



# CRITICAL AREAS REPORT

January 28, 2021



## UPS Kelso Delineation

*Kelso, Washington*

Prepared for

**Cushing Terrell**

**411 East Main Street**

**Bozeman, MT 59715**

**(406) 922-7111**

*Prepared by*

**Ecological Land Services, Inc.**


1157 3rd Avenue, Suite 220A • Longview, WA 98632

(360) 578-1371 • Project Number 3211.01

**SIGNATURES**

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The information in this report was prepared by the undersigned.



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Jacob McManus  
Biologist

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## **INTRODUCTION**

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Ecological Land Services, Inc. (ELS) has completed this critical areas report on behalf of the applicant, United Parcel Service (UPS) Inc, for the future development of a distribution warehouse within Cowlitz County Tax Parcel 243530100. The property is located south of 1699 South 13<sup>th</sup> Avenue in Kelso, Washington, within a portion of Section 35, Township 8 North, and Range 2 West of the Willamette Meridian (Figure 1). This report summarizes the findings of critical areas onsite in accordance with the *City of Kelso Unified Development Code (KUDC) Chapter 17.26; Environmentally Sensitive Areas* (April 2020).

## **SITE DESCRIPTION**

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The approximately 5.47-acre property is zoned “Light Industrial” (LI) by the City of Kelso and consists of Parcel 243530100. The eastern and western portions of the property gradually slope downwards towards the central portion, with a disconnected ditch being the lowest point topographically onsite. Several shallow pools of water (1 to 2 inches) were present within the ditch during the site visit, although no obvious outlets to the ditch were observed, and it does not appear to be culverted on either side. It is likely the ditch historically provided drainage for the site, but development within northern and southern neighboring parcels have blocked conveyance of water from the area (warehouse and parking lot on the northern side, and concrete ecology blocks on southern side). No development currently exists on the property. Vegetation onsite consists almost entirely of herbaceous species such as reed canarygrass (*Phalaris arundinacea*) with a few scattered trees. Vegetation within the disconnected ditch consisted entirely of purple loosestrife (*Lythrum salicaria*). The northwest portion of the property is bordered by a remnant drainage slough that connects to several roadside ditches in the area and the local diking district (Consolidated Diking Improvement District #3 – South Kelso). No obvious outlets to the slough were found, and it does not appear to drain into nearby streams such as the Coweeman River. No connection between the slough and hydrology onsite was observed.

Commercial and industrial activities border the parcel on the northern, eastern, southern, and southwest sides, although parcels immediately adjacent to the property on the southern side consists of empty lots with similar herbaceous vegetation. Adjacent parcels to the northwest consist of single-family residences. All surrounding parcels are zoned “light industrial,” excluding western bordering properties, which have not been zoned by the City of Kelso. The property is accessible via South 13<sup>th</sup> Avenue, which runs north to south and forms the eastern property boundary. The Washington State Department of Ecology’s Water Quality Atlas maps the project site within lower portion of Watershed Resource Inventory Area (WRIA) 26 – Cowlitz which is in the Lower Coweeman River sub-watershed and is within the 12-digit Hydrologic Unit Code (HUC): 170800050804.

## **METHODOLOGY**

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The wetland delineation followed the Routine Determination Method according to the *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)* (U.S. Army Corps of Engineers 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 Kelso.

One wetland, hereinafter referred to as Wetland A, was delineated onsite on June 12, 2020, and re-visited again October 6, 2020. Vegetation, soils, and hydrology information was collected from six test plots to determine the location and extent of the onsite wetland and wetland buffers (Appendix A). Onsite wetland boundaries were flagged with consecutively numbered pink flagging, and test plot locations were flagged with consecutively numbered orange pin-flags, both of which were mapped and recorded using a handheld GPS unit. Wetland Determination Data Sheets can be found in Appendix A.

## **VEGETATION**

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In addition to being recorded on the Wetland Determination Data Sheets (Appendix A), the dominant wetland and upland vegetation and their corresponding wetland indicator statuses are listed below.

The indicator status, following the scientific names, indicates the likelihood of the species 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) - 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.

### **Wetlands**

Vegetation observed in wetland test plots was dominated by Himalayan blackberry (*Rubus armeniacus*, FAC) in the shrub stratum and reed canarygrass (*Phalaris arundinacea*, FACW), in the herb stratum.

## Uplands

Dominant vegetation observed in upland test plots consisted of **shrubs:** Himalayan blackberry; and **herbs:** reed canarygrass, bird's-foot trefoil (*Lotus corniculatus*, FAC), colonial bentgrass (*Agrostis capillaris*, FAC), and poa spp. (*Poa spp.* assumed FAC status).

## SOILS

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Natural Resources Conservation Service (NRCS) designates soils onsite as Clato silt loam, 0 to 3 percent slopes, and Caples silty clay loam, 0 to 3 percent slopes (Figure 3). Clato silt loam is typically characterized as a well-drained soil formed on flood plains and derived from alluvium, with a typical profile consisting of silt loam from 0 to 80 inches. Caples silty clay loam is typically characterized as a somewhat poorly-drained soil derived from alluvium and formed in flood plains. A typical profile of Caples silty clay loam consists of silty clay loam from 0 to 60 inches (NRCS 2020b). According to the NRCS *Hydric Soils List*, Caples silty clay loam is classified as a hydric soil (2020a). Wetland A was delineated primarily within the mapped Caples silty clay loam soil unit (Figure 2). Mapped hydric soils do not necessarily mean that the area is a wetland—hydrology, wetland vegetation, and hydric soils must all be present to classify an area as a wetland. Conversely, wetlands may be found in areas where the soils are not mapped as hydric.

Soils evaluated within wetland test plots consisted of silt loams and clayey silt loams that satisfied requirements for the hydric soil indicator “depleted matrix” given the presence of soil layers with matrix values of 4 or more and chromas of 2 or less with observed redoximorphic features from 0 to 16 inches below ground surface. Evaluated upland soils within TPs 1 and 3 also met requirements for the hydric soil indicator depleted matrix, but lacked wetland hydrology and contained noticeably fewer redoximorphic features (Appendix A).

## HYDROLOGY

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### *Wetland A*

Wetland A is located within a depression in the central portion of the property (Figure 2). No obvious outlets to the wetland were observed. A ditch previously used for drainage purposes was observed in the central portion of the wetland, but development within northern and southern neighboring parcels has blocked conveyance of water offsite. Water is currently retained within the onsite ditch seasonally. During the site visit, several shallow pools (1 to 2 inches) of surface water were observed within the ditch primarily within the central portion. No surface water was observed elsewhere within the wetland. Sources of wetland hydrology include runoff from adjacent slopes on the property to the east and west of the wetland, precipitation, and a seasonally high groundwater table. Hydroperiods of the wetland include seasonally flooded and saturated only. Primary wetland hydrology indicators observed within wetland test plots included soil saturation and oxidized rhizospheres along living roots. Additionally, the water table was observed at a depth of 18 inches within TP-2 (Appendix A).

## NATIONAL WETLAND INVENTORY

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The National Wetlands Inventory (NWI) indicates the presence of a seasonally flooded, palustrine and emergent (PEM1C), wetland in the northwest portion of the property and extending offsite to

the north (Figure 4). ELS findings are generally not in agreement with this wetland designation, as the wetland indicated by NWI is likely a reflection of hydrology present within the slough, not of a wetland environment. The slough partially contained within the northwest portion of the property does not have any obvious outlets to nearby streams such as the Coweeman or Columbia Rivers.

ELS identified one emergent depressional wetland in the central portion of the property that has not been indicated by NWI (Wetland A). NWI maps are typically used to gather wetland information about a region and due to the large scale necessary for regional mapping are limited in accuracy for localized analyses.

## **CRITICAL AREAS SUMMARY**

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### ***Wetland A***

Wetland A was delineated on June 12, 2020 in the central portion of the property (Figure 2). According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Rating System) (Hruby 2014); Wetland A is an emergent, depressional wetland spanning approximately 1.410 acres onsite (61,419 sq. ft.). Wetland boundaries were bordered by notable changes in topography, soils, and hydrology. Dominant vegetation observed within the wetland consisted of reed canarygrass and Himalayan blackberry. Sources of wetland hydrology include runoff from adjacent slopes to the east and west of the wetland, precipitation, and a seasonally high groundwater table. Hydroperiods of the wetland include seasonally flooded and saturated only. The wetland primarily provides moderate water quality functions, with flood storage and delay functions provided to a lesser extent. According to the *Rating System*; Wetland A is a slope Category IV wetland scoring 6 points for water quality functions, 5 points for hydrologic functions, and 3 points for habitat functions. The wetland rating form can be found in Appendix B.

According to *KUDC*, standard wetland buffers are based on wetland category and level of habitat function (*17.26.050(D)*). Wetland A is a Category IV wetland with a low habitat function score. *KUDC Table 1-A* indicates the designated buffer width for Wetland A is 40 feet. Table 1 summarizes the wetland onsite (Figure 2).

### ***Slough Remnant***

The northwest property boundary is formed by a drainage slough with no obvious outlets to nearby streams, and with no apparent connection to onsite hydrology. During the site visit, water was present within the slough, but little to no flow was observed. Hydrology onsite is unlikely to have a surface connection to the slough given the western portion of the property consists of an upland environment and is situated higher in elevation than the interior of the parcel. Therefore, surface runoff generated onsite is contained within the central portion of the parcel. Additionally, the slough has an ordinary high-water mark that is synonymous with its top of bank, given the slough channel is formed by steep drop-offs. Several roadside ditches in adjacent industrial areas appear hydrologically connected to the slough; however, none appear connected to the subject parcel or nearby streams.

**Table 1. Critical Areas Summary**

Critical Area	Category <sup>1</sup> /Cowardin Class <sup>2</sup> /HGM Class <sup>3</sup> /Type <sup>4</sup>	Size (onsite)	Habitat Score	Buffer Width <sup>5</sup>
Wetland A	IV/Emergent/Depressional	1.410 acres (61,419 sq. ft.)	3	40 feet
Slough Remnant	Jurisdictional	N/A	N/A	N/A

<sup>1</sup>Hruby 2014

<sup>2</sup>Cowardin et al. 1979

<sup>3</sup>NRCS 2008

<sup>4</sup>KUDC 17.26.050(B)

<sup>5</sup>KUDC 17.26.050 Table 1-A

## **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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- Cowlitz County GIS Digital Atlas. 2020. <http://cowlitz.maps.arcgis.com/apps/webappviewer/index.html?id=5f8bb5c362a449648606077d1fcbf764&query=EPIC%20Data,PARCNO,243530100>. Accessed January 2020.
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- U.S. Army Corps of Engineers. 2010. *Final Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-13. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Service. 2012. *National Wetlands Inventory*. <http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>. Accessed June 2020.

**FIGURES AND PHOTOPLATES**

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WASHINGTON



Latitude: 46.1271°  
Longitude: -122.9021°

LOCATION MAP

R 2 W

8				1
31			35	36

T 8 N

PROJECT VICINITY MAP

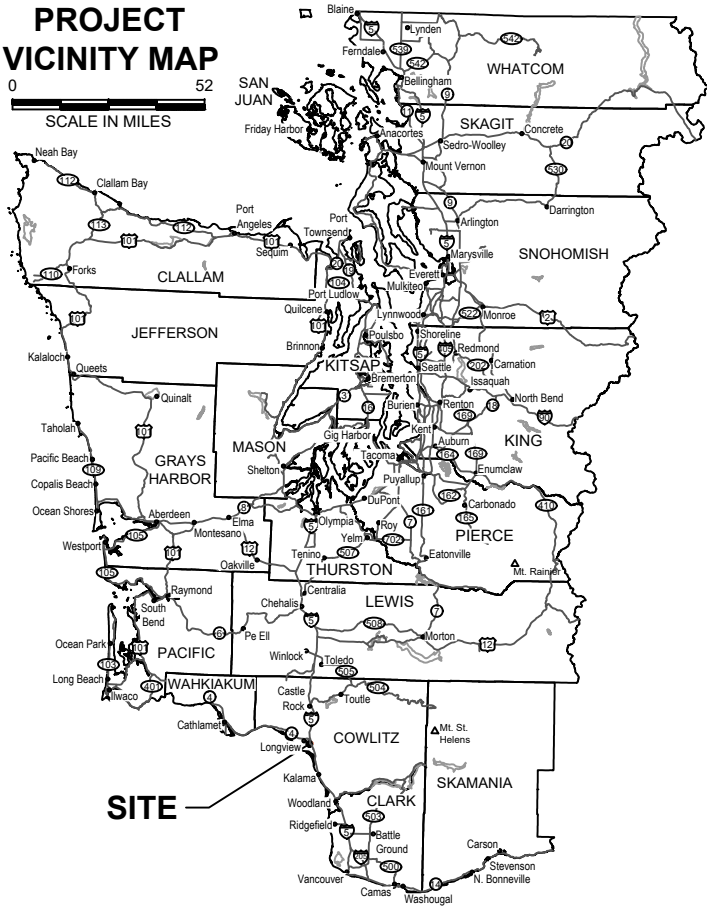
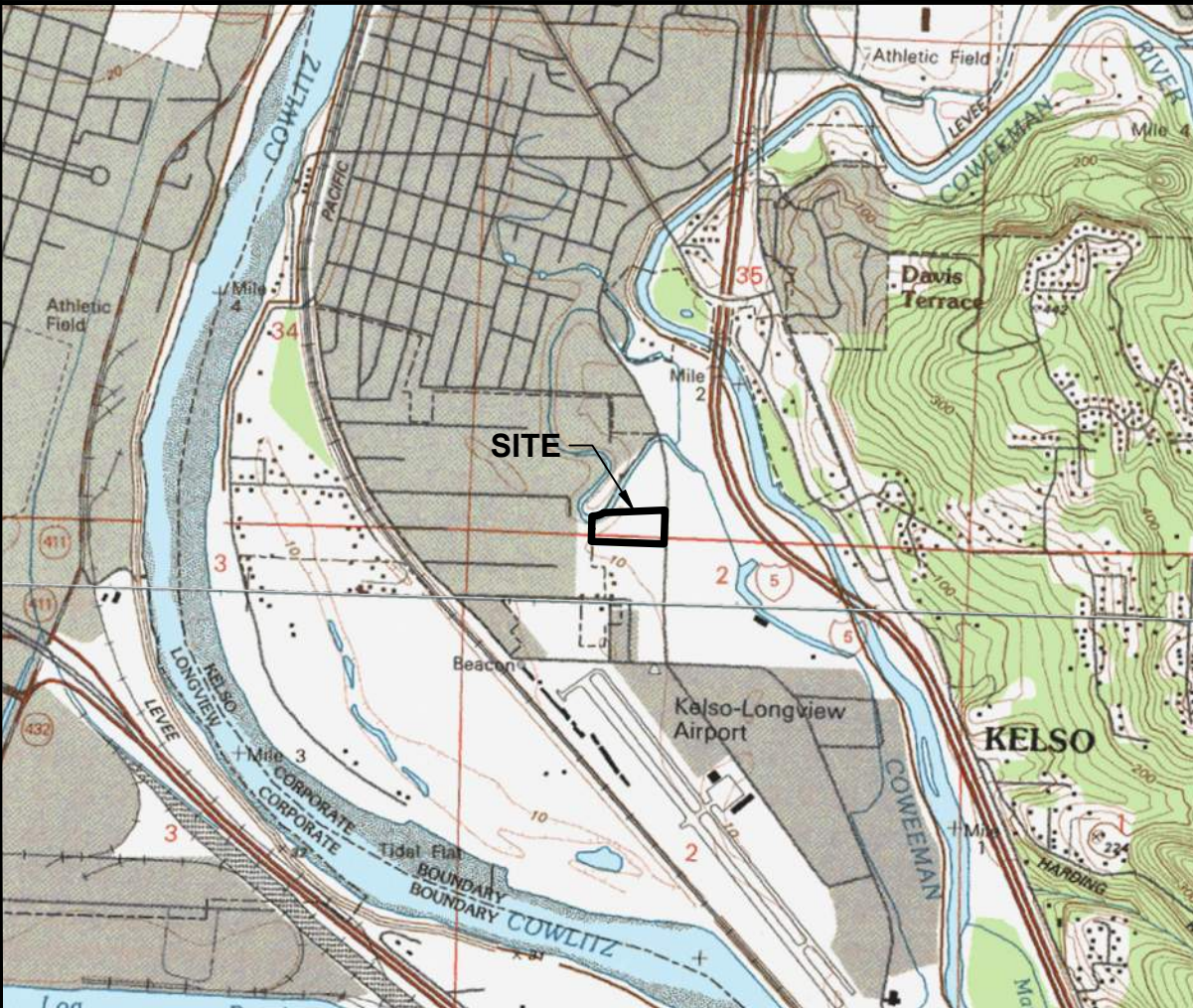


Figure 1  
VICINITY MAP  
UPS Kelso Delineation  
Cushing Terrell  
City of Kelso, Cowlitz County, Washington  
Section 35, Township 8N, Range 2W, W.M.

DATE: 1/21/21  
DWN: CDP  
REQ. BY: JM  
PRJ. MGR: JM  
CHK:  
PROJECT NO: 3211.03

**NOTE:**  
Quadrangle topographic map from USGS.

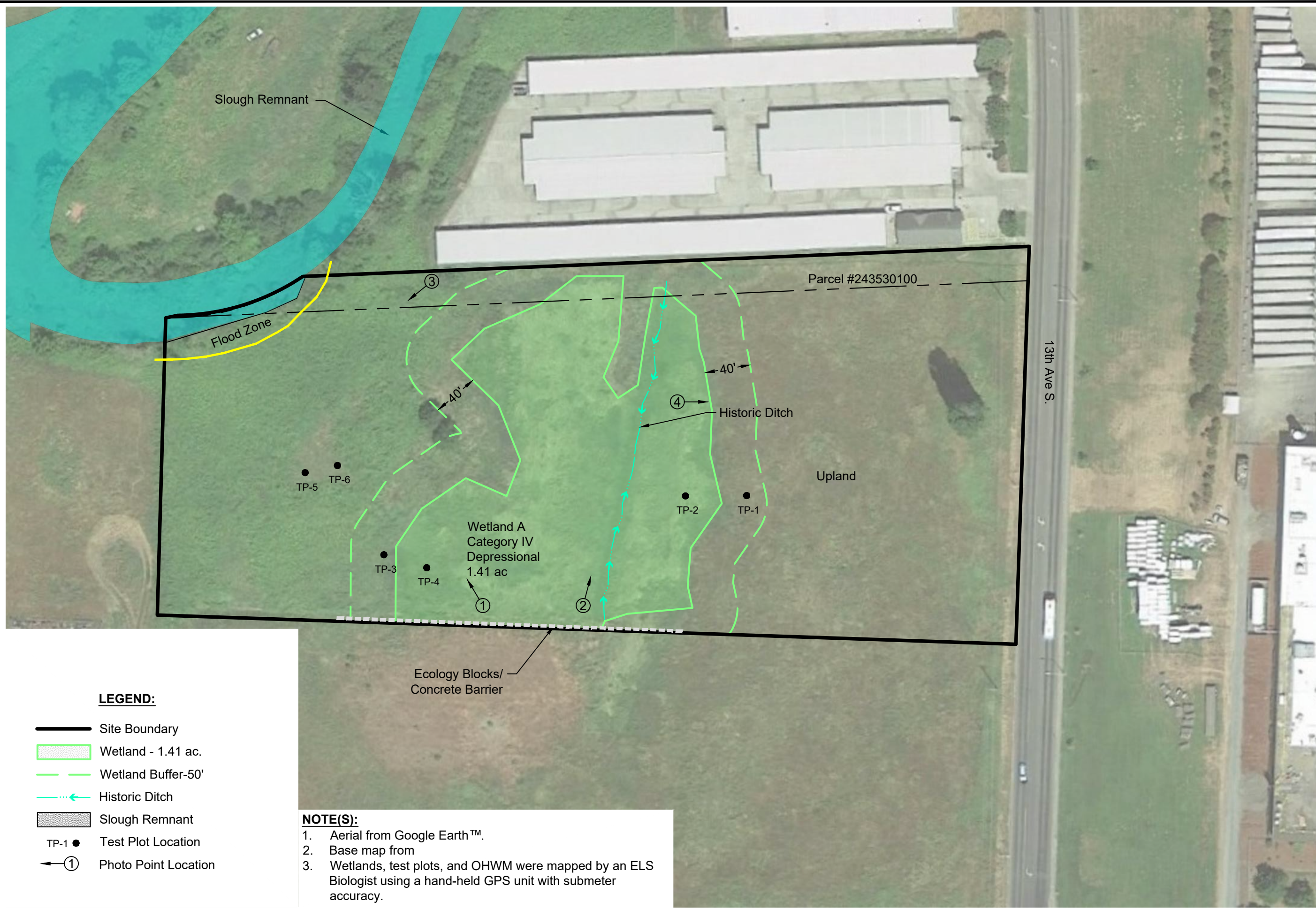


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

**Ecological Land Services**



1/21/2021 11:29 AM C:\Users\CPayne\Box\EL\SIWA\Cowitz\Kelso\3211-03-UPS Kelso Permitting\3211-03-Figures CAD Only\UPS\_DL.dwg Cpayne

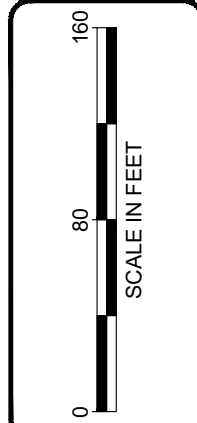
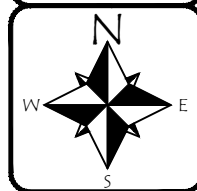


**LEGEND:**

-  Site Boundary
-  Wetland - 1.41 ac.
-  Wetland Buffer-50'
-  Historic Ditch
-  Slough Remnant
-  TP-1 ● Test Plot Location
-  ← ① Photo Point Location

**NOTE(S):**

1. Aerial from Google Earth™.
2. Base map from
3. Wetlands, test plots, and OHWM were mapped by an ELS Biologist using a hand-held GPS unit with submeter accuracy.



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 DWN: GDP  
 REQ. BY: JM  
 PRJ. MGR: JM  
 CHK:  
 PROJECT NO:  
 3211.03

Figure 2  
**EXISTING CONDITIONS SITE MAP**  
 UPS Kelso Delineation  
 Cushing Terrell  
 City of Kelso, Cowlitz County, Washington  
 Section 35, Township 8N, Range 2W, W.M.

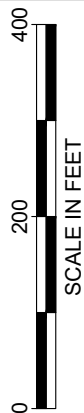


**LEGEND:**

-  Site Boundary
- 17** Caples silty clay loam, 0 to 3 percent slopes. **Hydric.**
- 32** Clato silt loam, 0 to 3 percent slopes. Not hydric.

**NOTE(S):**

1. Map provided online by NRCS at web address:  
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey>



SCALE IN FEET



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 PRJ. MGR: JM  
 CHK:  
 PROJECT NO:  
 3211.03

Figure 3  
 NRCS SOIL SURVEY MAP  
 UPS Kelso Delineation  
 Cushing Terrell  
 City of Kelso, Cowlitz County, Washington  
 Section 35, Township 8N, Range 2W, W.M.



Mapped wetlands indicated onsite by US Fish & Wildlife Service.

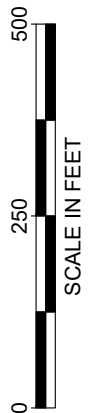
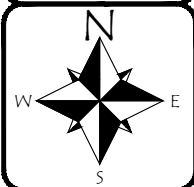
**LEGEND:**

-  Site Boundary
-  Freshwater Emergent Wetland

**PEM1C** Palustrine, emergent, persistent, seasonally flooded.

**NOTE(S):**

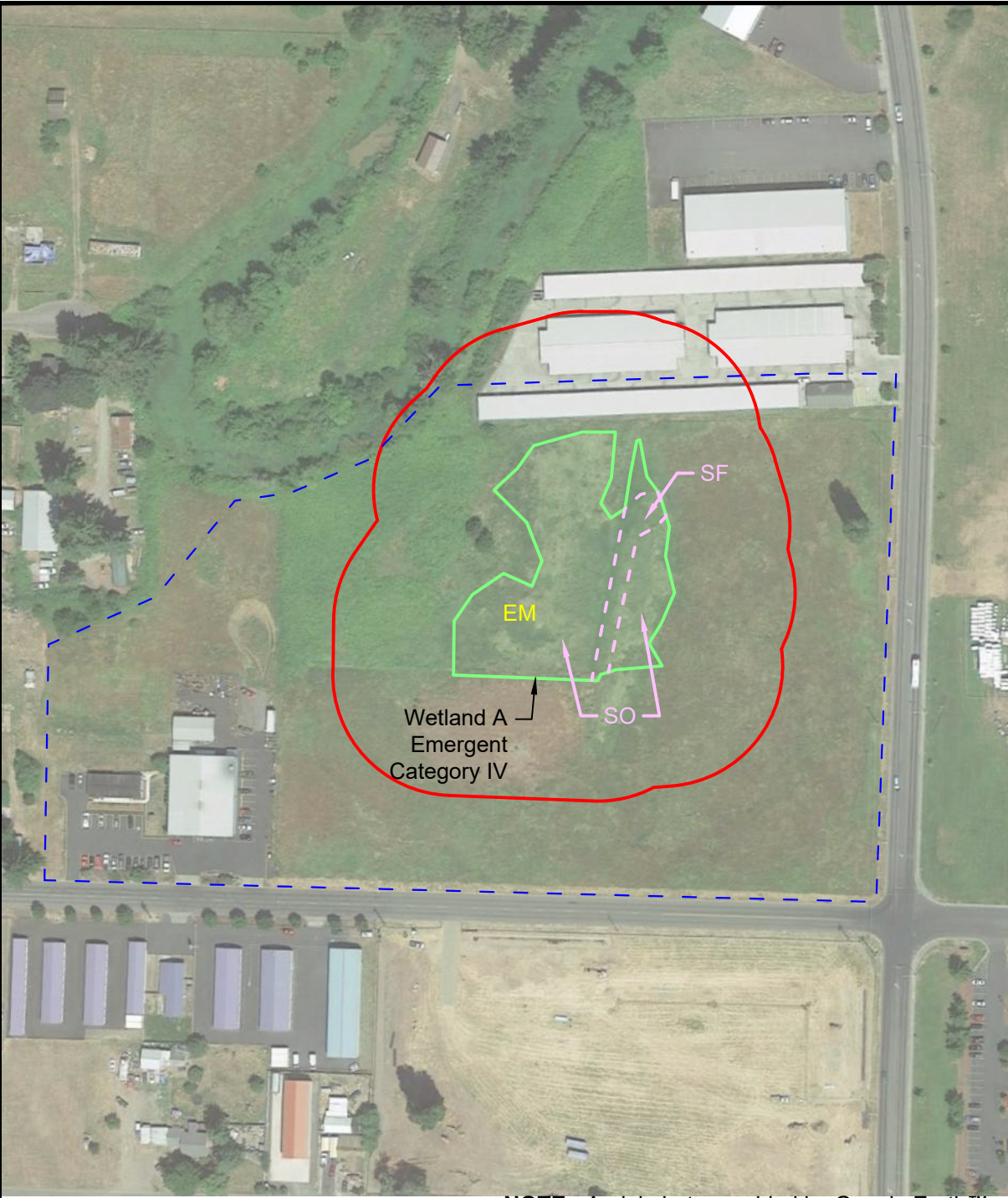
1. Map provided online by US Fish & Wildlife Service at web address: <https://www.fws.gov/wetlands/data/Mapper.html>



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Figure 4  
 USFWS NATIONAL WETLANDS INVENTORY MAP  
 UPS Kelso Delineation  
 Cushing Terrell  
 City of Kelso, Cowlitz County, Washington  
 Section 35, Township 8N, Range 2W, W.M.



NOTE: Aerial photo provided by Google Earth™.

**LEGEND:**

- Wetland Unit Boundary
- - - Vegetation Class Division
- - - Hydroperiod Division
- - - 150' Wetland Offset
- - - Contributing Basin - 10x
- Pollutants/Runoff - 12.5%

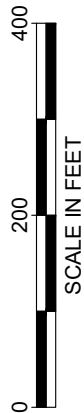
**Cowardin Classes:**

EM Emergent

**Hydroperiods:**

SF Seasonally flooded or inundated-10%

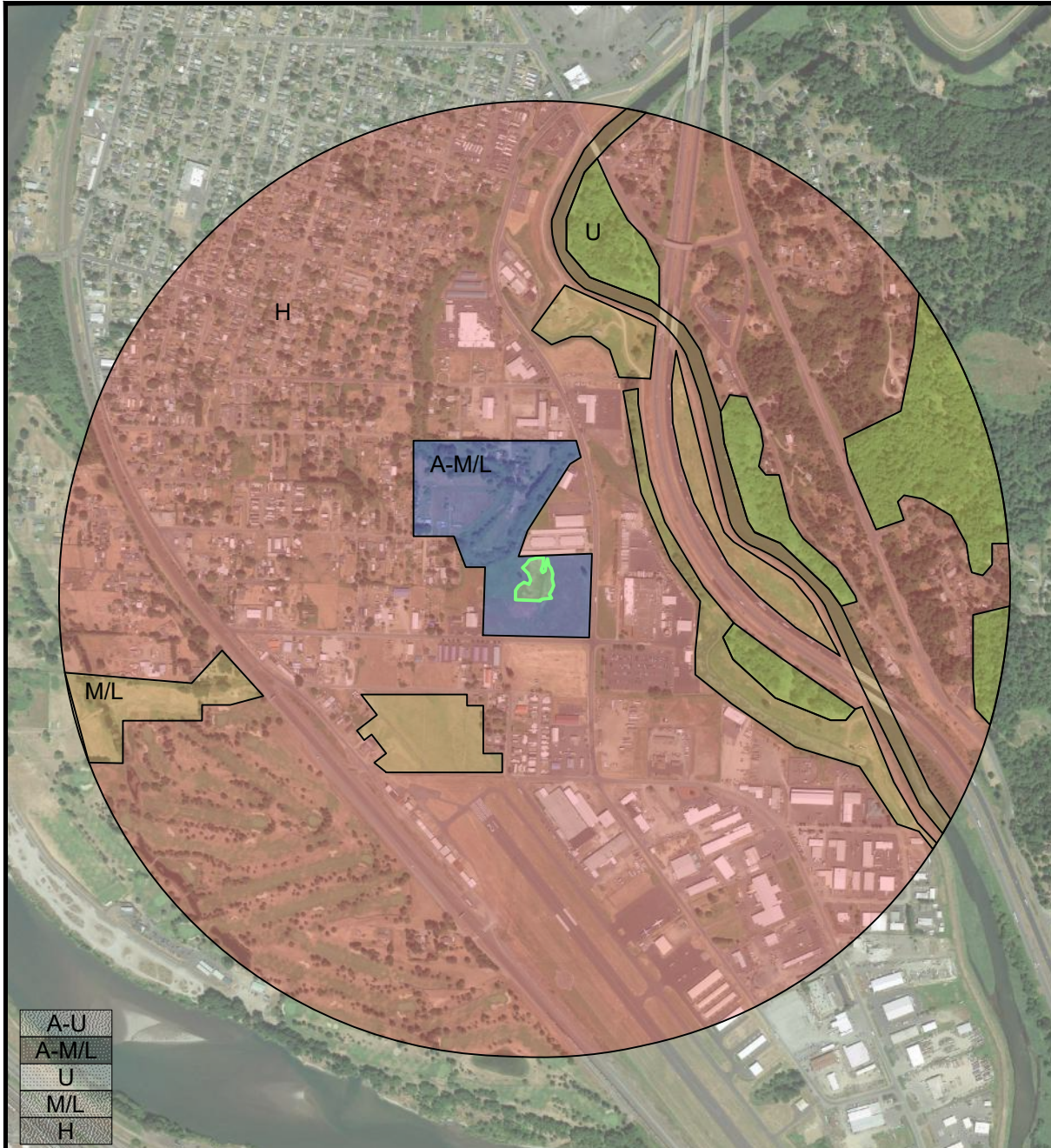
SO Saturated only



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 CHK:  
 PROJECT NO:  
 3211.03

Figure 5  
**WETLAND RATING FIGURE - 150' OFFSET**  
 UPS Kelso Delineation  
 Cushing Terrell  
 City of Kelso, Cowlitz County, Washington  
 Section 35, Township 8N, Range 2W, W.M.



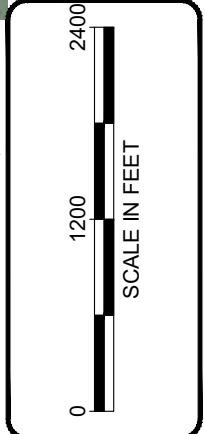
A-U
A-M/L
U
M/L
H

Figure 6  
**WETLAND RATING FIGURE - 1 KM OFFSET**  
 UPS Kelso Delineation  
 Cushing Terrell  
 City of Kelso, Cowlitz County, Washington  
 Section 35, Township 8N, Range 2W, W.M.

DATE: 1/21/21  
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NOTE: Aerial photo provided by Google Earth™.



**LEGEND:**

Wetland Unit Boundary

**H2.1 Accessible Habitat**

A-U	A-U (0%)
A-M/L	A-M/L (3%)

**H2.2 Undisturbed Habitat**

U	U (6%)
M/L	M/L (8%)

**H2.3 Land Use Intensity**

H	H (83%)
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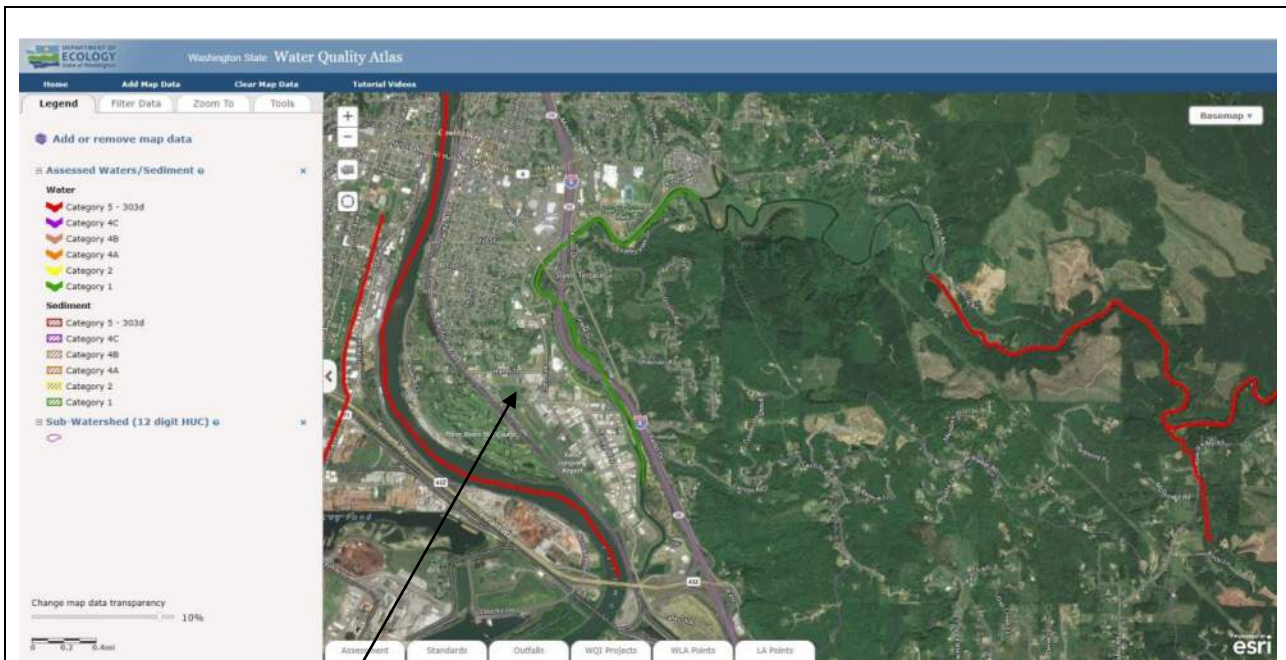
**H 2.1. Accessible Habitat Equation**

$$0\% \text{ A-U habitat} + [(3\% \text{ A-M/L intensity land uses})/2] \text{ } = \underline{1.5\%}$$

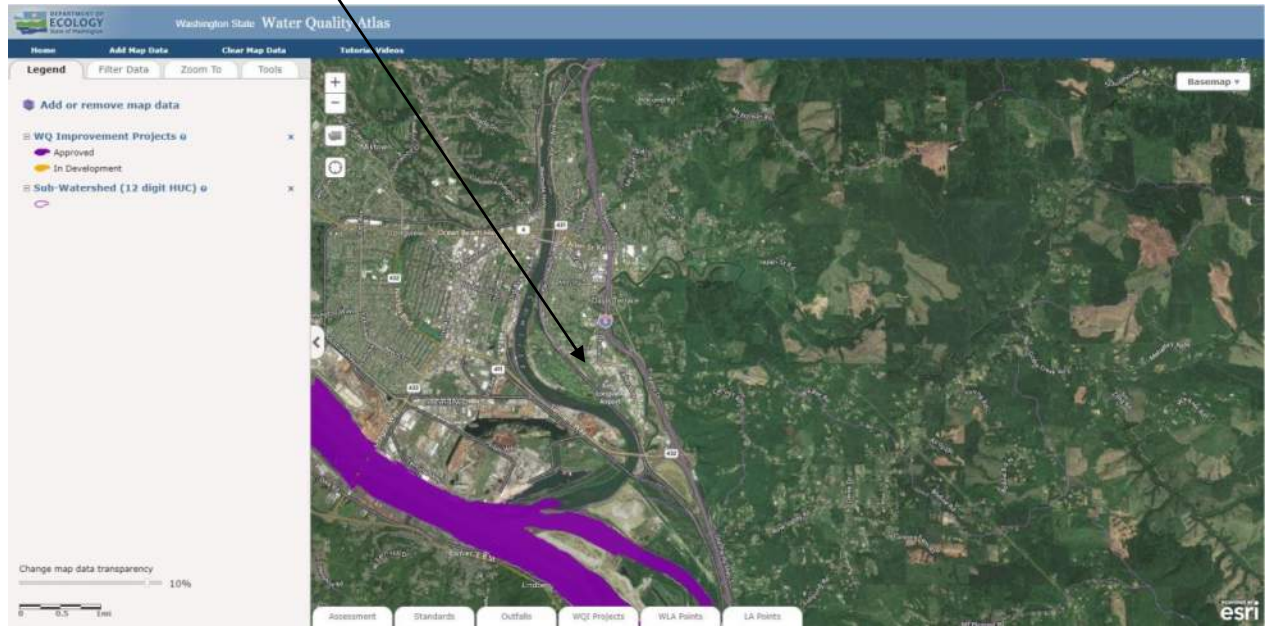
**H 2.2. Total Undisturbed Habitat Equation**

$$0\% \text{ A-U} + 6\% \text{ U habitat} + [(3\% \text{ A-M/L} + 8\% \text{ M/L land uses})/2] \text{ } = \underline{11.5\%}$$





Study Area



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 PRJ. MGR: Jacob  
 McManus  
 PROJ #: 3211.01

**Figure 8**  
 303(d) Listed Waters & TMDL's  
 UPS Kelso Delineation  
 Cushing Terrell  
 Cowlitz County Washington  
 Section 2, Township 7N, Range, 2W  
 W.M.



**Photo 1** was taken in the southwest portion of the property facing northwest.



**Photo 2** was taken in the southern portion of Wetland A facing north towards the historic drainage-ditch centerline. The ditch forms the lowest point topographically onsite and does not have any obvious outlets.



**Photo 3** was taken in the northwest portion of the property facing southwest towards the slough. This photo documents the upland environment and increase in elevation between the slough and Wetland A.



**Photo 4** was taken within Wetland A facing east towards the upland environment in the eastern portion of the property and South 13<sup>th</sup> Avenue.



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PRJ: JM  
PROJ.#: 3211.01

**Photoplate 1**  
UPS Kelso Delineation  
Cushing Terrell  
Cowlitz County,  
Washington

**APPENDIX A: WETLAND DETERMINATION DATA FORMS**

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

Project/Site: UPS Kelso Delineation City/County: Kelso/Cowlitz Sampling Date: 6/12/20  
 Applicant/Owner: Cushing Terrell State: WA Sampling Point: TP1  
 Investigator(s): Allison, Andrew and Johnson, Beau Section, Township, Range: Section 35, Township 8N, Range 2W  
 Landform (hillslope, terrace, etc.): Flood Plains Local relief: (concave, convex, none): convex Slope (%): 0-3%  
 Subregion (LRR): A Lat: 46.1269571° Long: -122.9017211° Datum: NAD83  
 Soil Map Unit Name: (17) Caples silty clay 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: TP-1 was located in the central portion of Cowlitz County Tax Parcel 243530100, east of Wetland A. Vegetation within this test plot consisted of herbaceous species. The hydrophytic vegetation criterion was met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses. Additionally, the hydric soil indicator Depleted Matrix (F6) was observed. However, there was no evidence of wetland hydrology within this test plot, therefore, it is not considered to be within a wetland area.	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> ft radius)				<b>Dominance Test Worksheet</b>
1. _____	_____ %	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____ %	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____ %	_____	_____	
4. _____	_____ %	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
50% = _____ 20% = _____	_____ %	=Total Cover		<b>Prevalence Index worksheet</b>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> ft. radius)				Total % Cover of: _____ Multiply by: _____
1. _____	_____ %	_____	_____	OBL species _____ x 1= _____
2. _____	_____ %	_____	_____	FACW species _____ x 2= _____
3. _____	_____ %	_____	_____	FAC species _____ x 3= _____
4. _____	_____ %	_____	_____	FACU species _____ x 4= _____
5. _____	_____ %	_____	_____	UPL species _____ x 5= _____
50% = _____ 20% = _____	_____ %	=Total Cover		Column Totals: _____ (A) _____ (B)
<b>Herb Stratum</b> (Plot size: <u>5</u> ft radius)				Prevalence Index = B/A = _____
1. <i>Lotus corniculatus</i>	30%	yes	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <i>*Poa spp.</i>	20%	yes	FAC	
3. <i>Agrostis capillaris</i>	20%	yes	FAC	
4. <i>Phalaris arundinacea</i>	10%	no	FACW	
5. <i>Cirsium vulgare</i>	5%	no	FACU	
6. <i>Cirsium arvense</i>	5%	no	FAC	
7. <i>Vicia americana</i>	5%	no	FAC	
8. <i>Juncus effusus</i>	3%	no	FACW	
9. <i>Rumex crispus</i>	2%	no	FAC	
10. _____	_____ %	_____	_____	
11. _____	_____ %	_____	_____	
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> ft radius)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____ %	_____	_____	
2. _____	_____ %	_____	_____	
50% = _____ 20% = _____	_____ %	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				
Remarks: The hydrophytic vegetation criterion has been met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.				

**SOIL**

Sampling Point: TP1

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/2	100%		%			silt loam	
8-16	10YR 4/1	99%	10YR 5/8	1%	C	M	silt loam	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky 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)

<sup>3</sup>Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Requirements for the hydric soil indicator Depleted Matrix (F6) have been satisfied given the presence of a soil layer with a matrix value of 4 or more and a chroma of 2 or less with observed redoximorphic features from 8 to 16 inches below ground surface.

**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: No evidence of wetland hydrology indicators observed within this test plot.

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

Project/Site: UPS Kelso Delineation City/County: Kelso/Cowlitz Sampling Date: 6/12/20  
 Applicant/Owner: Cushing Terrell State: WA Sampling Point: TP2  
 Investigator(s): Allison, Andrew and Johnson, Beau Section, Township, Range: Section 35, Township 8N, Range 2W  
 Landform (hillslope, terrace, etc.): Flood Plains Local relief: (concave, convex, none): Concave Slope (%): 0-3%  
 Subregion (LRR): A Lat: 46.1269517° Long: -122.9019352° Datum: NAD83  
 Soil Map Unit Name: (17) Caples silty clay 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: TP-2 was located in the central portion of Cowlitz County Tax Parcel 243530100, within the eastern portion of Wetland A. Vegetation within this test plot consisted of emergent species. The hydrophytic vegetation criterion was met via satisfying the Rapid Test for Hydrophytic Vegetation. Additionally, the hydric soil indicator Depleted Matrix (F6) was observed, along with the following wetland hydrology indicators; Saturation (A3) observed at a depth of 10 inches below ground surface and the secondary wetland hydrology indicators Geomorphic Position (D2) and a positive FAC-Neutral Test (D5). Given this test plot satisfied all three wetland indicator criteria, it is considered to be within a wetland area.	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> ft radius)				<b>Dominance Test Worksheet</b>
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	%	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	%	_____	_____	
4. _____	%	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC <u>100</u> (A/B)
50% = ___ 20% = ___	%	=Total Cover		<b>Prevalence Index worksheet</b>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> ft. radius)				Total % Cover of: _____ Multiply by: _____
1. _____	%	_____	_____	OBL species _____ x 1= _____
2. _____	%	_____	_____	FACW species _____ x 2= _____
3. _____	%	_____	_____	FAC species _____ x 3= _____
4. _____	%	_____	_____	FACU species _____ x 4= _____
5. _____	%	_____	_____	UPL species _____ x 5= _____
50% = ___ 20% = ___	%	=Total Cover		Column Totals: _____ (A) _____ (B)
<b>Herb Stratum</b> (Plot size: <u>5</u> ft radius)				Prevalence Index = B/A= _____
1. <i>Phalaris arundinacea</i>	95%	yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <i>Polygonum hydropiperoides</i>	20%	no	OBL	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	
6. _____	%	_____	_____	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
9. _____	%	_____	_____	
10. _____	%	_____	_____	
11. _____	%	_____	_____	
50% = <u>58</u> 20% = <u>23</u>	115%	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> ft radius)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	%	_____	_____	
2. _____	%	_____	_____	
50% = ___ 20% = ___	%	=Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks: Vegetation within this test plot satisfied requirements of the Rapid Test for Hydrophytic Vegetation.

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 4/2	100%		%			silt loam	
3-6	10YR 4/2	95%	7.5YR 4/6	5%	C	M	clayey silt loam	See Remarks Below
6-18	10YR 5/1	93%	10YR 5/8	7%	C	M	clayey silt	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky 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)

<sup>3</sup>Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Requirements for the hydric soil indicator Depleted Matrix (F6) have been satisfied given the presence of a soil layer with a matrix value of 4 or more and a chroma of 2 or less with observed redoximorphic features from 3 to 18 inches below ground surface.

**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): 18  
 Saturation Present? Yes  No  Depth (Inches): 10  
 (Includes Capillary fringe)

**Wetland Hydrology Present?** Yes  No

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

Remarks: The primary wetland hydrology indicator Saturation (A3) was observed at a depth of 10 inches below ground surface. Additionally, requirements for the secondary wetland hydrology indicators Geomorphic Position (D2) and a positive FAC-Neutral Test (D5) were satisfied.

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

Project/Site: UPS Kelso Delineation City/County: Kelso/Cowlitz Sampling Date: 6/12/20  
 Applicant/Owner: Cushing Terrell State: WA Sampling Point: TP3  
 Investigator(s): Allison, Andrew and Johnson, Beau Section, Township, Range: Section 35, Township 8N, Range 2W  
 Landform (hillslope, terrace, etc.): Flood Plains Local relief: (concave, convex, none): convex Slope (%): 0-3%  
 Subregion (LRR): A Lat: 46.126786° Long: -122.9029848° Datum: NAD83  
 Soil Map Unit Name: (17) Caples silty clay 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: TP-3 was located in the central portion of Cowlitz County Tax Parcel 243530100, west of Wetland A. Vegetation within this test plot consisted of scrub-shrub and herbaceous species. The hydrophytic vegetation criterion was met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses. Additionally, the hydric soil indicator Depleted Matrix (F6) was observed. However, there was no evidence of wetland hydrology within this test plot, therefore, it is not considered to be within a wetland area.	

**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>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</u> (A/B)
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
50% = ____ 20% = ____	%	=Total Cover		<b>Prevalence Index worksheet</b> 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= _____
<b>Sapling/Shrub Stratum (Plot size: 15 ft. radius)</b>				
1. <u>Rubus armeniacus</u>	50%	yes	FAC	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	
50% = <u>25</u> 20% = <u>10</u>	50%	=Total Cover		
<b>Herb Stratum (Plot size: 5 ft radius)</b>				
1. <u>Phalaris arundinacea</u>	50%	yes	FACW	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	
6. _____	%	_____	_____	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
9. _____	%	_____	_____	
10. _____	%	_____	_____	
11. _____	%	_____	_____	
50% = <u>25</u> 20% = <u>10</u>	50%	=Total Cover		
<b>Woody Vine Stratum (Plot size: 15 ft radius)</b>				
1. _____	%	_____	_____	
2. _____	%	_____	_____	
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>50%</u>				
<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

Remarks: The hydrophytic vegetation criterion has been met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.



**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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/2	100%		%			silt loam	
6-10	10YR 4/2	98%	10YR 5/8	2%	C	M	silt loam	See Remarks Below
10-18	10YR 5/1	95%	10YR 5/8	5%	C	M	silt	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky 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)

<sup>3</sup>Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Requirements for the hydric soil indicator Depleted Matrix (F6) have been satisfied given the presence of a soil layer with a matrix value of 4 or more and a chroma of 2 or less with observed redoximorphic features from 6 to 18 inches below ground surface.

**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: No evidence of wetland hydrology indicators observed within this test plot.

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

Project/Site: UPS Kelso Delineation City/County: Kelso/Cowlitz Sampling Date: 6/12/20  
 Applicant/Owner: Cushing Terrell State: WA Sampling Point: TP4  
 Investigator(s): Allison, Andrew and Johnson, Beau Section, Township, Range: Section 35, Township 8N, Range 2W  
 Landform (hillslope, terrace, etc.): Flood Plains Local relief: (concave, convex, none): concave Slope (%): 0-3%  
 Subregion (LRR): A Lat: 46.1267577° Long: -122.9028333° Datum: NAD83  
 Soil Map Unit Name: (17) Caples silty clay 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: TP-4 was located in the central portion of Cowlitz County Tax Parcel 243530100, within the western portion of Wetland A. Vegetation within this test plot consisted of scrub-shrub and emergent species. The hydrophytic vegetation criterion was met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses. Additionally, the hydric soil indicator Depleted Matrix (F6) was observed, along with the wetland hydrology indicator Oxidized Rhizospheres along Living Roots (C3). Given this test plot satisfied all three wetland indicator criteria, it is considered to be within a wetland area.	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> ft radius)				<b>Dominance Test Worksheet</b>
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	%	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	%	_____	_____	
4. _____	%	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC <u>100</u> (A/B)
50% = <u>   </u> 20% = <u>   </u>	%	=Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> ft. radius)				<b>Prevalence Index worksheet</b>
1. <u>Rubus armeniacus</u>	5%	yes	FAC	Total % Cover of: _____ Multiply by: _____
2. _____	%	_____	_____	OBL species _____ x 1= _____
3. _____	%	_____	_____	FACW species _____ x 2= _____
4. _____	%	_____	_____	FAC species _____ x 3= _____
5. _____	%	_____	_____	FACU species _____ x 4= _____
50% = <u>2.5</u> 20% = <u>1</u>	5%	=Total Cover		UPL species _____ x 5= _____
<b>Herb Stratum</b> (Plot size: <u>5</u> ft radius)				Column Totals: _____ (A) _____ (B)
1. <u>Phalaris arundinacea</u>	90%	yes	FACW	Prevalence Index = B/A= _____
2. <u>Polygonum hydropiperoides</u>	5%	no	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. _____	%	_____	_____	
4. _____	%	_____	_____	
5. _____	%	_____	_____	
6. _____	%	_____	_____	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
9. _____	%	_____	_____	
10. _____	%	_____	_____	
11. _____	%	_____	_____	
50% = <u>48</u> 20% = <u>19</u>	95%	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> ft radius)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	%	_____	_____	
2. _____	%	_____	_____	
50% = <u>   </u> 20% = <u>   </u>	%	=Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
% Bare Ground in Herb Stratum <u>5%</u>				

Remarks: The hydrophytic vegetation criterion has been met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

**SOIL**

Sampling Point: **TP4**

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	98%	7.5YR 5/8	2%	C	M	silt loam	See Remarks Below
4-8	10YR 4/2	97%	7.5YR 5/8	3%	C	M	silt loam	See Remarks Below
8-16	10YR 5/1	95%	7.5YR 5/8	5%	C	PL	clayey silt loam	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky 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)

<sup>3</sup>Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: Requirements for the hydric soil indicator Depleted Matrix (F6) have been satisfied given the presence of soil layers with matrix values of 4 or more and chromas of 2 or less with observed redoximorphic features from 0 to 16 inches below ground surface.

**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: Oxidized Rhizospheres along Living Roots (C3) were observed within this test plot.

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

Project/Site: UPS Kelso Delineation City/County: Kelso/Cowlitz Sampling Date: 10/6/2020  
 Applicant/Owner: Cushing Terrell State: WA Sampling Point: TP5  
 Investigator(s): McManus, Jacob Section, Township, Range: Section 35, Township 8N, Range 2W  
 Landform (hillslope, terrace, etc.): Flood Plains Local relief: (concave, convex, none): convex Slope (%): 0-3%  
 Subregion (LRR): A Lat: 46.12698006° Long: -122.9032693° Datum: NAD83  
 Soil Map Unit Name: (17) Caples silty clay 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: TP-5 was located in the western portion of Cowlitz County Tax Parcel 243530100, west of Wetland A. Vegetation within this test plot consisted of scrub-shrub and herbaceous species. The hydrophytic vegetation criterion was met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses. However, there was no evidence of hydric soil or wetland hydrology indicators within this test plot, therefore, it is not considered to be within a wetland area.	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> ft radius)				<b>Dominance Test Worksheet</b>
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	%			Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	%			
4. _____	%			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
50% = <u>   </u> 20% = <u>   </u>	%	=Total Cover		<b>Prevalence Index worksheet</b>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> ft. radius)				Total % Cover of: _____ Multiply by: _____
1. <u>Rubus armeniacus</u>	80%	yes	FAC	OBL species _____ x 1= _____
2. _____	%			FACW species _____ x 2= _____
3. _____	%			FAC species _____ x 3= _____
4. _____	%			FACU species _____ x 4= _____
5. _____	%			UPL species _____ x 5= _____
50% = <u>40</u> 20% = <u>16</u>	80%	=Total Cover		Column Totals: _____ (A) _____ (B)
<b>Herb Stratum</b> (Plot size: <u>5</u> ft radius)				Prevalence Index = B/A = _____
1. <u>Phalaris arundinacea</u>	70%	yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Lotus corniculatus</u>	30%	yes	FAC	
3. _____	%			
4. _____	%			
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> ft radius)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	%			
2. _____	%			
50% = <u>   </u> 20% = <u>   </u>	%	=Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>% Bare Ground in Herb Stratum</b> <u>0%</u>				

Remarks: The hydrophytic vegetation criterion has been met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

**SOIL**

Sampling Point: **TP5**

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/4	100%		%			silt loam	
11-16	10YR 3/2	99%	7.5 YR 5/8	1%	C	M	silt loam	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky 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)

<sup>3</sup>Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: No evidence of hydric soil indicators observed within this test plot.

**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: No evidence of wetland hydrology indicators observed within this test plot.

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

Project/Site: UPS Kelso Delineation City/County: Kelso/Cowlitz Sampling Date: 10/6/2020  
 Applicant/Owner: Cushing Terrell State: WA Sampling Point: TP6  
 Investigator(s): McManus, Jacob Section, Township, Range: Section 35, Township 8N, Range 2W  
 Landform (hillslope, terrace, etc.): Flood Plains Local relief: (concave, convex, none): convex Slope (%): 0-3%  
 Subregion (LRR): A Lat: 46.12698006° Long: -122.9032693° Datum: NAD83  
 Soil Map Unit Name: (17) Caples silty clay 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: TP-6 was located in the western portion of Cowlitz County Tax Parcel 243530100, west of Wetland A. Vegetation within this test plot consisted of scrub-shrub and herbaceous species. The hydrophytic vegetation criterion was met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses. However, there was no evidence of hydric soil or wetland hydrology indicators within this test plot, therefore, it is not considered to be within a wetland area.	

**VEGETATION – Use scientific names of plants.**

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> ft radius)				
1. _____	%			<b>Dominance Test Worksheet</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> ft. radius)				
1. <u>Rubus armeniacus</u>	90%	yes	FAC	<b>Prevalence Index worksheet</b> 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= _____
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = <u>45</u> 20% = <u>18</u>	90%	=Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5</u> ft radius)				
1. <u>Phalaris arundinacea</u>	50%	yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Lotus corniculatus</u>	20%	yes	FAC	
3. <u>Poa annua</u>	15%	no	FAC	
4. <u>Agrostis capillaris</u>	15%	no	FAC	
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> ft radius)				
1. _____	%			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: The hydrophytic vegetation criterion has been met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

**SOIL**

Sampling Point: **IP6**

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/3	100%		%			silt loam	
10-16	10YR 3/1	95%	7.5 YR 5/8	5%	C	M	silt loam	See Remarks Below
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**      Yes  No

Remarks: No evidence of hydric soil indicators observed within this test plot.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Algal Mat or crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Dry-Season Water Table (C2)
		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
		<input type="checkbox"/> Geomorphic Position (D2)
		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC Neutral Test (D5)
		<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
		<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (Inches):		<b>Wetland Hydrology Present?</b>
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (Inches):		
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (Inches):		

(Includes Capillary fringe)

**Yes  No**

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

Remarks: No evidence of wetland hydrology indicators observed within this test plot.

**APPENDIX B: WETLAND RATING FORM**

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Wetland name or number A

# RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A – UPS Kelso Delineation Date of site visit: 6/12/2020

Rated by: KT Wills Trained by Ecology? Yes X No      Date of training: 9/2016

HGM Class used for rating: Depressional Wetland has multiple HGM classes?      Y X N

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

Source of base aerial photo/map: Google Earth

**OVERALL WETLAND CATEGORY IV** (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

     Category III – Total score = 16 – 19

X Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	H M <input checked="" type="radio"/> L	
Landscape Potential	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	H M <input checked="" type="radio"/> L	
Value	H <input checked="" type="radio"/> M L	H M <input checked="" type="radio"/> L	H M <input checked="" type="radio"/> L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	6	5	3	<b>14</b>

**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	<input checked="" type="radio"/> N/A

Wetland name or number  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	5
Hydroperiods	D 1.4, H 1.2	5
Location of outlet <i>(can be added to map of hydroperiods)</i>	D 1.1, D 4.1	5
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	D 2.2, D 5.2	5
Map of the contributing basin	D 4.3, D 5.3	5
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	7
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	7

### 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 undisturbed 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 undisturbed 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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	



Wetland name or number   A  

**NO** – go to 6

**YES** – The wetland class is **Riverine**

**NOTE:** The Riverine unit can contain depressions that are filled with water when the river is not flooding

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

**NO** – go to 7

**YES** – The wetland class is **Depressional**

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

**NO** – go to 8

**YES** – The wetland class is **Depressional**

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

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

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

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

Wetland name or number A

<b>DEPRESSIONAL AND FLATS WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>D 1.0. Does the site have the potential to improve water quality?</b>	
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). <span style="float: right;">points = 3</span> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. <span style="float: right;">points = 2</span> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing <span style="float: right;">points = 1</span> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. <span style="float: right;">points = 1</span>	<b>3</b>
<b>D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes =</b> <span style="float: right;">No = 0</span>	<b>0</b>
<b>D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b> Wetland has persistent, ungrazed, plants > 95% of area <span style="float: right;">points = 5</span> Wetland has persistent, ungrazed, plants > ½ of area <span style="float: right;">points = 3</span> Wetland has persistent, ungrazed plants > 1/10 of area <span style="float: right;">points = 1</span> Wetland has persistent, ungrazed plants < 1/10 of area <span style="float: right;">points = 0</span>	<b>5</b>
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b> <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 <span style="float: right;">points = 4</span> Area seasonally ponded is > ¼ total area of wetland <span style="float: right;">points = 2</span> Area seasonally ponded is < ¼ total area of wetland <span style="float: right;">points = 0</span>	<b>0</b>
<b>Total for D 1</b>	<b>8</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = 1 <span style="float: right;">No = 0</span>
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 <span style="float: right;">No = 0</span>
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 <span style="float: right;">No = 0</span>
<b>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?</b>	Yes = 1 <span style="float: right;">No = 0</span>
Source	
<b>Total for D 2</b>	<b>1</b>

**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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>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?</b>	Yes = 1 <span style="float: right;">No = 0</span>
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 <span style="float: right;">No = 0</span>
<b>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 for the basin in which the unit is found)?</b>	Yes = 2 <span style="float: right;">No = 0</span>
<b>Total for D 3</b>	<b>1</b>

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

Wetland name or number A

**DEPRESSIONAL AND FLATS WETLANDS**

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

<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	4
Wetland has an intermittently flowing stream or 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	
<b>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.</b>		
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	
<b>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 wetland to the area of the wetland unit itself.</b>		
The area of the basin is less than 10 times the area of the unit	points = 5	3
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	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>10</b>

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

<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = 1 <u>No = 0</u>	0
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	<u>Yes = 1</u> No = 0	1
<b>D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at &gt;1 residence/ac, urban, commercial, agriculture, etc.)?</b>	Yes = 1 <u>No = 0</u>	0
<b>Total for D 5</b>	<b>Add the points in the boxes above</b>	<b>1</b>

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

<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>D 6.1. The unit is 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.</b>		
The wetland captures surface water that would otherwise flow down-gradient 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 down-gradient of unit.	points = 2	0
• Surface flooding problems are in a sub-basin farther down-gradient.	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: <u>No Outlet</u>	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 <u>No = 0</u>	0
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>

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

Wetland name or number 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 or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- 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**
- If the unit has a Forested class, check if:*
- The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

0

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 or ¼ 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
  - Seasonally flowing stream in, or adjacent to, the wetland
  - Lake Fringe wetland** **2 points**
  - Freshwater tidal wetland** **2 points**

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

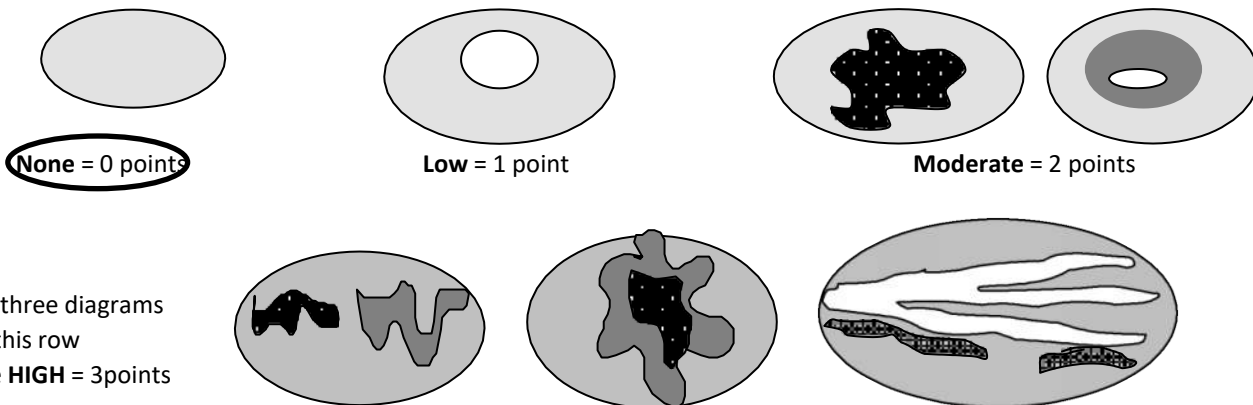
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

1

H 1.4. Interspersion of habitats

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



0

Wetland name or number A

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	2
<p>Total for H 1</p> <p style="text-align: right;">Add the points in the boxes above</p>	2

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

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>0%</u> + [(% moderate and low intensity land uses)/2] <u>1.6 = 1.5%</u> If</p> <p>total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p><u>&lt; 10%</u> of 1 km Polygon <span style="float: right;">points = 0</span></p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>6%</u>+ [(% moderate and low intensity land uses)/2] <u>5.5 = 11.5%</u></p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat <u>10-50% and &gt; 3 patches</u> <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>	1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><u>&gt; 50%</u> of 1 km Polygon is high intensity land use <span style="float: right;">points = (- 2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = 0</span></p>	-2
<p>Total for H 2</p> <p style="text-align: right;">Add the points in the boxes above</p>	-1

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

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

<p>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></p>	
<p>Site meets ANY of the following criteria: <span style="float: right;">points = 2</span></p> <p><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m <span style="float: right;">points = 1</span></p> <p><u>Site does not meet any of the criteria above</u> <span style="float: right;">points = 0</span></p>	

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



Wetland name or number   A  

## WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE:** *This question is independent of the land use between the wetland unit and the priority habitat.*

- **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 (*full descriptions in WDFW PHS report*).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **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) 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.  
  
**Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- **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.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **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.
- **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.
- **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.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number 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>	
<p><b>SC 1.0. Estuarine wetlands</b></p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <ul style="list-style-type: none"> <li>— The dominant water regime is tidal,</li> <li>— Vegetated, and</li> <li>— With a salinity greater than 0.5 ppt</li> </ul> <p style="text-align: right;">Yes –Go to <b>SC 1.1</b>    <b>No = Not an estuarine wetland</b></p>	
<p>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?</p> <p style="text-align: right;">Yes = <b>Category I</b>    No - Go to <b>SC 1.2</b></p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <ul style="list-style-type: none"> <li>— 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 page 25)</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</li> <li>— The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</li> </ul> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Category II</b></p>	Cat. I  Cat. II
<p><b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b></p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;">Yes – Go to <b>SC 2.2</b>    No – Go to <b>SC 2.3</b></p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;">Yes = <b>Category I</b>    <b>No = Not a WHCV</b></p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a></p> <p style="text-align: right;">Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b>    No = <b>Not a WHCV</b></p> <p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?</p> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Not a WHCV</b></p>	Cat. I
<p><b>SC 3.0. Bogs</b></p> <p>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></p> <p>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?</p> <p style="text-align: right;">Yes – Go to <b>SC 3.3</b>    <b>No – Go to SC 3.2</b></p> <p>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?</p> <p style="text-align: right;">Yes – Go to <b>SC 3.3</b>    <b>No = Is not a bog</b></p> <p>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?</p> <p style="text-align: right;">Yes = <b>Is a Category I bog</b>    No – Go to <b>SC 3.4</b></p> <p><b>NOTE:</b> 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.</p> <p>SC 3.4. Is an area with peats or mucks forested (&gt; 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?</p> <p style="text-align: right;">Yes = <b>Is a Category I bog</b>    No = <b>Is not a bog</b></p>	Cat. I

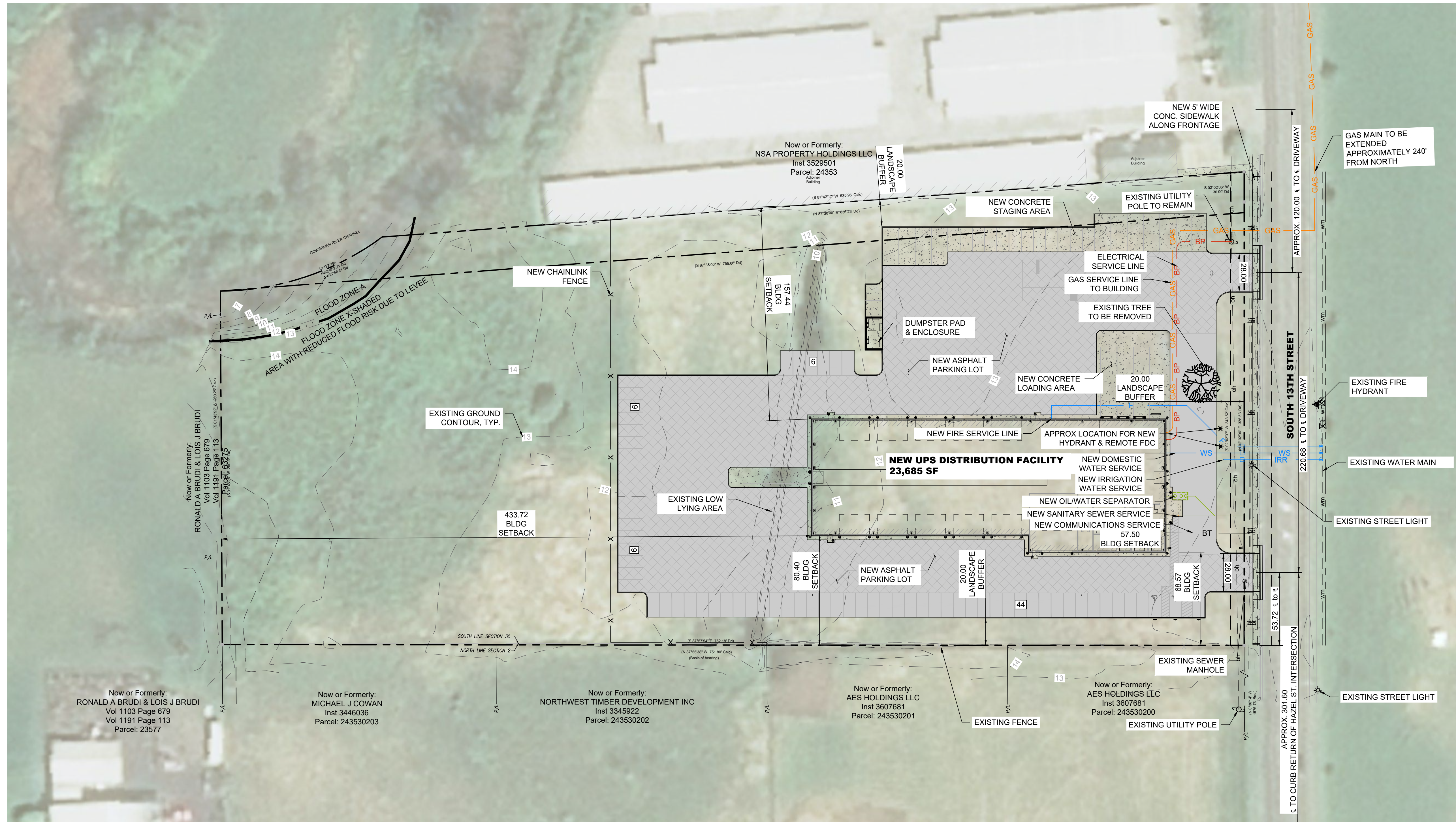


Wetland name or number A

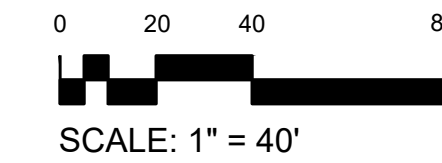
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**APPENDIX B: ORIGINAL SITE PLAN**

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1 OVERALL SITE PLAN



KELSO, WA  
UPS  
**PARCEL DISTRIBUTION FACILITY**  
Corps Ref #: NWS-2020-865

NOT FOR CONSTRUCTION - PRELIMINARY DESIGN

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PRE-APPLICATION EXHIBIT

06.03.2020  
DRAWN BY | SCHLEGEL  
CHECKED BY | GRAHAM  
REVISIONS

OVERALL SITE PLAN

C100

Call before you Dig  
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

