Ecological Land Services

CRITICAL AREAS RECONNAISSANCE REPORT

July 10, 2020

Bethel Ave Property
Port Orchard, WA

Prepared for

Kelsiana Marshall
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Prepared by

Ecological Land Services
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The information and data in this report were compiled and prepared under the supervision and direction of the undersigned.

Joanne Bartlett, PWS
Senior Biologist

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Biologist

INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by Kelsiana Marshall to conduct a critical areas reconnaissance for a lot located at 694 Bethel Avenue, Kitsap County Tax Parcel No. 4031-002-016-0003, in Port Orchard, Washington. This lot is located within a portion of Section 25, Township 24 North, Range 1 East of the Willamette Meridian. This report summarizes the findings of the site visit conducted on April 3, 3030. During the site visit, data was collected to identify whether or not critical areas as outlined in the *Port Orchard Municipal Code (POMC) Chapter 20.162* were present onsite or within the vicinity of the lot.

METHODOLOGY

The wetland determination followed the Routine Determination Method in the Western Mountains, Valleys, and Coast Region according to the U.S. Army Corps of Engineers, *Wetland Delineation Manual* (Environmental Laboratory 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (USACE 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 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 long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or ground water 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. Wetlands are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (USACE), as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the City of Port Orchard.

To determine the presence or absence of critical areas on the lot, ELS biologists collected vegetation, soils, and hydrology data at two test plots to determine if wetland conditions existed onsite (Figure 2). The data collected showed that no critical areas were present onsite.

LOT DESCRIPTION

This 0.13-acre rectangular lot is located on the west side of Bethel Avenue in a highly developed area of Port Orchard, Washington (Figure 1, Photoplate 1). The lot is undeveloped but is cleared and vegetated entirely by mowed grasses and small percentages of other emergent vegetation; all forest vegetation is growing offsite to the west and south of this lot and no trees are rooted on the lot. The topography is level onsite; offsite approximately 50 feet to the south, the topography slopes down into a depressional area containing a stream. Offsite to the west of this lot, the topography slopes steeply up from east to west (Photoplate 1). This lot is zoned Commercial Mixed Use (CMU) and is surrounded by other CMU zoned properties to the north and east across Bethel Avenue (*POMC 20.35.030)*. The lot to the north is fully developed with a store and parking lot and the properties to the east are either cleared, like this one, or developed with businesses. A narrow manmade ditch begins just offsite near the northwest lot corner and appears to continue to the north along the west side of the neighboring lot (Figure 2; Photoplate 3).

Offsite Stream

The identified stream to the south of the lot is located within the city right-of-way for Bethel Avenue and flows from south to north into a metal culvert, approximately five feet in diameter (Photoplate 2). This culvert is approximately 445 feet long and extends underneath this and the lot to the north before daylighting on the west side of Bethel Avenue (Figure 2, Photoplate 4). There is a trash rack at inlet of this culvert and that is blocked by thick debris, causing the channel of the stream to widen around the mouth of the culvert (Photoplate 2). At this location, the channel would meet the criteria for a Type F stream. Per the *POMC Chapter 20.162 Article IV*, a Type F stream requires a 150-foot buffer from the ordinary high water mark (OHWM) of the stream. Because the stream enters a culvert and flows underneath the lot but is not onsite, the stream buffer extends from where the stream enters the culvert.

VEGETATION

Vegetation onsite consists of mowed grasses (assumed FAC), creeping buttercup (*Ranunculus repens*, FAC), gallium species (*Galium sp.*, FAC), and stinging nettle (*Urtica dioica*, FAC); lower percentages of bleeding heart (*Dicentra Formosa*, FACU), horsetail (*Equisetum arvense*, FAC) and Pacific waterleaf (*Hydrophyllum tenuipes*, FAC) were also present. Because these species can grow 50 percent of the time in wetlands, test plots were conducted to determine if these areas were wetland. Wetland hydrology and soils were absent in these locations, so this area was determined to be upland.

Forest vegetation offsite to the west and south consisted of mixed forest dominated by red alder (*Alnus rubra*, FAC), Western redcedar (*Thuja plicata*, FAC), and big leaf maple (*Acer macrophyllum*, FACU) in the canopy; Himalayan blackberry (*Rubus armeniacus,* FAC), English laurel (*Prunus laurocerasus*, FACU), osoberry (*Oemleria cerasiformis*, FACU), red elderberry (*Sambucus racemosa*, FACU), and salmonberry (*Rubus spectabilis*, FAC) in the shrub layer; and sword fern (*Polystichum munitum*, FACU), bleeding heart), Pacific waterleaf, and stinging nettle in the herbaceous layer. Skunk cabbage (*Lysichiton americanum*, OBL) was growing within an area approximately 20 square feet in size within the manmade ditch offsite to the northwest. This area is entirely contained within the manmade ditch and does not provide wetland functions due to its small size. Additionally, because it was formed in the upland within a manmade ditch, it should not be considered wetland.

The dominant vegetation found onsite is recorded on the attached wetland determination data forms (Appendix A). The indicator status, following the common and scientific names, indicates how likely a species is to be found in wetlands. Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) – Almost always occur in wetlands.
- **FACW** (facultative wetland) – Usually occur in wetlands but may occur in non-wetlands.
- **FAC** (facultative) – Occur in wetlands and non-wetlands.
- **FACU** (facultative upland) – Usually occur in non-wetlands but may occur in wetlands.
- **UPL** (obligate upland) – Almost never occur in wetlands.
- **NI** (no indicator) – Status not yet determined.

SOILS

As referenced on the Natural Resources Conservation Service website (NRCS 2019), Urban land-Alderwood complex, 0 to 8 percent slopes (63) and Dystric Xerorthents, 45 to 70 percent slopes (10) are the primary soils mapped onsite. The Urban land and Alderwood complex are mapped across the lot; this complex is composed of 70 percent urban land and approximately 20 percent Alderwood soils, which are moderately well-drained and not hydric. Dystric Xerorthents are moderately well-drained, are formed from sandy and gravelly outwash, and are not hydric. The small offsite wetland, Wetland A, is not within a mapped hydric soil area.

Soil pits were dug at Test Plots 1 and 2 in areas where hydrophytic vegetation was growing. The soil profile at both test plots consisted of a top two inches of dark brown (10YR 3/2) silt loam underlain by medium brown (10YR 4/3) silt loam with five percent redoximorphic features (10YR 4/6). The soil profile at Test Plots 1 and 2 did not meet any of the hydric soil criteria because the matrix chroma of the bottom layer was too high to meet the definition of a depleted matrix.

HYDROLOGY

There was no evidence of wetland hydrology present at Test Plots 1 and 2 or elsewhere on the lot. A small area within the offsite drainage ditch northwest of the lot was saturated, but no water was flowing within it and no OHWM was identified. Runoff from the east appears to flow down into this ditch which conveys water to the north into the stream. This small area within the upland appears to be saturated as a result of ditch creation and/or lack of maintenance and is not wetland.

CRITICAL AREAS INVENTORIES

National Wetlands Inventory

National Wetlands Inventory (NWI) (USFWS 2020) maps no wetlands or riparian areas on or within 300 feet of the lot (Figure 4).

Port Orchard Environmental Mapping

The City of Port Orchard Environmental Map (2016) does not map any wetlands or riparian areas on or within 300 feet of the lot (Figure 5). The only mapped critical areas onsite or within the vicinity are Geologic Hazard areas mapped along the western lot boundary.

Priority Habitats and Species Mapping

The Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) website shows no priority habitats or species on or within 300 feet of the lot (Figure 6).

ELS biologists did not find any wetlands or other critical areas onsite and agrees with the NWI, PHS, and City mapping onsite. However, these maps did not indicate that a stream was located to the south of the lot[1].

[1] Critical area maps are to be used with discretion because they are intended to gather general wetland information about a regional area and therefore are limited in accuracy for smaller areas due to their large scale

CONCLUSIONS

Manmade Ditch

A small area (less than 20 square feet) of the offsite manmade drainage ditch appeared to be saturated and contained skunk cabbages, which typically grow in wetlands. However, per *POMC 20.162.048(1) "Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to* ***irrigation and drainage ditches****... ".* This manmade drainage ditch appears to have been dug in an upland area northwest of this lot to convey water from offsite impervious surfaces and should not be considered a wetland.

Stream Typing

No critical areas were identified onsite, however, an unmapped stream that enters a large culvert was identified approximately 67 feet south of the lot. The stream at that location was typed according to the *WAC 222-16-030 Water typing system* which is based on factors that include usage by fish, wildlife, and humans; the bankfull width of the channel; channel gradient; and whether the stream is seasonally or permanently flowing. Because the stream width where it entered the culvert was approximately eight feet wide and the grade of the stream was less than 16 percent, it was typed as a Type F water. However, this stream is very unlikely to be used by fish because the mouth of the culvert had a trash rack that was almost entirely blocked with debris, causing the channel to widen around the culvert mouth and water to flow underneath it (Photoplate 2). Additionally, if fish were able to enter this culvert, once debris and the trash rack were removed, they would have to travel approximately 445 feet underground beneath this lot and the lot to the north before entering at least one other culvert downstream that crosses under Bethel Avenue (Photoplate 4). Furthermore, another culvert is located near the traffic circle approximately 300 feet upstream (to the south) at Mile Hill Drive. This stream flows through a highly developed area, is not mapped by the city, and is highly constricted by culverts so it appears unlikely to support fish, at least in the vicinity of the project area. A 150-foot stream buffer and 15-foot building setback are required from the OHWM of the Type F stream, or in this case from where the stream enters the culvert.

Stream Buffer Discussion

The standard 150-foot buffer and 15-foot building setback extend onto the south end of the lot (Figure 2). However, the entirety of this lot is cleared and is approximately ten feet higher than the stream channel, which flows through the culvert beneath the lot. The slope and break in vegetation separate the existing buffer into functional and non-functional areas. The tree line ends near the south lot boundary, which is where the functional buffer for the stream also ends. The vegetation on this lot does not provide function for the stream because it consists entirely of mowed grass and does not provide any blocking of light or noise or the ability to filter pollutants from upslope. The project proposes to build a small coffee stand on the lot and because this lot is already cleared, no vegetation removal (other than removal of lawn grasses) will be required. This stream is highly constricted by culverts. Traffic from Bethel Avenue also creates light and noise impacts and generates pollutants that are routed to this stream. The addition of a small coffee stand in the non-functional portion of buffer consisting of mowed grass will not have negative impacts on the stream or the forested section of the buffer.

Stream Buffer Reduction Options
Table 5 within *POMC 20.162.072 Development Standards* states "*for minor new development the department may reduce the buffer width by up to 25 percent through an administrative buffer reduction process when review with the Washington State Department of Fish and Wildlife* (WDFW) *determines that conditions are sufficient to protect the affected habitat. The buffer shall not be less than 25 feet*". A standard administrative reduction (Type I decision) would allow the buffer to be reduced to 112.5 feet plus the 15-foot building setback, which would provide additional buildable area on this lot. Based on site observations, it is our professional opinion that placing the buffer at the edge of the tree line, which is the limit of the functional portion of the buffer, will provide more than adequate protection for the stream. No removal of vegetation from the functional buffer area would be required, so the forest would continue to provide its current functions to block light and noise, filter runoff, and provide a small area of habitat; the slope also provides physical separation from the lot and the stream channel. A 15-foot building setback would apply from the edge of the functional buffer to ensure vegetation within the buffer is not impacted by development onsite. Additionally, because the stream is so constricted by culverts and development, as discussed above, WDFW will make the final determination regarding the water type of this stream.

If the City of Port Orchard and WDFW do not approve an administrative reduction that allows enough buildable space onsite, a reasonable use exception (RUE) per *POMC 20.162.034* may be appropriate provided the project can prove that the stream buffer "*would deny all reasonable use of the subject property*". A RUE is processed as a Type III decision with review by the director and requires a public hearing and decision by a hearing examiner. A critical areas report, which contains information from this report, and mitigation plan may be also be required for the RUE.

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.

REFERENCES

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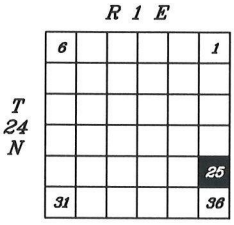
Washington Department of Fish and Wildlife (WDFW). 2020. *Priority Habitat and Species: PHS on the Web*. http://apps.wdfw.wa.gov/phsontheweb/. Website accessed March 2020.

FIGURES & PHOTOPLATES

WASHINGTON

47.5362° Latitude
-122.6276° Longitude

LOCATION MAP



PROJECT VICINITY MAP

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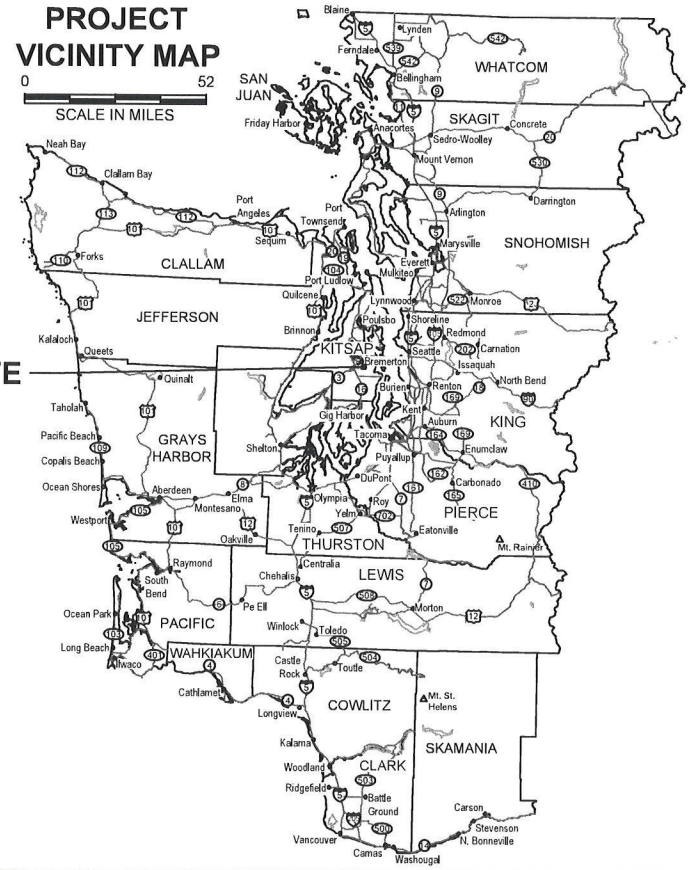

NOTE:
Quadrangle topographic map from USGS.

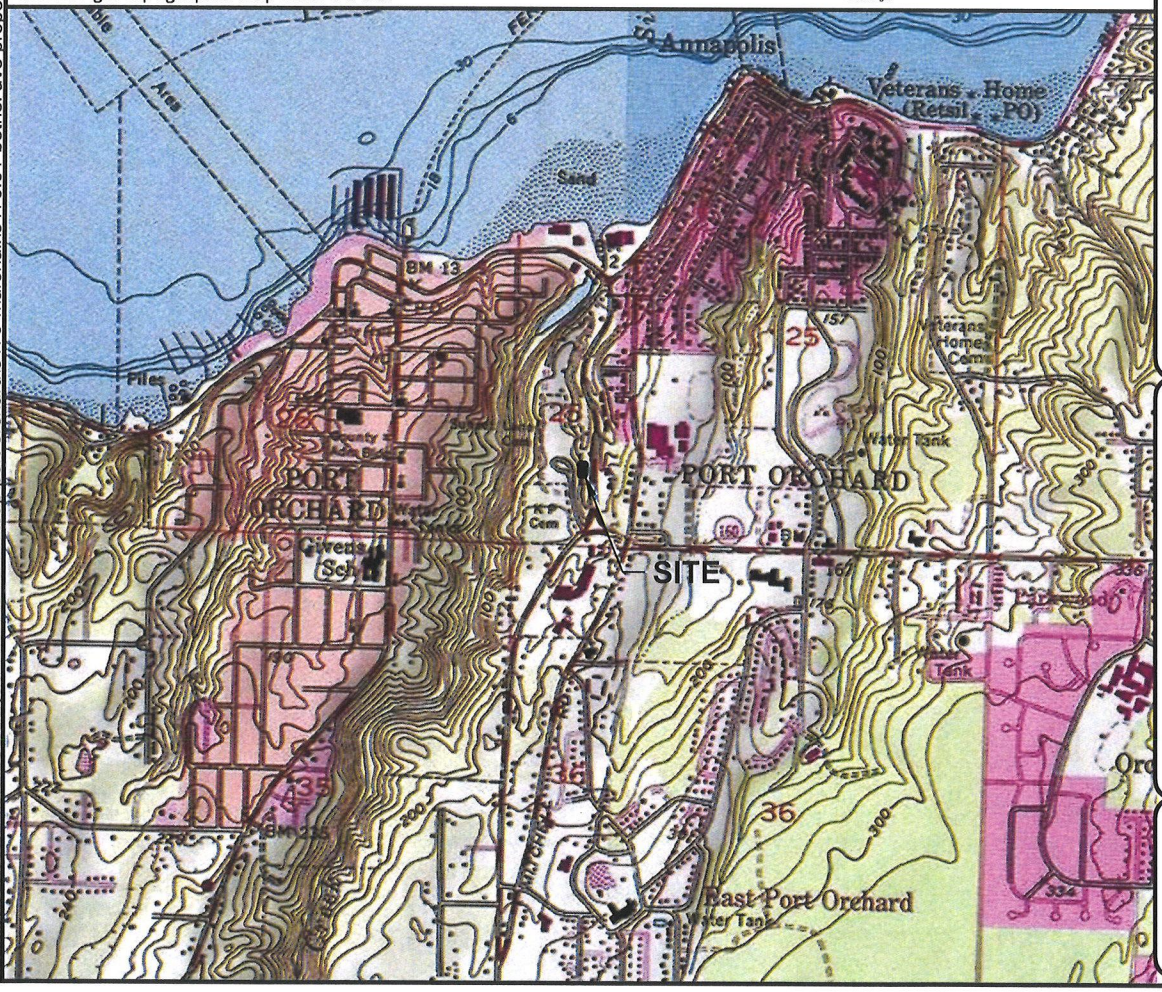

Figure 1
VICINITY MAP
Bethel Ave Property
Kelsiana Marshall
Kitsap County, WA
Section 25, Township 24N, Range 1E, W.M.

DATE: 4/14/20
DWN: JLL
REQ. BY:
PRJ. MGR: KL
CHK:
PROJECT NO: 3170.01

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Figure 2
SITE MAP
Bethel Ave Property
Kelsiana Marshall
Kitsap County, WA
Section 25, Township 24N, Range 1E, W.M.

NOTE(S):

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

LEGEND:

— Site Boundary

10 Dystric Xerorthents, 45 to 70 percent slopes. Not hydric.

63 Urban land-Alderwood complex, 0 to 8 percent slopes. Not hydric.

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Figure 3
SOIL SURVEY MAP
Bethel Ave Property
Kelsiana Marshall
Kitsap County, WA
Section 25, Township 24N, Range 1E, W.M.

NOTE(S):

1. Map provided on-line by US Fish & Wildlife Service at web address: *http://www.fws.gov/wetlands/data/index.html*

LEGEND:

- Freshwater Forested/Shrub Wetland
- Riverine

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Figure 4
NATIONAL WETLANDS INVENTORY MAP
Bethel Ave Property
Kelsiana Marshall
Kitsap County, WA
Section 25, Township 24N, Range 1E, W.M.

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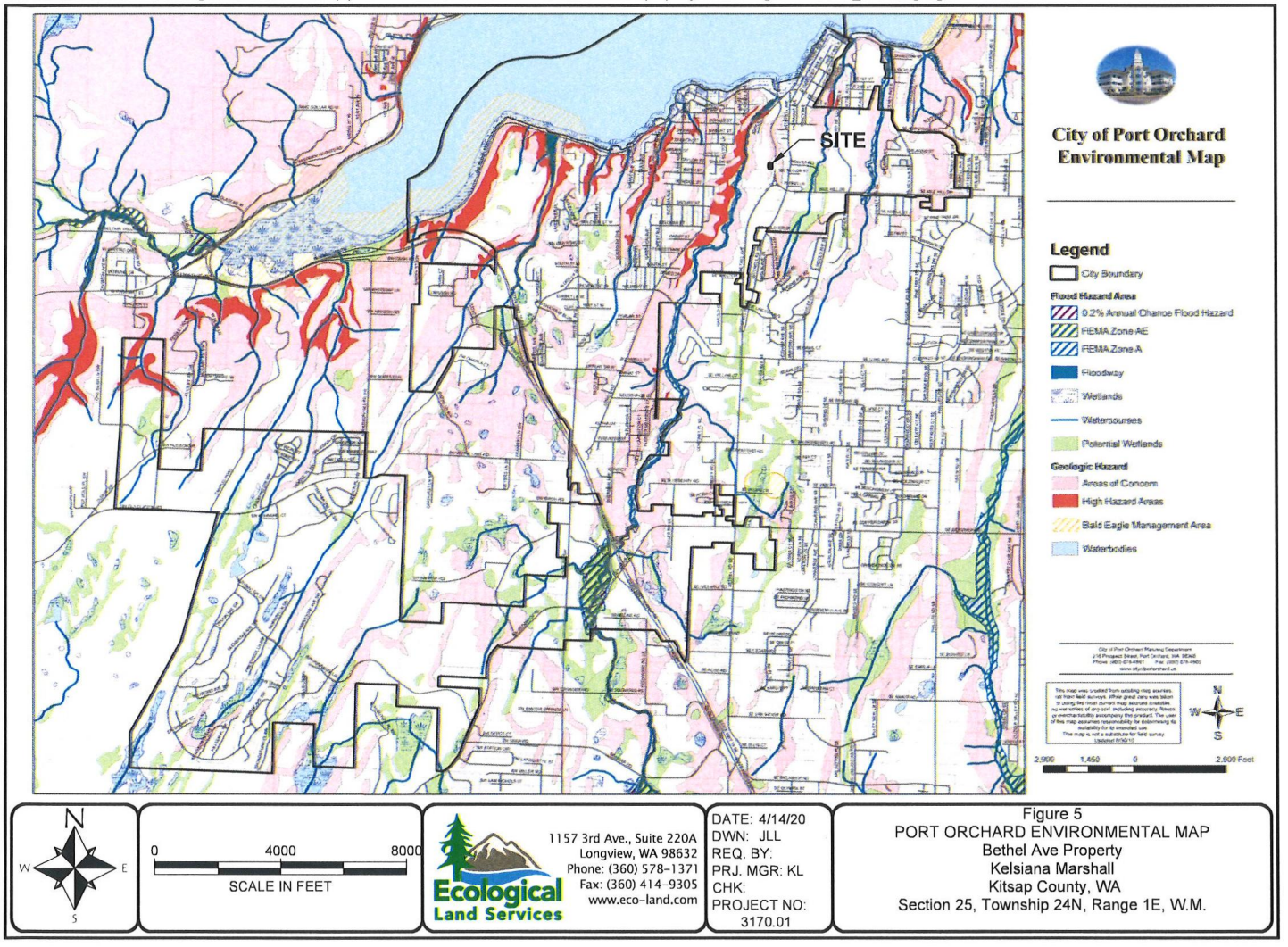

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Figure 5
PORT ORCHARD ENVIRONMENTAL MAP
Bethel Ave Property
Kelsiana Marshall
Kitsap County, WA
Section 25, Township 24N, Range 1E, W.M.

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LEGEND:

Fall Chinook, *Oncorhynchus tshawytscha*, Breeding Area
Fall Chum, *Oncorhynchus keta*, Breeding Area
Winter Steelhead, *Oncorhynchus mykiss*, Breeding Area
Summer Chum, *Oncorhynchus keta*, Breeding Area
Coho, *Oncorhynchus kisutch*, Breeding Area/Occurrence
Steelhead, *Oncorhynchus mykiss*, Occurrence
Chum, *Oncorhynchus keta*, Occurrence
Cutthroat, *Oncorhynchus clarki*, Occurrence
Resident Coastal Cutthroat, *Oncorhynchus clarki*, Occurrence/Migration

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 6
PRIORITY HABITAT AND SPECIES MAP
Bethel Ave Property
Kelsiana Marshall
Kitsap County, WA
Section 25, Township 24N, Range 1E, W.M.

Photo 1 was taken from the north end of the lot looking south at the eastern side of the lot and Bethel Avenue. The lot is level and vegetated by mowed grasses. The stream and culvert are present in the background of the photo south of the lot.

Photo 2 was taken from the same location as Photo 1 looking southwest across the rest of the lot. The topography slopes up west of the western lot line and is vegetated by mixed forest.

Photo 3 was taken from the same location as Photos 1 and 2 looking west along the northern lot line. The property to the north is entirely developed with a parking lot and store.

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Photoplate 1
2020 Site Photos
Kelsiana Marshall
Bethel Ave Property
Port Orchard, Washington

Photo 3 was taken approximately 67 feet south of the southern lot line where a large culvert, approximately 5 feet in diameter, is present. A stream, which flows to the north, enters this culvert.

Photo 4 was taken from the same location as Photo 3. The culvert is plugged with debris, so the stream channel has widened around the culvert and eroded some of the soil around it.

Photo 5 shows the opening of the culvert. A trash rack covers the opening and is clogged with debris. The culvert continues underground and day-lights approximately 445 feet to the north. Fish passage appears to be impossible through the clogged culvert.

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Photoplate 2
2020 Site Photos
Kelsiana Marshall
Bethel Ave Property
Port Orchard, Washington

Photo 7 was taken from the culvert and looks north toward the lot. The functional area of the 150-foot buffer ends at the top of the bank where the tree line ends.

Photo 8 was taken midway up the bank seen in Photo 7 and looks to the southeast showing Bethel Avenue in the background. The stream channel and culvert are out of the photo to the right.

Photo 9 was taken from the manmade ditch offsite, near the northwest lot corner. This ditch appears to continue to the north.

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Photoplate 3
2020 Site Photos
Kelsiana Marshall
Bethel Ave Property
Port Orchard, Washington

Photo 10 was taken from the manmade ditch offsite. Several small skunk cabbages were growing in this ditch in an area less than 20 square feet.

Photo 11 was taken near the outlet of the culvert looking west where the stream daylights, approximately 445 feet north of the culvert inlet. A culvert begins at the end of this stream and conveys water under Bethel Road.

Photo 12 was taken from the same location as Photo 11 looking north down Bethel Avenue. The stream channel disappears again, most likely because it goes beneath Bethel Avenue.

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Photoplate 4
2020 Site Photos
Kelsiana Marshall
Bethel Ave Property
Port Orchard, Washington

APPENDIX A

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

Project Site: 694 Bethel Ave City/County: Port Orchard/Kitsap Sampling Date: 4-3-20

Applicant/Owner: Kelsiana Marshall State: WA Sampling Point: TP-1

Investigator(s): K. Lacey Section, Township, Range: S 25, T 24, R 1E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1

Subregion (LRR): MLRA2 Lat: 47.5360996 Long: -122.6276772 Datum: NAD83

Soil Map Unit Name: Dystric Xerorthents, 45 to 70 percent slopes (10) NWI classification: none

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

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

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

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

Remarks: Test Plot 1 was conducted in the middle of the southern portion of this lot. Hydrophytic vegetation was present, but wetland hydrology and soils were absent so this area was determined to be upland.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Mowed grasses*	75	yes	FAC
2. *Ranunculus repens*	30	yes	FAC
3. *Hydrophyllum tenuipes*	15	no	FAC
4. *Urtica dioica*	5	no	FAC
5. *Galium sp.*	5	no	FAC
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 65, 20% = 26	130	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Hydrophytic vegetation criteria is met because there is greater than 50 percent dominance by FAC species.

Mowed grasses and Galium species are assumed FAC.

Project Site: 694 Bethel Ave

SOIL

Sampling Point: TP-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					silt loam	
2-16	10YR 4/3	95	10YR 4/6	5	C	M	silt loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Hydric soil criteria is not met because the matrix chroma is too high to meet the definition of a depleted matrix in the second layer of soil.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks: Wetland hydrology criteria is not met because there is no water or evidence of water present.

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

Project Site: 694 Bethel Ave City/County: Port Orchard/Kitsap Sampling Date: 4-3-20
Applicant/Owner: Kelsiana Marshall State: WA Sampling Point: TP-2
Investigator(s): K. Lacey Section, Township, Range: S 25, T 24, R 1E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
Subregion (LRR): MLRA2 Lat: 47.5363081 Long: -122.6277729 Datum: NAD83
Soil Map Unit Name: Dystric Xerorthents, 45 to 70 percent slopes (10) NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Test Plot 2 was conducted near the northwest corner of this lot. Hydrophytic vegetation was present, but wetland hydrology and soils were absent so this area was determined to be upland.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Hydrophyllum tenuipes*	30	yes	FAC
2. *Urtica dioica*	20	yes	FAC
3. *Galium sp.*	5	no	FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 27.5, 20% = 11	55	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 45			

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Hydrophytic vegetation criteria is met because there is greater than 50 percent dominance by FAC species.

Galium species are assumed FAC. No trees were rooted in this area.

Project Site: 694 Bethel Ave

SOIL

Sampling Point: TP-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					silt loam	
2-16	10YR 4/3	95	10YR 4/6	5	C	M	silt loam	

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

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- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Hydric soil criteria is not met because the matrix chroma is too high to meet the definition of a depleted matrix in the second layer of soil.

HYDROLOGY

Wetland Hydrology Indicators:

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

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- ☐ 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 Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks: Wetland hydrology criteria is not met because there is no water or evidence of water present.