooding from Stream A, which serves as Wetland A's outlet. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Rating System), Wetland A is a Category III wetland, scoring 7 points for water quality functions, 4 points for hydrologic functions, and 7 points for habitat functions, for a total score of 18 points. The wetland rating form is in Appendix C.

WETLAND B

Wetland B is a Category III, depressional, EM, FO, SF wetland, with approximately 0.03 acres onsite and a total area of approximately 0.84 acres, located primarily offsite to the west. Wetland B's vegetation is dominated by Oregon ash, black cottonwood, Scouler's willow, Nootka rose, reed canarygrass, and water smartweed. Hydrology is supported by a shallow groundwater table, precipitation, and runoff from adjacent uplands, and the wetland has no outlet. According to the Rating System, Wetland B is a Category III wetland, scoring 6 points for water quality functions, 5 points for hydrologic functions, and 7 points for habitat functions, for a total score of 18 points. The wetland rating form can be found in Appendix C.

WETLAND BUFFERS

Standard wetland buffers are based on wetland category and habitat score from the Rating System, in conjunction with the proposed land use intensity (*CMC 16.53.040(B)(2)*). Wetland A and Wetland B are both Category III wetlands, each with a habitat score of 7 points. According to *CMC Table 16.53.040-3*, the standard buffer widths for both wetlands are 75 feet, 110 feet, and 150 feet for proposed low, moderate, and high land use intensities, respectively. According to *CMC 16.53.040(B)(4)(b)(i)*, functionally isolated buffer areas are areas that do not protect the wetland from adverse impacts, such as preexisting roads and structures, and shall be excluded from buffer requirements. Portions of the wetland buffers are functionally isolated due to existing impervious surfaces such as the house onsite and the road that runs through the central portion of the site (Figure 2). Wetlands and buffers are summarized in Table 3.

STREAM A

Onsite, Stream A is mapped as Type-U by WDNR (WDNR 2025). According to WAC 222-16-031, Stream A meets the definition of a Type 3 water based on having a defined channel of 2 feet or greater within the bankfull width, a gradient of 16 percent or less, and the absence of any fish passage barriers (WDFW 2025b). As such, Stream A is considered a Type-F (fish-bearing) stream. Onsite hydrology is supported by precipitation, a shallow groundwater table, and runoff from upslope areas. Both sides of Stream A's onsite OHWM and the centerline of the stream were mapped. The streambed is composed of sediment and silty sands, with approximately 12 to 24 inches of flowing water, and banks that are sloping but not prominent.

STREAM BUFFERS

According to Washington State Fish Passage online mapping, Stream A may have the potential presence of resident fish (WDFW 2025b). According to *CMC 16.61.040(D)*, non-anadromous Type-F streams require a 75-foot riparian buffer. The riparian buffer of Stream A is primarily vegetated with reed canarygrass, slough sedge, and a mixture of mature coniferous and deciduous trees with a multi-layered subcanopy. Stream A is summarized in Table 3.

Table 3. Critical Areas Summary

Identifier	Classification	Cowardin Class, Hydroperiod ⁴	Habitat Score/Category ⁵	Proposed Land Use Intensity	Buffer Width ^{6,7}
Wetland A (2.26 acres onsite)	Depressional ¹	EM/FO, SF/SO/SFS	III/7	Low	75 feet
Wetland B (0.03 acres onsite)		EM/FO, SF		Moderate	110 feet
				High	150 feet
Stream A	Type F, non-anadromous ²	--			75 feet

¹NRCS 2008; ²WAC 222-16-031; ³WDNR 2025b; ⁴FGDC 2013; ⁵Hruby 2023; ⁶CMC Table 16.53.040-3; ⁷CMC 16.61.040(D).

DITCH A

Ditch A is an agricultural ditch that appears to have been created within uplands for the purpose of diverting upslope runoff into Stream A (Figure 2). According to *CMC 16.53.010(C)(2)(b)*, Ditch A is exempt from buffers as detailed below:

Artificial. Wetlands created from non-wetland sites including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, stormwater facilities, farm ponds, and landscape amenities; provided, that wetlands created as mitigation shall not be exempted.

Ditch A is not classified as a fish and wildlife habitat conservation area per *CMC 16.61.010(A)(5)* which defines “Water of the State” as omitting, “man-made ditches or bio-swales that have been created from areas not meeting the definition of waters of the state.”

OREGON WHITE OAK

CMC Chapter 16.61 regulates Fish and Wildlife Habitat Conservation Areas, which include areas with which state or federally designated endangered, threatened, and sensitive species have a primary association, state priority habitats and areas associated with state priority species, habitats of local importance (Oregon white oak and Camas lily), naturally occurring ponds under 20 acres, waters of the state, bodies of water planted with game fish by a governmental or tribal entity, and state natural area preserves and natural resource conservation areas (*CMC 16.61.010(A)*).

WDFW identifies which oak communities are considered priority habitats through its Priority Habitats and Species (PHS) program. The Washington Natural Heritage Program (WNHP) defines a North Pacific Oak Woodland as a community dominated or co-dominated by oak and associated with dry, low-elevation sites or those with frequent fires pre-settlement (Nolan and Azerrad 2024). Oregon white oak woodlands are associated with eight different plant communities, including a wide variety of native herbaceous and shrub species. Oak woodlands provide a mix of feeding, resting, and breeding habitat for many wildlife species (Nolan and Azerrad 2024). In addition to oak woodlands, individual oak trees can be considered a priority habitat if they provide considerable value to wildlife. In addition to woodland communities, oaks are also associated with prairies and savannas in Washington. These communities are considered wooded grasslands and are associated with upland grassland and meadows (Rocchio and Crawford 2015).

A cluster of 16 Oregon white oak trees is present in the central western portion, with 3 of the oaks existing onsite and the remaining 13 located on the western adjacent parcel (Figure 2). The cluster has a contiguous dripline of 0.10 acres (onsite and offsite combined). Although PHS mapping identifies the cluster as an oak woodland, it does not meet the woodland size requirements, and each oak shall be considered an individual rather than part of an oak woodland. Several of the oak trees meet WDFW priority habitat criteria for individual oaks.

LIMITATIONS

ELS bases the above listed determinations and conclusions on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with the conclusions of this report. However, this should be considered a preliminary report and should be used at your own risk until it has been reviewed and approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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FIGURES

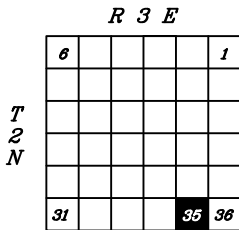
5/1/2025 7:48 AM C:\Users\MikeMiller\Box\EL\SWA\Clark\Camas\3341-03-IGC 252nd\3341-03-Figures CAD Only\Mills Parcel (west, aka IGC 252nd)\3341.03 DL.dwg MikeMiller

WASHINGTON



45.6188° Latitude
-122.4123° Longitude

LOCATION MAP

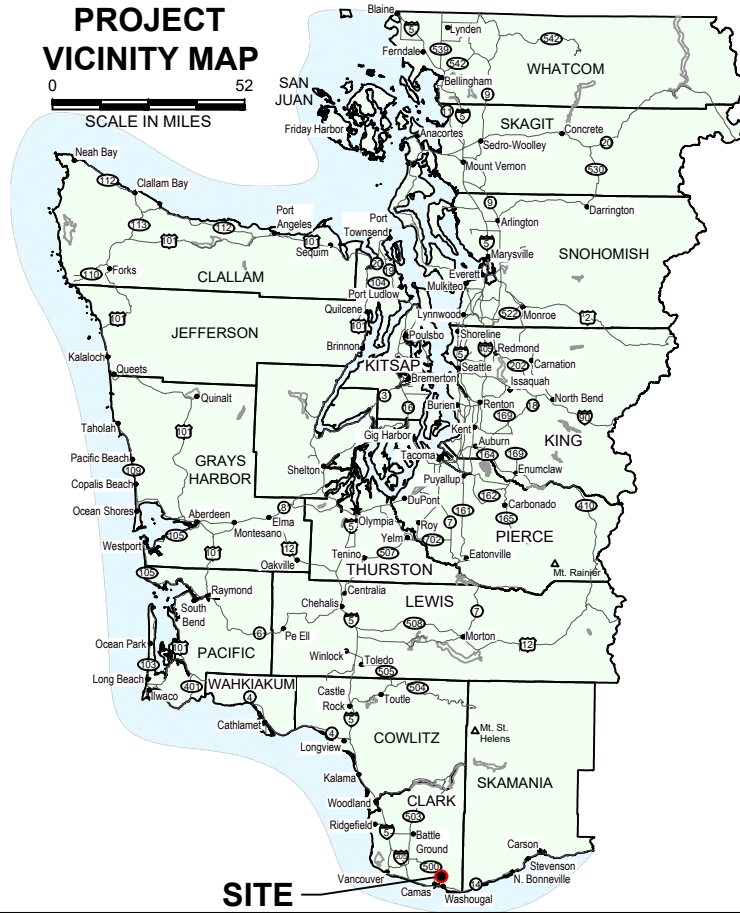


NOTE:

Quadrangle topographic map from USGS.

PROJECT VICINITY MAP

0 52
SCALE IN MILES



SITE

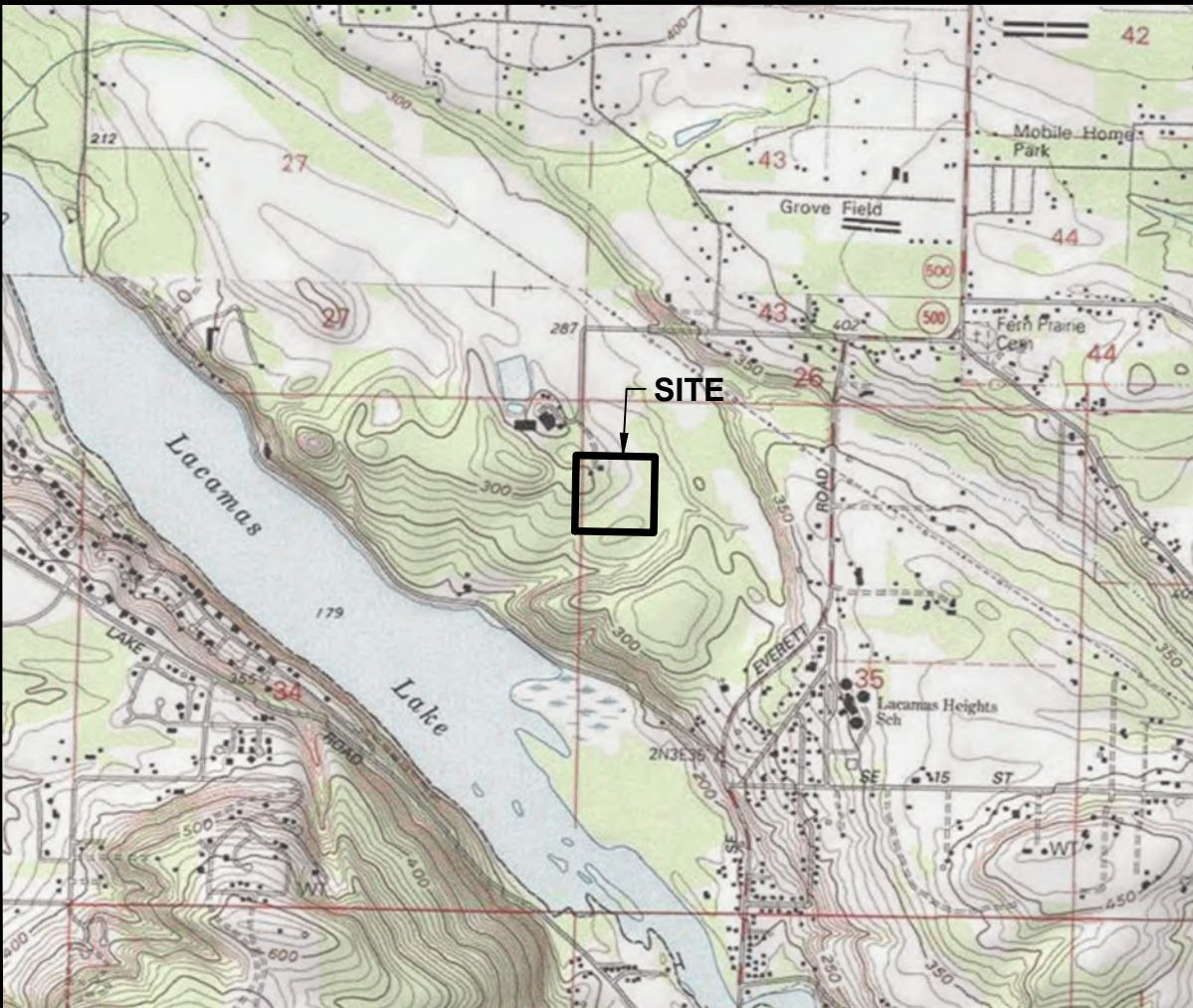


Figure 1

VICINITY MAP

ICG 252nd Property

HSR Capital LLC

City of Camas, Clark County, WA

Section 35, Township 2N, Range 3E, W.M.

DATE: 5/1/25

DWN: MPM

REQ. BY: ND

PRJ. MGR: JB

CHK:

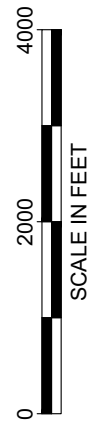
PROJECT NO:
3341.03

1157 3rd Ave., Suite 220A
Longview, WA 98632

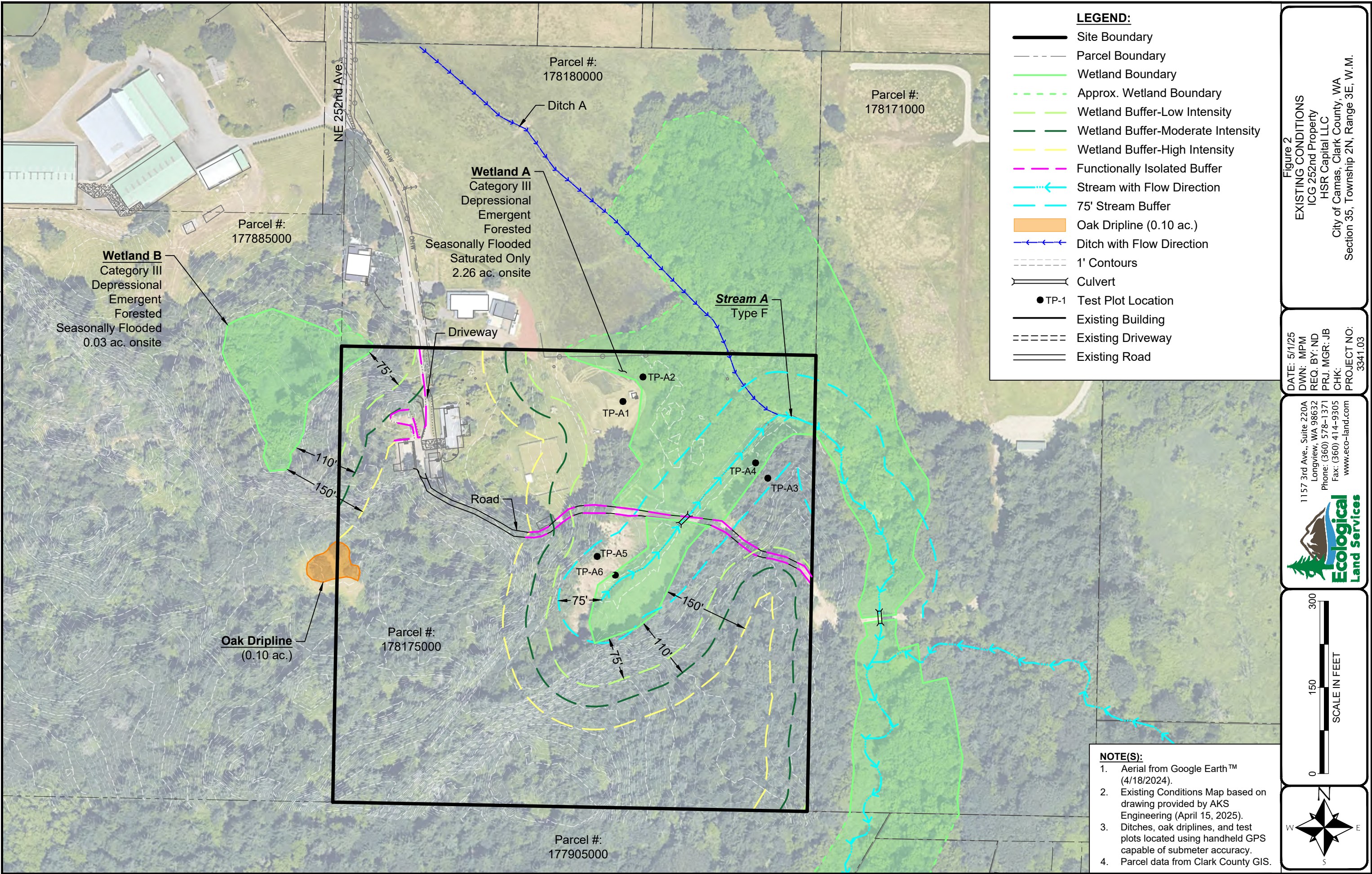
Phone: (360) 578-1371

Fax: (360) 414-9305

www.eco-land.com



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Wetland B
Category III
Depressional
Emergent
Forested
Seasonally Flooded
0.03 ac. onsite

Oak Dripline
(0.10 ac.)

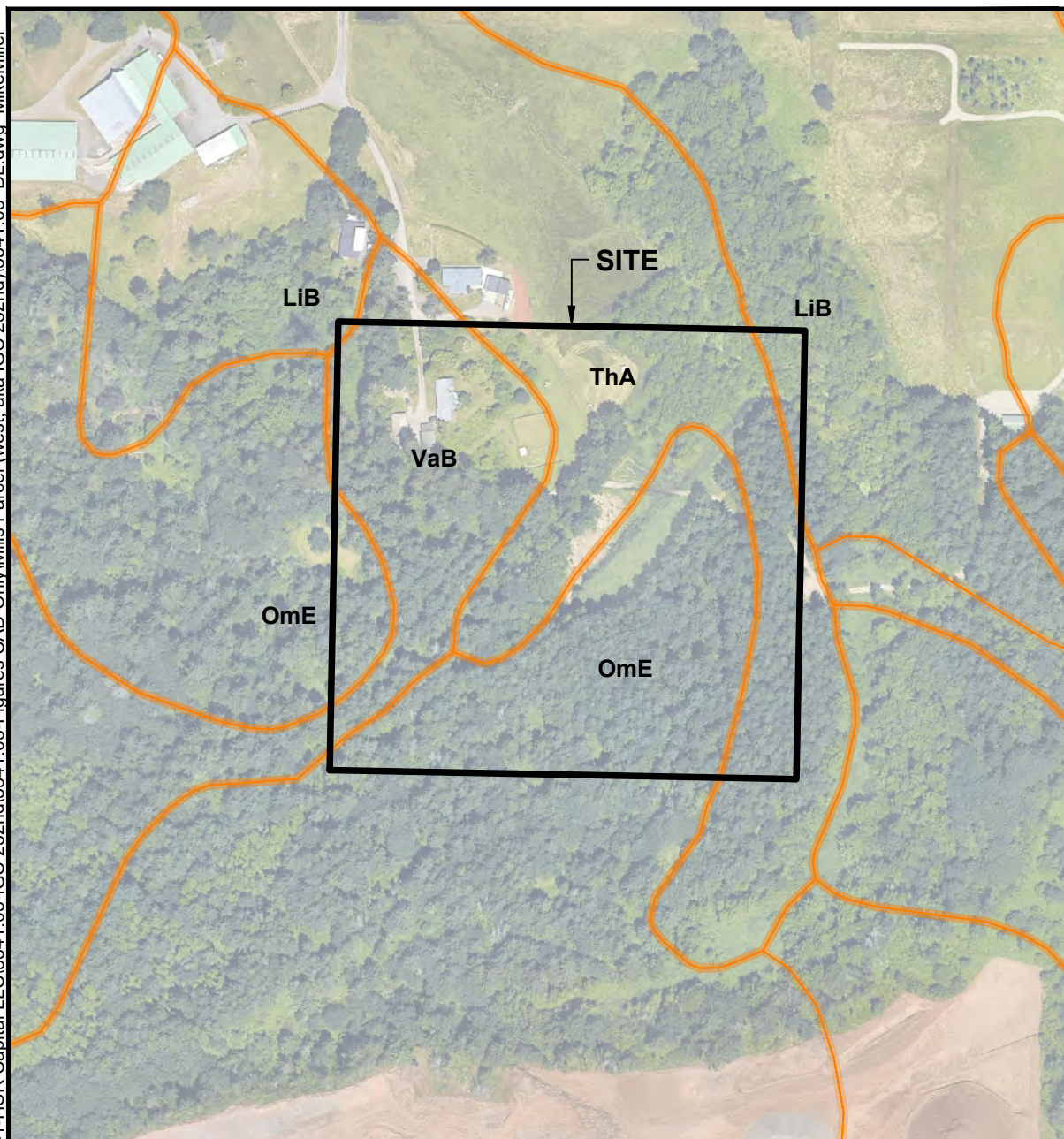
Wetland A
Category III
Depressional
Emergent
Forested
Seasonally Flooded
Saturated Only
2.26 ac. onsite

Parcel #:
178180000

Parcel #:
178171000

Parcel #:
178175000

Parcel #:
177905000



LEGEND:

- Site Boundary
- NRCS Soil Boundary
- ThA** Tisch silt loam, 0 to 3 percent slopes. Hydric.
- VaB** Vader silt loam, 3 to 8 percent slopes. Not Hydric.
- LiB** Lauren very gravelly loam, 0 to 8 percent slopes. Not Hydric.
- OmE** Olympic stony clay loam, 3 to 30 percent slopes. Not Hydric.

NOTE(S):

1. Map provided on-line by NRCS at web address: <http://websoilsurvey.nrcs.usda.gov/app/>

Figure 3
NRCS SOIL SURVEY
IGC 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 35, Township 2N, Range 3E, W.M.

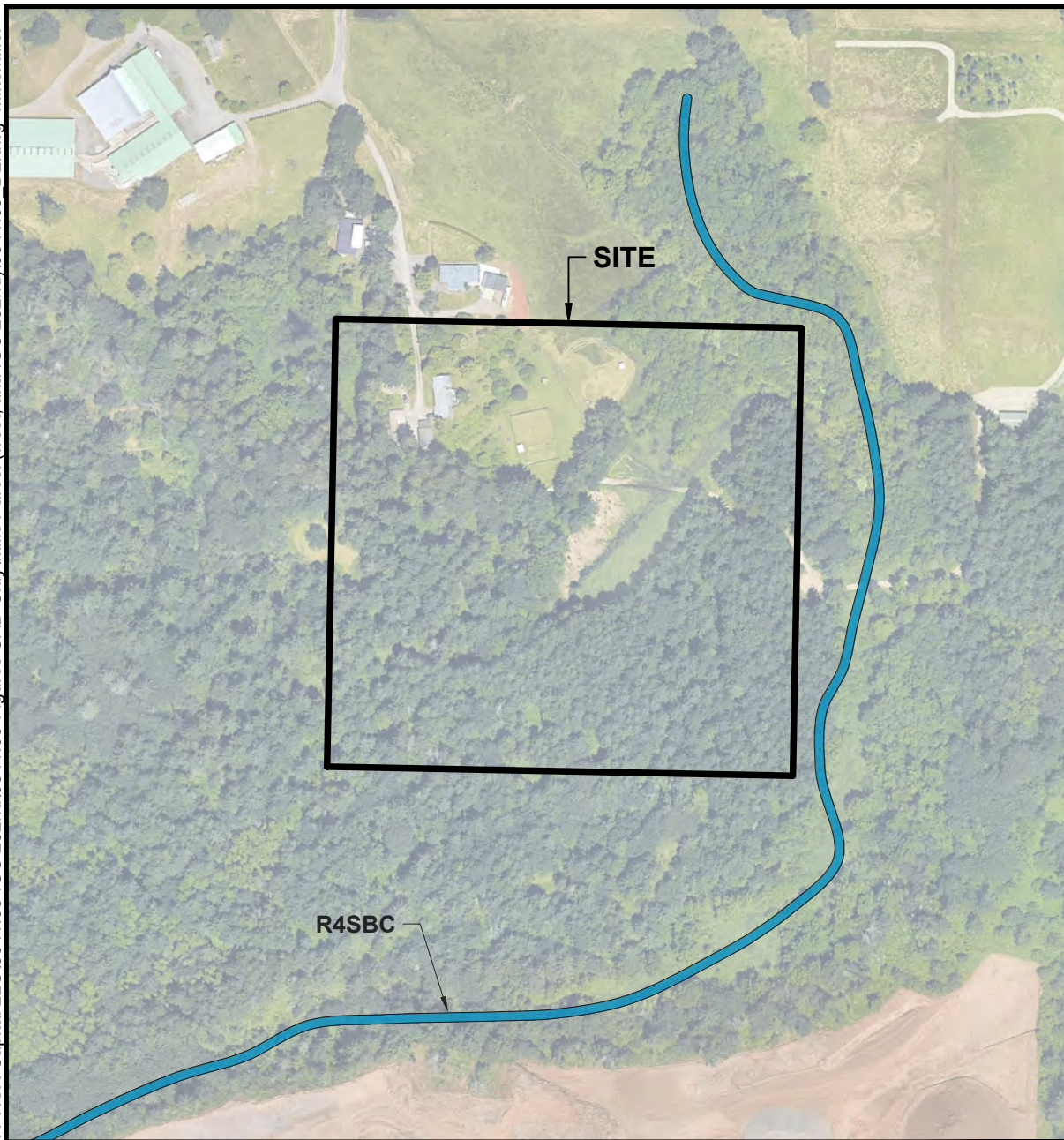
DATE: 5/1/25
DWN: MPM
REQ. BY: ND
PRJ. MGR: JB
CHK:
PROJECT NO: 3341.03

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**Ecological
Land Services**

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No mapped wetlands indicated onsite by US Fish & Wildlife Service.

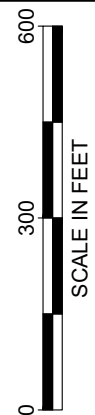
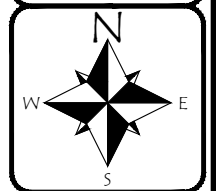
LEGEND:

- Site Boundary
- Wetlands**
- Riverine

R4SBC Riverine, Intermittent, Streambed, Seasonally Flooded

NOTE(S):

- Map provided on-line by US Fish & Wildlife Service at web address:
<https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>



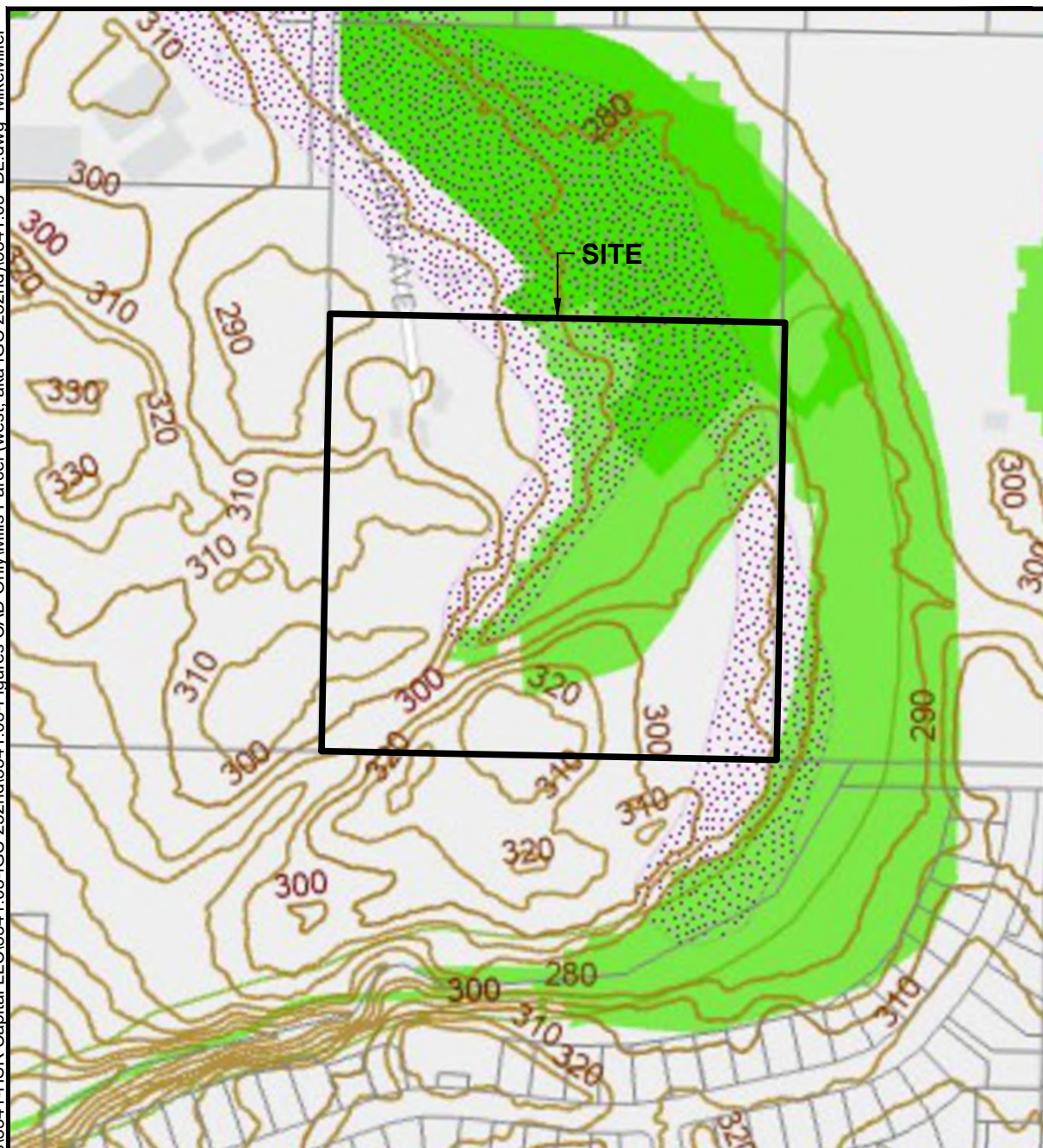
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DATE: 5/1/25
DWN: MPM
REQ. BY: ND
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CHK:
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Figure 4

USFWS NATIONAL WETLANDS INVENTORY
ICG 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 35, Township 2N, Range 3E, W.M.

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LEGEND:

— Site Boundary

Environmental

Priority Habitats and Species Group

Slopes and Geologic Hazards Group

Contour Lines

— Contour Lines - 10 ft

Soils and Wetlands Inventory

Hydric Soils

Potential Wetlands Presence

Permitted Wetland

NOTE(S):

1. Map provided on-line by Clark County at web address: <https://gis.clark.wa.gov/maponline/index.cfm?site=Environmental>

Figure 5
CLARK COUNTY CRITICAL AREAS

ICG 252nd Property

HSR Capital LLC

City of Camas, Clark County, WA

Section 35, Township 2N, Range 3E, W.M.

DATE: 5/1/25

DWN: MPM

REQ. BY: ND

PRJ. MGR: JB

CHK:

PROJECT NO:
3341.03

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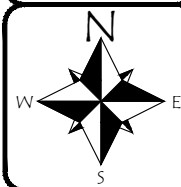
Phone: (360) 578-1371

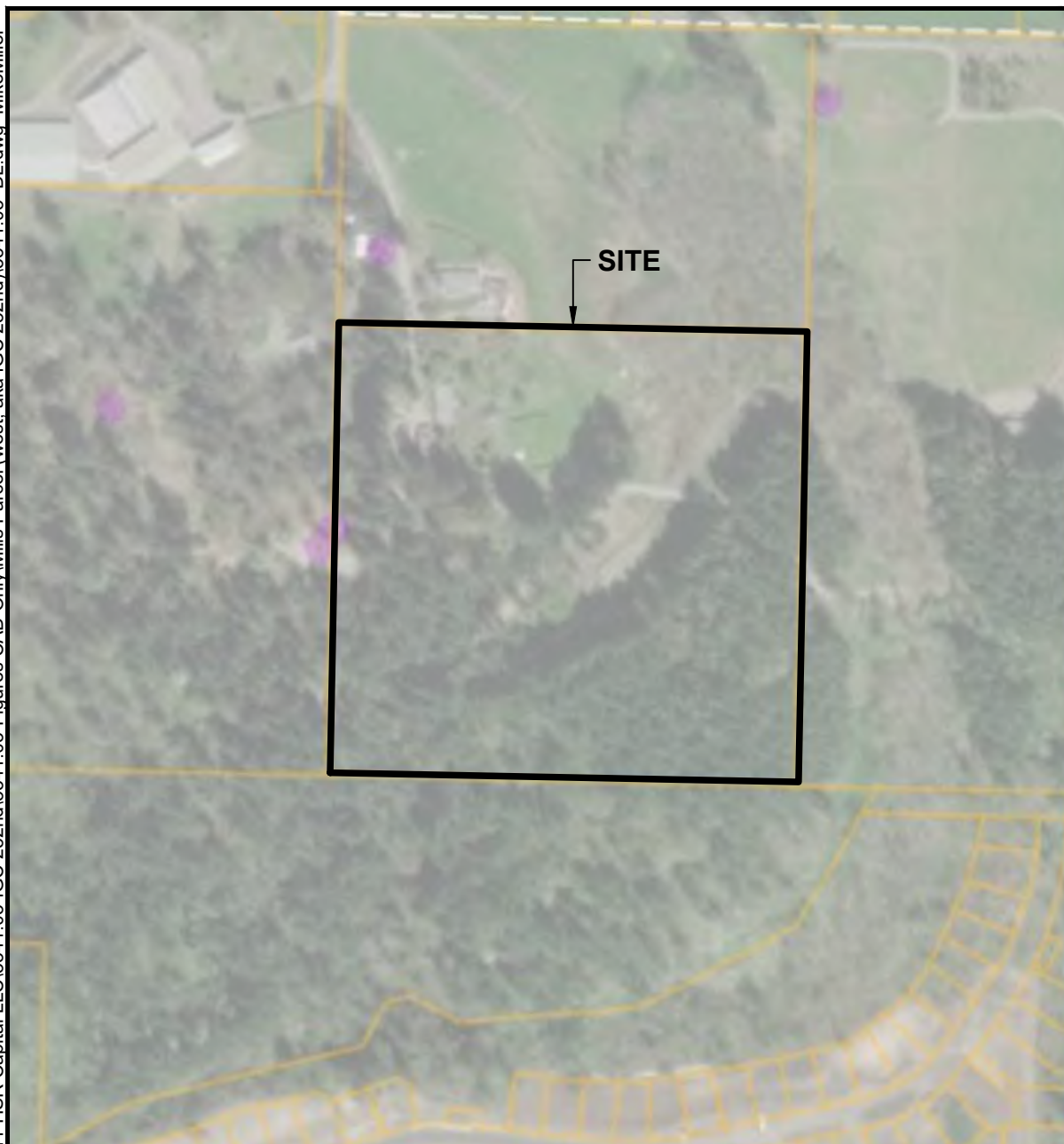
Fax: (360) 414-9305

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SCALE IN FEET



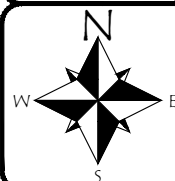


LEGEND:

-  Site Boundary
 Parcel Boundary
 Oak Woodland

By Township
Cave or Cave Rich Areas

NOTE: Map provided on-line by Washington State Department of Fish & Wildlife at web address:
<http://apps.wdfw.wa.gov/phsontheweb/>



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REQ. BY: ND
PRJ. MGR: JB
CHK:
PROJECT NO:
3341.03

Figure 6
WDFW PRIORITY HABITATS AND SPECIES
ICG 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 35, Township 2N, Range 3E, W.M.

**LEGEND:**

— Site Boundary

40-foot Contours

— 40 ft. Contours

Water Courses (FP)

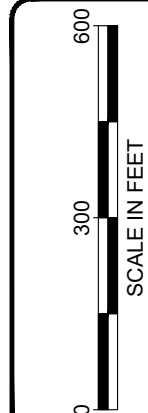
— Type S

— Type N, Np, Ns

DNR Roads

— Paved Road

— Unpaved Road/Surface Unknown



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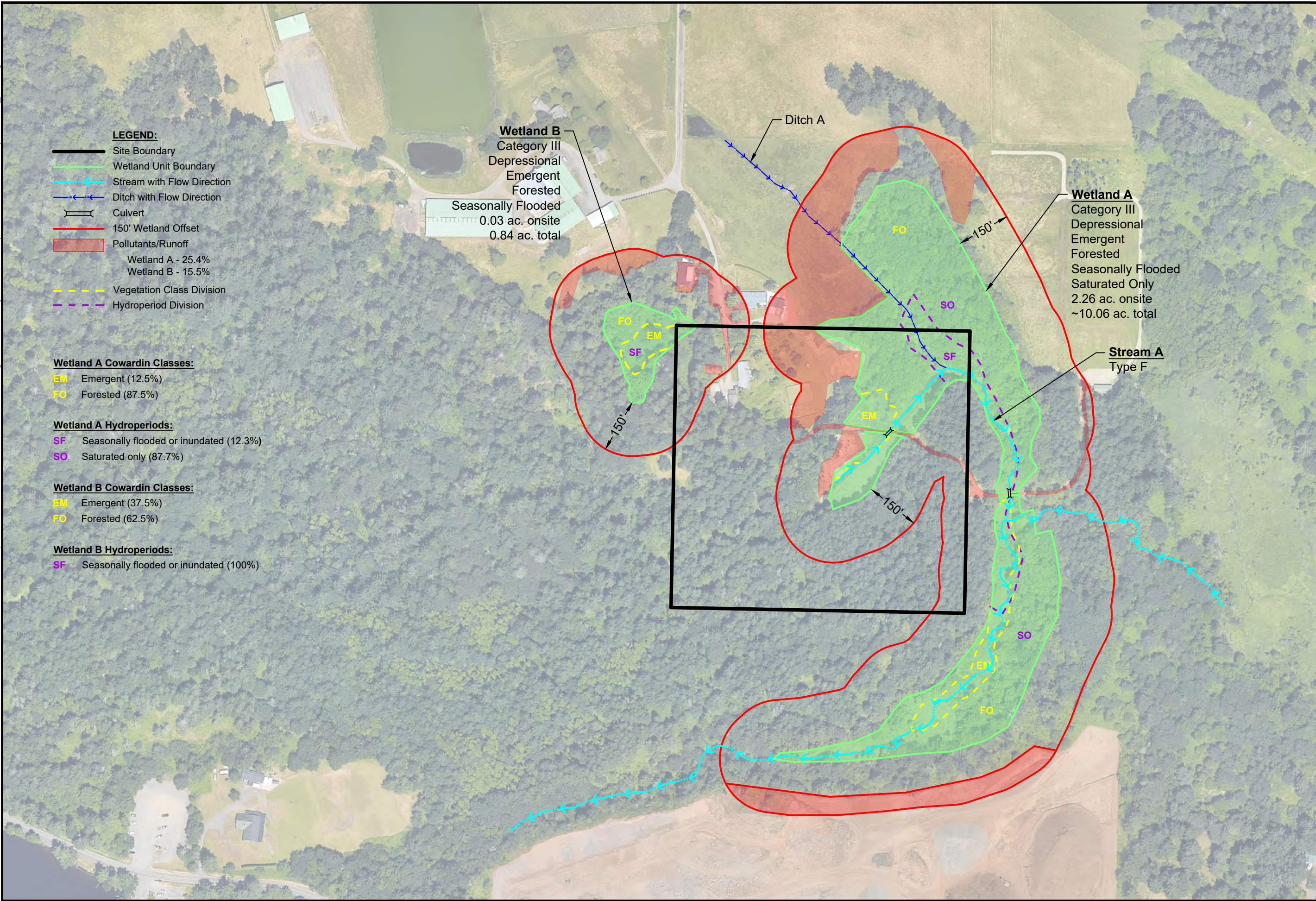


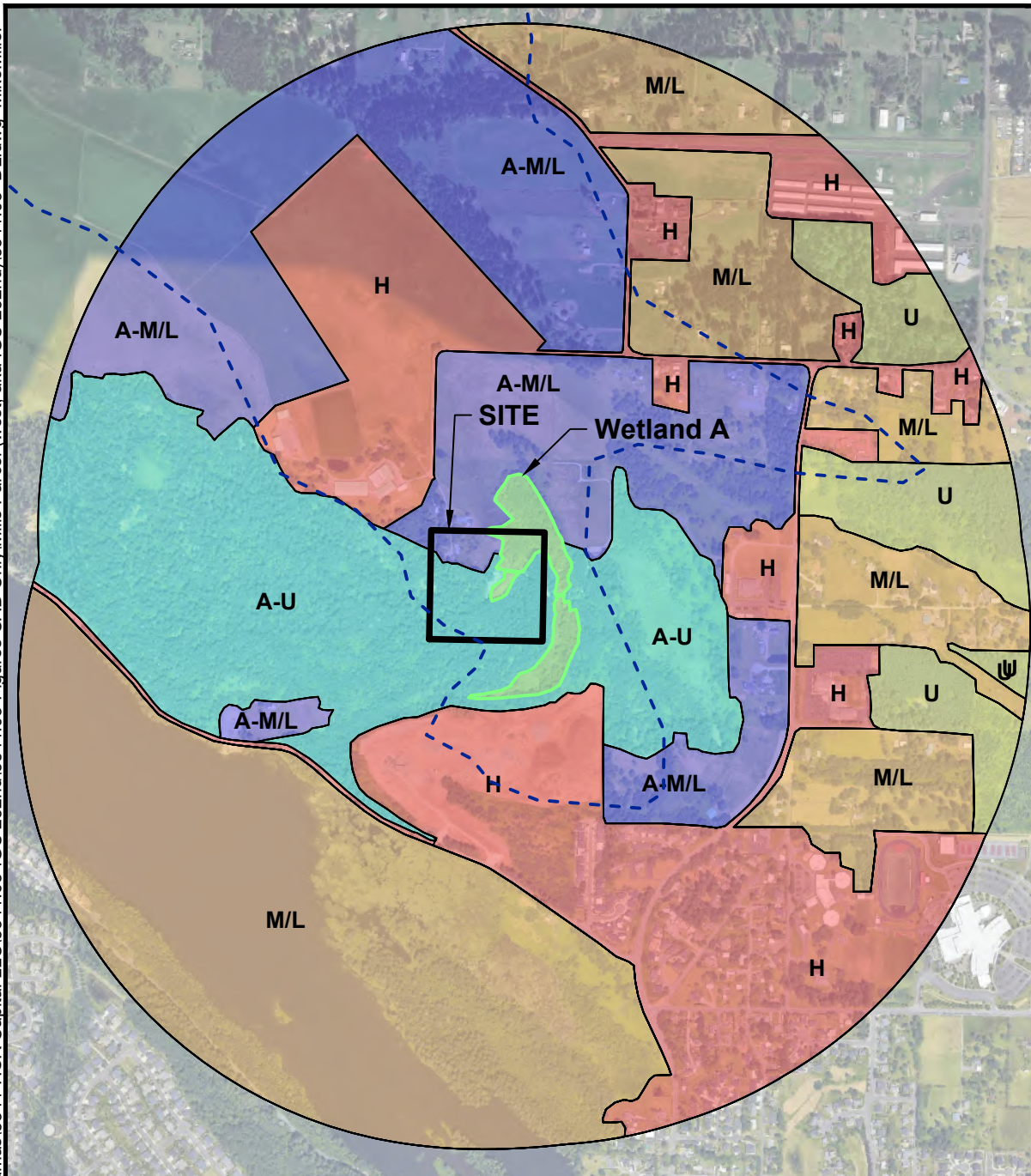
DATE: 5/1/25
DWN: MPM
REQ. BY: ND
PRJ. MGR: JB
CHK:
PROJECT NO:
3341.03

Figure 7
WDNR STREAM TYPE MAP
ICG 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 35, Township 2N, Range 3E, W.M.

NOTE: Map provided on-line by Washington State
Department of Natural Resources at web address:
<http://fortress.wa.gov/dnr/app1/Fpars/viewer.htm>

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**LEGEND:**

- Site Boundary
- Wetland Unit Boundary
- Contributing Basin
46x area of Wetland A

H2.1 Accessible Habitat

A-U	A-U (16.5%)
A-M/L	A-M/L (21.5%)

H2.2 Undisturbed Habitat

U	U (5.3%)
M/L	M/L (32.6%)

H2.3 Land Use Intensity

H	H (24.1%)
---	-----------

H 2.1. Accessible Habitat Equation

$$\% \text{ [A-U] habitat } 16.6\% + [(\% \text{ [A-M/L] intensity land uses})/2] 10.8\% = 27.4\%$$

H 2.2. Total Undisturbed Habitat Equation

$$\% \text{ [A-U] } + \% \text{ [U] habitat } 21.9\% + [(\% \text{ [A-M/L] } + \% \text{ [M/L] land uses})/2] 27.1\% = 49.0\%$$



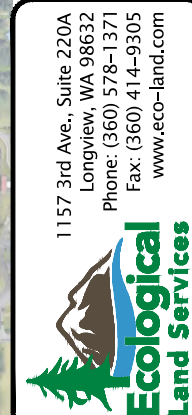
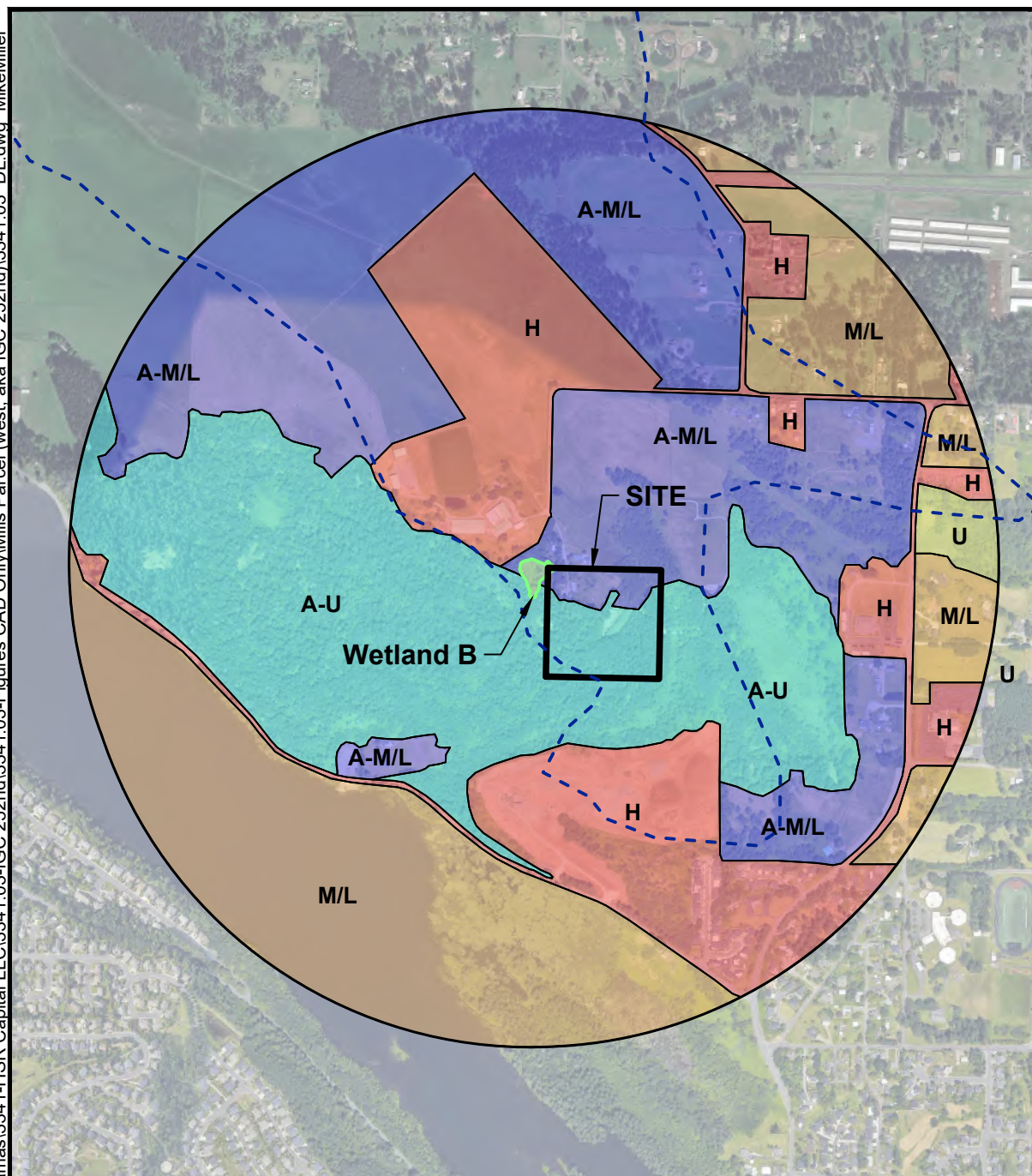
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REQ. BY: ND
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CHK:
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3341.03

Figure 9a

WETLAND RATING FORM-1 km OFFSET - Wetland A
ICG 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 35, Township 2N, Range 3E, W.M.





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3341.03

Figure 9b
WETLAND RATING FORM-1 km OFFSET - Wetland B
ICG 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 35, Township 2N, Range 3E, W.M.

LEGEND:

- Site Boundary
- Wetland Unit Boundary
- Contributing Basin
552x area of Wetland B

H2.1 Accessible Habitat

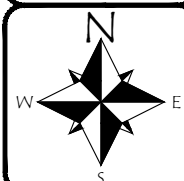
	A-U (23.9%)
	A-M/L (30.8%)

H2.2 Undisturbed Habitat

	U (0.9%)
	M/L (23.9%)

H2.3 Land Use Intensity

	H (20.5%)
--	-----------



H 2.1. Accessible Habitat Equation

$$\% \text{ [A-U] habitat } 23.9\% + [(\% \text{ [A-M/L] intensity land uses})/2] 15.4\% = 39.3\%$$

H 2.2. Total Undisturbed Habitat Equation

$$\% \text{ [A-U] } + \% \text{ [U] habitat } 24.8\% + [(\% \text{ [A-M/L] } + \% \text{ [M/L] land uses})/2] 27.4\% = 52.2\%$$

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Assessed Waters/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

Subbasins

-  12 Digit HUC Boundary

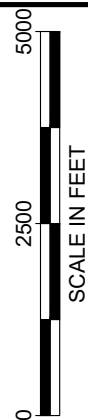


WQ Improvement Projects

-  ARP - In Development

NOTE(S):

1. Map provided on-line by Washington State Department of Ecology at web address: <https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?>



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REQ. BY: ND
PRJ. MGR: JB
CHK:
PROJECT NO: 3341.03

Figure 10
WETLAND RATING FORM-303(d) and TMDLs
ICG 252nd Property
HSR Capital LLC
City of Camas, Clark County, WA
Section 36, Township 2N, Range 3E, W.M.

APPENDIX A

ROUTINE DETERMINATION METHOD AND PLANT INDICATOR RATING DEFINITIONS

ROUTINE DETERMINATION METHOD

The Routine Determination Method is defined according to the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers' Wetland Delineation Manual* (Environmental Laboratory 1987); *Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010). The Routine Determination Method examines three parameters – vegetation, soils, and hydrology – to determine if wetlands exist in a given area. Hydrology is critical in determining what is a wetland, but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for a long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

VEGETATION INDICATOR STATUS

The indicator status, following the scientific names of plant species, indicates the likelihood of the species to be found in wetlands according to the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012). Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) - occur almost always under natural conditions in wetlands.
- **FACW** (facultative wetland) - usually occur in wetlands, but occasionally found in non-wetlands.
- **FAC** (facultative) - equally likely to occur in wetlands or non-wetlands.
- **FACU** (facultative upland) - usually occur in non-wetlands, but occasionally found in wetlands.
- **UPL** (obligate upland) - occur almost always under natural conditions in non-wetlands.
- **NI** (no indicator) - insufficient data to assign to an indicator category.

APPENDIX B

WETLAND DETERMINATION DATA FORMS

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

Project/Site: ICG 252nd Property City/County: Camas/Clark Sampling Date: 08/15/2024
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-A1
 Investigator(s): Naglich F., Mendez A. Section, Township, Range: S35, T2N, R3E
 Landform (hillslope, terrace, etc.): Depressions Local relief: (concave, convex, none): None Slope (%): 0-3%
 Subregion (LRR): A Lat: 45.6198537 Long: -122.4122602 Datum: NAD83
 Soil Map Unit Name: Tisch silt loam, 0 to 3 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain 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 ☐ Hydric Soils Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: TP-A1 is located in the northern, central portion of the site and is paired with TP-A2.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
50% = _____ 20% = _____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				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 = _____
1. _____	%	_____	_____	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	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)
Herb Stratum (Plot size: 5 ft radius)				
1. <i>Lolium perenne</i>	70%	yes	FAC	
2. <i>Prunella vulgaris</i>	10%	no	FACU	
3. <i>Daucus carota</i>	5%	no	FACU	
4. <i>Taraxacum officinale</i>	5%	no	FACU	
5. <i>Rubus ursinus</i>	5%	no	FACU	
6. <i>Plantago major</i>	5%	no	FAC	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
9. _____	%	_____	_____	
10. _____	%	_____	_____	
11. _____	%	_____	_____	
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: 15 ft radius)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____	%	_____	_____	
2. _____	%	_____	_____	
50% = _____ 20% = _____	%	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum <u>0%</u>				
Remarks:				

SOILSampling Point: TP-A1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/1	100%		%			Clay	
8-16	10YR 3/2	100%		%			Clay	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Minerals (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

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

³Indicators 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:

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (min. 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? Yes ☐ No ☒ Depth (Inches): _____
 (Includes Capillary fringe)

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: ICG 252nd Property City/County: Camas/Clark Sampling Date: 08/15/2024
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-A2
 Investigator(s): Naglich F., Mendez A. Section, Township, Range: S35, T2N, R3E
 Landform (hillslope, terrace, etc.): Depression Local relief: (concave, convex, none): Concave Slope (%): 0-3 %
 Subregion (LRR): A Lat: 45.6199713 Long: 45.6199713 Datum: NAD83
 Soil Map Unit Name: Tisch silt loam, 0 to 3 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain 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 ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: TP-A2 is located in the northern, central portion of the site and is paired with TP-A1.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	%	_____	_____	Total Number of Dominant Species Across All Strata:	2 (B)
3. _____	%	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC	100 (A/B)
4. _____	%	_____	_____	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= _____	
50% = _____ 20% = _____	%	=Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)					
1. _____	%	_____	_____		
2. _____	%	_____	_____		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
50% = _____ 20% = _____	%	=Total Cover			
Herb Stratum (Plot size: 5 ft radius)					
1. <i>Juncus effusus</i>	50%	yes	FACW		
2. <i>Phalaris arundinacea</i>	50%	yes	FACW		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
6. _____	%	_____	_____		
7. _____	%	_____	_____		
8. _____	%	_____	_____		
9. _____	%	_____	_____		
10. _____	%	_____	_____		
11. _____	%	_____	_____		
50% = 50 20% = 20	100%	=Total Cover			
Woody Vine Stratum (Plot size: 15 ft radius)					
1. _____	%	_____	_____		
2. _____	%	_____	_____		
50% = _____ 20% = _____	%	=Total Cover			
% Bare Ground in Herb Stratum 0%					
Remarks:				Hydrophytic Vegetation Present? Yes ☒ No ☐	

SOILSampling Point: TP-A2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/2	98%	7.5YR 3/4	2%	C	M	Mucky Clay	See Remarks Below
6-16	10YR 4/1	97%	7.5YR 7/6	3%	C	M	Mucky Clay	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Minerals (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

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

³Indicators 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: Distinct and prominent redox concentrations.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (min. 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): 1
 Water Table Present? Yes ☐ No ☒ Depth (Inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (Inches): _____
 (Includes Capillary fringe)

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: ICG 252nd Property City/County: Camas/Clark Sampling Date: 08/15/2024
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-A3
 Investigator(s): Naglich F., Mendez A. Section, Township, Range: S35, T2N, R3E
 Landform (hillslope, terrace, etc.): Depression Local relief: (concave, convex, none): None Slope (%): 3-30%
 Subregion (LRR): A Lat: 45.6195082 Long: -122.4112567 Datum: NAD83
 Soil Map Unit Name: Olympic stony clay loam, 3 to 30 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain 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 ☒ Hydric Soils Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: TP-A3 is located in the northeastern portion of the site and is paired with TP-A4.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. <i>Pseudotsuga menziesii</i>	30%	yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = <u>15</u> 20% = <u>6</u>	30%	=Total Cover		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= _____
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				
1. <i>Oemleria cerasiformis</i>	5%	yes	FACU	
2. <i>Symphoricarpos albus</i>	5%	yes	FACU	
3. <i>Rubus parviflorus</i>	5%	yes	FAC	
4. _____	%			
5. _____	%			
50% = <u>8</u> 20% = <u>3</u>	15%	=Total Cover		
Herb Stratum (Plot size: 5 ft radius)				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. <i>Polystichum munitum</i>	30%	yes	FACU	
2. <i>Rubus ursinus</i>	30%	yes	FACU	
3. _____	%			
4. _____	%			
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>30</u> 20% = <u>12</u>	60%	=Total Cover		Hydrophytic Vegetation Present? Yes ☐ No ☒
Woody Vine Stratum (Plot size: 15 ft radius)				
1. _____	%			
2. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>40%</u>				
Remarks:				

SOILSampling Point: TP-A3**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100%		%			Silt Loam	
8-16	10YR 5/2	100%		%			Silt Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Minerals (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

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

³Indicators 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:

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (min. 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? Yes ☐ No ☒ Depth (Inches): _____
 (Includes Capillary fringe)

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: ICG 252nd Property City/County: Camas/Clark Sampling Date: 08/15/2024
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-A4
 Investigator(s): Naglich F., Mendez A. Section, Township, Range: S35, T2N, R3E
 Landform (hillslope, terrace, etc.): Depression Local relief: (concave, convex, none): Concave Slope (%): 3-30%
 Subregion (LRR): A Lat: 45.6195713 Long: -122.4113417 Datum: NAD83
 Soil Map Unit Name: Olympic stony clay loam, 3 to 30 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain 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 ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: TP-A4 is located in the northeastern portion of the site and is paired with TP-A3.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
50% = _____ 20% = _____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				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= _____
1. _____	%	_____	_____	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	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)
50% = _____ 20% = _____	%	=Total Cover		
Herb Stratum (Plot size: 5 ft radius)				
1. <i>Phalaris arundinacea</i>	100%	yes	FACW	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	
6. _____	%	_____	_____	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
9. _____	%	_____	_____	
10. _____	%	_____	_____	Hydrophytic Vegetation Present? Yes ☒ No ☐
11. _____	%	_____	_____	
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: 15 ft radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	%	_____	_____	
2. _____	%	_____	_____	
50% = _____ 20% = _____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				
Remarks:				

SOILSampling Point: TP-A4**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	90%	10YR 5/4	10%	C	M	Silty Clay Loam	See Remarks Below
10-16	10YR 4/1	90%	10YR 5/4	10%	C	M	Silty Clay Loam	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils

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

³Indicators 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: Distinct redox concentrations.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

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? Yes ☒ No ☐ Depth (Inches): 0
 (Includes Capillary fringe)

Wetland Hydrology Present?Yes ☒ No ☐

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

Remarks: Saturated to surface.

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

Project/Site: ICG 252nd Property City/County: Camas/Clark Sampling Date: 08/15/2024
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-A5
 Investigator(s): Naglich F., Mendez A. Section, Township, Range: S35, T2N, R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief: (concave, convex, none): None Slope (%): 0-3%
 Subregion (LRR): A Lat: 45.6191137 Long: -122.4124104 Datum: NAD83
 Soil Map Unit Name: Tisch silt loam, 0 to 3 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain 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 ☐ Hydric Soils Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: TP-A5 is located in the central portion of the site and is paired with TP-A6.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = _____ 20% = _____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				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 = _____
1. <i>Phyllostachys</i> sp.*	10%	yes	UPL	
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = <u>5</u> 20% = <u>2</u>	10%	=Total Cover		
Herb Stratum (Plot size: 5 ft radius)				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. <i>Lolium perenne</i>	30%	yes	FAC	
2. <i>Daucus carota</i>	10%	yes	FACU	
3. <i>Rumex obtusifolius</i>	10%	yes	FAC	
4. <i>Plantago major</i>	10%	yes	FAC	
5. <i>Cirsium vulgare</i>	5%	no	FACU	
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>33</u> 20% = <u>13</u>	65%	=Total Cover		
Woody Vine Stratum (Plot size: 15 ft radius)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____	%			
2. _____	%			
50% = _____ 20% = _____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>35%</u>				
Remarks: <i>Phyllostachis</i> sp.* assumed UPL.				

SOILSampling Point: TP-A5**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/3	100%		%			Silt Loam	
10-16	10YR 4/3	100%		%			Silt Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Minerals (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

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

³Indicators 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:

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (min. 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? Yes ☐ No ☒ Depth (Inches): _____
 (Includes Capillary fringe)

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: ICG 252nd Property City/County: Camas/Clark Sampling Date: 08/15/2024
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-A6
 Investigator(s): Naglich F., Mendez A. Section, Township, Range: S35, T2N, R3E
 Landform (hillslope, terrace, etc.): Depression Local relief: (concave, convex, none): Concave Slope (%): 0-3%
 Subregion (LRR): A Lat: 45.6190404 Long: -122.4123058 Datum: NAD83
 Soil Map Unit Name: Tisch silt loam, 0 to 3 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain 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 ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: TP-A6 is located to the central portion of the site and is paired with TP-A5.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	3 (A)
2. _____	%	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	%	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC	100 (A/B)
4. _____	%	_____	_____	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= _____	
50% = _____ 20% = _____	%	=Total Cover			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)					
1. _____	%	_____	_____		
2. _____	%	_____	_____		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
50% = _____ 20% = _____	%	=Total Cover			
Herb Stratum (Plot size: 5 ft radius)					
1. <i>Phalaris arundinacea</i>	30%	yes	FACW		
2. <i>Juncus effusus</i>	30%	yes	FACW		
3. <i>Ranunculus repens</i>	25%	yes	FAC		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
6. _____	%	_____	_____		
7. _____	%	_____	_____		
8. _____	%	_____	_____		
9. _____	%	_____	_____		
10. _____	%	_____	_____		
11. _____	%	_____	_____		
50% = 43 20% = 17	85%	=Total Cover			
Woody Vine Stratum (Plot size: 15 ft radius)					
1. _____	%	_____	_____		
2. _____	%	_____	_____		
50% = _____ 20% = _____	%	=Total Cover			
% Bare Ground in Herb Stratum 15%					
Remarks:					

SOILSampling Point: TP-A6**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/1	100%		%			Silty Clay Loam	
12-16	10YR 3/1	100%		%			Silty Clay Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Minerals (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

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

³Indicators 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:

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (min. 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? Yes ☒ No ☐ Depth (Inches): 0
 (Includes Capillary fringe)

Wetland Hydrology Present?Yes ☒ No ☐

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

Remarks:

APPENDIX C

WETLAND RATING FORMS FOR WESTERN WASHINGTON

Wetland A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 8/15/2024Rated by: Julianne Blake Trained by Ecology? X Yes ___ No ___ Date of training: 6/2022HGM Class used for rating: Depressional Wetland has multiple HGM classes? ___ Y X N**NOTE: Form is not complete without the required figures** (figures can be combined).Source of base aerial photo/map: Google Earth**OVERALL WETLAND CATEGORY** III (based on functions X or special characteristics___)

1. Category of wetland based on FUNCTIONS

___ Category I – Total score = 23 - 27

___ Category II – Total score = 20 - 22

X Category III – Total score = 16 - 19

___ Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <u>M</u> L	H M <u>L</u>	H <u>M</u> L	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H <u>M</u> L	
Value	<u>H</u> M L	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	7	4	7	18

**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	Not Applicable

Wetland A

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	8
Hydroperiods	D 1.4, H 1.2	8
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	8
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	8
Map of the contributing basin	D 4.3, D 5.3	9a
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	9a
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	10

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 (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	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 (<i>can be added to another figure</i>)	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 (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	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 A

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 A

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 A

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: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> 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 X 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	0
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	1
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?	Yes = 1 No = 0	0
Source _____		
Total for D 2	Add the points in the boxes above	2

Rating of Landscape Potential If score is: 3 or 4 = H X 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	1
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	1
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	2

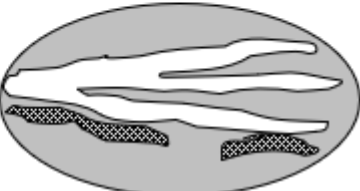
Rating of Value If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland A

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: 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		2
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. 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		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. 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		3
Total for D 4		5
Rating of Site Potential If score is: <u>12-16</u> = H <u>6-11</u> = M <u>X</u> <u>0-5</u> = 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		0
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		2
Rating of Landscape Potential If score is: <u>3</u> = H <u>X</u> <u>1 or 2</u> = M <u>0</u> = 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. <u>Choose the highest score if more than one condition is met.</u> 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. <i>Explain why</i> _____ points = 0 - There are no problems with flooding downstream of the wetland. points = 0		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		0
Rating of Value If score is: <u>2-4</u> = H <u>1</u> = M <u>X</u> <u>0</u> = L Record the rating on the first page		

Wetland A

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 ☒ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 ☒ Forested (areas where trees have > 30% cover) 1 structure: points = 0 <i>If the unit has a Forested class, check if:</i> ☒ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/groundcover) that each cover 20% within the Forested polygon	2
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 ☒ 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 ☒ Intermittently or seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points	2
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². 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	2
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 A

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) ☐ 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)		3
Total for H 1	Add the points in the boxes above	10

Rating of Site Potential If score is: 15-18 = H 7-14 = M 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. <i>Calculate:</i> % relatively undisturbed habitat 16.6%+[(% moderate and low intensity land uses)/2]10.8% = 27.4% 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		2
H 2.2. Total habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % relatively undisturbed habitat 21.9%+[(% moderate and low intensity land uses)/2]27.1% = 49.0% 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		0
Total for H 2	Add the points in the boxes above	3

Rating of Landscape Potential If score is: 4-6 = H 1-3 = M < 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		2

Rating of Value If score is: 2 = H 1 = M 0 = L

Record the rating on the first page

Wetland A

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).
- **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.
- **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.
- **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 Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

Wetland A

- **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>

Wetland A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No = Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No – Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are <i>Spartina</i> , see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer ? ¹³⁵ Yes = Category I No – Go to SC 2.2 SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination , ¹³⁶ Go to SC 2.3 No = Not a WHCV SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES, you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Category I bog No = Not a bog	Cat. I

¹³⁵ <https://www.dnr.wa.gov/NHPdata>¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland A

SC 4.0. Forested Wetlands Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) Yes = Category I No = Category II	Cat. I Cat. II
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i> In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to SC 6.1 No = Not an interdunal wetland for rating SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV	Cat I Cat. II Cat. III Cat. IV
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	Not Applicable

Wetland B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 11/11/2022Rated by: Julianne Blake Trained by Ecology? X Yes ___ No Date of training: 6/2022HGM Class used for rating: Depressional Wetland has multiple HGM classes? ___ Y X N**NOTE: Form is not complete without the required figures** (figures can be combined).Source of base aerial photo/map: Google Earth**OVERALL WETLAND CATEGORY III** (based on functions X or special characteristics___)

1. Category of wetland based on FUNCTIONS

___ Category I – Total score = 23 - 27

___ Category II – Total score = 20 - 22

X 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	
Score Based on Ratings	6			5			7			18

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	<u>Not Applicable</u>

Wetland B

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	8
Hydroperiods	D 1.4, H 1.2	8
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	8
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	8
Map of the contributing basin	D 4.3, D 5.3	9b
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	9b
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	10

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 (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	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 (<i>can be added to another figure</i>)	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 (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	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 B

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 B

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 B

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		3
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		3
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> 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		4
Total for D 1		10

Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H X 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 0
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		1

Add the points in the boxes above

Rating of Landscape Potential If score is: 3 or 4 = H X 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 1
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		1

Add the points in the boxes above

Rating of Value If score is: 2-4 = H X 1 = M 0 = L

Record the rating on the first page

Wetland B

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:**

Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	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.

Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
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.

The area of the basin is less than 10 times the area of the unit	points = 5	0
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

7**Rating of Site Potential** If score is: 12-16 = H X 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

0

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

2**Rating of Landscape Potential** If score is: 3 = H X 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.

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):		0
• 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

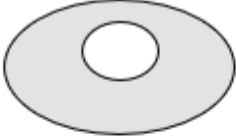
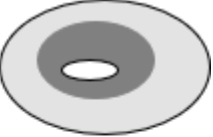
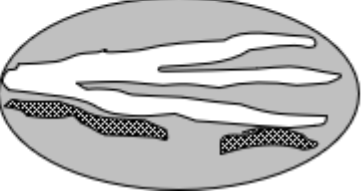
Total for D 6

Add the points in the boxes above

0**Rating of Value** If score is: 2-4 = H 1 = M X 0 = L

Record the rating on the first page

Wetland B

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 ☒ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 ☒ Forested (areas where trees have > 30% cover) 1 structure: points = 0 <i>If the unit has a Forested class, check if:</i> ☐ 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 ☒ 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 ☐ Intermittently or seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². 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	2
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	2

Wetland B

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) ☐ 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	6

Rating of Site Potential If score is: ☒ 15-18 = H ☐ 7-14 = M ☒ 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. <i>Calculate:</i> % relatively undisturbed habitat 23.9% + [(% moderate and low intensity land uses)/2] 15.4% = 39.3% 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	3
H 2.2. Total habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % relatively undisturbed habitat 24.8% + [(% moderate and low intensity land uses)/2] 27.4% = 52.2% 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	3
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	0
Total for H 2 Add the points in the boxes above	6

Rating of Landscape Potential If score is: ☒ 4-6 = H ☐ 1-3 = M ☐ < 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? <i>Choose only the highest score that applies to the wetland being rated.</i> 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	2

Rating of Value If score is: ☒ 2 = H ☐ 1 = M ☐ 0 = L

Record the rating on the first page

Wetland B

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).
- **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.
- **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.
- **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 B

- **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>

Wetland B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No = Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No – Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are <i>Spartina</i> , see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer ? ¹³⁵ Yes = Category I No – Go to SC 2.2 SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination , ¹³⁶ Go to SC 2.3 No = Not a WHCV SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES, you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Category I bog No = Not a bog	Cat. I

¹³⁵ <https://www.dnr.wa.gov/NHPdata>¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

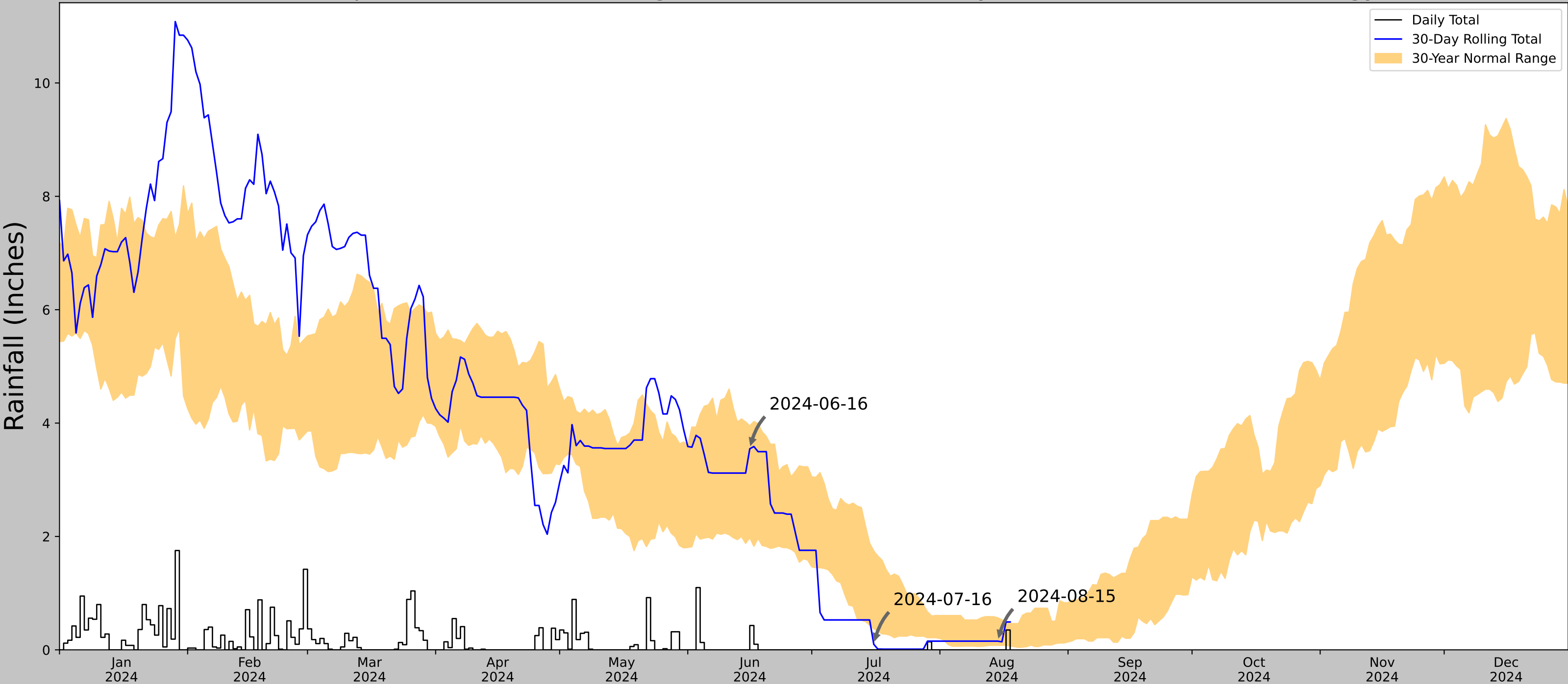
Wetland B

SC 4.0. Forested Wetlands Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) <u>exceeding 21 in. (53 cm)</u>. Yes = Category I <u>No = Not a forested wetland for this section</u>	Cat. I
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to SC 5.1 <u>No = Not a wetland in a coastal lagoon</u> SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ⅓ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) Yes = Category I No = Category II	Cat. I Cat. II
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i> In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to SC 6.1 <u>No = Not an interdunal wetland for rating</u> SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV	Cat I Cat. II Cat. III Cat. IV
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	Not Applicable

APPENDIX D

ANTECEDENT PRECIPITATION TOOL DATA

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.6198537, -122.4122602
Observation Date	2024-08-15
Elevation (ft)	280.598
Drought Index (PDSI)	Mild drought (2024-07)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-15	0.079134	0.564961	0.153543	Normal	2	3	6
2024-07-16	0.372047	1.743307	0.098425	Dry	1	2	2
2024-06-16	1.979921	3.949213	3.547244	Normal	2	1	2
Result							Normal Conditions - 10



**US Army Corps
of Engineers®**

Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



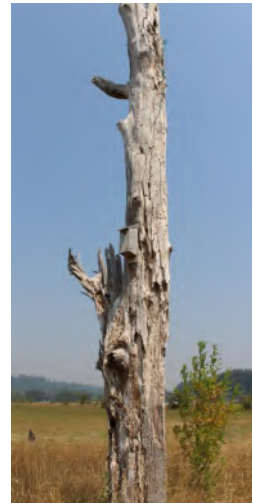
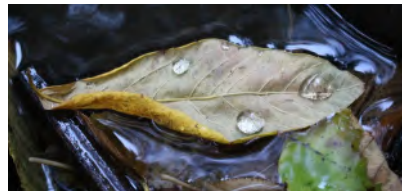
ERDC
ENGINEER RESEARCH & DEVELOPMENT CENTER

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
TROUTDALE	45.5533, -122.3886	33.136	4.739	247.462	3.305	9243	80
PORTLAND TROUTDALE AP	45.5511, -122.4097	24.934	1.032	8.202	0.473	1693	10
CAMAS 2.4 E	45.5845, -122.374	58.071	2.268	24.935	1.077	3	0
PORTLAND WFO	45.5608, -122.5383	20.997	7.261	12.139	3.356	315	0
PORTLAND INTL AP	45.5958, -122.6092	21.982	11.066	11.154	5.103	98	0



CRITICAL AREAS REPORT

May 19, 2025



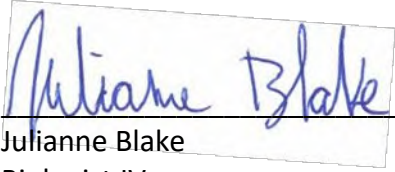
Mills Property
Camas, Washington

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SIGNATURE PAGE

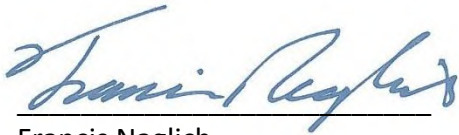
The information in this report was compiled and prepared under the supervision and direction of the undersigned.

A handwritten signature in blue ink that reads "Julianne Blake". The signature is written in a cursive style and is positioned above a horizontal line.

Julianne Blake
Biologist IV

A handwritten signature in blue ink that reads "Gabrielle (Gabby) Bender". The signature is written in a cursive style and is positioned above a horizontal line.

Gabrielle (Gabby) Bender
Biologist IV

A handwritten signature in blue ink that reads "Francis Naglich". The signature is written in a cursive style and is positioned above a horizontal line.

Francis Naglich
Principal/Sr. Wetland Biologist

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INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by HSR Capital, LLC to complete a critical areas report for Clark County Tax Parcel Number 177885000, located at 313 SE Leadbetter Road, in Camas, Washington. The site is approximately 21.02 acres and is located within Section 34, Township 2 North, Range 3 East of the Willamette Meridian (Figure 1). ELS biologists conducted site visits between September 2022 and January 2023, to determine the presence and extent of wetlands and fish and wildlife habitat conservation areas onsite. This critical areas report summarizes ELS findings according to *City of Camas Municipal Code (CMC) Chapter 16.53 Wetlands* and *Chapter 16.61 Fish and Wildlife Habitat Conservation Areas* (March 2025).

SITE DESCRIPTION

The approximately 21-acre site is zoned North Shore Higher Density Residential (HD-NS), North Shore Mixed Use (MX-NS), and North Shore Commercial (C-NS). Surrounding properties consist of undeveloped forested land, single-family residences, and agricultural uses. Access to the site is provided by informal foot trails which extend from Clark County Parcel number 178175000 with no existing vehicle access roads. Topography onsite consists of moderate slopes to the south over the majority of the site, with the presence of several depressional areas to the north and northeast. Shallow bedrock and rock outcroppings are also present in some locations. The site is dominated by a forested canopy with a small area of herbaceous vegetation in the northern portion of the parcel. One wetland (Wetland B), two clusters of Oregon white oak trees (*Quercus garryana*, FACU), and two herbaceous bald areas are present onsite. One wetland (Wetland A) and one stream (Stream A) were observed offsite to the east. The offsite wetland and stream were delineated by ELS biologists on August 15, 2024 and are described in the *Critical Areas Report for ICG 252nd Property* (ELS 2025).

METHODOLOGY

The property was evaluated for the presence of wetlands using the Routine Determination Method according to the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers' Wetland Delineation Manual* (Environmental Laboratory 1987); *Western Mountains, Valleys, and Coast Region* (Version 2.0) (Corps 2010). The Routine Determination Method and defining wetland criteria are discussed further in Appendix A. Wetlands are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (Corps), as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the City of Camas (City).

ELS biologists evaluated the property on September 9, September 22, November 11, and December 15, 2022, and January 4, 2023, for the presence of critical areas including streams, wetlands, and priority habitats and species. Due to the site's extensive size and the need to evaluate hydrologic conditions over time, multiple site visits were conducted. The wetland boundaries were delineated on November 11, 2022. An additional site visit was conducted on April 29, 2025 to assess the functions of oaks mapped during prior field work, confirm herbaceous bald boundaries, and confirm Wetland B conditions. Prior to conducting field work, ELS biologists

reviewed current and historic aerial photographs dating back to 1990 and reviewed the Clark County GIS database for information regarding soils, topography, wetlands, and habitat conservation areas. One depressional wetland (Wetland B) was delineated onsite (Figure 2). The offsite wetland and stream are assessed in the *Critical Areas Report for ICG 252nd Property*, and these features were determined not to have buffers that extend to the site.

Vegetation, soil, and hydrology information was collected from eleven test plots (TP) to determine the location and extent of onsite wetlands (Appendix B). Onsite wetland boundaries were flagged with consecutively numbered flagging tape and test plot locations were also flagged. Wetland and test plot flag locations, oak locations, oak driplines, and herbaceous bald areas were mapped using a hand-held global positioning system (GPS) unit capable of submeter accuracy (Figures 2 and 2a). Additional information regarding herbaceous bald mapping is in the Critical Areas Summary section of this report.

VEGETATION

Vegetation onsite is dominated by a mature forested canopy with a dense understory of scrub-shrub and herbaceous vegetation. Two herbaceous balds with two associated clusters of Oregon white oak trees were identified onsite and associated vegetation is detailed below. The plant indicator status following the plant scientific name is defined by the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012) and is in Appendix A.

WETLANDS

Dominant vegetation consists of **trees:** black cottonwood (*Populus balsamifera*, FAC) and Oregon ash (*Fraxinus latifolia*, FACW); **shrubs:** Scouler's willow (*Salix scoulerina*, FAC) and Nootka rose (*Rosa nutkana*, FAC); and **herbs:** longroot smartweed (*Polygonum amphibium*, OBL), reed canarygrass (*Phalaris arundinacea*, FACW), and common duckweed (*Lemna minor*, OBL).

UPLANDS

Dominant vegetation consists of **trees:** bigleaf maple (*Acer macrophyllum*, FACU) and Douglas fir (*Pseudotsuga menziesii*, FACU); **shrubs:** oceanspray (*Holodiscus discolor*, FACU), snowberry (*Symphoricarpos albus*, FACU), vine maple (*Acer circinatum*, FAC), beaked hazelnut (*Corylus cornuta*, FACU), salal (*Gaultheria shallon*, FACU), and Oregon grape (*Mahonia nervosa*, FACU); and **herbs:** western swordfern (*Polystichum minutum*, FACU) and trailing blackberry (*Rubus ursinus*, FACU).

OREGON WHITE OAK AND HERBACEOUS BALD ASSOCIATED VEGETATION

Vegetation associated with herbaceous bald habitat and Oregon white oak clusters includes **trees:** Douglas fir; **shrubs:** Pacific poison oak (*Toxicodendron diversilobum*, FAC); and **herbs:** deer fern (*Blechnum spicant*, FAC), licorice fern (*Polypodium glycyrrhiza*, UPL), Camas lily (*Camassia quamash*, FACW), trailing blackberry, and various grasses.

SOILS

Soils onsite are mapped as Lauren very gravelly loam, 0 to 8 percent slopes (LIB), Olympic stony clay loam, 3 to 30 percent slopes (OmE), Vader silt loam, 3 to 8 percent slopes (VaB), and Lauren loam, 0 to 8 percent slopes (LeB), as referenced on the Natural Resources Conservation Service (NRCS) Web Soil Survey website (2025a; Figure 3).

Lauren very gravelly loam, 0 to 8 percent slopes is classified as a well-drained soil typically found on terraces, with an average depth to water table of greater than 80 inches below ground surface (BGS). Olympic stony clay loam, 3 to 30 percent slopes is classified as a well-drained soil typically found on mountain slopes, with an average depth to water table of greater than 80 inches BGS. Vader silt loam, 3 to 8 percent slopes is classified as a well-drained soil with a depth to water table of greater than 80 inches BGS. A landform is not specified for VaB; however, it can be assumed this soil type exists on terraces because of its slope classification. Lauren loam, 0 to 8 percent slopes is classified as a well-drained soil typically found on terraces, with an average depth to water table of greater than 80 inches BGS. According to the Washington State Hydric Soils List (NRCS 2025b), none of the soils mapped onsite are classified as hydric.¹

WETLANDS

Soils evaluated in TP-2 in the southern portion of Wetland B consisted of mucky loam and loamy clay. The upper portion of the profile, where mucky soils were observed, displayed a black (10YR 2/1) matrix with no redoximorphic features. The central portion of the profile displayed a matrix color of very dark gray (10YR 3/1) with brown redoximorphic features (7.5YR 4/4). The lower portion of the profile displayed a matrix color of very dark grayish brown (10YR 3/2) and strong brown redoximorphic features (7.5YR 4/6). Test Plot 2 met several hydric soil indicators including Depleted Below Dark Surface (A11), Loamy Mucky Mineral (F1), Depleted Matrix (F3), and Redox Dark Surface (F6).

Soils were not evaluated in TP-4 or TP-5 due to the presence of standing water and unconsolidated soils; therefore, hydric soil conditions are assumed. Approximately one foot of standing water was present at TP-5, and approximately 18 inches of standing water was present at TP-4.

UPLANDS

Evaluated soils in upland test plots consisted of loam and clay soils. Matrix colors were identified as 10YR 2/1, 10YR 2/2, 10YR 3/2, 10YR 3/3, and 10YR 4/2. Test Plot 7 had redoximorphic features present in the pore linings, however, these features were not present at the depth and quantity required to meet hydric soil conditions. Refusal was encountered throughout upland and herbaceous bald areas onsite due to shallow soils over bedrock or roots present in the test plot.

¹Areas mapped with hydric soils do not necessarily mean that the area is a wetland—hydrology, hydrophytic vegetation, and hydric soils must all be present to classify an area as a wetland.

SOIL DEPTH PLOTS

Other notable soil investigations include the non-wetland pool in the northwest corner of the site. ELS biologists revisited this location between November and January to determine the presence or absence of wetland indicators including hydric soils. Soils were evaluated in Soil Depth (SD) Plots 1 through 4 on all sides of the pool location, showing shallow soils were present over bedrock. Soil Depth Plots 1, 2, and 3 showed two inches of soil present over bedrock, primarily consisting of a duff layer with loamy components. Soil Depth Plot 4 showed 5 inches of soil over bedrock with an approximately two-inch layer of duff and gravelly loam in the lower portion of the profile. No redoximorphic features were observed in the SD profiles and the matrix color of the loam component was dark brown (10YR 3/3). These observations indicate that soils on all sides of the pool location do not meet wetland conditions. The hydrologic component of this pool feature will be discussed in the Hydrology section of this report.

ELS does not agree with NRCS mapped hydric soils, as wetlands were observed in areas mapped with non-hydric soils, and uplands were observed in areas with mapped hydric soils. Specific soil information is recorded on the attached wetland determination data forms (Appendix B) and summarized in Table 1.

Table 1. Mapped Soils

Soil Series ¹	Landform ¹	Drainage Class ¹	Hydric Soil ²	Plots per Soil Series
Lauren very gravelly loam, 0-8% slopes (LIB)	Terraces	Well drained	No	TP-4 through TP-9
Olympic stony clay loam, 3-30% slopes (OmE)	Mountain slopes			TP-1, TP-2, TP-3, TP-10, TP-11, SD-1, SD-2, SD-3, SD-4
Vader silt loam, 3-8% slopes (VaB)	Terraces ³			--
Lauren loam, 0 to 8 percent slopes (LeB)	Terraces			--

¹NRCS 2024a; ²NRCS 2024b; ³A landform is not specified for VaB; however, it can be assumed this soil type exists on terraces because of its slope classification.

HYDROLOGY

WETLAND B

Wetland B is a seasonally flooded wetland located primarily onsite in a topographical depression in the northeast corner. Surface water was observed in Wetland B during site visits that took place between November 2022 and January 2023, however, it should be noted that no surface hydrology was observed during the September 2022 site visits. During the November 11, 2022 site visit, 12 to 18 inches of surface water was documented in the wetland. Wetland B provides flood storage and delay and groundwater recharge functions. Hydrology is supported by a shallow groundwater table, precipitation, and runoff from adjacent uplands. Wetland B does not have an outlet. According to Ecology's Water Quality Atlas, the site is in the Lacamas Creek 12-

digit hydrologic unit code (HUC) 170800050305 and Watershed Resource Inventory Area (WRIA) 28 Salmon – Washougal.

OTHER ONSITE HYDROLOGY

Potential wetland areas were investigated during several site visits following periods of precipitation from September 2022 to January 2023. A small pool developed in the northwest corner of the site in November 2022 and was observed during subsequent site visits. The pool was inundated with 8 inches of standing water. Although standing water was present, vegetation in and around the pool was not hydrophytic and no hydric soils were present, as described in the Soil Depth Plots subsection of this report. Based on these evaluations, ELS concludes that shallow bedrock prevents infiltration in this area and localized topography prevents water from leaving the depression, resulting in an area of pooling water that does not meet wetland criteria.

The depressional area in the northern portion of the site where TP-7 is located was also investigated as it displayed topographical conditions which could indicate the presence of wetlands. Redoximorphic concentrations were present but did not meet hydric soil criteria. Although hydrophytic vegetation was present in this area, neither hydric soils nor wetland hydrology were observed, and wetland criteria are not met.

PRECIPITATION

Because the wetland boundaries were delineated during the November 11, 2022 site visit, precipitation data relevant to this date only were assessed. The Corps Antecedent Precipitation Tool (APT) indicates normal precipitation conditions were present preceding the November site visit (Corps 2025). Precipitation data were gathered from the NOAA Regional Climate Centers *Multnomah County, Oregon, WETS Station: Troutdale*, which is the closest station to the project site with the most complete set of precipitation data. Precipitation two weeks prior to the site visit in November totaled 7.03 inches. September and October precipitation levels were drier than normal and November precipitation levels were wetter than normal. A copy of the APT data is provided in Appendix D and precipitation data is summarized in Table 2.

Table 2. Precipitation Data

Precipitation (inches)								
Date of Visit	Two Weeks Prior	30 Days Ending	Observed	30%	70%	DAREM ¹		
						Value	Weight	Total
11/11/2022 0.00	7.03	11/11/2022	8.49	3.62	6.70	3	3	9
		10/12/2022	0.55	1.61	3.99	1	2	2
		09/12/2022	0.01	0.22	1.27	1	1	1
Rainfall 3 months prior was: drier (sum 6-9), normal (sum 10-14), wetter (sum 15-18).								12
Year to Date Mean Rainfall ^{2,3} : 6.29								
Year to Date Actual Rainfall ³ : 8.99								

¹Direct Antecedent Rainfall Evaluation Methods (Sumner et al 2009); ²Based on 2002-2022 precipitation data; ³Based on a water year, which starts on October 1.

CRITICAL AREA INVENTORIES

NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory Map (NWI) does not show the presence of wetlands onsite or within 300 feet of the site (Figure 4). ELS field investigations are inconsistent with NWI Mapping as one wetland was delineated in the northeast portion of the site. Critical area inventory maps are typically used to gather information about a region and due to the large scale necessary for regional mapping, are limited in accuracy for localized analyses.

CLARK COUNTY MAPS ONLINE

Clark County Maps Online (CCMO) does not indicate the presence of any critical areas onsite (Figure 5). A permitted wetland is shown offsite to the northeast and was determined to be functionally isolated from the site by existing roads. ELS field investigations are inconsistent with CCMO mapping as a wetland was mapped onsite.

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PRIORITY HABITATS AND SPECIES

The Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) mapping displays the presence of oak woodlands onsite (Figure 6). ELS field investigations are partially consistent with PHS, as oaks were observed in the vicinity of the mapped oaks. However, ELS biologists identified two herbaceous bald areas onsite, which are also considered priority habitats but were not mapped by WDFW. Additional discussion of oaks and herbaceous balds are in the Critical Areas Summary section of this report.

CRITICAL AREAS SUMMARY

WETLANDS

WETLAND B

Wetland B is a Category III, depressional, emergent (EM), forested (FO), seasonally flooded (SF) wetland with no outlet that extends offsite to the east. The wetland is approximately 0.78 acres onsite with a total area of approximately 0.84 acres. Vegetation in Wetland B is dominated by Oregon ash, black cottonwood, Scouler's willow, Nootka rose, reed canarygrass, and water smartweed. Hydrology is supported by a shallow groundwater table, precipitation, and runoff from adjacent uplands. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Rating System), Wetland B is a Category III wetland, scoring 6 points for water quality functions, 5 points for hydrologic functions, and 7 points for habitat functions, for a total score of 18 points (Appendix C).

WETLAND BUFFERS

Standard wetland buffers are based on wetland category and habitat score from the Rating System, in conjunction with the proposed land use intensity (*CMC 16.53.040(B)(2)*). Wetland B is a Category III wetland with a habitat score of 7 points. According to *CMC Table 16.53.040-3*, the standard buffer widths for Wetland B are 75 feet, 110 feet, and 150 feet for proposed low, moderate, and high land use intensities, respectively. According to *CMC 16.53.040(B)(4)(b)(i)*, functionally isolated buffer areas are areas that do not protect the wetland from adverse impacts,

such as preexisting roads and structures, and shall be excluded from buffer requirements. A portion of the wetland buffer in the northeast corner of the site is functionally isolated due to existing impervious surfaces that extend from adjacent parcels to the north and east (Figure 2). Wetlands and buffers are summarized in Table 3.

Table 3. Wetland Summary

Identifier	HGM Class ¹	Cowardin Class, Hydroperiod ²	Habitat Score/Category ³	Proposed Land Use Intensity	Buffer Width ^{4,5}
Wetland B (0.78 acres onsite)	Depressional	EM/FO, SF	III/7	Low	75 feet
				Moderate	110 feet
				High	150 feet

¹NRCS 2008; ²FGDC 2013; ³Hruby 2023; ⁴CMC Table 16.53.040-3; ⁵CMC 16.61.040(D).

FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Fish and Wildlife Habitat Conservation Areas are regulated by *CMC Chapter 16.61* and include areas with which state or federally designated endangered, threatened, and sensitive species have a primary association, state priority habitats and areas associated with state priority species, habitats of local importance, naturally occurring ponds under 20 acres, waters of the state, bodies of water planted with game fish by a governmental or tribal entity, and state natural area preserves and natural resource conservation areas. Habitats of local importance include Camas lily of a significant concentration (0.25 acres or greater) and Oregon white oak trees with a diameter at breast height (DBH) of 20 inches or greater (*CMC 16.61.010(A)*).

OREGON WHITE OAK

The Washington Department of Fish and Wildlife (WDFW) identifies which oak communities are considered priority habitats through its Priority Habitats and Species (PHS) program. The Washington Natural Heritage Program (WNHP) defines a North Pacific Oak Woodland as a community dominated or co-dominated by oak and associated with dry, low-elevation sites or those with frequent fires pre-settlement (Nolan and Azerrad 2024). Oregon white oak woodlands are associated with eight different plant communities, including a wide variety of native herbaceous and shrub species. Oak woodlands provide a mix of feeding, resting, and breeding habitat for many wildlife species (Nolan and Azerrad 2024). In addition to oak woodlands, individual oak trees can be considered a priority habitat if they provide considerable value to wildlife. In addition to woodland communities, oaks are also associated with prairies and savannas in Washington. These communities are considered wooded grasslands and are an association of upland grassland and meadows (Rocchio and Crawford 2015).

Two oak clusters were identified onsite, with sixteen oaks in Cluster 1 and four oaks in Cluster 2. Three of the oaks in Cluster 1 are located offsite to the east but form a continuous and contiguous canopy with the rest of the cluster. The total dripline of Cluster 1 is approximately 0.10 acres (4,146 sq. ft.) and the total dripline of Cluster 2 is approximately 0.05 acres (2,169 sq. ft.). Although PHS mapping identifies each cluster as an oak woodland, these areas do not meet woodland size requirements and each oak shall be considered an individual. Several of the oak

trees meet WDFW priority habitat criteria for individual oaks. Oak data is summarized in Appendix E.

HERBACEOUS BALD HABITAT

According to CMC 16.61.010(A)(2), priority habitats and species are identified by WDFW; however, CMC 16.61.010(A)(1) states that lists, categories, and definitions of species promulgated by WDFW are provided to the City to be used for guidance only. According to the WDFW Priority Habitat and Species List (WDFW 2008) herbaceous balds are defined as:

“...variable-sized patches of grass and forb vegetation located on shallow soils over bedrock that commonly is fringed by forest or woodland. Typically consists of low-growing vegetation adapted for survival on shallow soils amid seasonally dry conditions, and is often on steep slopes. Dominant flora includes herbaceous vegetation, dwarf shrubs, mosses, and lichens. Rock outcrops, boulders, and scattered trees are often present, especially Douglas-fir, Pacific madrone, and Oregon white oak. Balds occur within mid-montane to lowland forest zones. On slopes near saltwater shorelines in the northern Puget Trough, herbaceous balds and herbaceous bluffs can sometimes be difficult to differentiate. Balds typically are smaller than 5 ha (12 ac), although some can be up to about 100 ha ($\cong$ 250 ac)” (WDFW 2008).

ELS biologists identified two areas onsite that meet herbaceous bald criteria (Herbaceous Bald 1 and Herbaceous Bald 2). Herbaceous Bald 1 is approximately 0.15 acres (6,628 sq. ft.) and Herbaceous Bald 2 is approximately 0.06 acres (2,497 sq. ft.) in size. These areas are defined by shallow soils with vegetation dominated by grasses and forbs. Dominant vegetation found on herbaceous bald locations included Camas lily, licorice fern, various grasses, moss, and blackberry species. Although Camas lily was observed on the entirety of both herbaceous balds, it comprises less than 0.25 acres and is not considered a priority habitat itself. Douglas fir trees were rooted near herbaceous bald locations but not directly on the balds. All observed oaks were rooted within herbaceous bald boundaries and many displayed stunted crowns and curled leaves, likely from stress related to shallow soils and shading by Douglas fir trees. Herbaceous bald boundaries were delineated based on vegetation and the presence of bedrock under shallow soils.

LIMITATIONS

ELS bases this report’s determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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FIGURES AND PHOTOPLATES

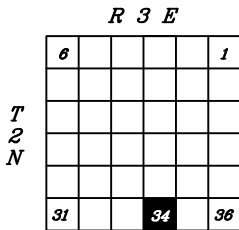
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WASHINGTON



Latitude: 45.6193°
Longitude: -122.4156°

LOCATION MAP

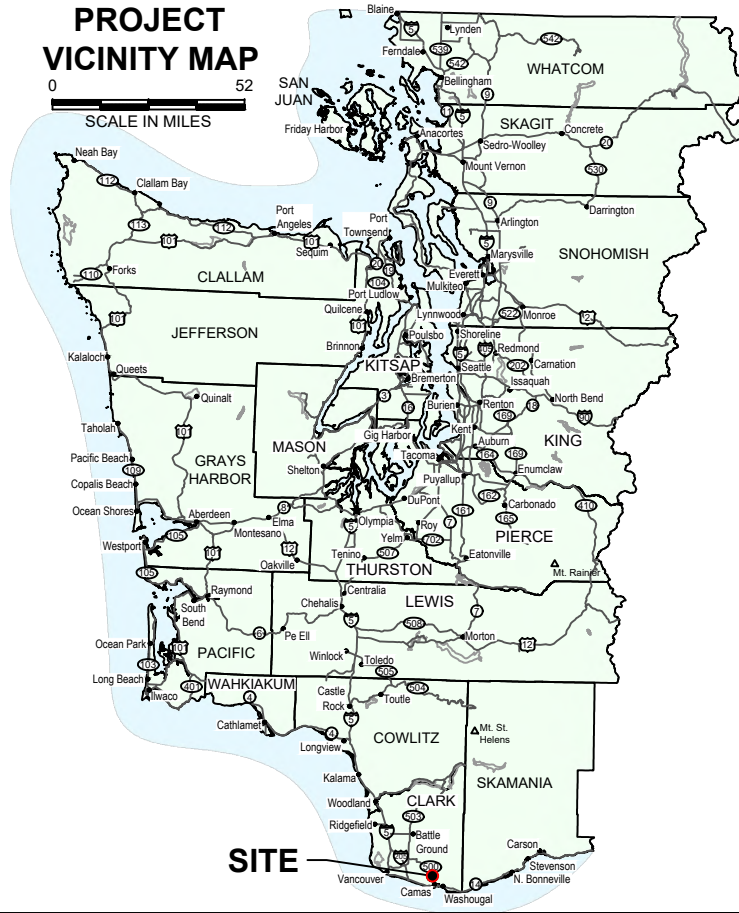


NOTE:

Quadrangle topographic map from USGS.

PROJECT VICINITY MAP

0 52
SCALE IN MILES

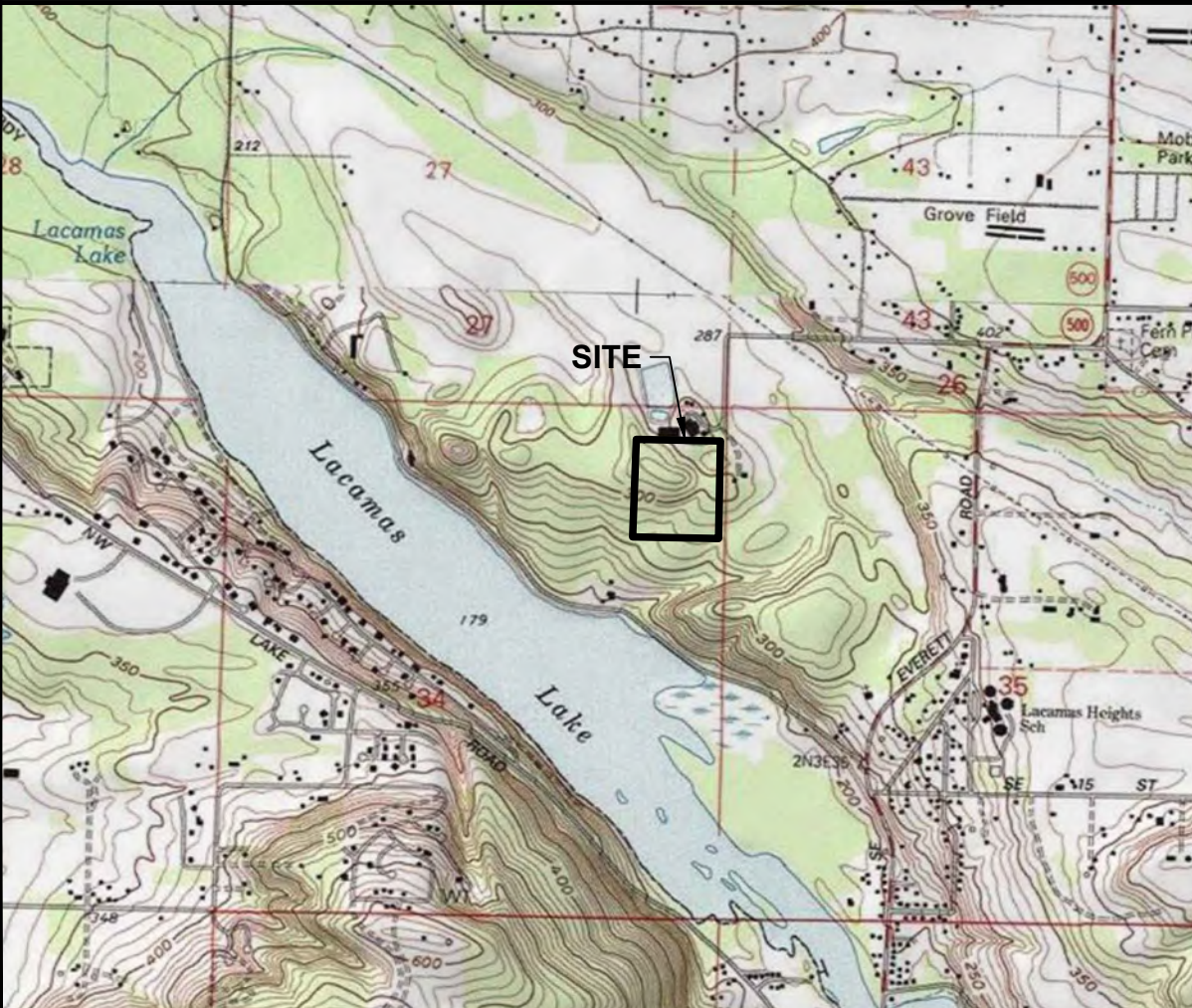
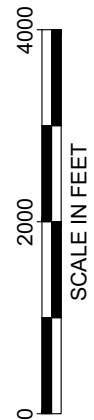


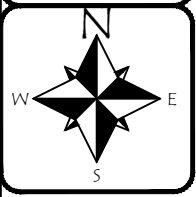
SITE

Figure 1
VICINITY MAP
Mills Property
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

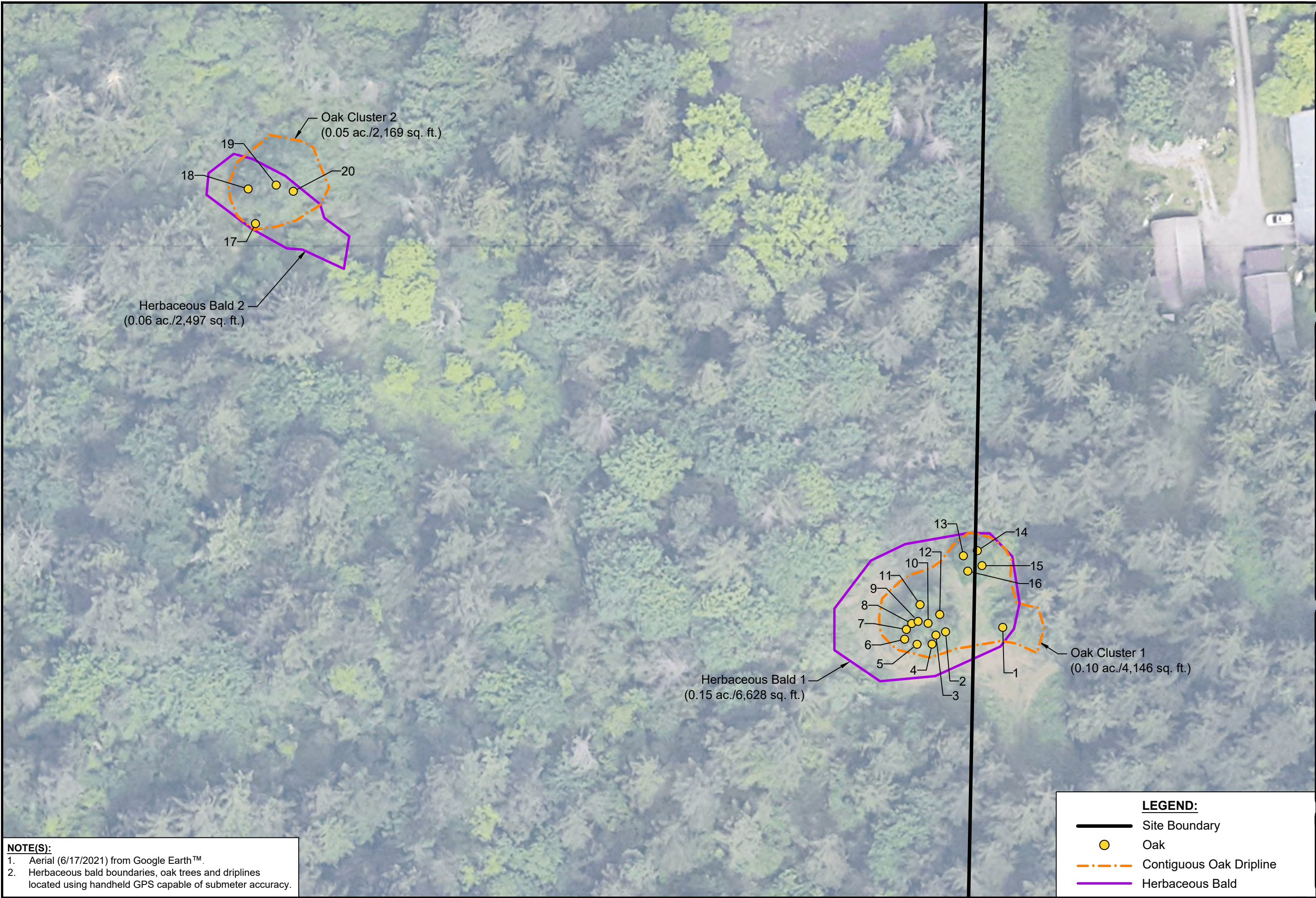
DATE: 5/19/25
DWN: JKJ
REQ. BY: GB
PRJ. MGR: GB
CHK:
PROJECT NO: 3341.10

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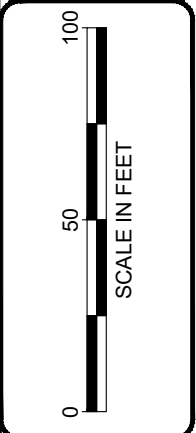
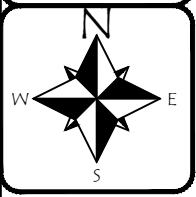
6/19/2025 10:27 AM C:\Users\MikeMiller\Box\EL\SI\WA\Clark\Camas\3341-HSR Capital LLC\3341.10-Northshore Critical Areas\3341.10-Figures CAD Only\3341.10_CAR.dwg MikeMiller



NOTE(S):
1. Aerial (6/17/2021) from Google Earth™.
2. Herbaceous bald boundaries, oak trees and driplines located using handheld GPS capable of submeter accuracy.

LEGEND:

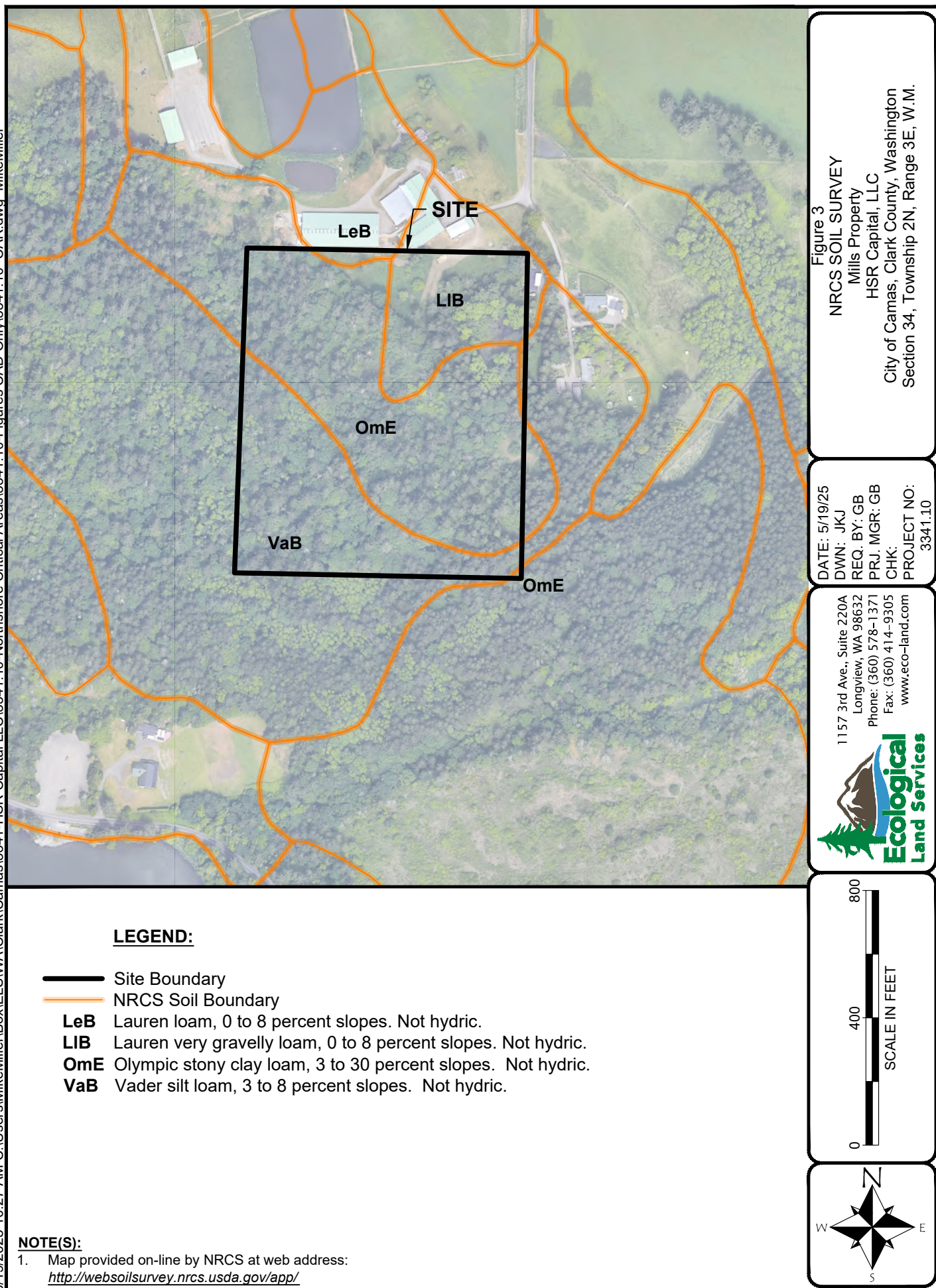
- Site Boundary
- Oak
- - - Contiguous Oak Dripline
- Herbaceous Bald

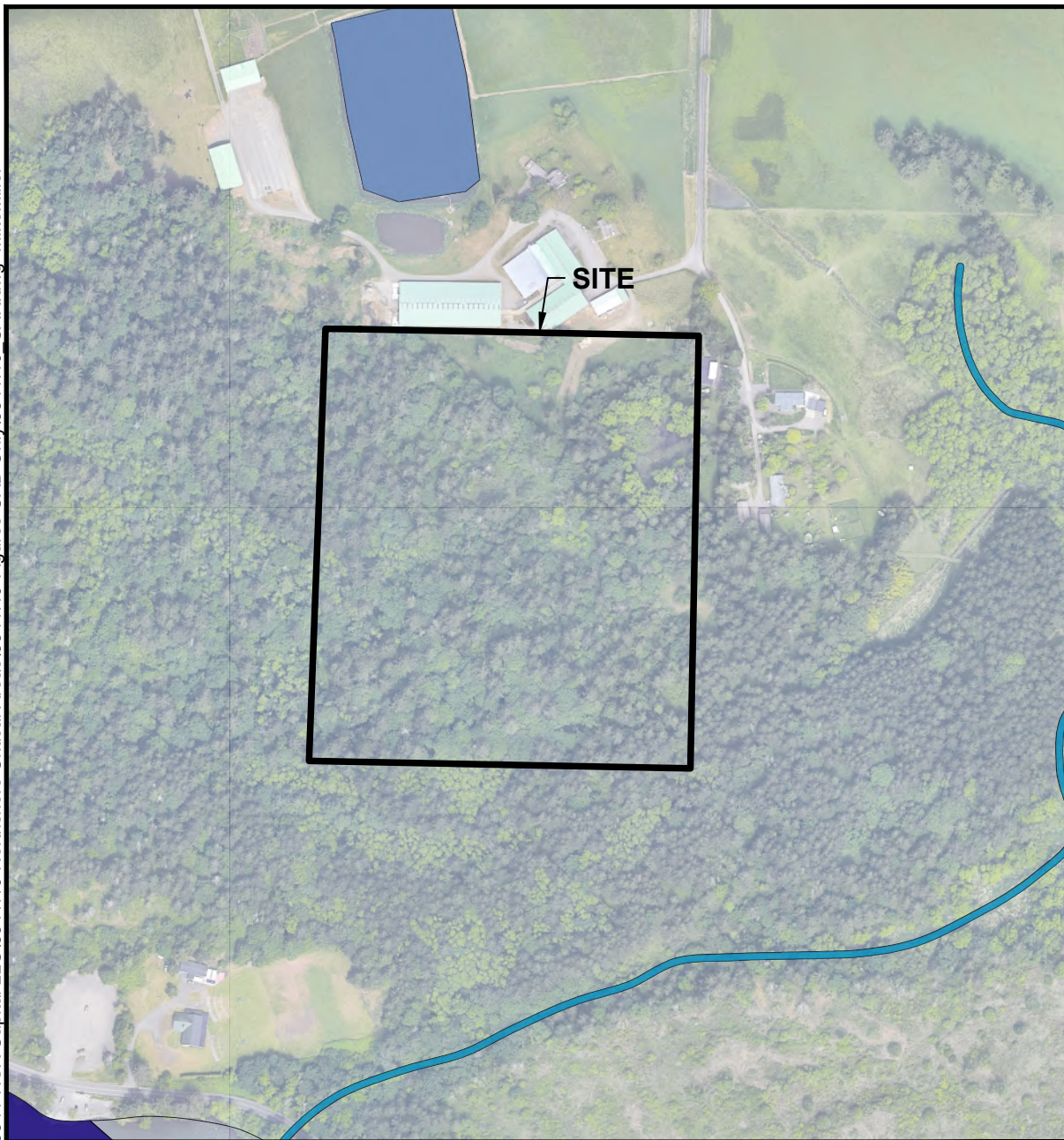



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CHK:
PROJECT NO:
3341.10

Figure 2a
HABITAT AREAS DETAIL
Mills Property
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.





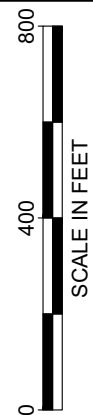
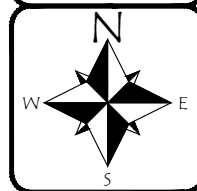
No mapped wetlands indicated onsite by US Fish & Wildlife Service.

LEGEND:

-  Site Boundary
- Wetlands**
-  Freshwater Pond
-  Riverine

NOTE(S):

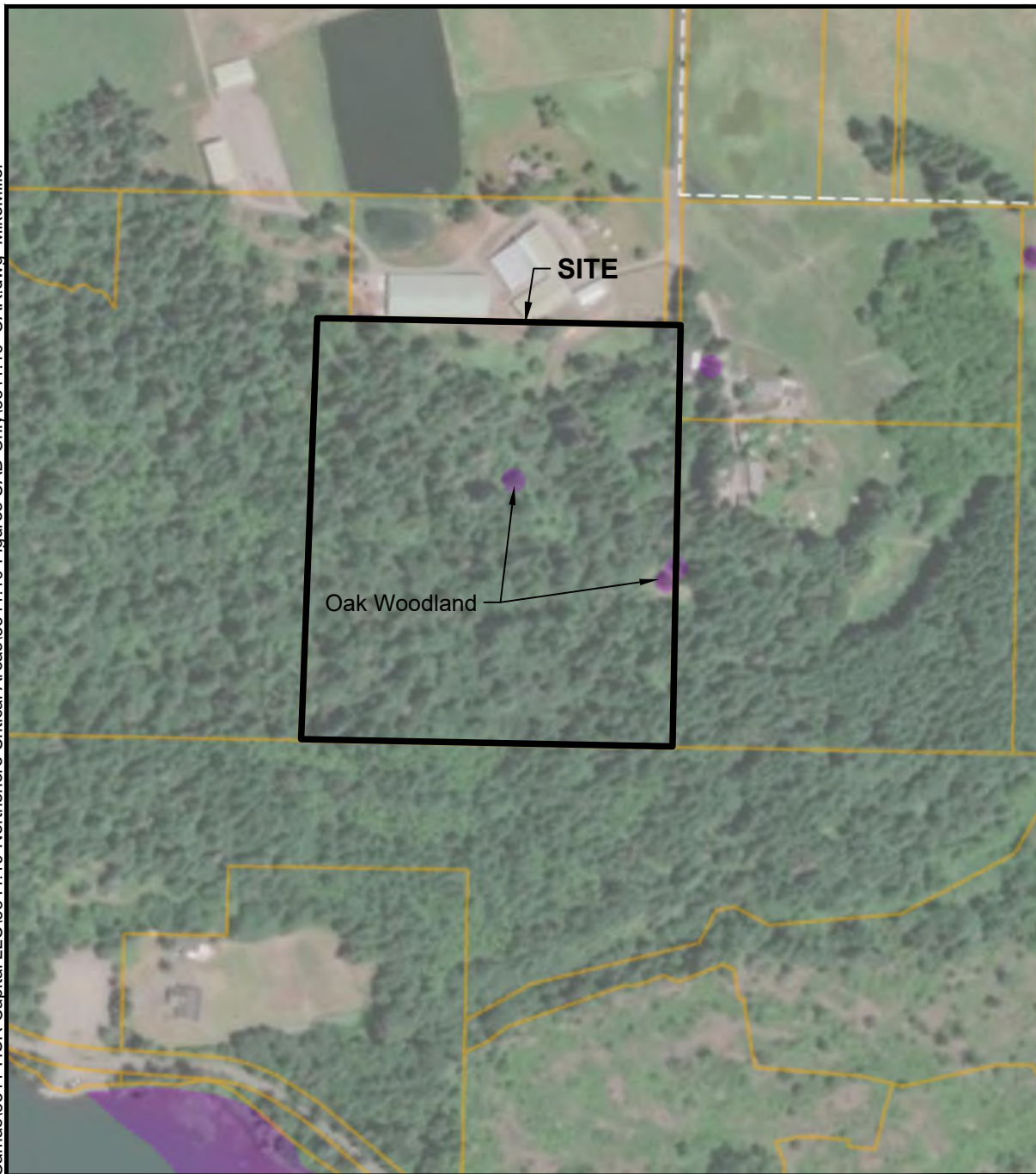
1. Map provided on-line by US Fish & Wildlife Service at web address:
<https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>



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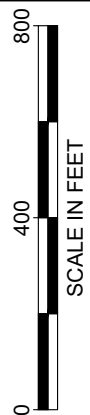
DATE: 5/19/25
 DWN: JKJ
 REQ. BY: GB
 PRJ. MGR: GB
 CHK:
 PROJECT NO:
 3341.10

Figure 4
USFWS NATIONAL WETLANDS INVENTORY
 Mills Property
 HSR Capital, LLC
 City of Camas, Clark County, Washington
 Section 34, Township 2N, Range 3E, W.M.

**LEGEND:**

- Site Boundary
- Parcel Boundary
- Priority Habitats
 - Oak Woodland - Habitat Feature
 - By Township:
 - Caves or Cave-rich Areas - Occurrence

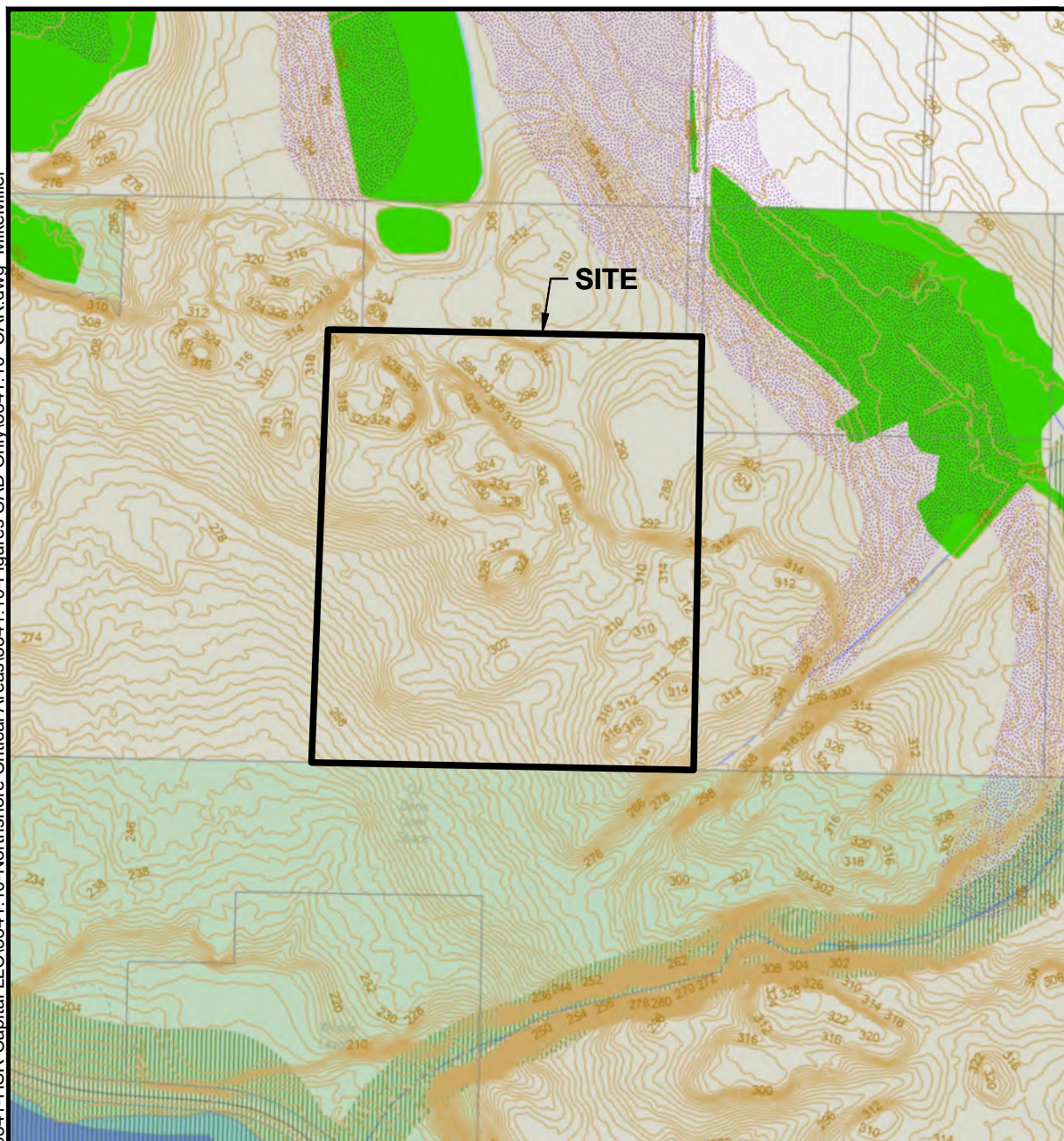
NOTE: Map provided on-line by Washington State Department of Fish & Wildlife at web address:
<http://apps.wdfw.wa.gov/phsontheweb/>



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Figure 5
WDFW PRIORITY HABITAT AND SPECIES
 Mills Property
 HSR Capital, LLC
 City of Camas, Clark County, Washington
 Section 34, Township 2N, Range 3E, W.M.

**LEGEND:**

— Site Boundary

Environmental

Priority Habitats and Species Group

Riparian Habitat

▨ Riparian Habitat Area

Slopes and Geologic Hazards Group

Contour Lines

— Contour Lines - 2 ft

Soils and Wetlands Inventory

▨ Hydric Soils

▨ Permitted Wetland

DNR Water Feature

— Stream - DNR

NOTE(S):

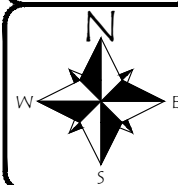
1. Map provided on-line by Clark County at web address: <https://gis.clark.wa.gov/maponline/index.cfm?site=Environmental>

Figure 6
CLARK COUNTY CRITICAL AREAS

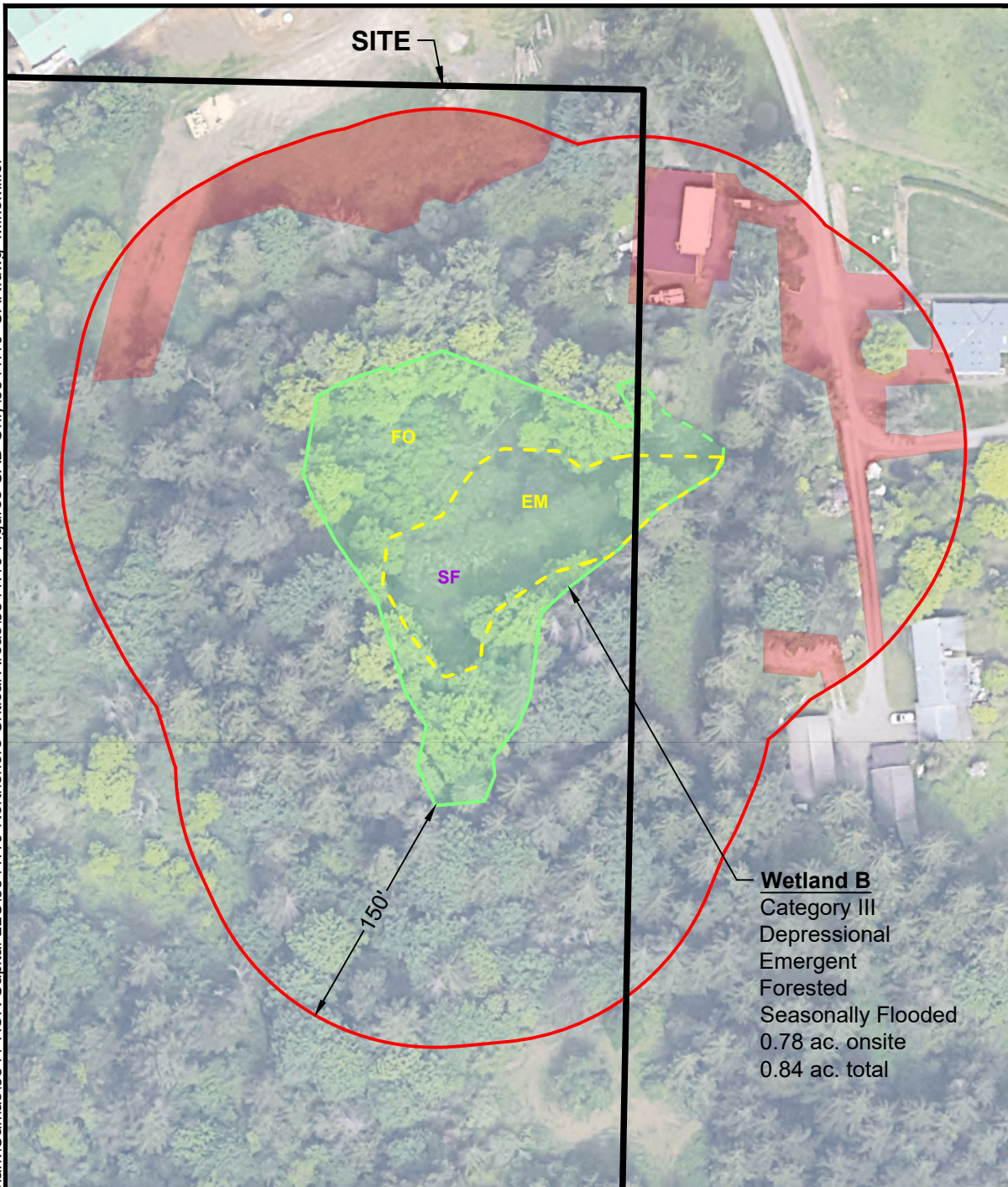
Mills Property
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

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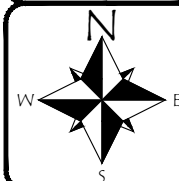
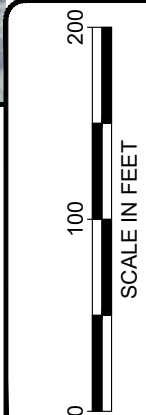


- LEGEND:**
- Site Boundary
 - Wetland Unit Boundary
 - 150' Wetland Offset
 - Pollutants/Runoff - 15.5%
 - Vegetation Class Division

- Cowardin Classes:**
- EM Emergent (37.5%)
 - FO Forested (62.5%)

- Hydroperiods:**
- SF Seasonally flooded or inundated (100%)

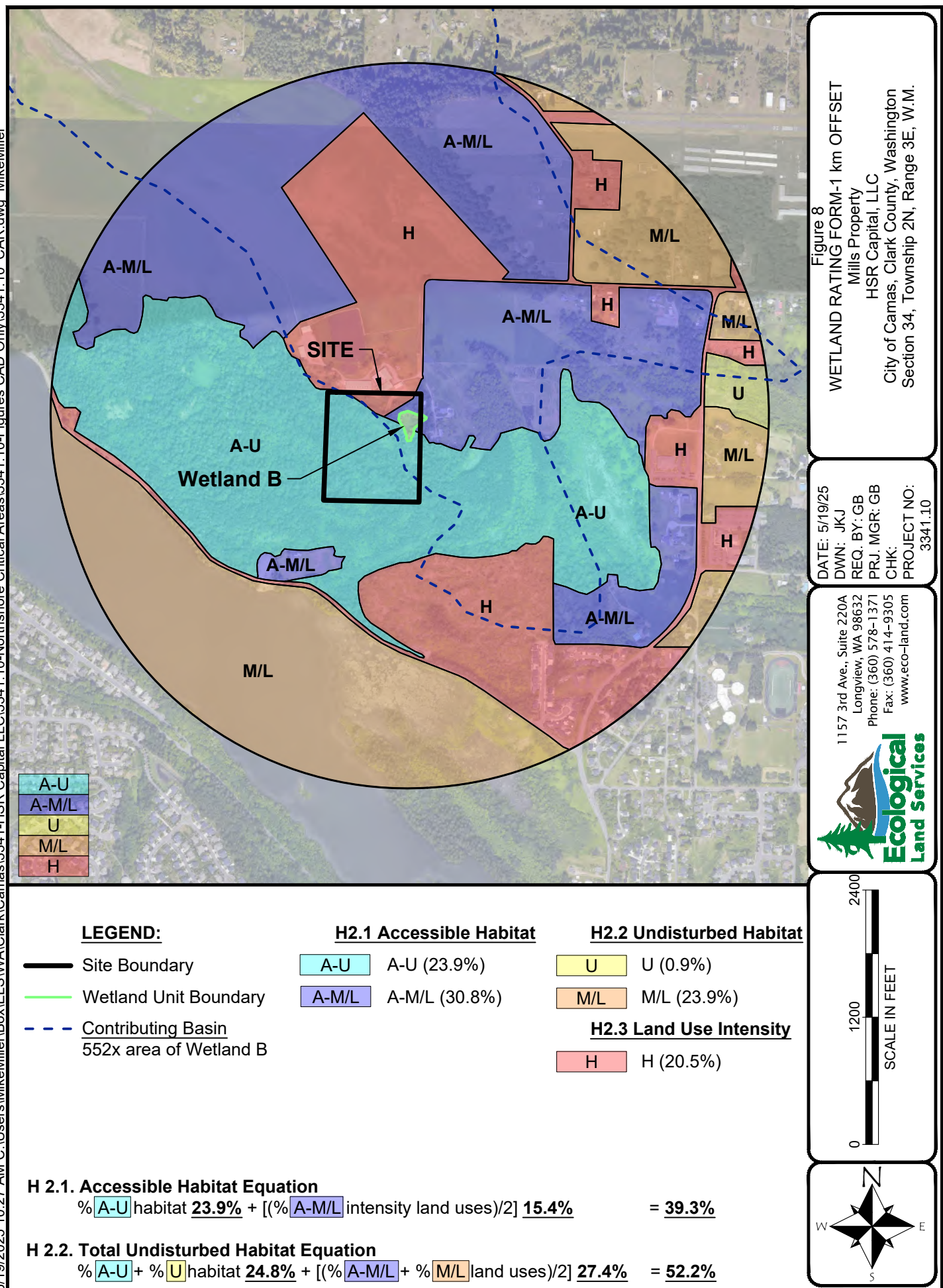
Wetland B
 Category III
 Depressional
 Emergent
 Forested
 Seasonally Flooded
 0.78 ac. onsite
 0.84 ac. total



Ecological Land Services
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Figure 7
WETLAND RATING FORM-150' OFFSET
 Mills Property
 HSR Capital, LLC
 City of Camas, Clark County, Washington
 Section 34, Township 2N, Range 3E, W.M.



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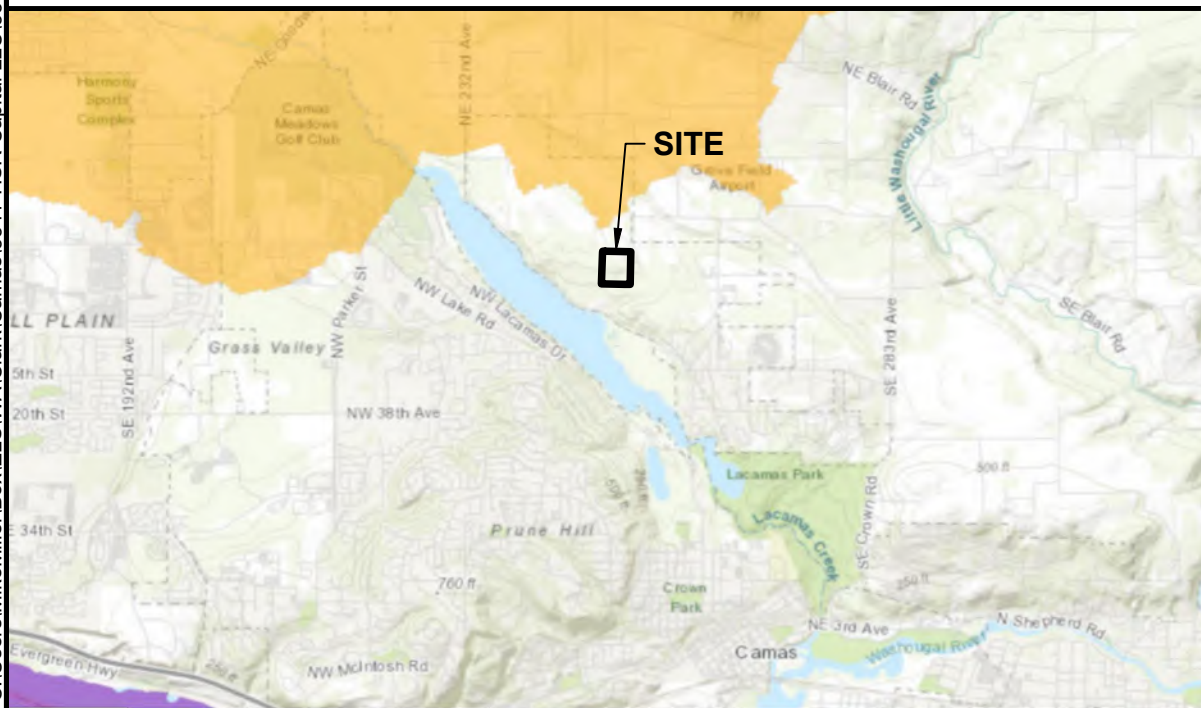
Assessed Waters/Sediment

Water

-  Category 5 - 303d
-  Category 2

Subbasins

-  12 Digit HUC Boundary



WQ Improvement Projects

-  Approved
-  In Development

NOTE(S):

1. Map provided on-line by Washington State Department of Ecology at web address: <https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?>

Figure 9
WETLAND RATING FORM-303(d) and TMDLs
 Mills Property
 HSR Capital, LLC
 City of Camas, Clark County, Washington
 Section 34, Township 2N, Range 3E, W.M.

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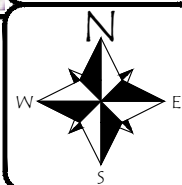




Photo 1

A view of the herbaceous bald area which is dominated by mosses and licorice fern.



Photo 2

A view of Oak Cluster 1, facing north.



Photo 3

A view of Oak Cluster 2 adjacent to the herbaceous bald showing in Photo 1 above.



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PROJ.#: 3341.10

Photoplate 1
Mills Property
Camas, Washington
Section 34, Township 2N, Range 3E, W.M.



Photo 4

A view of the forested portion of Wetland B, facing east.



Photo 5

A view of slough sedge in the southern portion of Wetland B.



Photo 6

A view of standing water at the location of TP-5 within Wetland B.



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Photoplate 2
Mills Property
Camas, Washington
Section 34, Township 2N, Range 3E, W.M.



Photo 7

A view of the non-wetland pool in the north-west corner of the site.



Photo 8

A view of upland conditions in the central portion of the site.



Photo 9

A view of the herbaceous upland area in the northern portion of the site.



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PROJ.#: 3341.10

Photoplate 3
Mills Property
Camas, Washington
Section 34, Township 2N, Range 3E, W.M.

**Photo 10**

A view of upland vegetation in the southwest corner of the site.

**Photo 11**

A view of upland vegetation in the southeast corner of the site.

**Photo 12**

A view of upland vegetation in the south central portion of the site.



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Photoplate 4
Mills Property
Camas, Washington
Section 34, Township 2N, Range 3E, W.M.



Photo 13

Photo is of Oak Cluster 1 showing the presence of Camas lily and herbaceous bald habitat



Photo 14

A view of herbaceous bald habitat near Oak Cluster 2.



Photo 15

A view of herbaceous bald habitat near Oak Cluster 2.



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DATE: 4/29/2025
DWN: JB
PRJ. MGR: JB
PROJ.#: 3341.10

Photoplate 5
Mills Property
Camas, Washington
Section 34, Township 2N, Range 3E, W.M.

APPENDIX A

ROUTINE DETERMINATION METHOD AND PLANT INDICATOR RATING DEFINITIONS

ROUTINE DETERMINATION METHOD

The Routine Determination Method is defined according to the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers' Wetland Delineation Manual* (Environmental Laboratory 1987); *Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010). The Routine Determination Method examines three parameters – vegetation, soils, and hydrology – to determine if wetlands exist in a given area. Hydrology is critical in determining what is a wetland, but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for a long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

VEGETATION INDICATOR STATUS

The indicator status, following the scientific names of plant species, indicates the likelihood of the species to be found in wetlands according to the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012). Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) - occur almost always under natural conditions in wetlands.
- **FACW** (facultative wetland) - usually occur in wetlands, but occasionally found in non-wetlands.
- **FAC** (facultative) - equally likely to occur in wetlands or non-wetlands.
- **FACU** (facultative upland) - usually occur in non-wetlands, but occasionally found in wetlands.
- **UPL** (obligate upland) - occur almost always under natural conditions in non-wetlands.
- **NI** (no indicator) - insufficient data to assign to an indicator category.

APPENDIX B

WETLAND DETERMINATION DATA FORMS

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 9/23/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-1
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 3-30
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6190672 Long: -122.4161983 Datum: NAD83
 Soil Map Unit Name: Olympic stony clay loam, 3 to 30 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the central section of Parcel 177885000 at the bottom of a slope. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Pseudotsuga menziesii</i></u></td> <td style="text-align: center;">30</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u><i>Thuja plicata</i></u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">50</td> <td colspan="2" style="text-align: center;">=Total Cover</td> </tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Acer circinatum</i></u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u><i>Frangula purshiana</i></u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. <u><i>Corylus cornuta</i></u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>4. <u><i>Mahonia aquifolium</i></u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>5. <u><i>Acer macrophyllum</i> (saplings)</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td></td> <td style="text-align: center;">85</td> <td colspan="2" style="text-align: center;">=Total Cover</td> </tr> </tbody> </table> Herb Stratum (Plot size: <u>5 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Polystichum munitum</i></u></td> <td style="text-align: center;">30</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u><i>Rubus ursinus</i></u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>11. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">50</td> <td colspan="2" style="text-align: center;">=Total Cover</td> </tr> </tbody> </table> Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Clematis sp*</i></u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">20</td> <td colspan="2" style="text-align: center;">=Total Cover</td> </tr> </tbody> </table> % Bare Ground in Herb Stratum <u>0</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Pseudotsuga menziesii</i></u>	30	Yes	FACU	2. <u><i>Thuja plicata</i></u>	20	Yes	FAC	3. <u> </u>				4. <u> </u>					50	=Total Cover			Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Acer circinatum</i></u>	20	Yes	FAC	2. <u><i>Frangula purshiana</i></u>	20	Yes	FAC	3. <u><i>Corylus cornuta</i></u>	20	Yes	FACU	4. <u><i>Mahonia aquifolium</i></u>	15	No	FACU	5. <u><i>Acer macrophyllum</i> (saplings)</u>	5	No	FACU		85	=Total Cover			Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Polystichum munitum</i></u>	30	Yes	FACU	2. <u><i>Rubus ursinus</i></u>	20	Yes	FACU	3. <u> </u>				4. <u> </u>				5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>				9. <u> </u>				10. <u> </u>				11. <u> </u>					50	=Total Cover			Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Clematis sp*</i></u>	20	Yes	FAC	2. <u> </u>					20	=Total Cover		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </tbody> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0¹ <u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants¹ <u> </u> Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
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2. <u><i>Thuja plicata</i></u>	20	Yes	FAC																																																																																																																																						
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4. <u> </u>																																																																																																																																									
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	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																						
1. <u><i>Acer circinatum</i></u>	20	Yes	FAC																																																																																																																																						
2. <u><i>Frangula purshiana</i></u>	20	Yes	FAC																																																																																																																																						
3. <u><i>Corylus cornuta</i></u>	20	Yes	FACU																																																																																																																																						
4. <u><i>Mahonia aquifolium</i></u>	15	No	FACU																																																																																																																																						
5. <u><i>Acer macrophyllum</i> (saplings)</u>	5	No	FACU																																																																																																																																						
	85	=Total Cover																																																																																																																																							
	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																						
1. <u><i>Polystichum munitum</i></u>	30	Yes	FACU																																																																																																																																						
2. <u><i>Rubus ursinus</i></u>	20	Yes	FACU																																																																																																																																						
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	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																						
1. <u><i>Clematis sp*</i></u>	20	Yes	FAC																																																																																																																																						
2. <u> </u>																																																																																																																																									
	20	=Total Cover																																																																																																																																							
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Remarks: * Assumed FAC indicator status.																																																																																																																																									

VEGETATION Continued – Use scientific names of plants.Sampling Point: TP-1

<u>Tree Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH, regardless of height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Woody Vine – All woody vines, regardless of height.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>50</u> =Total Cover				
<u>Sapling/Shrub Stratum</u>				
6. <i>Holodiscus discolor</i>	5	No	FACU	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
<u>85</u> =Total Cover				
<u>Herb Stratum</u>				
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
23. _____	_____	_____	_____	
<u>50</u> =Total Cover				
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>20</u> =Total Cover				

Remarks:

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 11/11/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-2
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 3-30
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6195332 Long: -122.4145612 Datum: NAD83
 Soil Map Unit Name: Olympic stony clay loam, 3 to 30 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: This test plot is located in the eastern section of Parcel 177885000. All three wetland indicators were met within the profile. Therefore, TP-2 is located in a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) 1. <u>Fraxinus latifolia</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 50 =Total Cover Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) 1. <u>Rosa nutkana</u> 2. <u>Spiraea douglasii</u> 3. <u>Cornus nuttallii</u> 4. <u> </u> 5. <u> </u> 60 =Total Cover Herb Stratum (Plot size: <u>5 ft. radius</u>) 1. <u>Carex obnupta</u> 2. <u>Rubus ursinus</u> 3. <u>Athyrium filix-femina</u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> 75 =Total Cover Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) 1. <u>Rubus armeniacus</u> 2. <u> </u> 1 =Total Cover % Bare Ground in Herb Stratum <u>25</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
Total % Cover of:	Multiply by:																	
OBL species <u> </u>	x 1 = <u> </u>																	
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FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u> </u>	x 4 = <u> </u>																	
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Column Totals: <u> </u> (A)	<u> </u> (B)																	
Prevalence Index = B/A = <u> </u>																		
Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																		
Remarks:																		

SOILSampling Point: TP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	100					Mucky Loam/Clay	
5-10	10YR 3/1	95	7.5YR 4/4	5	C	M	Loamy/Clayey	
10-16	10YR 4/2	95	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils³:
☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☒ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G) ☐ 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)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☐

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (2 or more required)	
☐ 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 on 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)	☐ 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): _____	Wetland Hydrology Present? Yes ☒ No ☐
Water Table Present?	Yes ☒	No ☐	Depth (inches): <u>6</u>	
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (inches): <u>0</u>	

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: Mills Property City/County: Camas/Clark Sampling Date: 11/11/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-3
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 3-30
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6194916 Long: -122.414523 Datum: NAD83
 Soil Map Unit Name: Olympic stony clay loam, 3 to 30 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the eastern section of Parcel 177885000. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Fraxinus latifolia</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Thuja plicata</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">70 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Rosa nutkana</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Corylus cornuta</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>Cornus nuttallii</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>4. <u>Sambucus racemosa</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">35 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Herb Stratum (Plot size: <u>5 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Athyrium filix-femina</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Polystichum munitum</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>Carex obnupta</u></td><td style="text-align: center;">2</td><td style="text-align: center;">No</td><td style="text-align: center;">OBL</td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>11. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">47 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Rubus armeniacus</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">5 =Total Cover</td><td></td><td></td></tr> </tbody> </table> % Bare Ground in Herb Stratum <u> </u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	40	Yes	FACW	2. <u>Thuja plicata</u>	30	Yes	FAC	3. <u> </u>				4. <u> </u>				70 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Rosa nutkana</u>	15	Yes	FAC	2. <u>Corylus cornuta</u>	10	Yes	FACU	3. <u>Cornus nuttallii</u>	5	No	FACU	4. <u>Sambucus racemosa</u>	5	No	FACU	5. <u> </u>				35 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Athyrium filix-femina</u>	30	Yes	FAC	2. <u>Polystichum munitum</u>	15	Yes	FACU	3. <u>Carex obnupta</u>	2	No	OBL	4. <u> </u>				5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>				9. <u> </u>				10. <u> </u>				11. <u> </u>				47 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Rubus armeniacus</u>	5	Yes	FAC	2. <u> </u>				5 =Total Cover				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71.4%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u> </u></td><td>x 1 = <u> </u></td></tr> <tr><td>FACW species <u> </u></td><td>x 2 = <u> </u></td></tr> <tr><td>FAC species <u> </u></td><td>x 3 = <u> </u></td></tr> <tr><td>FACU species <u> </u></td><td>x 4 = <u> </u></td></tr> <tr><td>UPL species <u> </u></td><td>x 5 = <u> </u></td></tr> <tr><td>Column Totals: <u> </u> (A)</td><td><u> </u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A = <u> </u></td></tr> </tbody> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0¹ <u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants¹ <u> </u> Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
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1. <u>Rosa nutkana</u>	15	Yes	FAC																																																																																																																																						
2. <u>Corylus cornuta</u>	10	Yes	FACU																																																																																																																																						
3. <u>Cornus nuttallii</u>	5	No	FACU																																																																																																																																						
4. <u>Sambucus racemosa</u>	5	No	FACU																																																																																																																																						
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1. <u>Athyrium filix-femina</u>	30	Yes	FAC																																																																																																																																						
2. <u>Polystichum munitum</u>	15	Yes	FACU																																																																																																																																						
3. <u>Carex obnupta</u>	2	No	OBL																																																																																																																																						
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1. <u>Rubus armeniacus</u>	5	Yes	FAC																																																																																																																																						
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Prevalence Index = B/A = <u> </u>																																																																																																																																									

Remarks:
 Moss and leaf litter cover approximately 53 percent of the herbaceous stratum.

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 11/11/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-4
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-8
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6198613 Long: -122.4147568 Datum: NAD83
 Soil Map Unit Name: Lauren very gravelly loam, 0 to 8 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: This test plot is located in the northeastern section of Parcel 177885000 in a depression. This test plot did meet all wetland indicators, therefore it does meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> =Total Cover Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> =Total Cover Herb Stratum (Plot size: <u>5 ft. radius</u>) 1. <u>Phalaris arundinacea</u> 40 Yes FACW 2. <u>Persicaria amphibia</u> 40 Yes OBL 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> 80 =Total Cover Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> 2. <u> </u> =Total Cover % Bare Ground in Herb Stratum <u>0</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
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Column Totals: <u> </u> (A)	<u> </u> (B)																
Prevalence Index = B/A = <u> </u>																	
Remarks: 20% open water and trace presence of Salix sitchensis (sitka willow).																	

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 11/11/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-5
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-8
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6202391 Long: -122.4146616 Datum: NAD83
 Soil Map Unit Name: Lauren very gravelly loam, 0 to 8 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: This test plot is located in the northeastern section of Parcel 177885000. This test plot did meet all wetland indicators, therefore it does meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Fraxinus latifolia</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">5 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Rosa nutkana</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Populus balsamifera (saplings)</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Salix scouleriana</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">30 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Herb Stratum (Plot size: <u>5 ft. radius</u>) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Phalaris arundinacea</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Persicaria amphibia</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">OBL</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>11. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">30 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">=Total Cover</td><td></td><td></td></tr> </tbody> </table> % Bare Ground in Herb Stratum <u>0</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	5	Yes	FACW	2. <u> </u>				3. <u> </u>				4. <u> </u>				5 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Rosa nutkana</u>	10	Yes	FAC	2. <u>Populus balsamifera (saplings)</u>	10	Yes	FAC	3. <u>Salix scouleriana</u>	10	Yes	FAC	4. <u> </u>				5. <u> </u>				30 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Phalaris arundinacea</u>	20	Yes	FACW	2. <u>Persicaria amphibia</u>	10	Yes	OBL	3. <u> </u>				4. <u> </u>				5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>				9. <u> </u>				10. <u> </u>				11. <u> </u>				30 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>				2. <u> </u>				=Total Cover				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Total % Cover of:</th> <th style="width: 40%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u> </u></td><td>x 1 = <u> </u></td></tr> <tr><td>FACW species <u> </u></td><td>x 2 = <u> </u></td></tr> <tr><td>FAC species <u> </u></td><td>x 3 = <u> </u></td></tr> <tr><td>FACU species <u> </u></td><td>x 4 = <u> </u></td></tr> <tr><td>UPL species <u> </u></td><td>x 5 = <u> </u></td></tr> <tr><td>Column Totals: <u> </u> (A)</td><td><u> </u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A = <u> </u></td></tr> </tbody> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0¹ <u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants¹ <u> </u> Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 11/11/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-6
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-8
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6202862 Long: -122.4146177 Datum: NAD83
 Soil Map Unit Name: Lauren very gravelly loam, 0 to 8 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the northeastern section of Parcel 177885000 upland of Wetland A. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Populus balsamifera</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Fraxinus latifolia</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">50 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Populus balsamifera (saplings)</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Fraxinus latifolia</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">35 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Herb Stratum (Plot size: <u>5 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Rubus ursinus</u></td><td style="text-align: center;">50</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>2. <u>Phalaris arundinacea</u></td><td style="text-align: center;">15</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>Carex deweyana</u></td><td style="text-align: center;">15</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>11. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">80 =Total Cover</td><td></td><td></td></tr> </tbody> </table> Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">=Total Cover</td><td></td><td></td></tr> </tbody> </table> % Bare Ground in Herb Stratum <u>0</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Populus balsamifera</u>	30	Yes	FAC	2. <u>Fraxinus latifolia</u>	20	Yes	FACW	3. <u> </u>				4. <u> </u>				50 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Populus balsamifera (saplings)</u>	30	Yes	FAC	2. <u>Fraxinus latifolia</u>	5	No	FACW	3. <u> </u>				4. <u> </u>				5. <u> </u>				35 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Rubus ursinus</u>	50	Yes	FACU	2. <u>Phalaris arundinacea</u>	15	No	FACW	3. <u>Carex deweyana</u>	15	No	FAC	4. <u> </u>				5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>				9. <u> </u>				10. <u> </u>				11. <u> </u>				80 =Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>				2. <u> </u>				=Total Cover				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u> </u></td><td>x 1 = <u> </u></td></tr> <tr><td>FACW species <u> </u></td><td>x 2 = <u> </u></td></tr> <tr><td>FAC species <u> </u></td><td>x 3 = <u> </u></td></tr> <tr><td>FACU species <u> </u></td><td>x 4 = <u> </u></td></tr> <tr><td>UPL species <u> </u></td><td>x 5 = <u> </u></td></tr> <tr><td>Column Totals: <u> </u> (A)</td><td><u> </u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A = <u> </u></td></tr> </tbody> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0¹ <u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants¹ <u> </u> Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 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Remarks:

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 11/11/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-7
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3-30
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.620403 Long: -122.4158555 Datum: NAD83
 Soil Map Unit Name: Olympic stony clay loam, 3 to 30 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the northeastern section of Parcel 177885000 in a depression. This test plot did meet all wetland indicators, therefore it does meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> <u> </u> =Total Cover Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> <u> </u> =Total Cover Herb Stratum (Plot size: <u>5 ft. radius</u>) 1. <u>Festuca arundinacea</u> <u>80</u> <u>Yes</u> <u>FACW</u> 2. <u>Ranunculus repens</u> <u>10</u> <u>No</u> <u>FAC</u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> <u>90</u> =Total Cover Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> <u> </u> <u> </u> <u>FAC</u> 2. <u> </u> <u> </u> =Total Cover % Bare Ground in Herb Stratum <u>10</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
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Remarks:

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 12/15/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-8
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-8
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6205959 Long: -122.414489 Datum: NAD83
 Soil Map Unit Name: Lauren very gravelly loam, 0 to 8 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the northeastern section of Parcel 177885000 on a terrace. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> <u> </u> =Total Cover Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> <u> </u> =Total Cover Herb Stratum (Plot size: <u>5 ft. radius</u>) 1. <u>Carex obnupta</u> 80 Yes OBL 2. <u>Plantago lanceolata</u> 5 No FACU 3. <u>Rumex crispus</u> 5 No FAC 4. <u>Hypochaeris radicata</u> 5 No FACU 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> <u> </u> 95 =Total Cover Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) 1. <u>Rubus armeniacus</u> 5 Yes FAC 2. <u> </u> <u> </u> 5 =Total Cover % Bare Ground in Herb Stratum <u>5</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 12/15/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-9
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-8
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6202053 Long: -122.4157401 Datum: NAD83
 Soil Map Unit Name: Lauren very gravelly loam, 0 to 8 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the northern central section of Parcel 177885000 on a terrace. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft. radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
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3. <u> </u>					
4. <u> </u>					
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15 ft. radius</u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
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4. <u> </u>					
=Total Cover					
Herb Stratum	(Plot size: <u>5 ft. radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Agrostis capillaris</u>		55	Yes	FAC	
2. <u>Hypochaeris radicata</u>		20	Yes	FACU	
3. <u>Ranunculus repens</u>		20	Yes	FAC	
4. <u>Cirsium arvense</u>		5	No	FAC	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
9. <u> </u>					
10. <u> </u>					
11. <u> </u>					
100 =Total Cover					
Woody Vine Stratum	(Plot size: <u>15 ft. radius</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>					
2. <u> </u>					
=Total Cover					
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

SOILSampling Point: TP-9**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/3	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)	☐ Sandy Redox (S5)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G)	☐ Redox Depressions (F8)
☐ Sandy Gleyed Matrix (S4)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present?Yes _____ No X

Remarks:

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

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 x Depth (inches): _____Water Table Present? Yes _____ No x Depth (inches): _____Saturation Present? Yes _____ No x Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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: Mills Property City/County: Camas/Clark Sampling Date: 12/15/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-10
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-8
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6204896 Long: -122.4163951 Datum: NAD83
 Soil Map Unit Name: Lauren loam, 0 to 8 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the northwestern section of Parcel 177885000 on a terrace. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> =Total Cover Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> =Total Cover Herb Stratum (Plot size: <u>5 ft. radius</u>) 1. <u>Agrostis capillaris</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> 100 =Total Cover Woody Vine Stratum (Plot size: <u>15 ft. radius</u>) 1. <u> </u> 2. <u> </u> =Total Cover % Bare Ground in Herb Stratum <u>0</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
Total % Cover of:	Multiply by:																
OBL species <u> </u>	x 1 = <u> </u>																
FACW species <u> </u>	x 2 = <u> </u>																
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FACU species <u> </u>	x 4 = <u> </u>																
UPL species <u> </u>	x 5 = <u> </u>																
Column Totals: <u> </u> (A)	<u> </u> (B)																
Prevalence Index = B/A = <u> </u>																	
Remarks:																	

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

Project/Site: Mills Property City/County: Camas/Clark Sampling Date: 12/15/22
 Applicant/Owner: HSR Capital, LLC State: WA Sampling Point: TP-11
 Investigator(s): KT Wills; Jess Andrade Section, Township, Range: S34, T2N, R3E
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3-20
 Subregion (LRR): LRR A, MLRA 2 Lat: 45.6189702 Long: -122.4143748 Datum: NAD83
 Soil Map Unit Name: Onlympic stony clay loam, 3 to 20 percent slopes NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This test plot is located in the western section of Parcel 177885000 on a terrace. This test plot did not meet all wetland indicators, therefore it does not meet the criteria of being a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft. radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u> </u>					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15 ft. radius</u>)																				
1. <u>Mahonia nervosa</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>	
Total % Cover of:	Multiply by:																				
OBL species <u> </u>	x 1 = <u> </u>																				
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Prevalence Index = B/A = <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
<u>10</u> =Total Cover																					
Herb Stratum	(Plot size: <u>5 ft. radius</u>)																				
1. <u>Agrostis capillaris</u>		<u>90</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
6. <u> </u>																					
7. <u> </u>																					
8. <u> </u>																					
9. <u> </u>																					
10. <u> </u>																					
11. <u> </u>																					
<u>90</u> =Total Cover																					
Woody Vine Stratum	(Plot size: <u>15 ft. radius</u>)																				
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
2. <u> </u>																					
=Total Cover																					
% Bare Ground in Herb Stratum <u>10</u>																					
Remarks:																					

APPENDIX C

WETLAND RATING FORM FOR WESTERN WASHINGTON

Wetland B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 11/11/2022Rated by: Julianne Blake Trained by Ecology? X Yes ___ No Date of training: 6/2022HGM Class used for rating: Depressional Wetland has multiple HGM classes? ___ Y X N**NOTE: Form is not complete without the required figures** (figures can be combined).Source of base aerial photo/map: Google Earth**OVERALL WETLAND CATEGORY III** (based on functions X or special characteristics___)

1. Category of wetland based on FUNCTIONS

___ Category I – Total score = 23 - 27

___ Category II – Total score = 20 - 22

X 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	
Score Based on Ratings	6			5			7			18

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	Not Applicable

Wetland B

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	7
Hydroperiods	D 1.4, H 1.2	7
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	7
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	7
Map of the contributing basin	D 4.3, D 5.3	8
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	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	9
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	9

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 (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	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 (<i>can be added to another figure</i>)	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 (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	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 B

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 B

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 B

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). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.		points = 3 points = 2 points = 1 points = 1 3
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 Wetland has persistent, ungrazed plants > ½ of area Wetland has persistent, ungrazed plants ≥ 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area		points = 5 points = 3 points = 1 points = 0 3
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is ≥ ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland		points = 4 points = 2 points = 0 4
Total for D 1		Add the points in the boxes above 10

Rating of Site Potential If score is: 12-16 = H X 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 0
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 1

Rating of Landscape Potential If score is: 3 or 4 = H X 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 1
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 1

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

Wetland B

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:**

Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	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.

Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
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.

The area of the basin is less than 10 times the area of the unit	points = 5	0
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

7**Rating of Site Potential** If score is: 12-16 = H X 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

0

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

2**Rating of Landscape Potential** If score is: 3 = H X 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.

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):		0
• 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

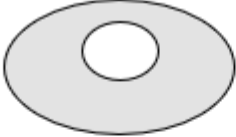
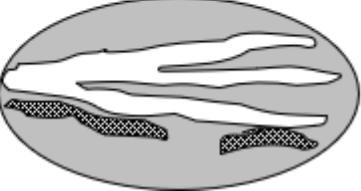
Total for D 6

Add the points in the boxes above

0**Rating of Value** If score is: 2-4 = H 1 = M X 0 = L

Record the rating on the first page

Wetland B

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 ☒ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 ☒ Forested (areas where trees have > 30% cover) 1 structure: points = 0 <i>If the unit has a Forested class, check if:</i> ☐ 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 ☒ 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 ☐ Intermittently or seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². 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	2
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	2

Wetland B

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) ☐ 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	6

Rating of Site Potential If score is: ☒ 15-18 = H ☐ 7-14 = M ☒ 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). <i>Calculate:</i> % relatively undisturbed habitat 23.9% + [(% moderate and low intensity land uses)/2] 15.4% = 39.3% 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	3
H 2.2. Total habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % relatively undisturbed habitat 24.8% + [(% moderate and low intensity land uses)/2] 27.4% = 52.2% 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	3
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	0
Total for H 2 Add the points in the boxes above	6

Rating of Landscape Potential If score is: ☒ 4-6 = H ☐ 1-3 = M ☐ < 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? <i>Choose only the highest score that applies to the wetland being rated.</i> 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	2

Rating of Value If score is: ☒ 2 = H ☐ 1 = M ☐ 0 = L

Record the rating on the first page

Wetland B

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).
- **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.
- **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.
- **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 B

- **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>

Wetland B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No = Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No – Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are <i>Spartina</i> , see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer ? ¹³⁵ Yes = Category I No – Go to SC 2.2 SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination , ¹³⁶ Go to SC 2.3 No = Not a WHCV SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES, you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Category I bog No = Not a bog	Cat. I

¹³⁵ <https://www.dnr.wa.gov/NHPdata>¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland B

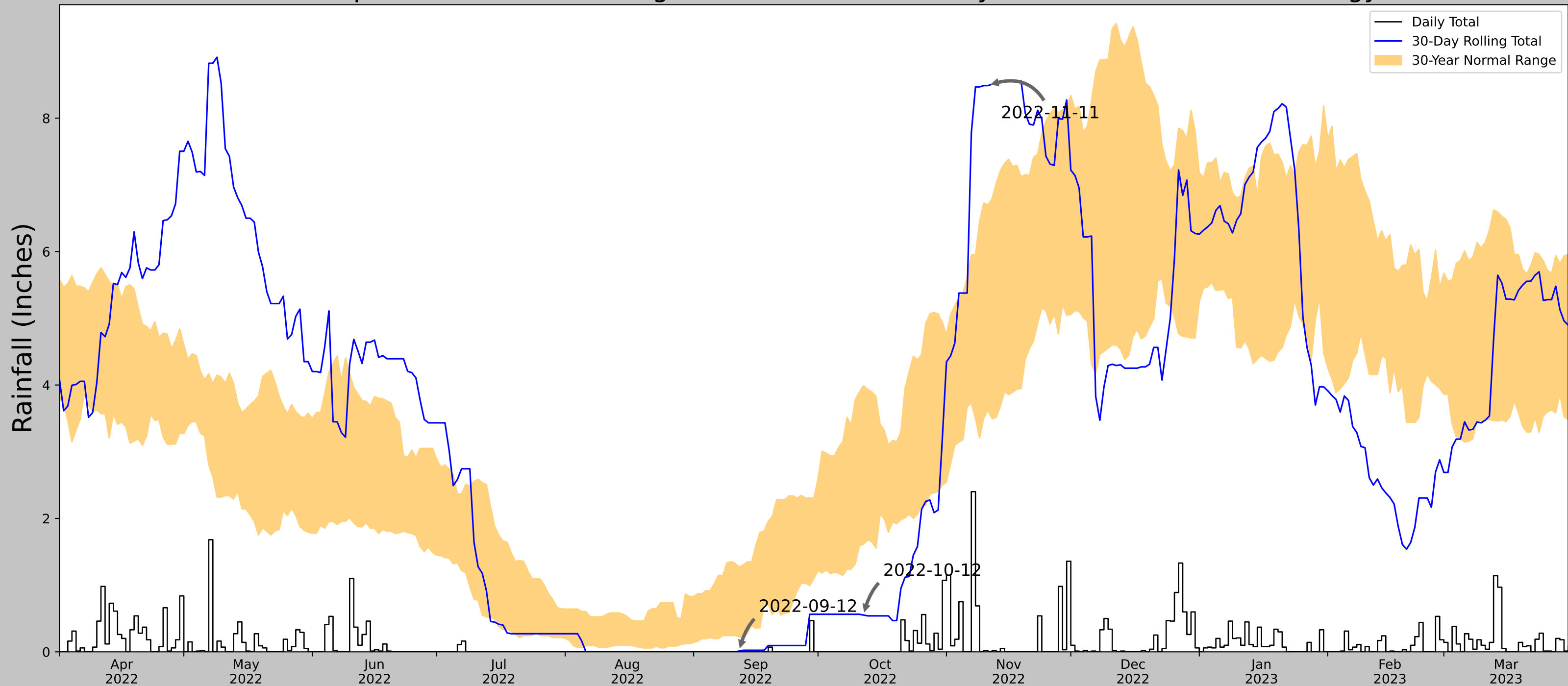
SC 4.0. Forested Wetlands Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) <u>exceeding 21 in. (53 cm)</u>. Yes = Category I <u>No = Not a forested wetland for this section</u>	Cat. I
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to SC 5.1 <u>No = Not a wetland in a coastal lagoon</u> SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ⅓ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) Yes = Category I No = Category II	Cat. I Cat. II
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i> In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to SC 6.1 <u>No = Not an interdunal wetland for rating</u> SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV	Cat I Cat. II Cat. III Cat. IV
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	Not Applicable

APPENDIX D

ANTECEDENT PRECIPITATION TOOL DATA

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Exhibit 5 SUB25-1008



Coordinates	45.619781, -122.416341
Observation Date	2022-11-11
Elevation (ft)	322.65
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-11-11	3.621654	6.700394	8.488189	Wet	3	3	9
2022-10-12	1.614961	3.990158	0.551181	Dry	1	2	2
2022-09-12	0.220472	1.269685	0.011811	Dry	1	1	1
Result							Normal Conditions - 12



Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
TROUTDALE	45.5533, -122.3886	33.136	4.785	289.514	3.539	9310	83
PORTLAND TROUTDALE AP	45.5511, -122.4097	24.934	1.032	8.202	0.473	1610	7
CAMAS 2.4 E	45.5845, -122.374	58.071	2.268	24.935	1.077	3	0
PORTLAND WFO	45.5608, -122.5383	20.997	7.261	12.139	3.356	315	0
PORTLAND INTL AP	45.5958, -122.6092	21.982	11.066	11.154	5.103	115	0

APPENDIX E

OREGON WHITE OAK INVENTORY

Oregon White Oak Inventory

Identifier	DBH (inches)	Notes
Oak 1	8	Low hanging leaves, broken/dead branches, full crown
Oak 2	8	Low hanging leaves, broken/dead branches, suppressed crown
Oak 3	8	Low hanging leaves, broken/dead branches, suppressed crown
Oak 4	6	Low hanging leaves, broken/dead branches, suppressed crown
Oak 5	6	Low hanging leaves, broken/dead branches, suppressed crown
Oak 6	5	Low hanging leaves, broken/dead branches, suppressed crown
Oak 7	9	Low hanging leaves, broken/dead branches, suppressed crown
Oak 8	10	Low hanging leaves, broken/dead branches, suppressed crown
Oak 9	8	Low hanging leaves, broken/dead branches, suppressed crown
Oak 10	10	Low hanging leaves, broken/dead branches, suppressed crown
Oak 11	5	Low hanging leaves, broken/dead branches, suppressed crown
Oak 12	10	Low hanging leaves, broken/dead branches, suppressed crown
Oak 13	9	Suppressed crown
Oak 14	8	Low hanging leaves, broken/dead branches, suppressed crown
Oak 15	8	Low hanging leaves, broken/dead branches, suppressed crown
Oak 16	9	Low hanging leaves, broken/dead branches, suppressed crown
Oak 17	6	Low hanging leaves, leaves, full crown
Oak 18	10	Low hanging leaves, broken/dead branches, galls, suppressed crown
Oak 19	15	Low hanging leaves, broken/dead branches, galls, suppressed crown
Oak 20	15, 25	Split trunk, broken/dead branches, suppressed crown

**All oaks produce acorns. Insects and cavities are absent in all oaks.*



WETLAND BUFFER MODIFICATION & MITIGATION PLAN

July 8, 2025



Village at North Shore
Camas, Washington

Prepared for

HSR Capital, LLC
19120 SE 34th St. #103
Vancouver, WA 98683
(360) 798-6458

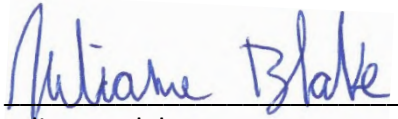
Prepared by

Ecological Land Services, Inc.

1157 3rd Avenue, Suite 220A • Longview, WA 98632
(360) 578-1371 • Project Number 3341.26

SIGNATURE PAGE

The information and data in this report was compiled and prepared under the supervision and direction of the undersigned.



Julianne Blake
Biologist IV

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APPENDIX

Appendix A – WDFW Functional Assessments for Individual Oaks and Mitigation Calculations
Appendix B – Offsite Protected Wetland Area

INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by the applicant, HSR Capital, LLC, to address impacts to the buffers of two Category III wetlands and impacts to Oregon white oak (*Quercus garryana*; oak) and herbaceous bald habitat associated with the proposed Village at North Shore (VANS) subdivision. The project will include 102 single-family lots, 4 multi-family buildings with 96 apartment units, and 3 mixed-use building(s) with 30,250 square feet of commercial use and 44 apartment units, within Clark County parcel numbers 177885000 and 178175000. The approximately 36-acre site is located just south of the terminus of NE 252nd Avenue in Camas, Washington within a portion of Section 34, Township 2 North, Range 3 East of the Willamette Meridian (Figure 1). This wetland buffer modification and mitigation plan has been prepared in accordance with *City of Camas Municipal Code (CMC) Title 16 – Environment* (June 2025) and *Management recommendations for Washington's priority habitats: Best management practices for mitigating impacts to Oregon white oak priority habitat* (Guidance; Nolan and Azerrad 2024).

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PROJECT DESCRIPTION

PROPOSED DEVELOPMENT

The project will include 102 single-family lots, 4 multi-family buildings with 96 apartment units, and 3 mixed-use building(s) with 30,250 square feet of commercial use and 44 apartment units, over the approximately 36.03-acre site. Residential lot sizes range from approximately 2,280 to 6,500 square feet. Construction of the subdivision will include clearing, grading, lot preparation, and construction of supporting infrastructure including parking areas, stormwater facilities, interior circulation roads, sidewalks, utilities, streetlights, and open space areas (Figure 4). All interior roads will be designed to meet minimum emergency vehicle circulation requirements and City of Camas North Shore Subarea design standards. Access to the subdivision will be provided by extending NE 252nd Avenue southerly at the northern site boundary. Construction of a new arterial road (North Shore Blvd.) extending northwest from the eastern boundary of the site is required to comply with the mandated public road alignment. This roadway supports broader City transportation goals established in the municipal code and has been closely coordinated with City staff. Several alignment alternatives were evaluated, including the City's initial proposal to route the boulevard through Wetland B. The final proposed alignment was selected by the City to avoid critical areas, meet long-term transportation objectives, and comply with roadway design standards for this higher classification roadway to ensure the safe and efficient movement of traffic. While the City may complete construction of the roadway as part of a larger transportation improvement project, the development will, at a minimum, dedicate the necessary right-of-way to accommodate future construction. If the City does not proceed with its transportation project, the applicant will construct the roadway as shown in the proposed plans.

Stormwater generated from new impervious surfaces will be managed according to the *2019 Stormwater Management Manual for Western Washington* and City of Camas stormwater design requirements. Stormwater runoff from the western and southwestern portions of the site will be collected and directed to an onsite mechanical water quality treatment facility, where it will receive basic treatment for pollutants and phosphorous treatment prior to being discharged to Lacamas Lake, which has a large water body direct discharge exemption. Runoff from the eastern portion of the site will be collected and conveyed to water quality treatment facilities prior to entering detention facilities for flow control management. Three stormwater detention facilities will be located in low-lying areas in the eastern and north-central portions of the site for detaining stormwater prior to discharge to Wetland A and Stream A and eventually Lacamas Lake.

The proposed project will remove eleven Oregon white oak trees in Oak Cluster 1, each with a diameter at breast height (DBH) of 10 inches or less for a combined dripline impact of 0.048 acres (2,077 sq. ft.). Approximately 0.088 acres (3,852 sq. ft.) of herbaceous bald habitat and 0.184 acres (8,001 sq. ft.) of Wetland B's buffer will also be impacted (Figure 5). All direct wetland impacts will be avoided and impacts to wetland buffers will be minimized through the use of low impact strategies, combined with buffer averaging. Wetland buffer impacts will be mitigated by enhancing approximately 0.184 acres (8,001 sq. ft.) of wetland buffer onsite. Herbaceous bald impacts and a portion of temporal oak impacts will be mitigated by preserving and enhancing

approximately 0.15 acres (6,522 sq. ft.) of existing oak and herbaceous bald habitat onsite. The remaining oak impacts will be mitigated by purchasing 1.063 credits from Terrace Oak Mitigation Bank (Terrace). Additionally, two vegetated corridors will be established and protected in perpetuity to offset wetland impacts, achieve an overall net gain in ecological functions onsite, and further protect critical areas from the surrounding developments.

EXISTING CONDITIONS

EXISTING AND SURROUNDING LAND USES

The approximately 36-acre site consists of Clark County Tax Parcel Numbers 177885000 and 178175000 and is accessed by a gravel road off SE 252nd Avenue from the north. The site is zoned as North Shore Lower Density Residential (LD-NS), North Shore Higher Density Residential (HD-NS), Mixed Use (MX-NS), and North Shore Commercial (C-NS). The properties surrounding the site consist of single-family homes, farmland, undeveloped forested land, and two subdivisions with construction in progress. The northwest portion of the site has a single-family residence and fenced area for livestock. Topography on parcel 178175000 is generally level in the north and northeast, with a depressional area in the northwest corner of the parcel that corresponds to the location of Wetland B. Topography in the remainder of the parcel consists of moderate to steep slopes that descend towards the onsite portions of Wetland A and Stream A. Topography on parcel 177885000 consists of moderate slopes downward to the south, undulating hills throughout the parcel, and several low-lying areas to the north and northeast. Shallow bedrock and rock outcroppings are also present in some locations. General vegetation consists of grasses, weedy herbs, and forbs in the northern portions of each parcel, and the remainder of the site consists of a forested canopy containing a mix of coniferous and deciduous trees with a multi-layered subcanopy. Two wetlands (Wetlands A and B), one stream (Stream A), two oak clusters consisting of a total of 20 oak trees, and two herbaceous balds (Herbaceous Bald 1 and Herbaceous Bald 2; HB-1 and HB-2) are located onsite. An agricultural ditch (Ditch A) was also mapped onsite (Figure 2).

EXISTING CRITICAL AREAS

The site was assessed for critical areas by ELS in 2022, 2023, and 2024. The *Critical Areas Report for ICG 252nd Property* was completed by ELS on May 19, 2025, and addresses critical areas on parcel 178175000 (ELS 2025a). The *Critical Areas Report for Mills Property* was also completed by ELS on May 19, 2025, and addresses critical areas on parcel 17885000 (ELS 2025b).

WETLAND A

Wetland A is Category III, depressional, emergent (EM), forested (FO), seasonally flooded (SF) and saturated only (SO) wetland with a seasonally flowing stream (SFS) within the wetland, with approximately 2.26 acres onsite and a total area of approximately 10.06 acres (Figure 2). Portions of Wetland A's offsite boundary were approximated using lidar and topographic maps along with visual observations of noticeable changes in elevation and vegetation. Wetland A's onsite vegetation is dominated by Oregon ash (*Fraxinus latifolia*), common rush (*Juncus effusus*), and reed canarygrass (*Phalaris arundinacea*). Hydrology is supported by seasonal overbank flooding from Stream A, which serves as Wetland A's outlet, a shallow groundwater table, precipitation,

and surface runoff. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Rating System), Wetland A is a Category III wetland, scoring 7 points for water quality functions, 4 points for hydrologic functions, and 7 points for habitat functions, for a total score of 18 points.

WETLAND B

Wetland B is a Category III, depressional, EM, FO, SF wetland, with approximately 0.81 acres onsite and a total area of approximately 0.84 acres. Wetland B's vegetation is dominated by Oregon ash, black cottonwood (*Populus trichocarpa*), Scouler's willow (*Salix scouleriana*), Nootka rose (*Rosa nutkana*), reed canarygrass, and water smartweed (*Persicaria amphibia*). Hydrology is supported by a shallow groundwater table, precipitation, and runoff from adjacent uplands. Wetland B does not have an outlet. According to the Rating System, Wetland B is a Category III wetland, scoring 6 points for water quality functions, 5 points for hydrologic functions, and 7 points for habitat functions, for a total score of 18 points.

WETLAND BUFFERS

Standard wetland buffers are based on wetland category and habitat score from the Rating System, in conjunction with the proposed land use intensity (*CMC 16.53.040(B)(2)*). Wetland A and Wetland B are both Category III wetlands, each with a habitat score of 7 points. According to *CMC Table 16.53.040-3*, the standard buffer widths for both wetlands adjacent to proposed high land use intensity is 150 feet. According to *CMC 16.53.040(B)(4)(b)(i)*, functionally isolated buffer areas are areas that do not protect the wetland from adverse impacts, such as preexisting roads and structures, and shall be excluded from buffer requirements. Portions of the wetland buffers are functionally isolated due to existing impervious surfaces (Figure 2). Wetlands and buffers are summarized in Table 1.

STREAM A

Stream A is mapped as Type-U by Washington Department of Natural Resources (WDNR 2025). According to WAC 222-16-031, Stream A meets the definition of a Type 3 water based on a defined channel of 2 feet or greater within the bankfull width, a gradient of 16 percent or less, and the absence of any fish passage barriers (WDFW 2025a). As such, Stream A is considered a Type-F (fish-bearing) stream. Onsite hydrology is supported by a shallow groundwater table, precipitation, and runoff from upslope areas.

STREAM BUFFERS

According to Washington State Fish Passage online mapping, Stream A may have the potential presence of resident fish (WDFW 2025a). According to *CMC 16.61.040(D)*, non-anadromous Type-F streams require a 75-foot stream buffer. The buffer of Stream A is primarily vegetated with reed canarygrass, slough sedge, and a mixture of mature coniferous and deciduous trees with a multi-layered subcanopy. Stream A is summarized in Table 1.

Table 1. Wetland and Stream Summary

Identifier	Classification	Cowardin, Hydroperiod ⁴	Habitat Score/Category ⁵	Proposed Land Use Intensity	Buffer Width ^{6,7}
Wetland A (2.26 acres onsite)	Depressional ¹	EM/FO, SF/SO/SFS	III/7	High	150 feet
Wetland B (0.81 acres onsite)		EM/FO, SF			
Stream A	Type F, non-anadromous ²	--			75 feet

¹NRCS 2008; ²WAC 222-16-031; ³WDNR 2025b; ⁴FGDC 2013; ⁵Hruby and Yahnke 2023; ⁶CMC Table 16.53.040-3; ⁷CMC 16.61.040(D).

DITCH A

Ditch A is an agricultural ditch that appears to have been created within uplands for the purpose of diverting upslope runoff into Stream A (Figure 2). According to CMC 16.53.010(C)(2)(b), Ditch A is exempt from buffers as detailed below:

Artificial. Wetlands created from non-wetland sites including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, stormwater facilities, farm ponds, and landscape amenities; provided, that wetlands created as mitigation shall not be exempted.

Ditch A is not classified as a fish and wildlife habitat conservation area per CMC 16.61.010(A)(5) which defines “Water of the State” as omitting, “man-made ditches or bio-swales that have been created from areas not meeting the definition of waters of the state.”

LANDSCAPE POSITION

According to the Washington State Department of Ecology’s Water Quality Atlas, the site is in the Lacamas Creek 12-digit hydrologic unit code (HUC) 170800050305 and Watershed Resource Inventory Area (WRIA) 28 Salmon – Washougal. Onsite hydrology generally flows downslope to the east into the wetlands and stream.

OREGON WHITE OAK

The Washington Department of Fish and Wildlife (WDFW) identifies which oak communities are considered priority habitats through its Priority Habitats and Species (PHS) program. The Washington Natural Heritage Program (WNHP) defines a North Pacific Oak Woodland as a community dominated or co-dominated by oak and associated with dry, low-elevation sites or those with frequent fires pre-settlement. Oregon white oak woodlands are associated with eight different plant communities, including a wide variety of native herbaceous and shrub species. Oak woodlands provide a mix of feeding, nesting, and breeding habitat for many wildlife species (Nolan and Azerrad 2024). In addition to oak woodlands, individual oak trees can be considered a priority habitat if they provide considerable value to wildlife. In addition to woodland communities, oaks are also associated with prairies and savannas in Washington. These

communities are considered wooded grasslands and are an association of upland grassland and meadows (Rocchio and Crawford 2015).

Two oak clusters were identified onsite, with sixteen oaks in Cluster 1 and four oaks in Cluster 2. The total dripline of Cluster 1 is approximately 0.10 acres and the total dripline of Cluster 2 is approximately 0.05 acres. Although PHS mapping identifies each cluster as an oak woodland, these areas do not meet woodland size requirements, and each oak shall be considered an individual (Figure 3). Details for Oaks 2-12 will be discussed in this report, as these oaks will be impacted by the proposed project. For more details on other oaks onsite, see the *Critical Areas Report for Mills Property* (ELS 2025b).

HERBACEOUS BALD HABITAT

According to CMC 16.61.010(A)(2), priority habitats and species are identified by WDFW; however, CMC 16.61.010(A)(1) states that lists, categories, and definitions of species promulgated by WDFW are provided to the City to be used for guidance only. According to the WDFW Priority Habitat and Species Program (WDFW 2025b) herbaceous balds are defined as:

“...variable-sized patches of grass and forb vegetation located on shallow soils over bedrock that commonly is fringed by forest or woodland. Typically consists of low-growing vegetation adapted for survival on shallow soils amid seasonally dry conditions, and is often on steep slopes. Dominant flora includes herbaceous vegetation, dwarf shrubs, mosses, and lichens. Rock outcrops, boulders, and scattered trees are often present, especially Douglas-fir, Pacific madrone, and Oregon white oak. Balds occur within mid-montane to lowland forest zones. On slopes near saltwater shorelines in the northern Puget Trough, herbaceous balds and herbaceous bluffs can sometimes be difficult to differentiate. Balds typically are smaller than 5 ha (12 ac), although some can be up to about 100 ha ($\cong$ 250 ac)” (WDFW 2008).

ELS biologists identified two areas onsite that meet herbaceous bald criteria (HB-1 and HB-2). These areas are defined by shallow soils with vegetation dominated by grasses and forbs. Dominant vegetation found on herbaceous bald locations included Camas lily (*Camassia quamash*), licorice fern (*Polypodium glycyrrhiza*), various grasses, moss, and blackberry species. Although Camas lily was observed on the entirety of both herbaceous balds, it comprises less than 0.25 acres and is not considered a priority habitat itself. Douglas fir (*Pseudotsuga menziesii*) trees were rooted near herbaceous bald locations but not directly on the balds. All observed oaks were rooted within herbaceous bald boundaries and many displayed stunted crowns and curled leaves, likely from stress related to shallow soils and shading by Douglas fir trees. Herbaceous bald boundaries were delineated based on vegetation and the presence of bedrock under shallow soils.

STANDARD WETLAND BUFFER MODIFICATIONS

According to CMC 16.53.050.C(1), standard wetland buffer widths may be reduced under certain conditions, provided the project results in no net loss or a net gain in ecological functions and values provided by the wetland. The section also specifies that buffer width reductions allowed

under subsections (C)(1)(a) and (C)(1)(b) may be combined, provided that minimum buffer widths shall never be less than fifty feet for Category III wetlands. In *italic* font are excerpts from CMC detailing the criteria required to utilize the buffer reductions, with a description of how this project will meet the criteria in regular font.

WETLAND BUFFER REDUCTION

LOWER IMPACT LAND USES

According to CMC 16.53.050.C(1)(a), buffer widths recommended for proposed land uses with high-intensity impacts to wetlands can be reduced to those recommended for moderate-intensity impacts if both the following criteria are met:

i. A relatively undisturbed, vegetated corridor at least one hundred feet wide is protected between the wetland and any other priority habitats that are present as defined by the Washington State Department of Fish and Wildlife.

Wetland A: Wetland A extends onto the adjacent parcel to the east (parcel 178171000), which was permitted for the Enclave development in June 2025 (NWS-2025-263). A vegetated corridor, ranging in width between approximately 141 feet to 491 feet from Wetland A's eastern boundary to the eastern parcel boundary, will be established and protected in perpetuity through a conservation covenant or similar (Figure 6). Protection and enhancement of Wetland A and its buffer on the Enclave parcel are mandated by the permit (NWS-2025-263), providing an additional corridor width of approximately 300 feet to the adjacent development (Appendix B). This additional corridor width will increase the ecological functions of critical areas on- and offsite and further minimize impacts caused by the proposed project. The *Buffer Modification and Onsite Mitigation Plan for Enclave Property* (ELS 2025) details the offsite mitigation and protection measures.

Wetland B: A corridor ranging between approximately 66 feet and 260 feet will be established between Wetland B and the location of HB-1 and Oak Cluster 1. Wetland B's buffer will be increased and enhanced in this area to provide more protection for nearby habitats and to create continuity between the wetland and other priority habitat areas in the vicinity.

ii. Measures to minimize the impacts of the land use adjacent to the wetlands are applied, such as infiltration of stormwater, retention of as much native vegetation and soils as possible, direction of noise and light away from the wetland, and other measures that may be suggested by a qualified wetland professional.

Wetland A and B: Infiltration is not feasible due to the shallow soils present over solid bedrock; however, runoff impacts to wetlands and buffers from the development will be minimized by collecting stormwater for detention and treatment prior to regulated discharge toward the wetlands, to maintain hydrologic input to the wetlands. Where possible, disturbed vegetated areas will be restored by placing topsoil that meets Ecology standards on top of the grading slopes to allow for reestablishment of native vegetation. Many areas onsite are composed of shallow soils over solid bedrock. If solid bedrock is present as anticipated, cut slopes will be minimized to

the greatest extent practicable by control blasting near vertical slopes to limit disturbance from the development toward the wetland. These near vertical slopes will not be suitable for revegetation; however, disturbance beyond the top of the cuts will be minimized.

Stormwater facilities proposed within the buffers are designed to meet city and state standards for managing stormwater runoff prior to discharge towards the critical areas. The discharge locations will be placed as far from the critical areas as feasible to allow for the greatest flow path through the wetland buffers. No untreated stormwater will be discharged from the project. Streetlights will be directed down and away from the wetland to the greatest extent practicable to reduce light pollution. Increases to ambient noise after construction is complete are expected, as the proposed subdivision is in a growing mixed-use residential area with commercial uses required by City zoning standards. However, noise generated by the completed project will be comparable to surrounding land uses and is not anticipated to exceed standard acceptable levels. The project will retain a significant amount of heavily vegetated areas which will reduce noise disturbances to the wetlands and stream. Additionally, the buffers for both wetlands will be enhanced by controlling invasive species to provide an overall higher ecological function than currently exists onsite (Figure 6). A full description of buffer enhancement activities can be found in the *Onsite Mitigation Plan* section of this report.

The above design measures will be implemented to reduce the land use intensity of the project and reduce adverse impacts. Therefore, the project meets the required criteria, and this buffer reduction should be allowed. As such, the buffers for Wetland A and Wetland B are reduced from 150 feet to 110 feet per *CMC Table 16.53.040-3* (Figure 4).

RESTORATION

The following is an excerpt from *CMC 16.53.050.C(1)(b)*: *Buffer widths may be reduced up to twenty-five percent if the buffer is restored or enhanced from a pre-project condition that is disturbed (e.g., dominated by invasive species), so that functions of the post-project wetland and buffer are equal or greater. To the extent possible, restoration should provide a vegetated corridor of a minimum one hundred feet wide between the wetland and any other priority habitat areas as defined by the Washington State Department of Fish and Wildlife. The habitat corridor must be protected for the entire distance between the wetland and the priority habitat area by some type of permanent legal protection such as a covenant or easement. The restoration plan must meet requirements in subsection D of this section for a mitigation plan, and this section for a critical area report.*

Wetland A and B: Invasive species such as reed canarygrass and Himalayan blackberry are present in the wetland and buffer areas of both wetlands and are prolific in some areas. The buffers of both Wetland A and Wetland B will be enhanced by removing invasive vegetation, which will allow native species to reestablish and provide an overall net gain in ecological functions. Two vegetated corridors, one for each wetland, will be established and protected as described in the *Lower Impact Land Uses* section of this report. The vegetated corridors will be protected in perpetuity through a conservation covenant or similar legal mechanism and the restoration plan will follow all applicable guidelines outlined in the *CMC*. As such, the buffers for

Wetland A and Wetland B are reduced further from 110 feet to 82.5 feet per CMC 16.53.050.C(1)(b) (Figure 4).

WETLAND BUFFER AVERAGING

According to CMC 16.53.050(C)(2), averaging buffers is allowed in conjunction with any of the other provisions for reductions in buffer width listed in subsection (C)(1), provided that minimum buffer widths listed in subsection (C)(1)(c) are adhered to. This project proposes buffer averaging to further avoid and minimize wetland buffer impacts caused by construction of the subdivision, and will adhere to the following criteria:

a. The total area contained in the buffer after averaging is no less than that contained within the buffer prior to averaging.

Wetland A: A total of 0.015 acres (661 sq. ft.) of the buffer will be decreased in the southwestern portion of the wetland and correspondingly increased in the northwest portion of the wetland.

Wetland B: A total of 0.216 acres (9,388 sq. ft.) of the buffer will be decreased along the northeast and western portions of the wetland and correspondingly increased in the southeast portion of the wetland (Figure 4).

b. Decreases in width are generally located where wetland functions may be less sensitive to adjacent land uses, and increases are generally located where wetland functions may be more sensitive to adjacent land uses, to achieve no net loss or a net gain in functions.

Wetland A and Wetland B: The buffer areas proposed for decrease generally provide equal or less ecological function than the areas proposed for increase, resulting in no net loss of function. Native vegetation is less dense, and invasive species are present in higher quantities in decreased areas than increased areas. Thus, no net loss is achieved, and this criterion is met.

c. The averaged buffer width at its narrowest point shall not result in a width less than seventy-five percent of the required width, provided that minimum buffer widths shall never be less than fifty feet for all Category 1, 2, and 3 wetlands and twenty-five feet for all Category IV wetlands.

Wetland A and Wetland B: The standard wetland buffer width, after applying the allowed reduction, is 82.5 feet. The averaged buffer width at its narrowest point is approximately 62 feet, which meets the requirement of being no less than 75 percent of the standard width. Buffer averaging is shown on Figure 4.

d. Effect of Mitigation. If wetland mitigation occurs such that the rating of the wetland changes, the requirements for the category of the wetland after mitigation shall apply.

Wetland A and Wetland B: It is not anticipated that onsite mitigation will result in a change to the wetland ratings, as mitigation will take place in the wetland buffers. Functions of the wetland buffers will increase, but the ratings are expected to remain the same.

AVOIDANCE AND MINIMIZATION

The preferred mitigation sequencing of first avoidance, then minimization, and finally compensation for unavoidable impacts was taken into consideration during the project design process. The proposed subdivision has been designed to completely avoid direct impacts to Wetland A, Wetland B, Oak Cluster 2, and Herbaceous Bald 2, by utilizing lower impact development strategies in conjunction with buffer enhancement and averaging as described in the *Standard Wetland Buffer Modifications* section of this report. Several layouts were tested during the project design process to locate the majority of development outside of critical areas boundaries. Grading impacts to Oak Cluster 2 and HB-2 have been completely avoided by incorporating a 2:1 slope up to the proposed open space in which they are located. This area also appears to be solid rock based on site observations and the project geotechnical findings; therefore, the 2:1 slopes may be steeper and thus minimize the grading impact around the oak cluster and herbaceous bald even further.

Impacts to the buffer for Wetland A, Wetland B, Oak Cluster 1, and HB-1 could not be entirely avoided due to the City mandated location of North Shore Blvd., topographical and environmental constraints onsite, as well as required roadway circulation, density requirements, stormwater paths, and parking lots to support the residential and commercial uses as required by CMC. However, impacts will be minimized to the greatest extent practicable by applying the buffer reductions described above, retaining and protecting oaks and herbaceous balds to the maximum extent possible, and establishing and protecting two vegetated corridors onsite. Impacts will be further minimized by utilizing best management practices (BMPs) as described in the *Best Management Practices* subsection of this report.

BEST MANAGEMENT PRACTICES

Before work begins, a construction entrance will be established and clearing and grading will occur within the project area. All construction and tree removal will strictly adhere to the designated construction area. BMPs utilized prior to, during, and after construction to further minimize impacts to critical areas are as follows:

- Install silt fencing or similar measures to control sedimentation and general ground disturbance.
- Locate construction access and staging and stockpile areas within uplands.
- Limit ground disturbance to only those areas necessary to construct project elements.
- Grading will occur during the dry season to minimize surface runoff.
- Maintain stable construction access per the 2019 *Stormwater Management Manual for Western Washington*.
- Use a water truck as needed during construction to control fugitive dust.
- Maintain, repair, and service vehicles and equipment outside of any critical area onsite.
- Maintenance, service, and repair operations include, but are not limited to:
 - Prohibiting discharge of wastewaters into stormwater drains or hose down work areas.
 - Removing the buildup of oils and grease on equipment.

- Removing construction maintenance waste materials from work site and dispose and/or recycle.
- Having a spill kit onsite.
- Stabilize exposed soil with straw mulch or other suitable BMP if left exposed and unworked according to the *2019 Stormwater Management Manual for Western Washington*.

UNAVOIDABLE IMPACTS

The project will result in approximately 0.184 acres (8,001 sq. ft.) of wetland buffer impact and approximately 0.088 acres (3,852 sq. ft.) of herbaceous bald impact. The project will also remove Oaks 2-12, resulting in approximately 0.048 acres (2,077 sq. ft.) of oak canopy dripline impact from clearing and grading for construction of North Shore Blvd. (Figures 4 and 5, Table 2).

Table 2. Impact Summary

Oregon White Oak Trees				
Name		Size	Impact Type	Impact Area
Oak 2		8-inch DBH	Individual Oak Removal	0.048 acres (2,077 sq. ft.) Combined Dripline Impact ¹
Oak 3		8-inch DBH		
Oak 4		6-inch DBH		
Oak 5		6-inch DBH		
Oak 6		5-inch DBH		
Oak 7		9-inch DBH		
Oak 8		10-inch DBH		
Oak 9		8-inch DBH		
Oak 10		10-inch DBH		
Oak 11		5-inch DBH		
Oak 12		10-inch DBH		
Total Oak Impact				
Herbaceous Balds				
Name		Size	Impact Type	Impact Area
HB-1		0.15 acres (6,628 sq. ft.)	Permanent	0.088 acres (3,852 sq. ft.)
Wetlands				
Critical Area	Impact Type	HGM ²	Ecology Rating ³	Impact Area
Wetland B	Buffer	Depressional	Category III	0.184 acres (8,001 sq. ft.)

¹The driplines for Oaks 2-12 are contiguous and shall be combined for the purpose of mitigation calculations. ²NRCS 2008. ³Hruby & Yahnke 2023.

OAK MITIGATION DISCUSSION

OAK MITIGATION REQUIREMENTS

According to the Guidance, compensatory mitigation should ideally take place onsite or as close to the site as possible when options for onsite mitigation are limited, and any plan for compensatory mitigation must address both the physical loss of oak habitat and the temporal loss in ecological function (Nolan and Azerrad 2024). This mitigation plan accounts for both the physical and temporal losses from the project, as described later in this section. Because North Shore Blvd. construction is still under discussion between the applicant and the City, oak habitat will be retained as long as possible and will not be impacted until road construction begins. Suitable area for oak mitigation is limited onsite due to the densely forested canopy and sub-canopy, which interfere with the potential for oak establishment as they require ample sunlight and open area. Use of open spaces that may be suitable for oak mitigation is undetermined, and these areas may not be available in the future due to CMC requirements and potential changes to North Shore Blvd. design and construction. Because of this, a portion of temporal impacts will be offset by enhancing retained oak habitat onsite and the remainder will be offset by purchasing 1.063 credits from Terrace.

OAK WOODLAND DETERMINATION

Mitigation for impacts to oak woodlands differs from mitigation for impacts to individual oaks. As such, an assessment must be completed to determine whether the project impacts an oak woodland or individual oaks. Each oak on- and offsite is assigned a habitat area with a 118-foot radius, which produces an area of approximately one acre per oak. If two or more of these habitat areas overlap, further investigation is required to determine if they meet the definition of an oak woodland. To be considered an oak woodland, there must be a minimum density of five large oaks per acre and the oak component must be no less than 25 percent of the total canopy cover. The habitat areas for all oaks in Cluster 1 overlap; however, the oak component of the canopy comprises approximately 7.46 percent of the total canopy. The habitat areas for all oaks in Cluster 2 also overlap; however, the oak component of the canopy comprises approximately 4.16 percent of the total canopy. The habitat areas for Cluster 1 and Cluster 2 do not overlap and the oak component of each cluster comprises less than 25 percent of the total canopy. As such, all oaks onsite are considered individuals, and project impacts will be calculated according to the WDFW process for individual oak trees (Nolan and Azerrad 2024). Table 3 summarizes the completed oak woodland assessment, which is also depicted on Figure 3.

Table 3. Oak Woodland Determination

Identifier	Habitat Area Total	Oak Dripline Total	Oak Canopy Coverage
Oak Cluster 1	1.34 acres	0.10 acres	7.46 percent
Oak Cluster 2	1.20 acres	0.05 acres	4.16 percent

PHYSICAL IMPACTS

After it has been determined whether the project will impact oak woodland or individual oaks, mitigation to offset project impacts must be calculated. Physical mitigation is designed to offset

the physical losses of an impacted oak and is determined by the DBH of the impacted oak. Table 4 summarizes the mitigation needed to offset physical impacts of the proposed project. No mitigation is required for removal of Oak 6 or Oak 11, as both oaks have a DBH of approximately 5 inches; therefore, these oaks are excluded from mitigation calculations.

Table 4. Oak Mitigation to Offset Physical Impacts

Name	Mitigation Ratio ¹	Oak Quantity
Oak 2	50:1	50
Oak 3		50
Oak 4		50
Oak 5		50
Oak 7		50
Oak 8		50
Oak 9		50
Oak 10		50
Oak 12		50
Total Oak Quantity		450
Total Area for Physical Loss (Oak Quantity x Spacing ² = Total Area)		0.90 acres (39,150 sq. ft.)

¹Nolan and Azerrad 2024. ²Spacing = 87 square feet (Nolan and Azerrad 2024).

TEMPORAL IMPACTS

Because oaks are slow-growing trees, temporal mitigation is designed to offset the temporal functional losses of an impacted oak by enhancing and/or preserving existing oak habitat. An assessment must be completed for the functions of each impacted oak prior to and after development and will determine the mitigation ratios to be used. Because the oaks will be removed entirely, a post-development assessment will not be completed and post-development functions shall be considered minimal. After mitigation ratios have been established, the dripline of each oak is used to determine how much area is needed to offset temporal impacts. This information is summarized in Table 5. Functional assessments and mitigation calculations are in Appendix A.

Table 5. Mitigation for Temporal Impacts

Name	Baseline Functions	Functions After Development	Mitigation Ratio ¹	Combined Dripline ²
Oak 2	High	Minimal	10:1	0.048 acres (2,077 sq. ft.)
Oak 3				
Oak 4				
Oak 5				
Oak 7				
Oak 8				
Oak 9				
Oak 10				
Oak 12				
Total Area Required for Temporal Mitigation ³				0.477 acres (20,770 sq. ft.)
Temporal Mitigation to be Mitigated Onsite				0.150 acres (6,522 sq. ft.)
Temporal Mitigation Remaining after Onsite Enhancement				0.327 acres (14,248 sq. ft.)

¹Nolan and Azerrad 2024. ²The driplines for Oaks 2-12 are contiguous and the assigned mitigation ratio is consistent for each oak; therefore, the combined dripline shall be used for mitigation calculations. ³Dripline x Ratio = Area Required.

OREGON WHITE OAK MITIGATION BANK SELECTION RATIONALE

The Oregon white oaks proposed for removal are located in the service area for the Terrace Oak Bank (Bank). The oak trees are approximately 5 miles southeast of the Bank which is in the southeastern portion of the service area (Figure 7). The proposed oak removal will be mitigated by purchasing credits from the Bank at ratios specified in the Terrace Oak Bank's Mitigation Banking Instrument (MBI).

Rationale for selecting this mitigation bank is as follows:

- There is not adequate space available onsite to fully compensate for oak habitat losses utilizing onsite mitigation. The use of the Bank will ensure that habitat functions common to urban areas can be fully replaced.
- The habitat functions lost from the proposed oak removal correspond directly with the habitat creation purpose, goals, and objectives at the Bank which identifies 13.93 acres of existing Oregon white oak woodland WDFW Priority Habitat that will be restored to pre-agricultural conditions through creation, enhancement, and preservation. Creation and enhancement will be accomplished through planting oak saplings and/or native understory plantings, removing of Douglas-fir, and establishing a conservation easement over the entire 13.93 acres.
- The use of Terrace Oak Bank credits will provide immediate compensation for the accrued oak impacts.

The 2008 *Compensatory Mitigation for Losses of Aquatic Resources, Final Rule* (Corps) recommends purchasing mitigation bank credits for ecological considerations (lower risk of failure and lower temporal loss of resources and services) and to avoid the maintenance and

contingency issues and outright failures that often accompany permittee-responsible mitigation sites. As such, use of the Terrace Oak Bank substantially lowers the risk of failure and temporal loss of resource functions and services over newly established, permittee-responsible mitigation sites and offsite mitigation is anticipated to be more meaningful and beneficial to the watershed's habitat functions.

FUNCTIONS PROVIDED AT OAK BANK

The general goal of the Bank is to restore the approximately 13.93 acres to a state similar to its pre-agricultural condition through creation, enhancement, and preservation of an existing Oregon white oak woodland. All functions related to oak habitat are expected to increase as a result of design implementation. The primary ecological goals of the Bank are as follows:

- Removal of all existing impervious surfaces, including buildings, large equipment, gravel and paved areas, and debris, followed by replanting oak saplings and native understory species.
- Removal of invasive species in creation, enhancement, and preservation areas, primarily English ivy (*Hedera helix*) and Himalayan blackberry (*Rubus armeniacus*).
- Removal of Douglas-fir (*Pseudotsuga menziesii*) overstory as recommended by WDFW to reduce competition and further degradation of the Oregon white oak woodland from shading.
- Replanting of both creation and enhancement areas with oak saplings and native understory species to augment and expand existing Oregon white oak habitat.
- Preserve the Bank through a conservation easement.

WILDLIFE HABITAT

The proposed development site plan will provide diverse habitat for a variety of large and small mammals, songbirds, waterfowl, amphibians, and insects by improving the condition of the existing Oregon White Oak habitat through creation and enhancement that includes replanting of oaks and native understory, removing invasive species, non-native debris, and impervious surfaces, and eliminating Douglas-fir encroachment.

ANTICIPATED FUNCTIONAL LIFT

The creation, enhancement, and Douglas-fir stand release activities proposed in the Bank will provide a variety of benefits lifting overall habitat functions. Invasive species eradication and installing oak trees and native understory in open areas will increase the site's potential to provide habitat by providing improved and increased diversity of plant species, structure, and interspersions of habitat. Removing Douglas-fir competition will allow the existing oaks to increase branching and smaller oak trees to become better established. The changes will increase acorn production, provide additional food for wildlife, and support a greater diversity of wildlife species as will removing impervious surfaces and debris. All functions impacted by removing an oak tree at the project site will be fully mitigated at the Bank.

PROPOSED MITIGATION CREDITS

The mitigation credits required for oak impacts will be determined using calculations described in the Guidance (Nolan and Azerrad 2024). Because the Guidance recommends physical impacts be mitigated by planting new oaks, and temporal impacts be mitigated by enhancing or preserving existing oak habitat, physical impacts shall be treated as creation and temporal impacts shall be treated as enhancement and preservation. As such, physical impacts shall be assigned a 2:1 creation ratio and temporal impacts shall be assigned a 1:1 enhancement and preservation ratio. Because mitigating at the bank increases the likelihood of mitigation success and impacts can be mitigated immediately, the total credit amount shall be multiplied by a “risk reduction factor” of 50 percent (0.5). Table 9 summarizes the impact type, mitigation ratio, and total credits proposed for compensation.

Table 6. Proposed Credit Purchase Summary

Impact Type ¹	Impact Area	Credit Type	Ratio	Multiplier	Credits
Physical	0.899 acres (39,150 sq. ft.)	Creation	2:1	0.5	0.899
Temporal	0.327 acres ² (14,248 sq. ft.)	Enhancement/ Preservation	1:1		0.164
Total					1.063

¹Nolan and Azerrad 2024. ²Remaining mitigation required after onsite enhancement.

CREDIT PURCHASE OR TRANSFER TIMING

Following permit issuance, HSR Capital, LLC, as the applicant, will enter into a Buy/Sell Agreement with Terrace Oak Bank, for purchase of mitigation credits (in the quantity specified in Table 9) that would appropriately mitigate for the proposed project impacts. The actual purchase of credits will occur upon permit issuance. Prior to impacting the project oak, the applicant will submit proof of transfer of mitigation credits to project managers for the City of Camas. Proof of the mitigation transfer will be provided in the form of a notification letter to the approving agencies. Upon service of this notification, the mitigation requirement to purchase 1.063 mitigation credits will be fully satisfied.

CONFIRMATION OF MITIGATION CREDIT AVAILABILITY

Proof of the current number of available mitigation credits at the Terrace Oak Bank site will be confirmed by the approving agency, City of Camas and through the advising members of the Oak Bank Review Team.

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ONSITE ENHANCEMENT PLAN

MITIGATION GOALS AND DISCUSSION

The goal of this onsite mitigation plan is to fully compensate for wetland buffer and herbaceous bald impacts, partially compensate for oak temporal impacts associated with the proposed development, and to satisfy the aforementioned buffer reduction requirements.

WETLAND BUFFERS

To compensate for wetland buffer impacts, approximately 0.184 acres (8,001 sq. ft.) of the buffer for Wetland A will be enhanced by removing invasive species and installing native species, for an overall buffer enhancement ratio of 1:1. Although the majority of buffer impacts are associated with Wetland B, the buffer planting area will be located entirely within the buffer for Wetland A. The majority of Wetland B's buffer is densely forested with a diverse sub-canopy, providing ample protection for the wetland from the surrounding development, while the portions of Wetland A's buffer proposed for planting consist of regularly mowed grasses and provide very little protection for the wetland. As such, mitigating impacts within Wetland A's buffer will provide a higher ecological lift than mitigating within Wetland B's buffer.

Additionally, a vegetated corridor will be established within each wetland buffer, and the entirety of both buffers will be enhanced through invasive species removal to satisfy buffer reduction criteria, further contributing to the functional gain onsite. Enhancing the buffers will improve wetland protection from surrounding human activity, helping to preserve important habitat and

water quality functions. This enhancement will offset for any loss to functions or values and ensure no net loss of ecological function. Furthermore, the enhancement areas will be protected in perpetuity by installing protective fencing and signage, and by establishing a conservation covenant or similar legal mechanism. The legal mechanism shall protect the Existing Oak Habitat and Herbaceous Bald Enhancement Areas and the entirety of the vegetated corridors, which include all other critical areas required for protection. Temporary impacts to Wetland A's buffer will be restored to pre-project conditions by applying a native seed mix to disturbed areas and will not require further mitigation or monitoring.

OAK AND HERBACEOUS BALD HABITAT

Approximately 0.15 acres (6,522 sq. ft.) of retained oak and HB habitat areas will be utilized to compensate for HB impacts and a portion of oak temporal impacts. This approach is ecologically appropriate due to the correlation between oak habitat and HB habitat, and because all oaks present onsite were near or within HB boundaries. According to WDFW's HB priority area description, dominant flora found on HBs includes herbaceous vegetation, dwarf shrubs, mosses, and lichens. Rock outcrops, boulders, and scattered trees are often present, especially Douglas fir, Pacific madrone (*Arbutus menziesii*), and Oregon white oak (WDFW 2025b). These conditions were present within the oak and HB areas, which further supports utilizing retained habitat as mitigation for oak temporal impacts and HB impacts. Oak physical impacts and the remaining temporal impacts will be offset by purchasing 1.063 credits from Terrace, as described in the *Proposed Mitigation Credits* section of this report.

There is currently no guidance that details management recommendations for herbaceous bald habitat. To ensure no net loss is achieved and impacts are adequately compensated for, ELS recommends HB impacts be mitigated at a 1:1 ratio. Enhancement will consist of removing invasive species and seeding native herbaceous species commonly associated with oak and HB habitat (Table 7).

OBJECTIVES AND PERFORMANCE STANDARDS

Monitoring and maintenance of the enhancement areas will occur for a 5-year period with annual monitoring and reporting occurring in Years 1, 2, 3, and 5. Monitoring and maintenance will ensure the mitigation area is meeting the mitigation plan's goals, objectives, and performance standards. To meet this goal, the following objectives and performance standards are proposed:

Objective 1: Control invasive plant species including, but not limited to, English ivy (Hedera helix), Himalayan blackberry (Rubus armeniacus), reed canarygrass, and Canada thistle (Cirsium arvense) throughout the Wetland Buffer Enhancement Area, Existing Oak Habitat and Herbaceous Bald Enhancement Areas, and Wetland Buffer Planting Area.

Performance Standard 1a: Remove existing invasive species in the enhancement areas. Document the removal in the as-built report.

Performance Standard 1b: In all years, invasive plant species (not including reed canarygrass) will not exceed 20 percent aerial cover within the enhancement areas.

Objective 2: Enhance the buffers for Wetland A and Wetland B by installing native vegetation within the Wetland Buffer Planting Area.

Performance Standard 2a: Install native species according to the specifications in Table 7. Document installation in the as-built report.

Performance Standard 2b: In Year 1, planted species will achieve 90 percent survival. If dead plants are replaced, this performance standard will be met. Volunteers will be included in species counts. Document in annual monitoring report.

Performance Standard 2c: In Year 2, planted species will achieve 85 percent survival. If dead plants are replaced, this performance standard will be met. Volunteers will be included in species counts. Document in annual monitoring report.

Performance Standard 2d: In Year 3, planted species will achieve a minimum of 25 percent aerial cover OR 75 percent survival. If dead plants are replaced, this performance standard will be met. Volunteers will be included in species counts. Document in annual monitoring report.

Performance Standard 2e: In Year 5, planted species will achieve 35 percent aerial cover. If dead plants are replaced, this performance standard will be met. Volunteers will be included in cover estimates. Document in annual monitoring report.

Objective 3: Enhance the retained oak and herbaceous bald habitat by seeding native herbaceous species in the Existing Oak Habitat Enhancement and Herbaceous Bald Enhancement Areas.

Performance Standard 3a: Spread native seed according to specifications in Table 8. Document in the as-built report.

Performance Standard 3b: In Year 1, native herbaceous species will achieve 15 percent aerial cover. If the areas are reseeded to meet cover requirements, this performance standard will be met. Document in annual monitoring report.

Performance Standard 3c: In Year 2, native herbaceous species will achieve 20 percent aerial cover. If the areas are reseeded to meet cover requirements, this performance standard will be met. Document in annual monitoring report.

Performance Standard 3d: In Year 3, native herbaceous species will achieve 25 percent aerial cover. If the areas are reseeded to meet cover requirements, this performance standard will be met. Document in annual monitoring report.

Performance Standard 3e: In Year 5, native herbaceous species will achieve 35 percent aerial cover. If the areas are reseeded to meet cover requirements, this performance standard will be met. Document in annual monitoring report.

Objective 4: Provide long-term protection for the enhancement areas.

Performance Standard 4a: Record a conservation covenant or similar legal mechanism protecting the Vegetated Corridors in perpetuity. This performance standard will be met when the protection mechanism is recorded by the City, and a copy will be provided in the as-built report.

Performance Standard 4b: Permanent fencing and logs salvaged from trees removed onsite will be installed along the boundary of the enhancement area. This performance standard will be met when the logs and fencing are reported to be in place in the final monitoring report.

Performance Standard 4c: Restrictive signage meeting CMC requirements will be posted every 100 feet along the fencing and will remain in legible condition. Signs will be replaced if they become missing or illegible. This performance standard will be met when signs are reported to be in place in the final monitoring report.

PLANTING SPECIFICATIONS

The enhancement areas will be cleared of invasive species, planted with native trees and shrubs, and seeded with herbaceous species, providing greater habitat diversity, refuge, and forage opportunities than currently exist onsite. Planting native trees and shrubs in the wetland buffers will improve their ability to trap sediments and pollutants, reduce stormwater surface flows, and protect the wetlands from the surrounding development. The proposed species were selected due to their hardy and fast-growing nature, ensuring quick establishment and a timely net gain in functions (Table 7). Actual planting locations will be determined in the field, with consideration to the listed spacing and density to produce the most natural appearance possible. The enhancement will also create more habitat interspersed adjacent to Wetland A, increase its value to a greater variety of animal species, and increase screening from the proposed development, resulting in an overall net gain in ecological functions. Impacts and proposed mitigation measures are summarized in Table 6.

Table 7. Proposed Impacts and Onsite Mitigation

Critical Area	Impact Type	Mitigation Ratio	Impact Area	Mitigation Total	Mitigation Activities
Wetland B	Buffer	1:1	0.184 acres (8,001 sq. ft.)	0.184 acres (8,001 sq. ft.)	- Remove invasive species - Install native species - Protect with fencing, signage, and a conservation covenant - Maintain and monitor for 5 years
Herbaceous Bald 1	Removal	1:1	0.088 acres (3,852 sq. ft.)	0.150 acres (6,522 sq. ft.) ^{2,3}	
Oak Cluster 1		-- ¹	0.048 acres (2,077 sq. ft.)		

¹See the Oak Mitigation Requirements section of this report for required oak mitigation discussion. ²Remaining oak impacts will be mitigated at Terrace Oak Bank. ³Oak and HB impacts will be mitigated together due to their similar habitat conditions.

Table 8. Wetland Buffer Planting Specifications

Species Name and Facultative Status ¹	Spacing ²	Stock ³	Quantity
Trees			
Red alder (<i>Alnus rubra</i> , FAC)	10 feet on-center	One-gallon Container	10
Black cottonwood (<i>Populus trichocarpa</i> , FAC)			10
Total Trees			20
Shrubs			
Red flowering currant (<i>Ribes sanguineum</i> , FACU)	6 feet on-center	One-gallon Container	45
Nootka rose (<i>Rosa nutkana</i> , FAC)			45
Common snowberry (<i>Symphoricarpos albus</i> , FACU)			45
Scouler’s willow (<i>Salix scouleriana</i> , FAC)			45
Total Shrubs			180
Total Woody Species			200

¹Corps 2012. ²Actual planting locations will be determined in the field. ³Actual plant stock will be determined based on nursery availability.

Table 9. Seed Mix Specifications

Sunmark Seeds International, Inc – Native Pollinator Mix			
Species	Composition	Rate	Quantity
Baby Blue Eyes (<i>Nemophila menziesii</i>)	20.00%	1 pound per 1,000 sq. ft.	7 pounds (6,522 sq. ft.)
Meadow Barley (<i>Hordeum brachyantherum</i>)	18.50%		
Blanketflower (<i>Gaillardia aristata</i>)	18.00%		
Coastal Tidytops (<i>Layia platyglossa</i>)	13.00%		
Riverbank Lupine (<i>Lupinus rivularis</i>)	10.0%		
Small Camas (<i>Camassia quamash</i>)	7.00%		
Tufted Hairgrass (<i>Deschampsia cespitosa</i>)	4.50%		
Black-Eyed Susan (<i>Rudbeckia hirta</i>)	3.50%		
Sweet Alyssum (<i>Lobularia maritima</i>)	2.00%		
Common Yarrow (<i>Achillea millefolium</i>)	1.75%		
Aspen Fleabane (<i>Erigeron speciosus</i>)	1.25%		
Oceanspray (<i>Holodiscus discolor</i>)	0.50%		
Total	100%		

*An alternate seed mix may be used in the Existing Oak and Herbaceous Bald Enhancement Areas, provided it is appropriate for the local habitat type and comprised entirely of native species.

PLANTING PLAN

Site Specifications

- Stake or flag the enhancement area.
- Investigate for and remove invasive and competing species from the mitigation area.
- Install mitigation plantings according to plant specifications.

Planting Implementation

- Install plants and spread seed in late fall (October-November) or early spring (February-March) at the intervals listed in Table 7 and Table 8.
- Space plants somewhat irregularly to encourage heterogeneity in the density and appearance of the mitigation area.
- Place plants so that their roots can extend down entirely and do not bend upward or circle inside the hole (no “J” or “U” roots).
- Position the root crowns so that they are at or slightly below the level of surrounding soil.
- Compact the soil around the planted species to eliminate air spaces.
- Irrigate all installed plants as site and weather conditions warrant.

Potted Stock

- Potted species will be purchased from a native plant nursery.
- Potted plants will be a minimum size of one-gallon.
- Potted stock will be kept cool and moist prior to being planted.
- Potted stock will have well-developed roots and sturdy stems, with an appropriate root-to-shoot ratio.
- Unplanted potted stock will be properly stored at the end of each day.

- The planting technician will be responsible for inspecting potted plant stock prior to and during planting, culling unacceptable plant materials.

MONITORING, MAINTENANCE, AND CONTINGENCY MEASURES

Monitoring and maintenance of the enhancement areas will occur for a 5-year period and annual monitoring and reporting will be conducted in Years 1, 2, 3, and 5. Plant counts will be conducted in Years 1, 2, and 3, to determine percent survival of installed species. Native volunteers may be included. Percent of aerial cover will be assessed in Year 5 using visual estimation. At least six monitoring plots will be established in the Wetland Buffer Enhancement Areas, one plot in the Wetland Buffer Planting Area, and one plot in each Existing Oak Habitat and Herbaceous Bald Enhancement Area during as-built activities to assess performance standards. Additionally, a photostation will be established at each monitoring plot to photo-document vegetation establishment. Photostation locations and the direction in which the picture is taken will also be recorded in the as-built report.

The goal of monitoring will be to determine if the previously stated performance standards are being met. Monitoring reports will be submitted no later than December 31st of each monitoring year to the City of Camas. Year 1 monitoring will begin a minimum of one year after plant installation.

At minimum, the following items will be included in the annual report:

- Location map and as-built drawing, including any changes.
- Historic description of the project, including dates of plant installation, current year of monitoring, and remedial actions taken (if any).
- Description of monitoring methods.
- Documentation of vegetative performance standards and overall development of plant communities.
- Assessment of invasive plant species and recommendations for management.
- Photographs from established photo stations.
- Observations of wildlife, including amphibians, invertebrates, reptiles, birds, and mammals. If photographs are taken, they will be included.
- Summary of the maintenance and contingency measures completed for the past year and proposed for the next year.

Monitoring

Monitoring will occur annually during the growing season, preferably during the same two-week period to better compare data. The following information will be gathered in the mitigation area:

- Percent survival of native species in Years 1, 2, and 3.
- Percent cover of native species in Year 5.
- Percent cover of non-native, invasive species in all monitoring years.

- General health of plants in the mitigation area, noting specific problems and potential causes.
- Photo documentation of vegetative changes over time from photo station established after plant installation.

Maintenance

Maintenance will include the following:

- Irrigating planting areas every other week or as needed in the dry season for the first three years. Taper watering in Years 2 and 3, watering approximately every 3 to 4 weeks in the dry season, or as needed.
- Remove competing herbaceous species at least three times yearly within a 3-foot radius of planted species and re-apply mulch, as needed.
- Weed-eat, spray, or mow invasive species as needed during the growing season.
- Replace dead or failed plants as described for the original installation to meet the minimum performance standards.

Contingency Measures

If the performance criteria are not met, steps will be taken to correct the situation in a timely manner. The following steps will be implemented when an area is identified as failing or potentially failing:

- Identify the cause(s) of the failure or potential failure.
- Identify the extent of the failure or potential failure.
- Implement corrective actions such as irrigating, fertilizing, and replanting.
- Document the activities and include this data in the monitoring reports.
- If a routine corrective action will not correct the problem, immediately consult with the appropriate agencies.
- Evaluate recommendations from resource agency staff and implement recommendations in a timely manner.

Funding for corrective actions will be the responsibility of the applicant.

LIMITATIONS

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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FIGURES

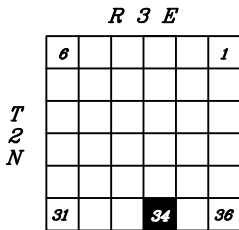
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WASHINGTON



Latitude: 45.6193°
Longitude: -122.4156°

LOCATION MAP



NOTE:
Quadrangle topographic map from USGS.

PROJECT VICINITY MAP

0 52
SCALE IN MILES

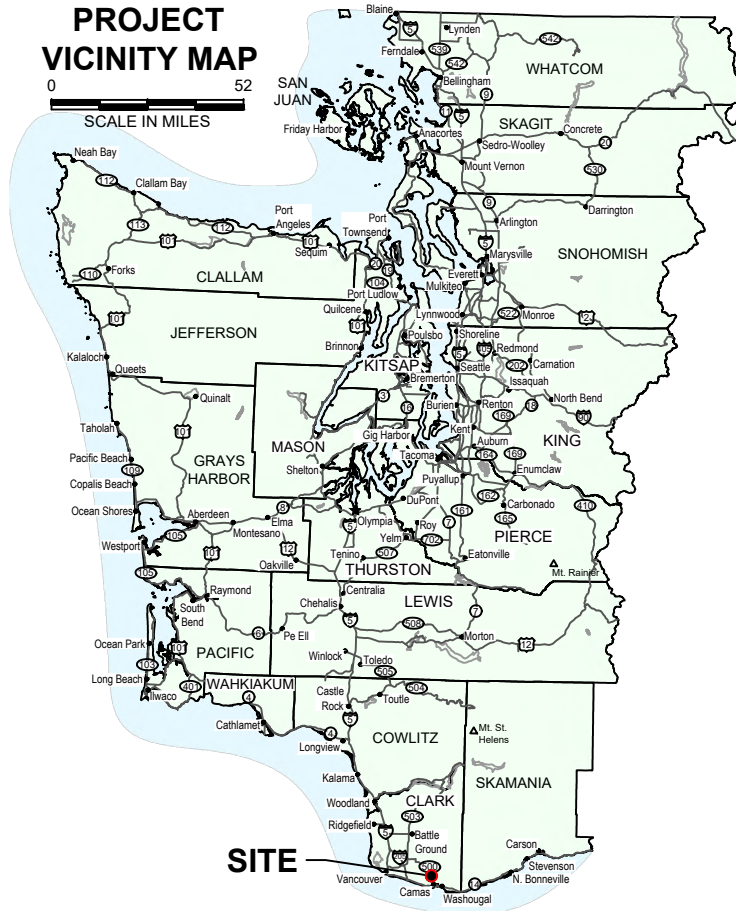
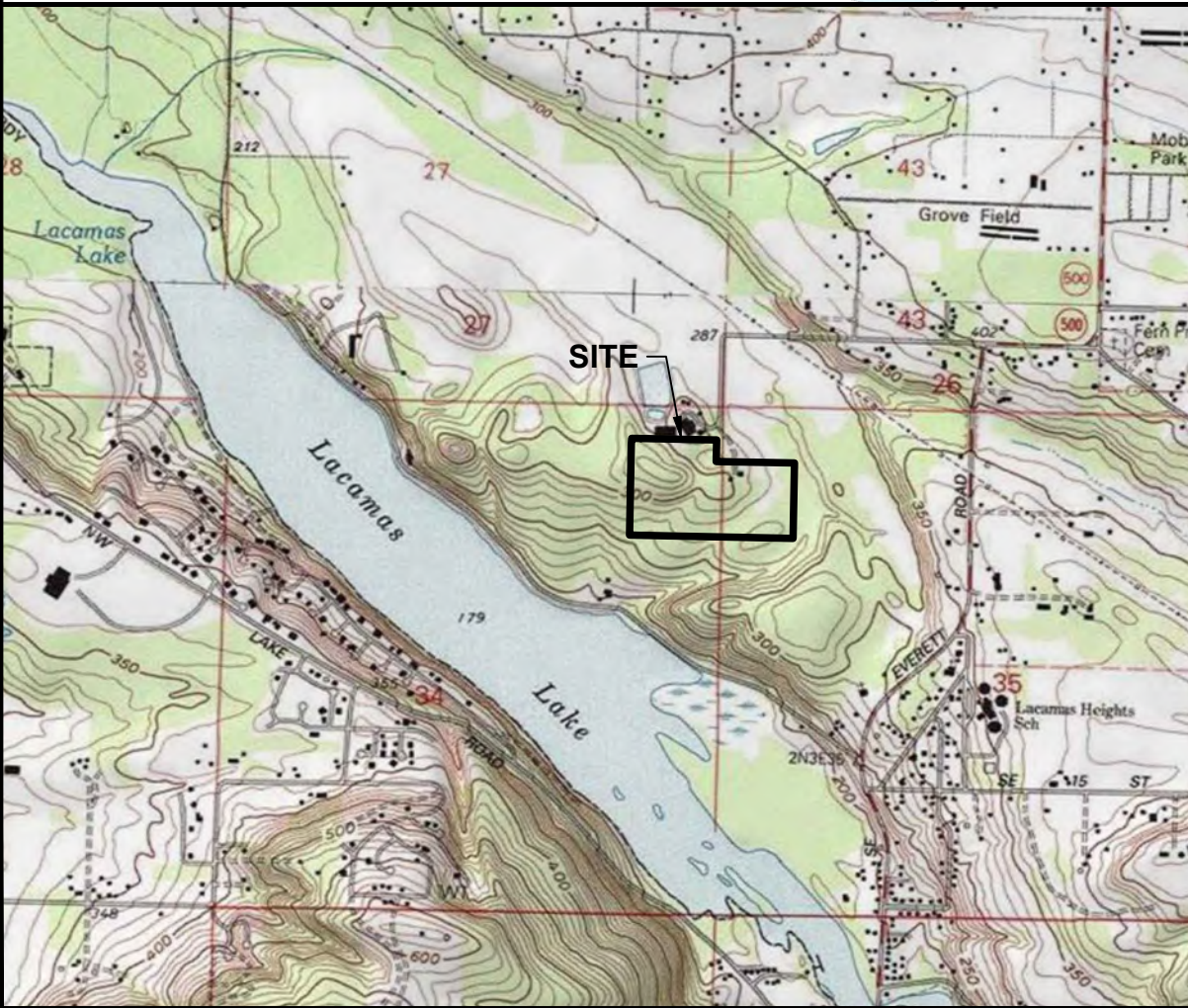
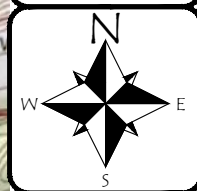
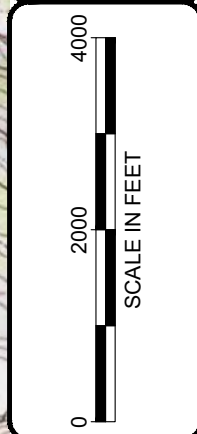


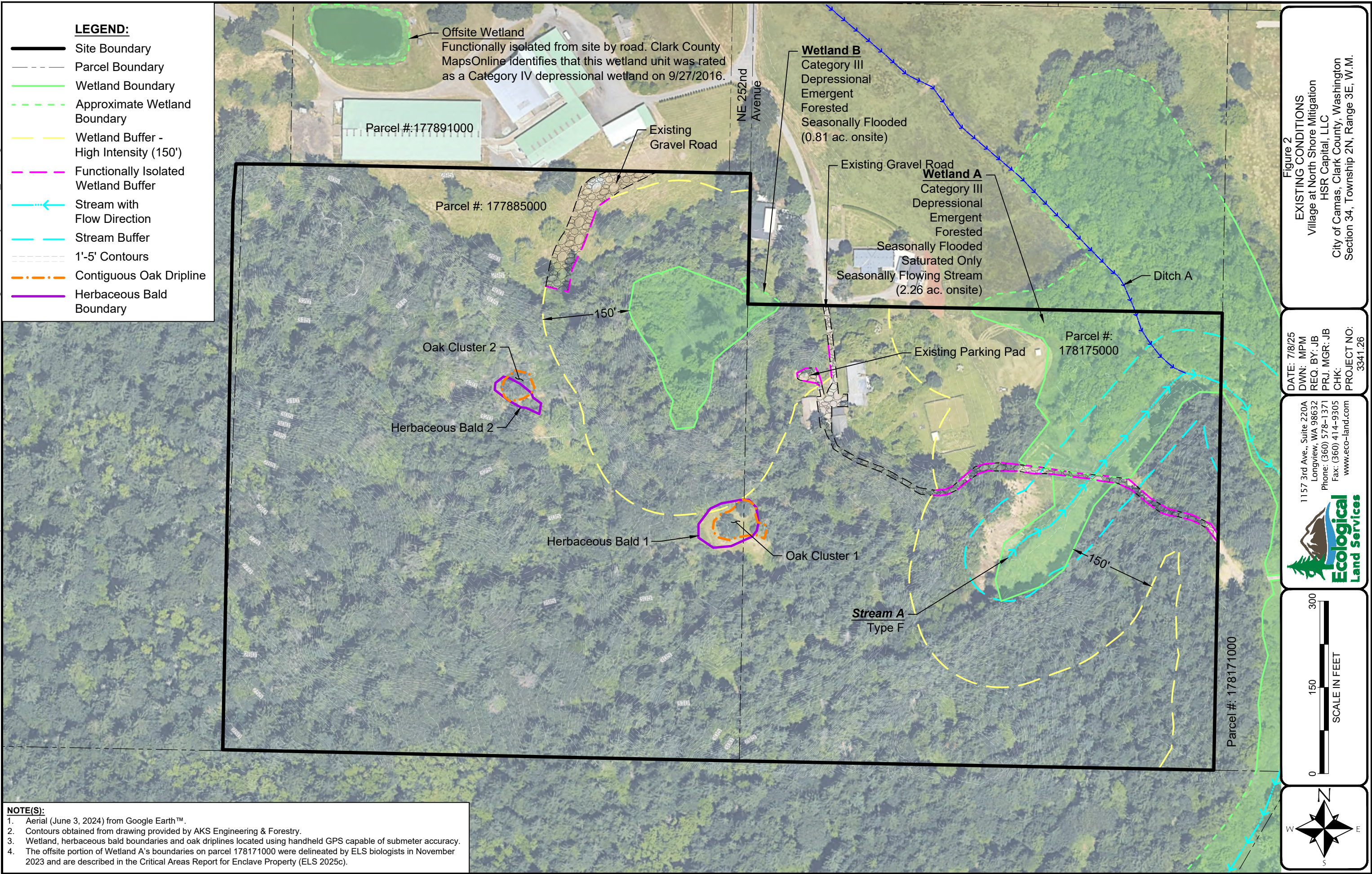
Figure 1
VICINITY MAP
Village at North Shore Mitigation
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

DATE: 7/8/25
DWN: MPM
REQ. BY: JB
PRJ. MGR: JB
CHK:
PROJECT NO: 3341.26

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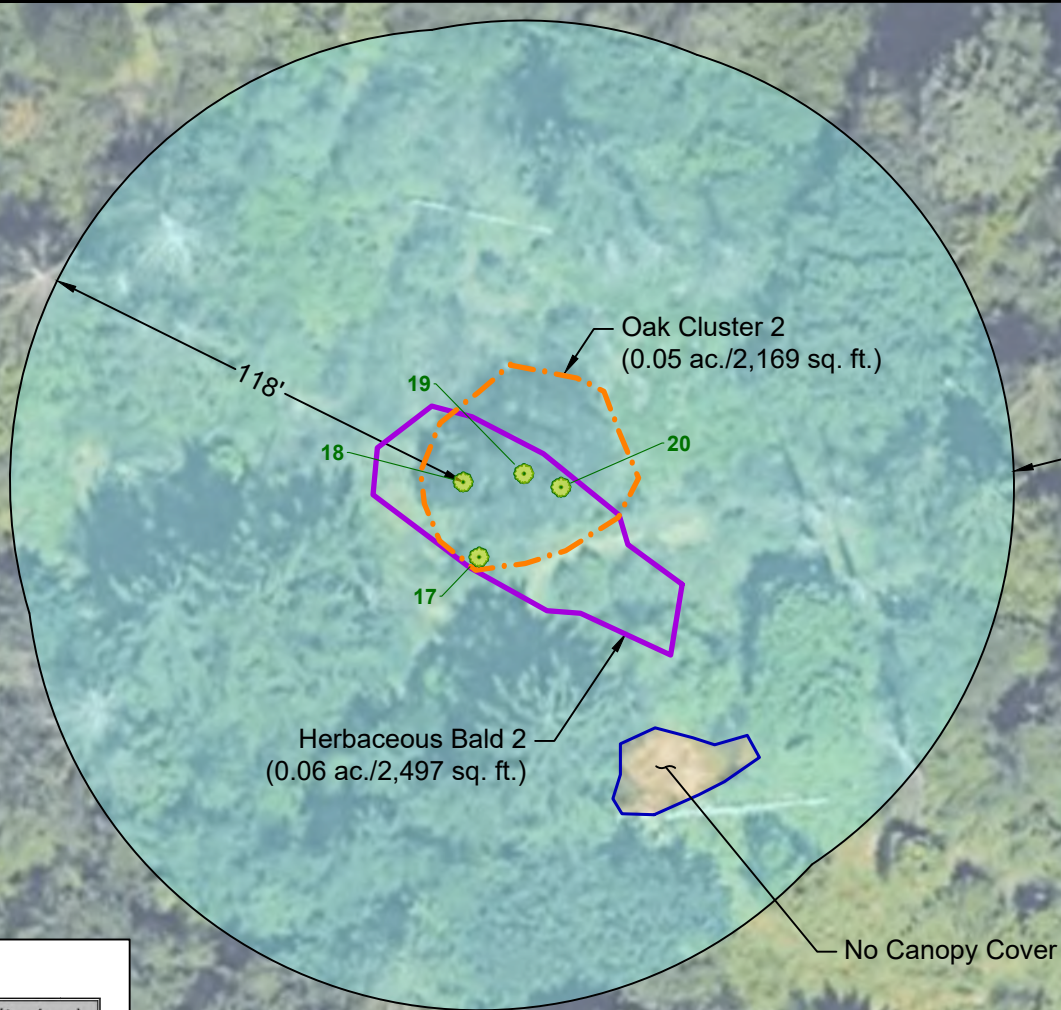


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Oak Inventory

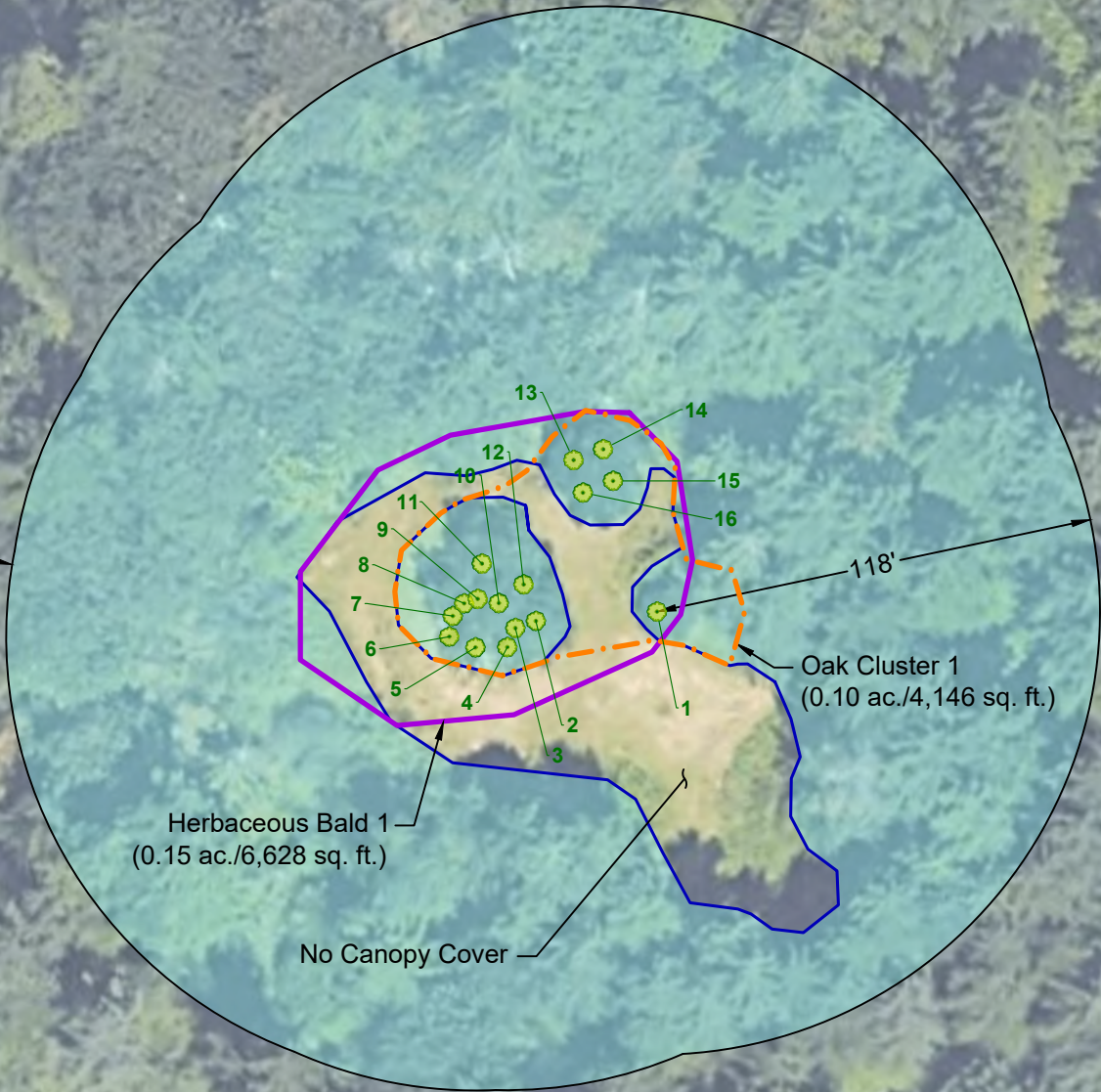
Identifier	DBH (inches)
Oak 1	8
Oak 2	8
Oak 3	8
Oak 4	6
Oak 5	6
Oak 6	5
Oak 7	9
Oak 8	10
Oak 9	8
Oak 10	10
Oak 11	5
Oak 12	10
Oak 13	9
Oak 14	8
Oak 15	8
Oak 16	9
Oak 17	6
Oak 18	10
Oak 19	15
*Oak 20	15, 25

*Split trunk



Oak Cluster 2
Oak Dripline Area: 0.05 ac.
Forested Canopy: 1.20 ac.
Oak Dripline Percentage of Forested Canopy: 4.16%

Oak Cluster 1
Oak Dripline Area: 0.10 ac.
Forested Canopy: 1.34 ac.
Oak Dripline Percentage of Forested Canopy: 7.46%

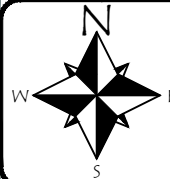


LEGEND:

- Oak
- Contiguous Oak Dripline
- 118' Radius Oak Offset
- Forested Area within 118' Radii
- Herbaceous Bald Boundary

NOTE(S):

- Aerial (June 3, 2024) from Google Earth™.
- Herbaceous bald boundaries, oak trees and driplines located using handheld GPS capable of submeter accuracy.

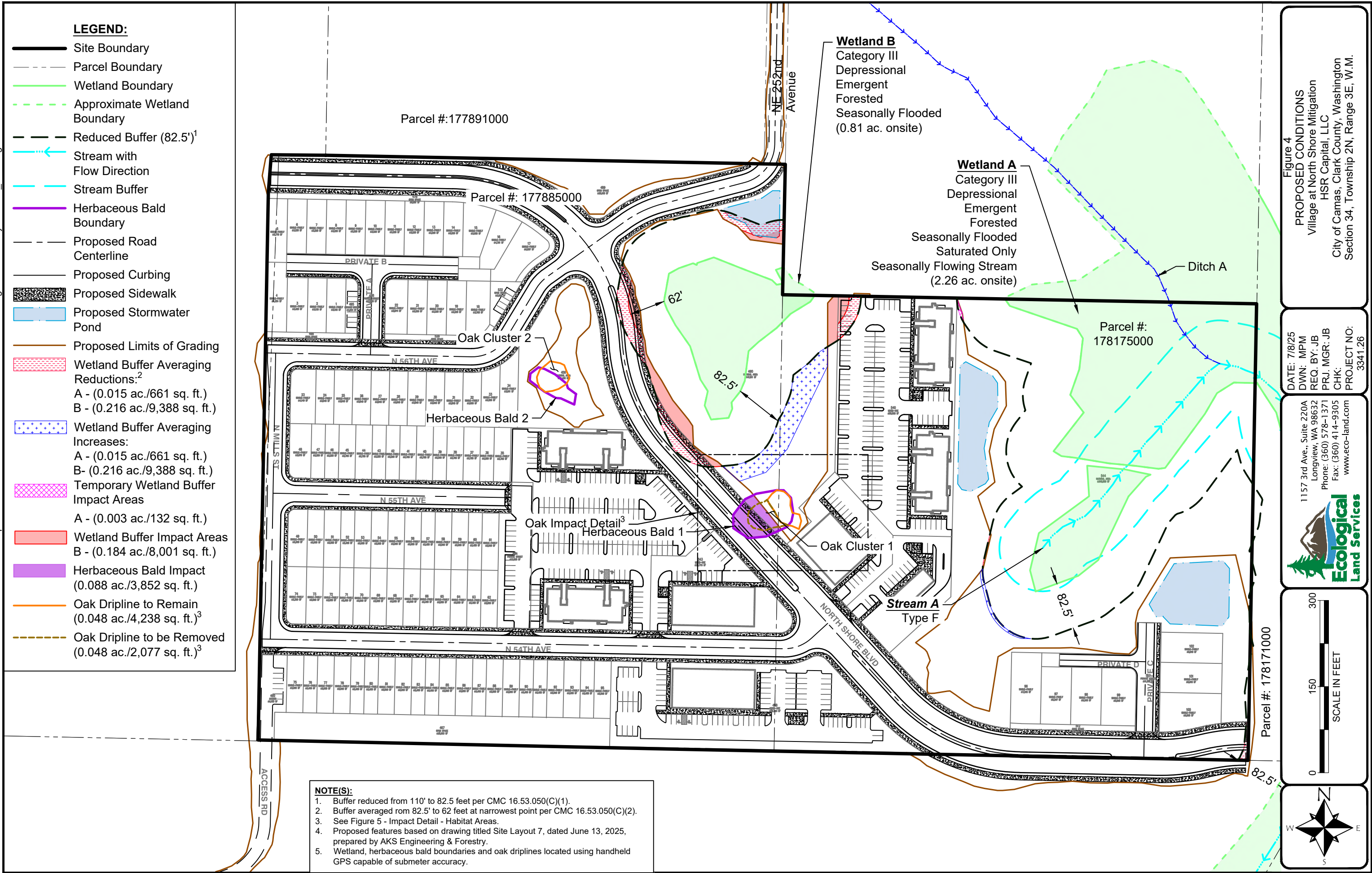


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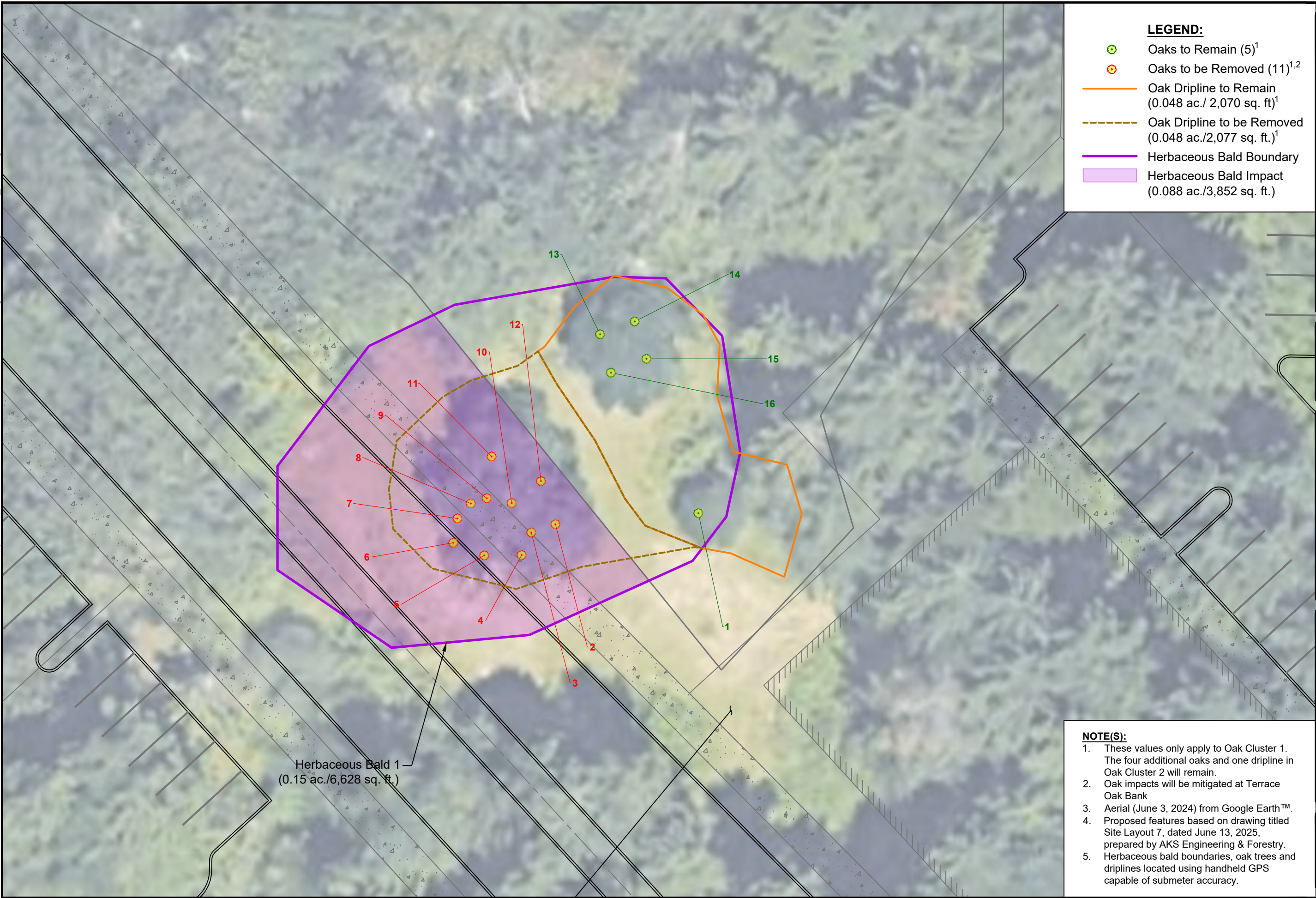
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Figure 3
HABITAT AREAS DETAIL
Village at North Shore Mitigation
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

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LEGEND:

- Oaks to Remain (5)¹
- Oaks to be Removed (11)^{1,2}
- Oak Dripline to Remain (0.048 ac./ 2,070 sq. ft)¹
- Oak Dripline to be Removed (0.048 ac./2,077 sq. ft.)¹
- Herbaceous Bald Boundary
- Herbaceous Bald Impact (0.088 ac./3,852 sq. ft.)

NOTE(S):

- These values only apply to Oak Cluster 1. The four additional oaks and one dripline in Oak Cluster 2 will remain.
- Oak impacts will be mitigated at Terrace Oak Bank
- Aerial (June 3, 2024) from Google Earth™.
- Proposed features based on drawing titled Site Layout 7, dated June 13, 2025, prepared by AKS Engineering & Forestry.
- Herbaceous bald boundaries, oak trees and driplines located using handheld GPS capable of submeter accuracy.

Figure 5

IMPACT DETAIL - HABITAT AREAS

Village at North Shore Mitigation

HSR Capital, LLC

City of Camas, Clark County, Washington

Section 34, Township 2N, Range 3E, W.M.

DATE: 7/8/25

DWN: MPM

REQ. BY: JB

PRJ. MGR: JB

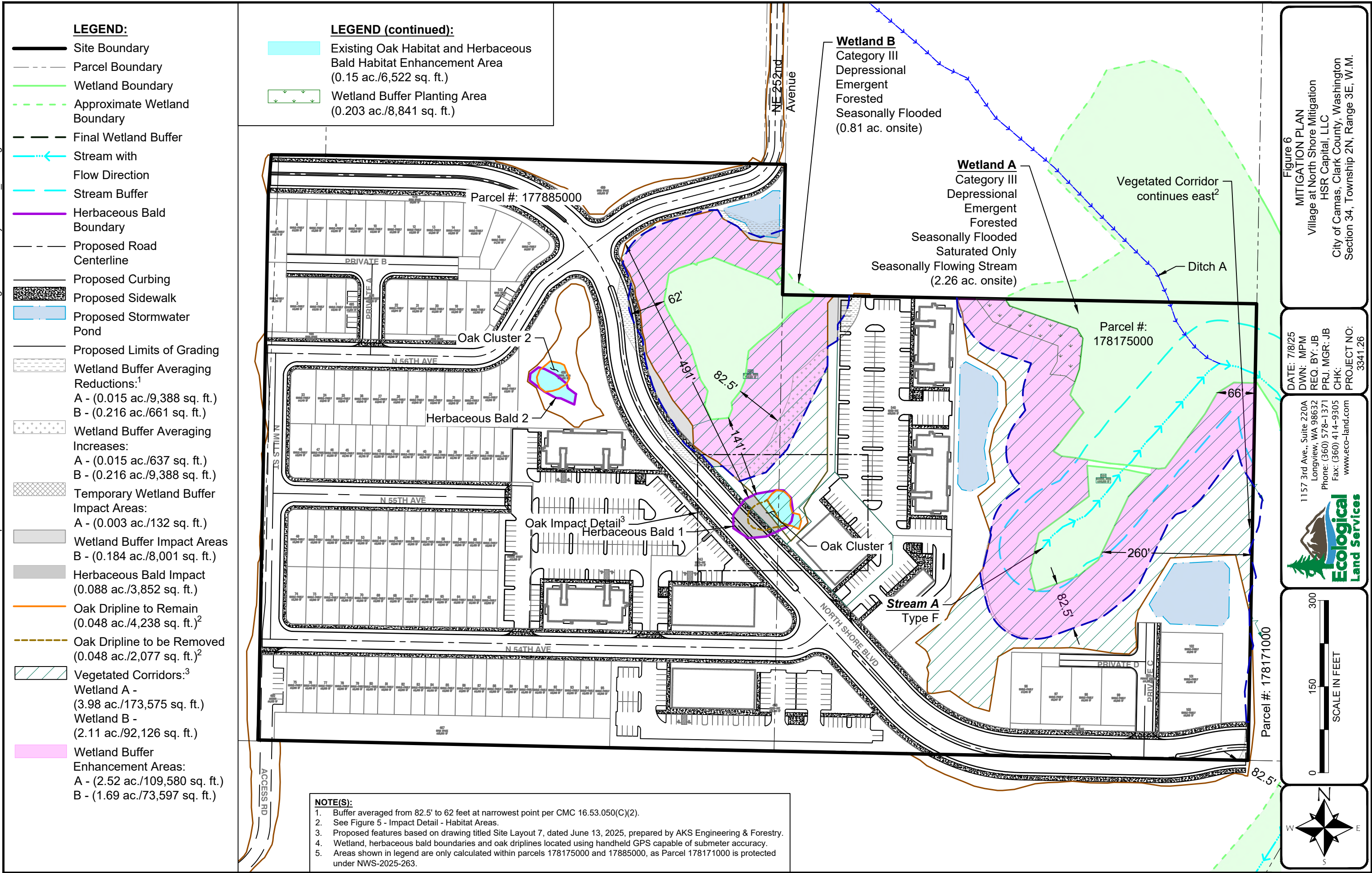
CHK:

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SCALE IN FEET

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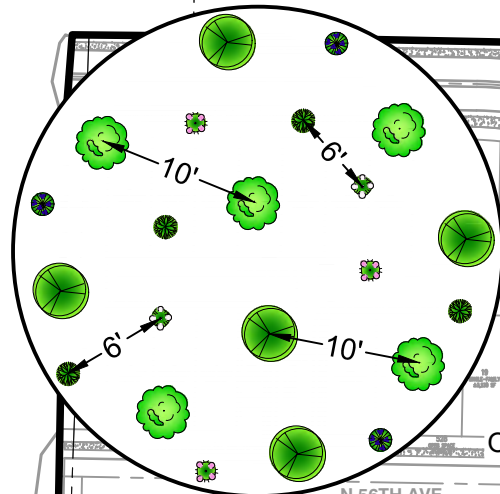
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LEGEND:

- Site Boundary
- Parcel Boundary
- Wetland Boundary
- Approximate Wetland Boundary
- Final Buffer
- Stream with Flow Direction
- Stream Buffer
- Herbaceous Bald Boundary
- Proposed Road Centerline
- Proposed Curbing
- Proposed Sidewalk
- Proposed Stormwater Pond
- Proposed Limits of Grading
- Wetland Buffer Averaging Reductions:²
 - A - (0.015 ac./9,388 sq. ft.)
 - B - (0.216 ac./661 sq. ft.)
- Wetland Buffer Averaging Increases:
 - A - (0.015 ac./637 sq. ft.)
 - B - (0.216 ac./9,388 sq. ft.)
- Temporary Wetland Buffer Impact Areas:
 - A - (0.003 ac./132 sq. ft.)
 - B - (0.184 ac./8,001 sq. ft.)
- Herbaceous Bald Impact (0.088 ac./3,852 sq. ft.)
- Oak Dripline to Remain (0.048 ac./4,238 sq. ft.)³
- Oak Dripline to be Removed (0.048 ac./2,077 sq. ft.)³
- Vegetated Corridors:⁴
 - Wetland A - (3.98 ac./173,575 sq. ft.)
 - Wetland B - (2.11 ac./92,126 sq. ft.)
- Wetland Buffer Enhancement Areas:
 - A - (2.52 ac./109,580 sq. ft.)
 - B - (1.69 ac./73,597 sq. ft.)

LEGEND (continued):

- Existing Oak Habitat and Herbaceous Bald Habitat Enhancement Area (0.15 ac./6,522 sq. ft.)
- Wetland Buffer Planting Area (0.203 ac./8,841 sq. ft.)



Planting Diagram (Not to Scale)

Wetland Buffer Planting Specifications

Species Name and Facultative Status ¹	Spacing ²	Stock ³	Quantity
Trees			
Red alder (<i>Alnus rubra</i> , FAC)	10 feet	One-gallon	10
Black cottonwood (<i>Populus trichocarpa</i> , FAC)	on-center	Container	10
Total Trees			20
Shrubs			
Red flowering currant (<i>Ribes sanguineum</i> , FACU)	6 feet on-center	One-gallon Container	45
Nootka rose (<i>Rosa nutkana</i> , FAC)			40
Common snowberry (<i>Symphoricarpos albus</i> , FACU)			40
Scouler’s willow (<i>Salix scouleriana</i> , FAC)			40
Total Shrubs			165
Total Woody Species			185

¹Corps 2012. ²Actual planting locations will be determined in the field. ³Actual plant stock will be determined based on nursery availability.

NOTE(S):

- Buffer reduced from 110' to 82.5 feet per CMC 16.53.050(C)(1).
- Buffer averaged from 82.5' to 62 feet at narrowest point per CMC 16.53.050(C)(2).
- See Figure 5 - Impact Detail - Habitat Areas.
- Proposed features based on drawing titled Site Layout 7, dated June 13, 2025, prepared by AKS Engineering & Forestry.
- Wetland, herbaceous bald boundaries and oak driplines located using handheld GPS capable of submeter accuracy.
- Areas shown in legend are only calculated within parcels 178175000 and 17885000, as Parcel 178171000 is protected under NWS-2025-263.

Wetland B
Category III
Depressional
Emergent
Forested
Seasonally Flooded
(0.81 ac. onsite)

Wetland A
Category III
Depressional
Emergent
Forested
Seasonally Flooded
Saturated Only
Seasonally Flowing Stream
(2.26 ac. onsite)

Vegetated Corridor
continues east²

Ditch A

Parcel #:
178175000

Stream A
Type F

Seed Mix Specifications (Existing Oak and Herbaceous Bald Habitat Enhancement Areas)

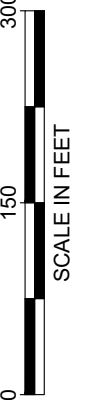
Sunmark Seeds International, Inc – Native Pollinator Mix			
Species	Composition	Rate	Quantity
Baby Blue Eyes (<i>Nemophila menziesii</i>)	20.00%	1 pound per 1,000 sq. ft.	7 pounds (6,522 sq. ft.)
Meadow Barley (<i>Hordeum brachyantherum</i>)	18.50%		
Blanketflower (<i>Gaillardia aristata</i>)	18.00%		
Coastal Tidytip (<i>Layia platyglossa</i>)	13.00%		
Riverbank Lupine (<i>Lupinus rivularis</i>)	10.0%		
Small Camas (<i>Camassia quamash</i>)	7.00%		
Tufted Hairgrass (<i>Deschampsia cespitosa</i>)	4.50%		
Black-Eyed Susan (<i>Rudbeckia hirta</i>)	3.50%		
Sweet Alyssum (<i>Lobularia maritima</i>)	2.00%		
Common Yarrow (<i>Achillea millefolium</i>)	1.75%		
Aspen Fleabane (<i>Erigeron speciosus</i>)	1.25%		
Oceanspray (<i>Holodiscus discolor</i>)	0.50%		
Total	100%		

*An alternate seed mix may be used, provided it is appropriate for the local habitat type and comprised entirely of native species.

Figure 7
PLANTING PLAN
Village at North Shore Mitigation
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

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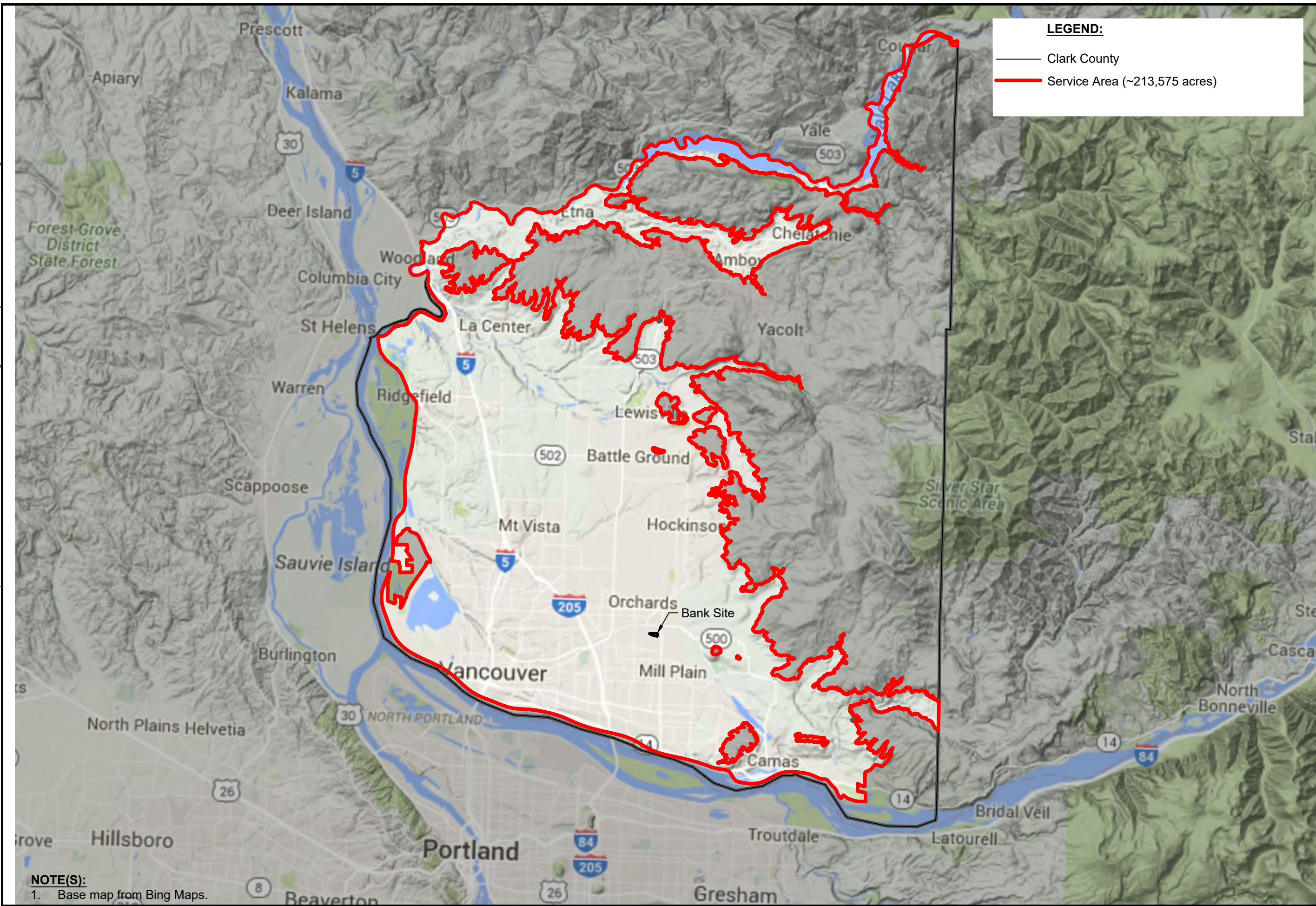
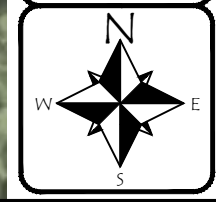
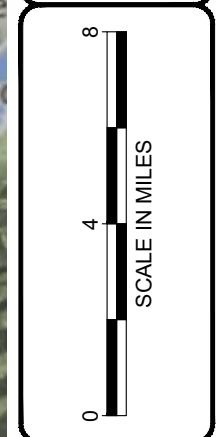


Figure 8
TERRACE MITIGATION BANK SERVICE AREA
Village at North Shore
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

DATE: 7/8/25
DWN: MPM
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Ecological Land Services



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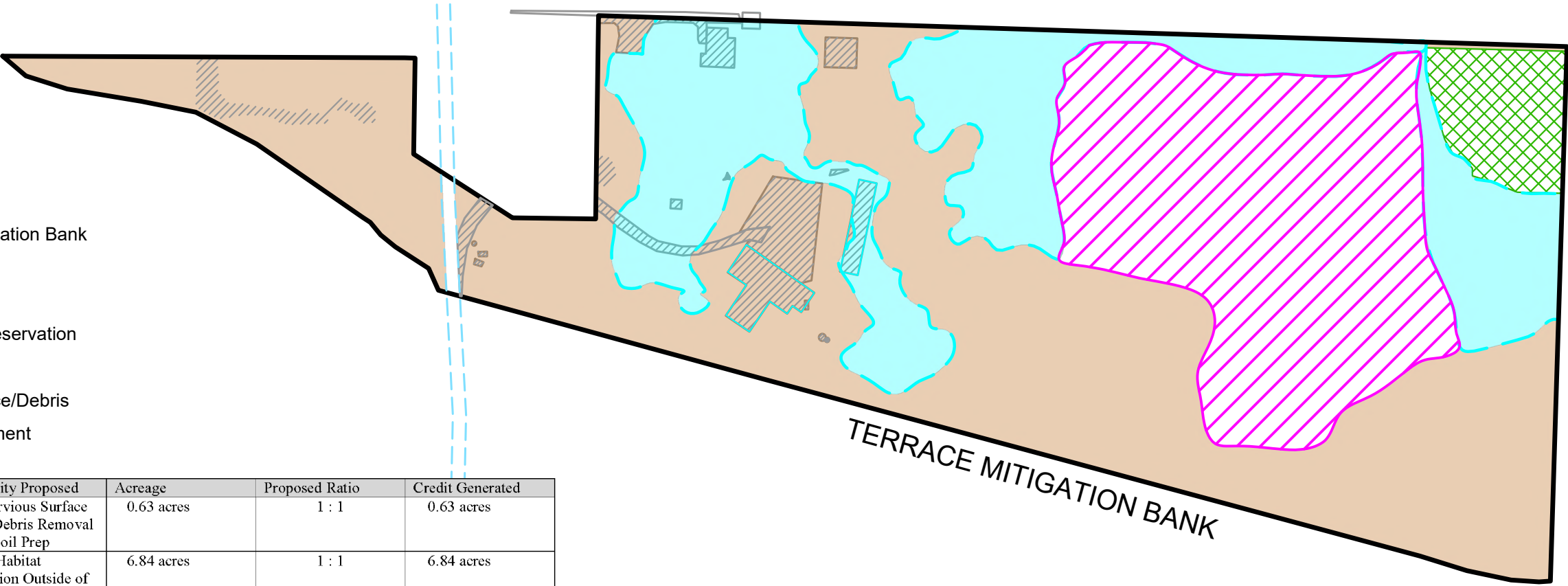
- LEGEND:**
- Terrace Oak Mitigation Bank
 - Creation
 - Enhancement
 - Upland Forest Preservation
 - Stand Release
 - Impervious Surface/Debris
 - Water Line Easement

Activity Proposed	Acreage	Proposed Ratio	Credit Generated
Impervious Surface and Debris Removal and Soil Prep	0.63 acres	1 : 1	0.63 acres
Oak Habitat Creation Outside of Existing Oak Stand	6.84 acres	1 : 1	6.84 acres
Douglas Fir Stand Release	3.34 acres	0.4 : 1	8.35 acres
Enhancement of Existing Oak Stand	3.20 acres	0.4 : 1	8.00 acres
Upland Forest Preservation	0.50 acres	0.5 : 1	1.00 acres
Totals	14.51 acres¹		24.82 acres

¹ Total acreage includes areas of activity overlap and does not include 0.05 acres of water line easement, so is not reflective of the 13.93 acres represented in the legal survey of Oak Bank area.

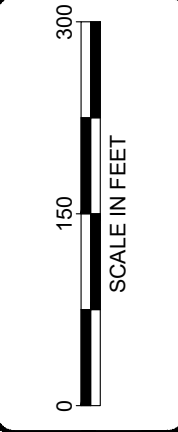
Table 2. Oak Mitigation Bank Activity Descriptions.

Activity Proposed	Type of Activity/Area
Impervious Surface and Debris Removal and Soil Prep	- Includes: - Buildings, driveways, gravel pads or any other impervious area to be removed (regardless of whether oak tree canopy already covers the area) - Removal of debris piles throughout the site - Loosening of soils following impervious/debris removal
Oak Habitat Creation Outside of Existing Oak Stand	- Includes open areas of all types not currently covered by oak canopy - Areas to be replanted with oak saplings and native understory
Douglas Fir Stand Release	- Includes area of dense fir canopy within existing oak stand - Douglas fir over-story to be removed through harvest or tree girlding/snag creation
Enhancement of Existing Oak Stand	- Includes areas of existing oak canopy - Enhancement areas will have non-natives removed and understory planted with native shrubs typically associated with oak woodlands
Upland Forest Preservation	- Includes areas of deciduous forest adjacent to oak canopy, providing upland forest habitat - Area will be preserved through administration of a conservation easement



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Figure 9
TERRACE MITIGATION BANK SITE DESIGN
Village at North Shore
HSR Capital, LLC
City of Camas, Clark County, Washington
Section 34, Township 2N, Range 3E, W.M.

APPENDIX A

WDFW FUNCTIONAL ASSESSMENTS FOR INDIVIDUAL OAKS AND MITIGATION CALCULATIONS

WDFW Functional Assessments for Individual Oaks to be Impacted

Oregon White Oak Functional Assessments - HSR Capital, Village at North Shore - April 29, 2025										
Metric	Multiplier	Oak 2	Oak 3	Oak 4	Oak 5	Oak 7	Oak 8	Oak 9	Oak 10	Oak 12
Size of Oak Trees (Choose one)										
>76 cm (30 in) DBH	6	☐	☐	☐	☐	☐	☐	☐	☐	☐
50-76 cm (20-30 in) DBH	5	☐	☐	☐	☐	☐	☐	☐	☐	☐
30-50 cm (12-20 in) DBH	3	☐	☐	☐	☐	☐	☐	☐	☐	☐
<30 cm (12 in) DBH	1	☒	☒	☒	☒	☒	☒	☒	☒	☒
Condition of Crown (Choose one)										
Well-formed/dominant	3	☐	☐	☐	☐	☐	☐	☐	☐	☐
Suppressed/stunted	2	☒	☒	☒	☒	☒	☒	☒	☒	☒
Seedling/Sapling	1	☐	☐	☐	☐	☐	☐	☐	☐	☐
Wildlife Value (Choose all that apply)										
Acorn production	2	☒	☒	☒	☒	☒	☒	☒	☒	☒
Leaves available for wildlife browsing	1	☒	☒	☒	☒	☒	☒	☒	☒	☒
Presence of cavities	2	☐	☐	☐	☐	☐	☐	☐	☐	☐
Presence of dead branches	1	☒	☒	☒	☒	☒	☒	☒	☒	☒
Presence of galls or fungi	1	☐	☐	☐	☐	☐	☐	☐	☐	☐
Presence of heart rot or carpenter ants	1	☐	☐	☐	☐	☐	☐	☐	☐	☐
Located near other OWO trees (<118 ft)	3	☒	☒	☒	☒	☒	☒	☒	☒	☒
Total		10	10	10	10	10	10	10	10	10
Function Score		High	High	High	High	High	High	High	High	High

*Oak 6 and Oak 11 were not assessed due to DBH < 6 inches.

Score	Function
0	Minimal
1	Minimal
2	Minimal
3	Minimal
4	Low
5	Low
6	Low
7	Medium
8	Medium
9	Medium
10	High
11	High
12	High
13	High
14	High
15	High
16	High
17	High
18	High
19	High
20	High
21	High
22	High
23	High

APPENDIX B

OFFSITE PROTECTED WETLAND AREA

