

CRITICAL AREAS REPORT

Revised August 2, 2022



Mid I-5 Industrial Park Kelso, Washington

Prepared for

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Prepared by Ecological Land Services, Inc.

1157 3rd Avenue, Suite 220A • Longview, WA 98632 (360) 578-1371 • Project Number 3665.02

SIGNATURE PAGE

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

Steffanie Taylor Senior Biologist/Principal

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INTRODUCTION

Ecological Land Services, Inc. (ELS) completed this report on behalf of Trammell Crow Portland Development, Inc. to document critical areas, including wetlands and fish and wildlife habitat conservation areas, within the study area of the subject property. The subject property totals approximately 120 acres and consists of Cowlitz County Tax Parcels 24095, 24385, and 439101 in the City of Kelso, Cowlitz County, Washington within Sections 12 and 13, Township 7N, Range 2W, W.M., (Figure 1). The study area subject to the critical areas delineation totals just over 93 acres and includes all of Parcel 24095, extending slightly into the northern portion of Parcel 24385 (Figures 2a and 2b). Field work occurred on November 30 and December 8, 2021. This report summarizes critical area findings within the study area in accordance with the City of Kelso Municipal Code (KMC), *Title 17 Unified Development Code Chapter 17.26 Environmentally Sensitive Areas*. This report has been updated to reflect a project name change from Segale Properties Site to the Mid I-5 Industrial Park.

SITE DESCRIPTION

The approximately 93-acre study area consists of Cowlitz County Tax Parcel 24095 and extends slightly into the northern portion of Parcel 2438524100. The property is currently zoned General Commercial (GC). An extension of Talley Way provides access to study area. This extension was constructed in approximately 2010 along with underground utilities and stormwater treatment facilities for street runoff (Photos 1 through 3; Figure 2). A utility easement with unimproved access road and above-ground utility poles extends along the eastern study area boundary. The State Route (SR) 432 on-ramp borders the study area to the north, the Burlington Northern Sante Fe (BNSF) railroad borders to the west, Interstate 5 (I-5) borders to the east, and undeveloped wetland area borders to the south.

The study area consists of approximately 15 to 20 feet of dredged material placed following the eruption of Mt. Saint Helens in 1980. The filled area is generally flat, with the southern extent dropping steeply approximately five feet in elevation. Side slopes of the fill are very steep, at an approximate 1:1 slope. Access points to the utility poles along the eastern study area boundary are approximately 10 feet lower in elevation than the top of the dredged material. Fill around the utility poles is gravel dominated. Low-lying areas surrounding the dredged material are within the 100-year floodplain of the Cowlitz, Coweeman, and Columbia Rivers. The confluence of the Cowletz River is approximately 1,000 feet north of the study area, and the confluence of the Cowlitz with the Columbia River is located approximately one mile to the west.

A large wetland system is located along the base of the fill slope along the eastern, western, and southern perimeters of the study area. The wetland is confined to a channel on the eastern perimeter between the dredged material and the I-5 on-ramp and is also confined to a channel on the western perimeter between the dredged material and BNSF railroad berm. The western wetland channel connects to the Coweeman River approximately 1,000 feet north of the study area, and the eastern wetland channel dead-ends near the northeast property boundary. The wetland unit also extends south connecting with Owl Creek approximately 3,800 feet south of the study area.

Vegetation is establishing on the dredged material and is dominated by red alder (*Alnus rubra*) saplings and trees, Scot's broom (*Cytisus scoparius*), and mosses. Side slopes along the eastern boundary are predominantly vegetated by blackberries (*Rubus spp.*) with other shrubs intermingled. Utility pole maintenance access points consist of maintained grasses. The southern fill slope is similarly dominated by blackberries and other shrubs. A small, forested area lies along the southwestern fill slope dominated by mature red alder with a moderately dense understory typical of floodplain forests. The fill slope north of this area is dominated by blackberries, Scot's broom, and grasses with native shrubs in a narrow strip near the base.

METHODOLOGY

The wetland delineation followed the Routine Determination Method according to the U.S. Army Corps of Engineers, *Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (U.S. Army Engineer Research and Development Center 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 Corps and as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by KMC *Chapter 17.26*.

State and federal environmental databases and Google Earth aerial imagery dating back to 1990 were reviewed prior to conducting a site visit and to evaluate offsite portions of the wetland unit that were inaccessible or outside the study area. The wetland boundary was delineated and test plot data was gathered on November 30 and December 8, 2021. Vegetation, soil, and hydrology information was collected from 13 test plots to determine the extent of the wetland in the study area and to document overall representative site conditions (Appendix A). Wetland boundaries were flagged in the study area only, using consecutively numbered, pink flagging and were surveyed by Gibbs & Olson, Inc. Test plot locations were also flagged and GPS coordinates taken with a hand-held GPS unit with sub-meter accuracy. The wetland boundary distinctively followed topography. Where there were gaps in wetland boundary flagging due to inaccessibility along steeps slopes and/or dense blackberry overgrowth, flags were connected based on surveyed topography. Changes in vegetation from hydrophytic-dominated species to a mix of hydrophytic, non-hydrophytic and upland species was apparent along the wetland boundary.

VEGETATION

Vegetation observed during the site visit is recorded on the attached wetland determination data forms (Appendix A). 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.

Uplands

The upland portion of the study area consisted of historically placed sandy dredged material that has become vegetated by red alder (FAC) saplings and trees, Scot's broom (FACU), blackberries (FAC to FACU), and weedy forbs, grasses and mosses. In addition to blackberries, the fill slopes also contain red osier dogwood (*Cornus sericea*, FACW), red elderberry (*Sambucus racemosa*, FACU), salmonberry (*Rubus* spectabilis, FAC), and snowberry (*Symphoricarpos* albus, FACU). Mature red alder trees are located near the base of the fill slope at the southern end of the western wetland channel.

Wetlands

Scrub-shrub wetland vegetation in the study area was primarily found near the base of the fill slope and consisted of willow species (*Salix* spp.), red-osier dogwood, rose spiraea (*Spiraea douglasii*, FACW), and Nootka rose (*Rosa nutkana*, FAC). Emergent wetland vegetation was heavily dominated by reed canarygrass (*Phalaris arundinacea*, FACW), as well as soft rush (*Juncus effusus*, FACW) and cattail (*Typha latifolia*, OBL). Aquatic vegetation included duckweed (*Lemna minor*, OBL); yellow pond-lily (*Nuphar lutea*, OBL) was visible on aerial photos. A wider variety of aquatic and emergent species are expected during the growing season as vegetation has senesced and was no longer visible during the site visit.

SOILS

The National Resources Conservation Service (NRCS) map depicts Caples silty clay loam, 0 to 3 percent slopes (17) over the entire study area (Figure 3). Caples silty clay loam consists of somewhat poorly drained soil on floodplains with a depth to water table between 18 and 24 inches below ground surface and is considered a hydric soil (NRCS 2021a and NRCS 2021b). The majority of the study area, however, consists of 15 to 20 feet of dredged material placed following the eruption of Mt. Saint Helens in 1980. Gravel-dominated fill has also been placed along the eastern study area boundary where the utility poles are located. Native soil appears to be present along the base of the fill slopes and within the wetland boundary.

Evaluated upland soils generally consisted of sand or coarse sand with no redoxomorphic features present. Some upland plots contained a thin layer of loam/loamy sand at the surface. Many of the wetland test plots were inundated or soils were unconsolidated so they were unable to be fully evaluated. Due to the presence of hydrophytic vegetation and wetland hydrology, these soils were assumed to be hydric. Test Plot 6 within with southern portion of the western channel of Wetland A appeared to also contain fill with soil textures consisting of sandy loam, clayey sand, and fine sand moving down through the profile. Redox concentrations were present starting at 6 inches below ground surface meeting hydric soil indicator Sandy Redox (S5). Specific soil information is recorded on the attached wetland determination data forms (Appendix A).

HYDROLOGY

Wetland A is a depressional and riverine wetland that is supported by groundwater, backflooding from the Coweeman and potentially the Cowlitz Rivers during flood events, highway runoff, and precipitation. Historically, hydrology within the wetland unit was likely much different. Construction of the BNSF railroad berm, SR 432, and I-5 has likely impounded water causing more ponding and altered drainage patterns. Hydrology likely interchanged freely with the Coweeman, Cowlitz, and Columbia Rivers prior to this infrastructure construction.

Based on Google Earth imagery, a channel extends the entire length of the railroad berm within the wetland unit that is primarily permanently flooded. This channel connects to the Coweeman River at the north end of the wetland unit and extends to Owl Creek approximately 1,000 feet south of the subject property, south of the Owl Creek Quarry Road (Figure 7). Owl Creek flows west, just south of this road, then turns south and flows into the Columbia River approximately one mile farther the south. Fish present in Owl Creek and the Coweeman River can likely access Wetland A during the wet season.

Water movement within the wetland appears to flow both north and south but is mainly stagnant. It is not clear where the break in flow is located; however, based on a previous topographical survey, the channel along the railroad berm deepens near Owl Creek Quarry Road near the south end of the study area. The wetland unit does extend south of Owl Creek Quarry Road, but it is not likely that this hydrology influences flow patterns in the wetland north of the road. The wetland south of Owl Creek Quarry Road is topographically lower than the study area, preventing hydrological input to northern portion of Wetland A; therefore, the southern wetland unit boundary was drawn along the north side of Owl Creek Quarry Road, as the wetland unit south of the road could be considered a separate wetland unit due to hydrological differences.

Wetland A contains multiple hydroperiods including permanently flooded, seasonally flooded, and saturated only, with permanently flooded being the majority hydroperiod. Numerous snags in a portion of the wetland just south of the study area are an indication that surface hydrology is increasing, which is killing the trees. These areas also lack shrubs, an indication of persistent water, although it may be shallow. Ponding is likely greater than 3 feet deep within the channel along the railroad berm and in other areas. Water levels do not appear to fluctuate more than approximately two feet based on water marks observed on shrubs in the western Wetland A

channel and no water marks were observed on rocks along the railroad berm. Open water is present in some areas all year long.

NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory (NWI) maps multiple wetland types over the entire study area including the following:

- Palustrine forested, seasonally flooded (PFOC)
- Palustrine, emergent, persistent/scrub-shrub, seasonally flooded (PEM1/SSC)
- Palustrine, unconsolidated bottom, permanently flooded, excavated (PUBHx)
- Riverine tidal, unconsolidated bottom, permanently flooded/tidal (R1UBV)
- Riverine, unknown perennial, unconsolidated bottom, permanently flooded (R5UBH)

NWI mapping within the subject property likely occurred prior to historic dredged material placement on the property. ELS did not observe any wetlands within the dredged material area. Wetland A was delineated within the mapped R1UBV, R5UBH, PFOC, and PEM1/SSC wetland types. ELS generally agrees with the R1UBH mapping along a portion of the western channel of the wetland, however, there are areas of scrub-shrub and emergent vegetation, as well as a small forested area in the southern portion of the finger. The channel also does not appear to be tidally influenced as there were no water marks or drift lines observed on the railroad berm (Photoplate 7). The R5UBH riverine channel along the eastern channel of Wetland A should extend the length of the eastern study area boundary. This channel appears to be permanently flooded containing both aquatic and emergent vegetation with a fringe of scrub-shrub vegetation near the base of the fill slope. The remaining wetland abutting the southern portion of the study area is best described as a permanently and seasonally flooded wetland with a mosaic of open water, emergent, and aquatic bed vegetation interspersed with areas of scrub-shrub vegetation and scattered trees.

CRITICAL AREAS SUMMARY

A portion of one wetland, Wetland A, was delineated within the study area extending offsite to the northwest and south. Wetland A is part of a large wetland complex that totals 7.58 acres onsite. According to the *Washington State Wetland Rating System for Western Washington:* 2014 Update (Rating System), Wetland A is a depressional and riverine Category II wetland scoring 8 points for water quality functions, 6 points for hydrologic functions, and 7 points for habitat functions for a total of 21 points. According to the Rating System, depressional and riverine wetlands should be rated as depressional. Vegetation classes include aquatic bed, emergent, and scrub-shrub, with some open water areas interspersed. There are areas of forested vegetation, but they do not comprise more than 10 percent of the wetland unit so are not considered a Cowardin class for rating purposes. The overall wetland unit contains multiple hydroperiods including permanently flooded, seasonally flooded, and saturated only, with permanently flooded being the majority hydroperiod. Hydrology in the wetland has been historically altered by construction of the BSNF railroad, SR 432, and I-5, as well as dredged material placement following the eruption of Mt. Saint Helens. Water movement within the wetland appears to flow both north and south but is mainly stagnant. Based on a previous

topographical survey, the break in flow appears to be located outside the study area near Owl Creek Quarry Road at the southern end of the subject property, which is where the wetland unit boundary was drawn.

A channel extends along the railroad berm the length of the overall wetland unit. This channel connects to the Coweeman River outside the study area approximately 1,000 feet north. The Coweeman River back-floods into this channel during flood events. The southern extent of this channel eventually connects to Owl Creek approximately 3,800 feet south of the study area. Both Owl Creek and the Coweeman River are fish-bearing, Type S (shoreline) waters. Salmonids are present within Owl Creek and the Coweeman River so the wetland may provide off-channel habitat for juvenile salmonids and other fish species.

Buffers

In accordance with *Table 1-A: Wetland Buffer Requirements* in KMC *17.26.050.D*, wetland buffers are based on the wetland category and habitat score from the Rating System. However, KMC *17.26.050.D.7* states "Buffer widths can be reduced below the minimums when site-specific, abrupt topographical changes such as cliffs, or human-made features such as levees, dikes, railroads, or streets, indicate that extending the buffer beyond such features will not improve wetland protection." The dredged material slopes along the wetland range between approximately 15 and 20 feet high with approximate 1:1 slopes. The dredged material beyond the top of the slope affords minimal protection to the wetland and is mainly vegetated with blackberries and Scot's broom, meeting this criterion. ELS, therefore, recommends a 50-foot buffer be applied to the wetland. Table 1 below summarizes the wetland characteristics.

Wetland	Size in Study Area	Category ¹ /HGM Class ² /Cowardin Class ³	Habitat Score ⁴	Buffer Width ⁵
А	7.58 acres	Category II / Depressional and Riverine / Aquatic Bed, Emergent, and Scrub-Shrub	7	50 feet
¹ Hruby 2014 ² NRCS 2008 ³ Cowardin et a ⁴ Washington ⁵ KMC 17.26	State Wetland Ro	nting System for Western Washington: 2014 Update		

Table 1. Wetland Summary.

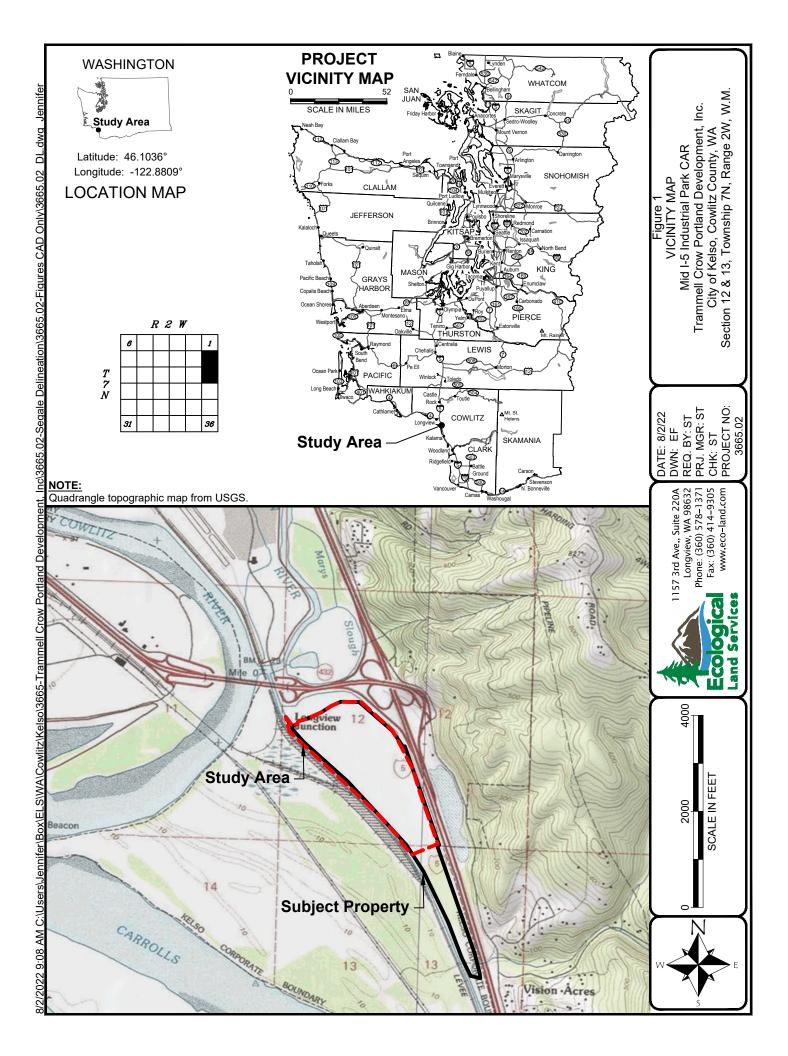
LIMITATIONS

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

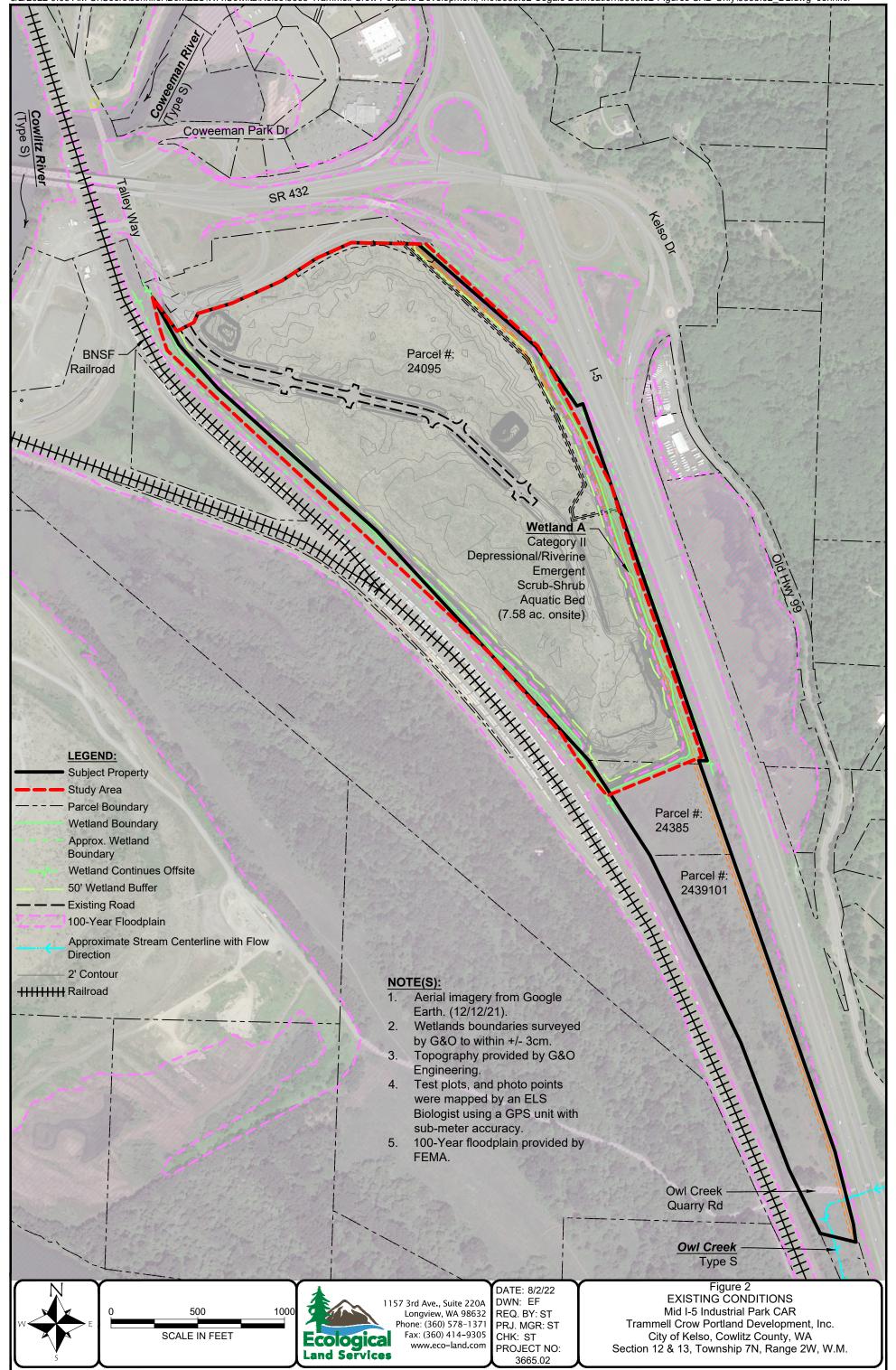
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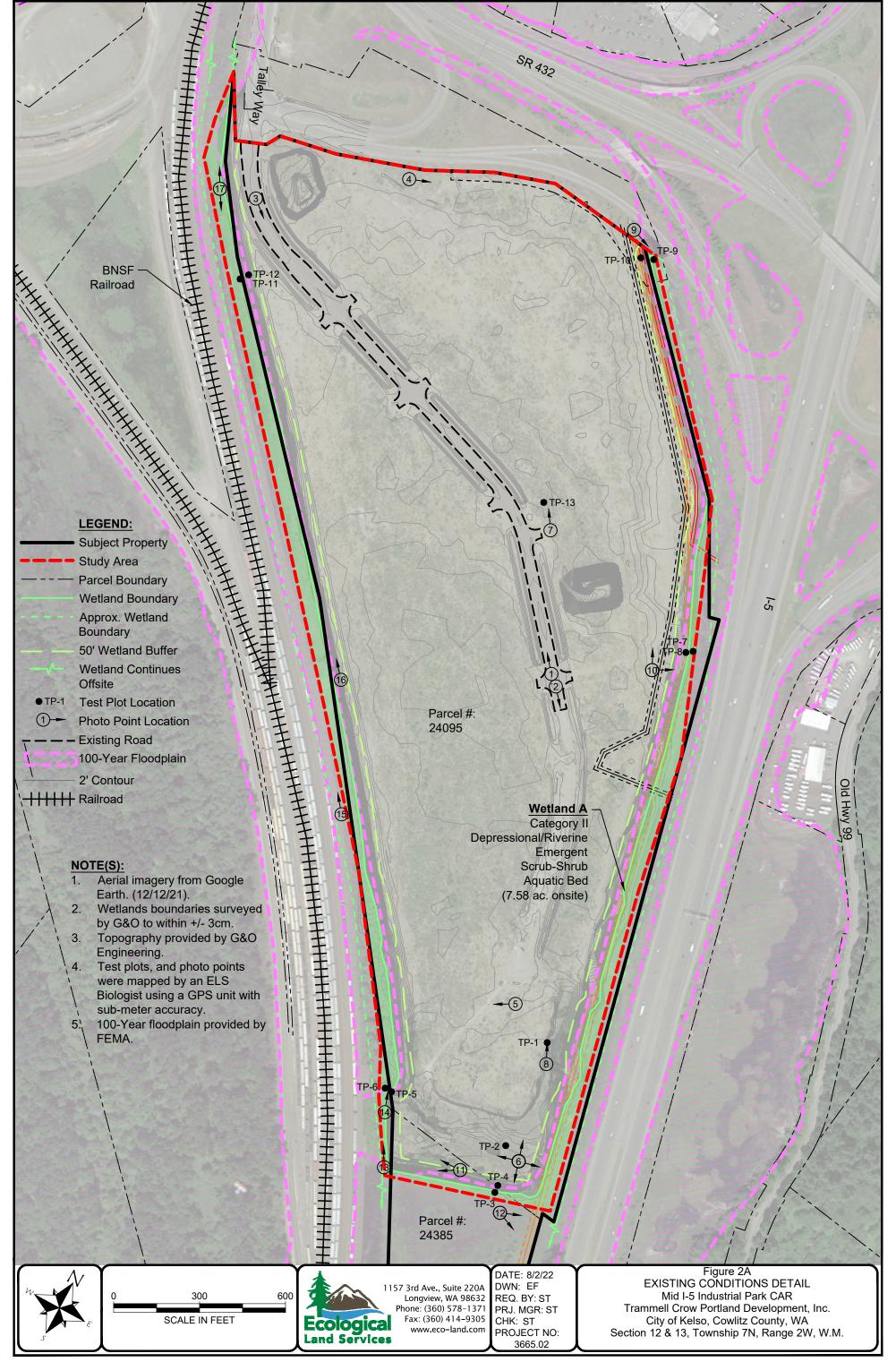
FIGURES AND PHOTOPLATES

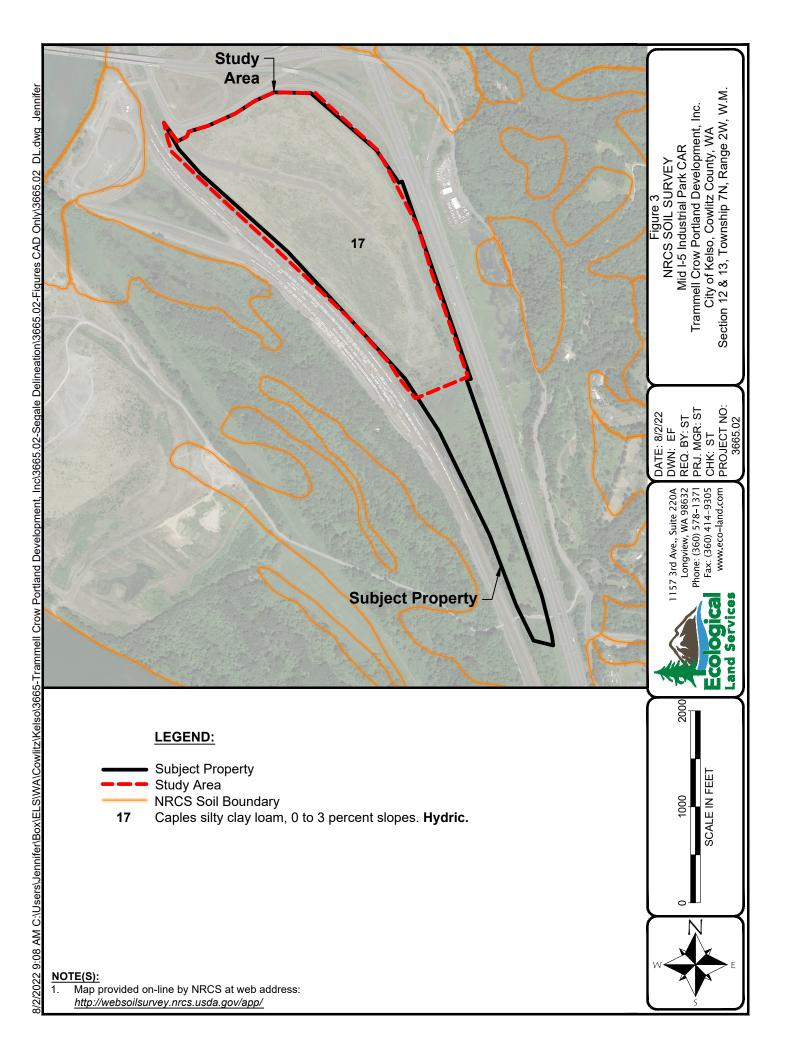


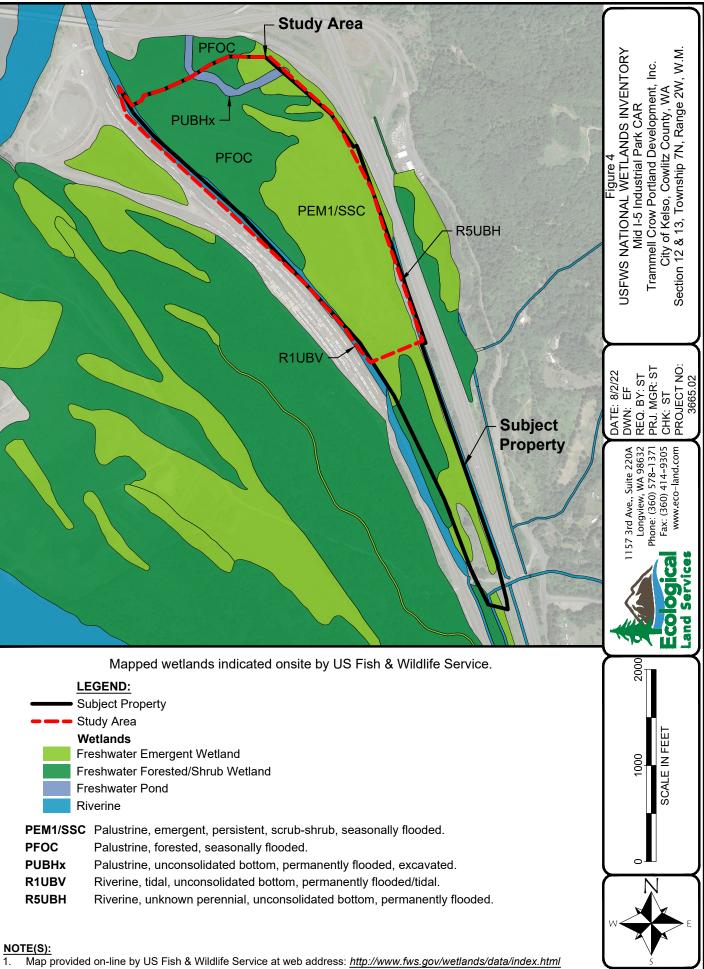
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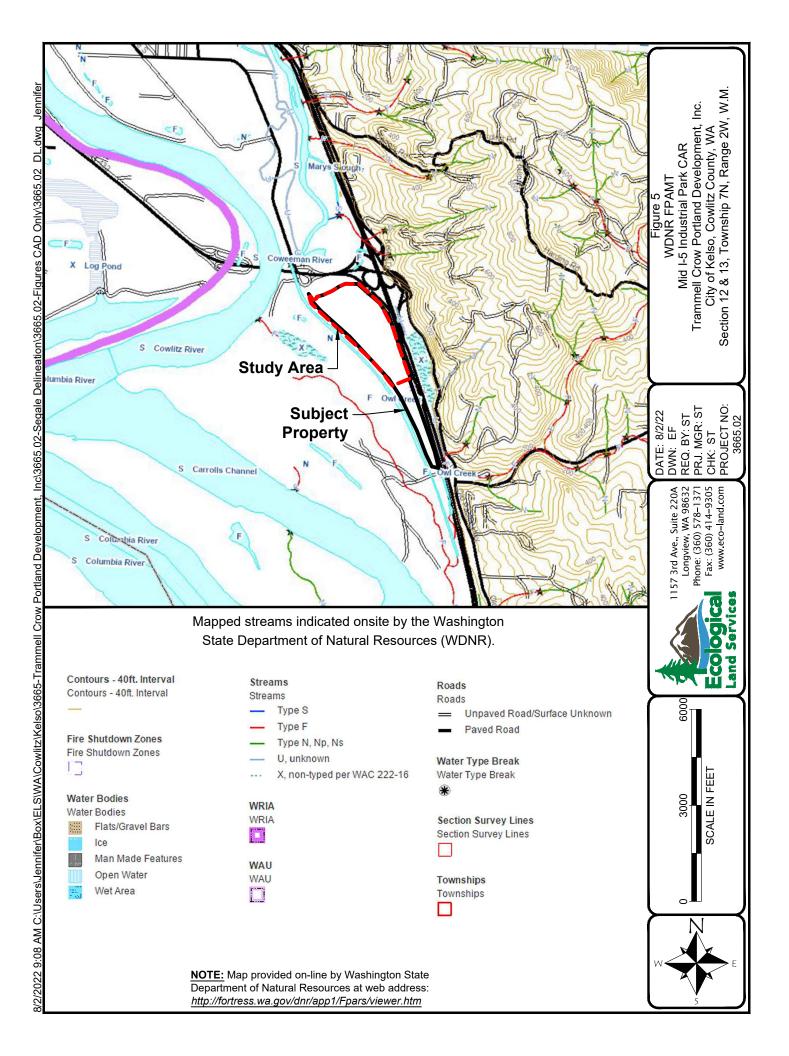


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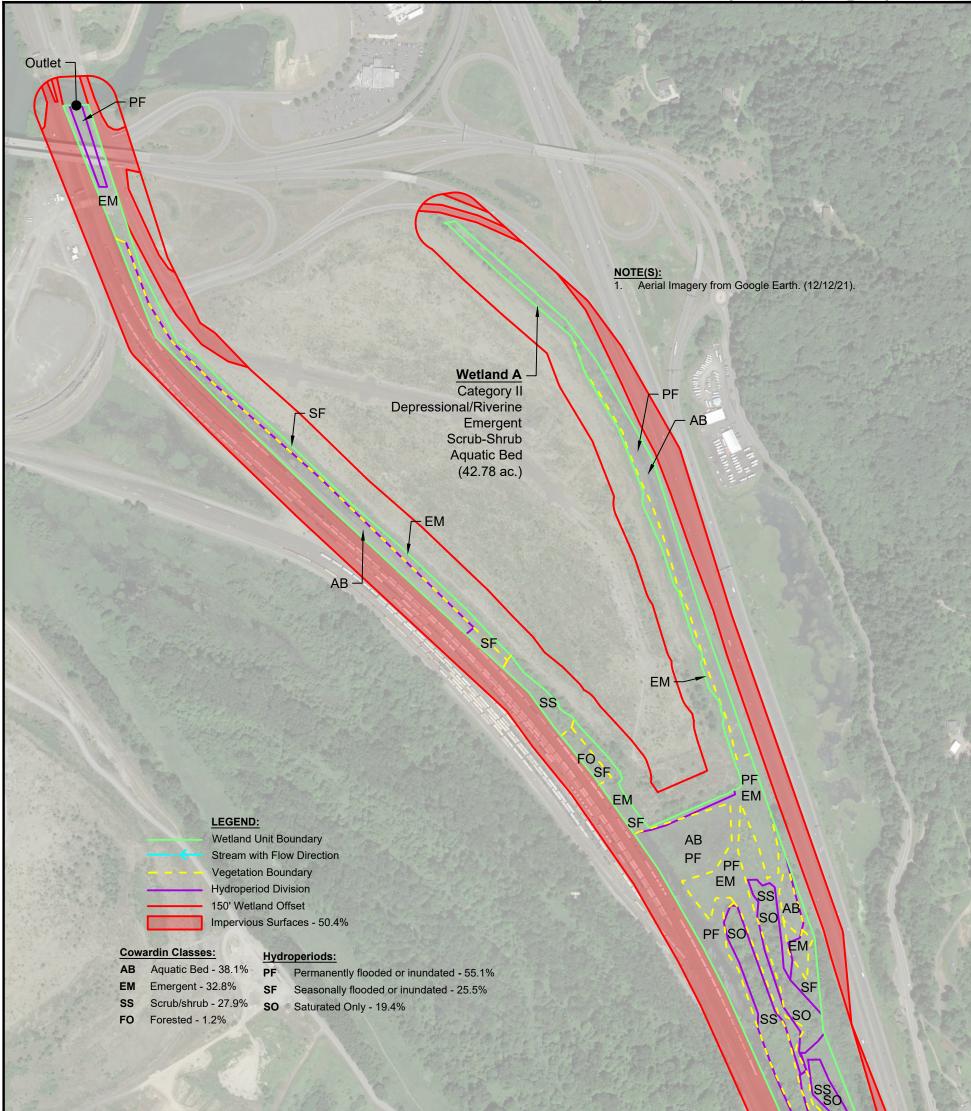




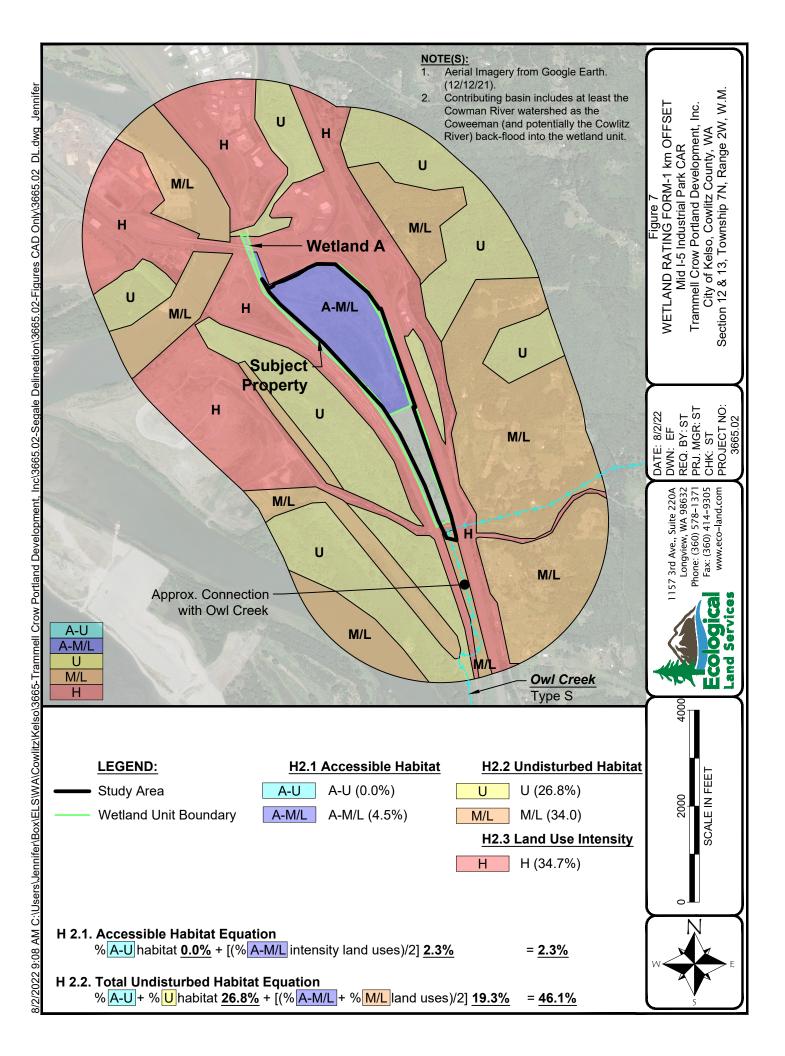




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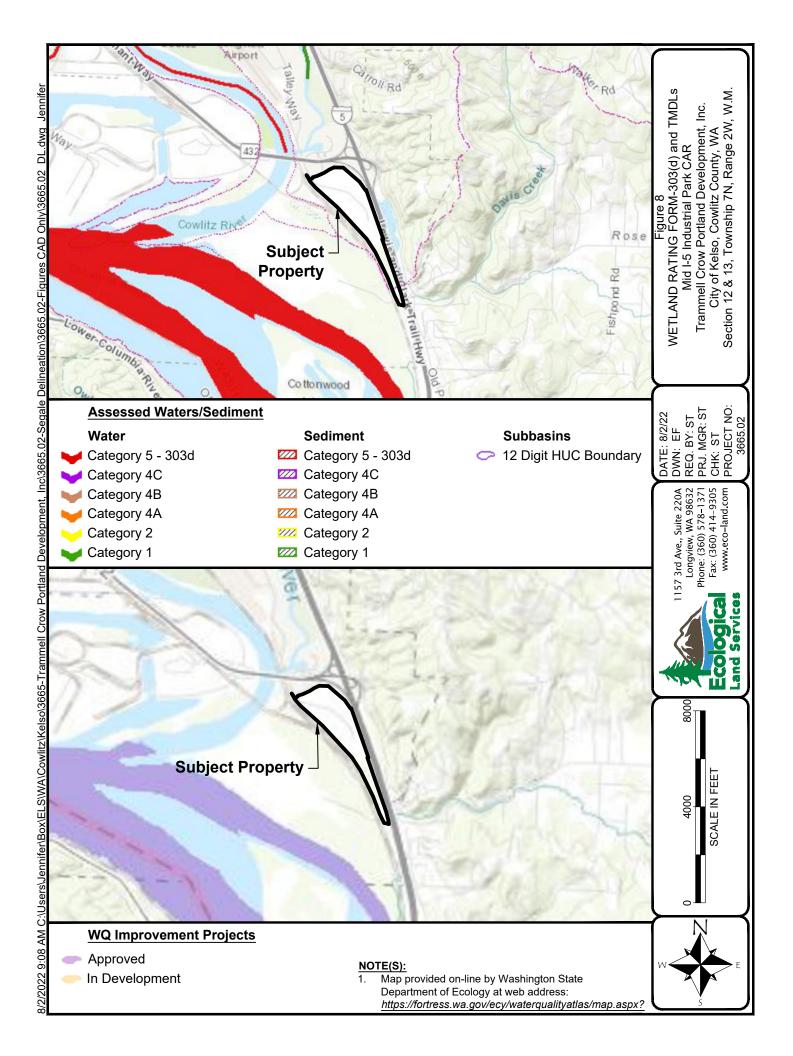




Photo 1: Southern end of Talley Way facing north in the central portion of the study area.

Photo 2: Southern end of Talley Way facing south in the central portion of the study area.





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Photoplate 1 Site Photos Mid I-5 Industrial Park CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington

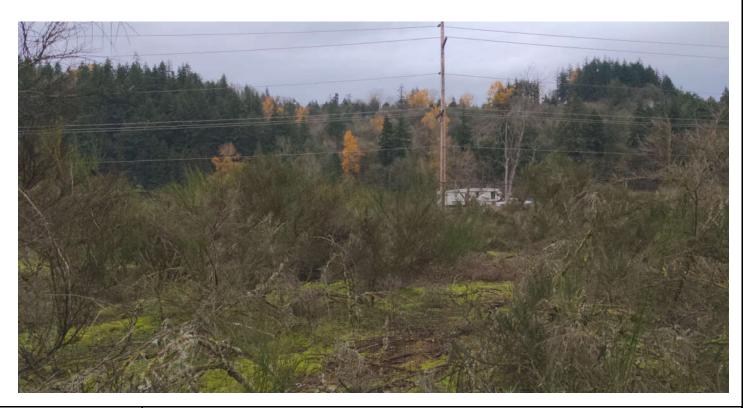


Photo 3: Northern end of Talley Way facing south at the northern end of the study area. Photo 5: Overall representative upland photo in southern portion of the study area facing southwest. Trees pictured in center right are offsite along a railroad berm.





Photo 4: Facing east along northern property line. ing south on I-5 offsite.





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Photo 6a: Facing east in a lower elevation area in the southern end of the study area. Truck and trailer pictured at center are travel-

Photoplate 2 Site Photos Mid I-5 Industrial Park CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington





Photo 6c: Facing west from the same location as Photo 6a. Railroad cars are visible on track offsite. Photo 7: Facing north from TP-13 located in the central portion of the study area.







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Photoplate 3 Site Photos CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington





Photo 9: Facing southeast at the northeastern finger of Wetland A. TP-10 is visible in the foreground. TP-9 and a wetland flag are visible downslope.

Photo 10b: Looking northerly at the utility access along the eastern portion of the study area in the vicinity of TP-8.









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Photoplate 4 Site Photos Mid I-5 Industrial Park CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington



Photo 11a: Facing west from the berm along the southern fill boundary, upslope of TP-4. Vegetation generally consists of blackberries, Scot's broom, and occasional alder trees. Photo 12a: Facing southeast at Wetland A from TP-3.





Photo 11b: Facing southwest from the same location as Photo 11a across Wetland A at the southern end of the study area.

Photo 12b: Facing south across Wetland A from TP-3.





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Photoplate 5 Site Photos Mid I-5 Industrial Park CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington



Photo 13: Facing north at the southern end of the western finger of Wetland A. The corner of the fill slope is visible at right.

Photo 15: Facing north at the channel that extends through the southern portion of the western finger of Wetland A. This channel may be maintained by beavers.





Photo 14: Facing north at the western finger of Wetland A from TP-5. TP-5 is located on fill approximately 4 feet higher than Wetland A. Photo 16: Facing north at the central portion of the western finger of Wetland A that contains permanent water.







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Photoplate 6 Site Photos Mid I-5 Industrial Park CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington



Photo 17a: Facing south from the northern portion of the western finger of Wetland A. Limited vegetation is present on the fill slope.

Photo 17b: Facing north from the same location as Photo 17a. Permanent flooding transitions to seasonal flooding near the light brown vegetation pictured in the upper right.



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Photoplate 7 Site Photos Mid I-5 Industrial Park CAR Trammell Crow Portland Development, Inc. Kelso, Cowlitz County, Washington

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

Project/Site: Segale Delineation	C	City/County: Kelso/Cowlitz C	ounty	Sampling Date: 12/8/2021
Applicant/Owner: Trammell Crow Company		State: WA		Sampling Point: TP-1
Investigator(s): Baker, Erin; Taylor, Steffanie		Section, Township, Range:	S12, T07N,	R02W
Landform (hillslope, terrace, etc.): Floodplain	Local r	relief: (concave, convex, non	e): Convex	Slope (%):0-3 %
Subregion (LRR): A2	Lat: 46.0991345	Long: -122.8761587		Datum: NAD83
Soil Map Unit Name: Caples silty clay loam	NWI classi	fication: PEM	1/SSC	
Are climatic / hydrologic conditions on the site typical f	Yes No (If no, explai	in Remarks.)		
Are Vegetation, Soil, or Hydrology significant	ly disturbed?	Are "Normal Circumstar	ices" present?	Yes⊠ No□
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map	showing sampli	ng point locations, trar	nsects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Yes 🛛 No		the Sampled Area		
Hydric Soils Present? Yes 🗌 No	XI	thin a Wetland?	Yes∏ N	oX
Wetland Hydrology Present? Yes 🗌 No				
Remarks: General study area is located on a large a	rea of dredge spoils. T	TP-1 was selected to investig	jate a topogra	phical low area in the southeast
portion of the parcel. The feature apeared to be an ab-	andoned excavated ro	oad bed. Neither hydric soils	nor wetland h	ydrology were present; therefore,
it was concluded that TP-1 was in an upland area.				

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status			
1. Populus balsamifera	40%	yes	FAC	Number of Dominant Species	2	(A)
2	%			That Are OBL, FACW, or FAC:		
3	%					
4.	%			Total Number of Dominant	3	(B)
50% = <u>20</u> 20% = <u>8</u>	40%	=Total Cover		Species Across All Strata:		
				Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC	67	(A/B)
1.	%			Prevalence Index worksheet	<u> </u>	(,,,,,,)
2.				Total % Cover of:	Multiply by:	
2	0/				x 1=	_
4	0/				x 2=	-
4 5	%			FAC species	x 3=	-
50% = 20% =	%	=Total Cover		FACU species	x 4=	-
Herb Stratum (Plot size: 5 ft radius)	70			UPL species	x 5=	-
1. Daucus carota	15%	VOC	FACU	Column Totals:	(A)	(B)
	10%	yes	FAC	Prevalence Index = E		_ (D)
		yes	FAC			
3	<u>%</u> %			Hydrophytic Vegetation Indicat		
4.				□ 1 – Rapid Test for Hydroph		
5						
6.	%			\Box 3 - Prevalence Index is \leq 3.0		
7	%			4 - Morphological Adaptatio		
8				supporting data in Remarks	s or on a separate	•
9	%			sheet)		
10	%			5 - Wetland Non-Vascular F	Plants ¹	
11	%					
$50\% = \underline{13} \ 20\% = \underline{5}$	25%	=Total Cover		Problematic Hydrophytic Ve	egetation ¹ (Explai	n)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)						
1	%			¹ Indicators of hydric soil and wetla		
2.	%			must be present, unless disturbed	d or problematic.	
50% = 20% =	%	=Total Cover				
00% = 20% =		-		Hydrophytic		
				Vegetation		
				Present?	Yes 🛛 No	
% Bare Ground in Herb Stratum 75%						
Remarks:*Various grasses have an assumed FAC i	indicator status	s. Bareground in	the vicinity	y of TP-1 was covered in leaf litter.		

SOIL		Sar	npling Point: <u>TP-1</u>
Profile Description: (Describe to the dept	h needed to document the indicator or confir	m the absence of indicators.)	
Denth Metrix	Deday Festures		
DepthMatrix(inches)Color (moist)%	Redox Features Color (moist) % Type ¹ I	Loc ² Texture	Remarks
0-16 10YR 4/3 100%	<u> </u>	Sand	Romano
<u> </u>	%		
%	%		
<u> </u>	%		
<u> </u>	<u> </u>		
<u> </u>	<u> </u>		
	<u> </u>		
	Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining,	M=Matrix
Hydric Soil Indicators: (Applicable to all L		Indicators for Problematic Hydr	
Histosal (A1)	Sandy Redox (S5)	2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA		12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	_	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetatio	
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)	Wetland hydrology must be pre- unless disturbed or problematic	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed of problematic	
Restrictive Layer (if present):			
Turner			
Type: Depth (inches):		Hydric Soil Present?	Yes⊡ No⊠
Remarks:		Tryune Son Tresent:	
itemarks.			
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (min. of one required; che	eck all that apply)	Secondary Indicators (2 o	r more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except MLR)	A 1, 2, 4A, 🛛 Water-Stained Leaves	(B9) (MI RA 1, 2,
High Water Table (A2)	and 4B)	4A, and 4B)	(Do) (MERA 1, 2,
\Box Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B1	0)
☐ Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Tak	,
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on A	
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roots		
☐ Algal Mat or crust (B4)	Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	,
☐ Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	FAC Neutral Test (D5)	1
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D	
□ Inundation Visible on Aerial Imagery (B7)		Frost-Heave Hummoc	
Sparsely Vegetated Concave Surface (B8		—	()
Field Observations:	,		
Surface Water Present? Yes	No 🛛 Depth (Inches):		
Water Table Present? Yes	No 🛛 Depth (Inches):	Wetland Hydrology Present?	
Saturation Present? Yes	No 🛛 Depth (Inches):		Yes 🗌 No 🛛
(Includes Capillary fringe)			
Describe Recorded Data (Stream gauge, mo	pnitoring well, aerial photos, previous inspections), il available:	
Remarks:			
-			

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

Project/Site: Segale Delineation		City/Cou			npling Date: <u>12/8/2021</u>
Applicant/Owner: Trammell Crow Company			State: V		pling Point: TP-2
Investigator(s): Baker, Erin; Taylor, Steffanie		Sectio	n, Townshi	p, Range: S12, T07N, R02V	V
Landform (hillslope, terrace, etc.): Floodplain		Local relief: (c	concave, co	onvex, none): Convex	Slope (%):0-3 %
Subregion (LRR): A2	Lat: 46.098	31422	Long: -12	2.8758418 C	Datum: NAD83
Soil Map Unit Name: Caples silty clay loam				NWI classification: PEM1/SS	C
Are climatic / hydrologic conditions on the site typical	for this time of	year? Yes	No (II	f no, explain Remarks.)	
Are Vegetation, Soil, or Hydrology significant	ly disturbed?	Are	e "Normal [`] (Circumstances" present? Yes	
Are Vegetation, Soil, or Hydrology naturally p				any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map				-	nt features, etc.
Hydrophytic Vegetation Present? Yes No				· · · ·	
Hydric Soils Present? Yes No			npled Area		
Wetland Hydrology Present? Yes No		within a V	Vetland?	Yes⊡ No⊠	
Remarks: General study area is located on a large a		spoils TP-2 wa	s selected	to investigate a topographical	low area in the southeast
portion of the parcel. No wetland indicators were pres					
VEGETATION – Use scientific names of pla	ants.				
	Absolute	Dominant	Indicator	Dominance Test Workshe	et
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status		
1.	<u>%</u>	000000	Olalas	Number of Dominant Speci	es 0 (A)
2	<u>%</u>			That Are OBL, FACW, or F	
3.	<u>%</u>			,,,	
4.	<u>%</u>			Total Number of Dominant	1 (B)
		Trial Original		Species Across All Strata:	<u> </u>
50% = 20% =	%	=Total Cover			
				Percent of Dominant Speci	es
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or F	
1. Cytisus scoparius	60%	yes	UPL	Prevalence Index worksh	
2.	%			Total % Cover of:	Multiply by:
3.	%			OBL species	x 1=
4.	%			FACW species	x 2=
5.	%			FAC species	x 3=
$50\% = 30\ 20\% = 12$	60%	=Total Cover		FACU species	x 4=
Herb Stratum (Plot size: 5 ft radius)				UPL species	x 5=
1. Mosses	100%			Column Totals:	(A) (B)
2.	%			Prevalence Ind	
3.	<u>%</u>			Hydrophytic Vegetation I	
	<u>%</u>			1 – Rapid Test for Hy	
4	<u>%</u>			\square \square \square $2 - Dominance Test i$	
5					
6	%			3 - Prevalence Index	
7	<u>%</u>			4 - Morphological Ada	
8					emarks or on a separate
9	<u>%</u>			sheet)	
10				5 - Wetland Non-Vas	cular Plants'
11.	%				
50% = 20% =	%	=Total Cover		Problematic Hydroph	ytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)					
1	%			¹ Indicators of hydric soil and	
2	%			must be present, unless dis	sturbed or problematic.
50% = 20% =	%	=Total Cover			
				Hydrophytic	
				Vegetation	
				Present?	Yes 🗌 No 🖾
% Bare Ground in Herb Stratum%					
Remarks: Trace amount of annual weeds present.					

SOIL

	needed to document the indicator or confirm			
Donth Matrix	Podey Features			
Depth <u>Matrix</u> (inches) Color (moist) %	Redox Features Color (moist) % Type ¹ L	.0C ²	Texture	Remarks
0-1 10YR 2/2 100%	<u>%</u>		Loam	Remains
<u>1-4</u> <u>10YR 4/3</u> <u>100%</u>	<u> </u>		Sand	
4-16 10YR 4/1 100%	%		Sand	
<u> </u>	<u> </u>			
<u>%</u>	%			
<u></u>		· · ·		
	%			
	%			
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand	Grains.	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all L			tors for Problemation	
Histosal (A1)	Sandy Redox (S5)	🗌 2 cm	Muck (A10)	•
Histic Epipedon (A2)	Stripped Matrix (S6)	🗌 Red	Parent Material (TF2	2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	1) 🗌 Very	Shallow Dark Surface	ce (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		r (Explain in Remark	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		(
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicate	ors of hydrophytic ve	netation and
Sandy Mucky Minerals (S1)			and hydrology must	
	Depleted Dark Surface (F7)		ss disturbed or proble	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	anio		omatio
Restrictive Layer (if present):				
Type:			-	
Depth (inches):		Hydric Soil	Present?	Yes⊡ No⊠
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:				
Wettania Hyarology maleators.				
Primary Indicators (min. of one required; che	ck all that apply)		Secondary Indicato	ors (2 or more required)
Primary Indicators (min. of one required; che				ors (2 or more required)
Primary Indicators (min. of one required; che	Water-Stained Leaves (B9) (except MLRA	A 1, 2, 4A,	Water-Stained L	_eaves (B9) (MLRA 1, 2,
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA and 4B)	A 1, 2, 4A,	Water-Stained L 4A, and 4B)	eaves (B9) (MLRA 1, 2,
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA	A 1, 2, 4A,	Water-Stained L 4A, and 4B)	Leaves (B9) (MLRA 1, 2,
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA and 4B)	A 1, 2, 4A,	Water-Stained L 4A, and 4B)	Leaves (B9) (MLRA 1, 2,
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11)	A 1, 2, 4A,	Water-Stained L 4A, and 4B) Drainage Patter	Leaves (B9) (MLRA 1, 2,
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 ☐ Water-Stained Leaves (B9) (except MLRA and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 		Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib	Leaves (B9) (MLRA 1, 2, ns (B10) Iter Table (C2) le on Aerial Imagery (C9)
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 □ Water-Stained Leaves (B9) (except MLRA and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roots 		Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Point	Leaves (B9) (MLRA 1, 2, rns (B10) Iter Table (C2) Ile on Aerial Imagery (C9) sition (D2)
Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or crust (B4)	 Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) 		□ Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ☑ Geomorphic Point □ Shallow Aquitar	Leaves (B9) (MLRA 1, 2, ns (B10) Iter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3)
Primary Indicators (min. of one required; che 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)	 Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 		 Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ⊠ Geomorphic Pote □ Shallow Aquitare □ FAC Neutral Test 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5)
Primary Indicators (min. of one required; che 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)	 Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 		 Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ⊠ Geomorphic Point □ Shallow Aquitar □ FAC Neutral Ter □ Raised Ant Mouting 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nnds (D6) (LRR A)
Primary Indicators (min. of one required; che 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)	 Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 		 Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ⊠ Geomorphic Pote □ Shallow Aquitare □ FAC Neutral Test 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nnds (D6) (LRR A)
Primary Indicators (min. of one required; che 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 and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 		 Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ⊠ Geomorphic Point □ Shallow Aquitar □ FAC Neutral Ter □ Raised Ant Mouting 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nnds (D6) (LRR A)
Primary Indicators (min. of one required; che 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) Field Observations:	 Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 		 Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ⊠ Geomorphic Point □ Shallow Aquitar □ FAC Neutral Ter □ Raised Ant Mouting 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nnds (D6) (LRR A)
Primary Indicators (min. of one required; che 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 Field Observations: Surface Water Present? Yes	□ Water-Stained Leaves (B9) (except MLRA and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roots □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks)) No ⊠ Depth (Inches):	(C3)	 Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib ⊠ Geomorphic Pos Shallow Aquitar FAC Neutral Tes Raised Ant Mout Frost-Heave Hu 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nnds (D6) (LRR A)
Primary Indicators (min. of one required; che 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 Field Observations: Surface Water Present? Yes Water Table Present? Yes	□ Water-Stained Leaves (B9) (except MLRA and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roots □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks)) No ⊠ Depth (Inches): No ⊠ Depth (Inches):	(C3)	 Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib ⊠ Geomorphic Point □ Shallow Aquitar □ FAC Neutral Ter □ Raised Ant Mouting 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) unds (D6) (LRR A) ummocks (D7)
Primary Indicators (min. of one required; che 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 Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present Pres	□ Water-Stained Leaves (B9) (except MLRA and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roots □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks)) No ⊠ Depth (Inches):	(C3)	 Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib ⊠ Geomorphic Pos Shallow Aquitar FAC Neutral Tes Raised Ant Mout Frost-Heave Hu 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nnds (D6) (LRR A)
Primary Indicators (min. of one required; che 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 Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe)	Water-Stained Leaves (B9) (except MLRA and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (Inches): No Depth (Inches): No Depth (Inches):	(C3) Wetland Hyd	 Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib ⊠ Geomorphic Pos Shallow Aquitar FAC Neutral Tes Raised Ant Mout Frost-Heave Hu 	Leaves (B9) (MLRA 1, 2, ns (B10) tter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) st (D5) unds (D6) (LRR A) ummocks (D7)
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Segale Delineation	City/County: Kelso/Cowlitz County	Sampling Date: 12/8/2021
Applicant/Owner: Trammell Crow Company	State: WA	Sampling Point: TP-3
Investigator(s): Baker, Erin; Taylor, Steffanie	Section, Township, Range: S12	, T07N, R02W
Landform (hillslope, terrace, etc.): Floodplain	Local relief: (concave, convex, none): C	oncave Slope (%):0-3 %
Subregion (LRR): A2 Lat: 46.0	977484 Long: -122.8756122	Datum: NAD83
Soil Map Unit Name: Caples silty clay loam	NWI classification	on: PEM1/SSC
Are climatic / hydrologic conditions on the site typical for this time	marks.)	
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, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area	
Hydric Soils Present? Yes X No	within a Wetland? Ye	es⊠ No⊡
Wetland Hydrology Present? Yes 🛛 No 🗌		
Remarks: General study area is located on a large area of dredg		
the parcel beyond the edge of dredge spoil placement and approx	imately 15 to 20 feet below the top of the di	redge spoils. All wetland indicators were
present; therefore, it was concluded that TP-3 was in a wetland.		

VEGETATION – Use scientific names of plants.

_		Absolute	Dominant	Indicator	Dominance Test Worksheet		
	ee Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status			
1.	Salix spp.*	40%	yes	FAC	Number of Dominant Species	5	(A)
2.		%	·		That Are OBL, FACW, or FAC:		
3.		%	·		Total Number of Dominant		
4.		%	<u> </u>		Species Across All Strata:	5	(B)
	$50\% = \underline{20} \ 20\% = \underline{8}$	40%	=Total Cover		Species Across All Strata:		
					Percent of Dominant Species		
Sa	upling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				That Are OBL, FACW, or FAC	100	(A/B)
1.	Cornus sericea	30%	ves	FACW	Prevalence Index worksheet	100	(,,,,,,)
2.	Spirea douglasii	15%	ves	FACW	Total % Cover of:	Multiply by:	
3.	ophoa acagiach	%		17.011		x 1=	
4.		%	·			x 2=	-
5.		%	·				-
0.	<u>50% = 23</u> 20% = <u>9</u>	45%	=Total Cover			x 3= x 4=	_
н	erb Stratum (Plot size: 5 ft radius)	4070				x 5=	_
1.	Lemna minor	50%	yes	OBL	· · · · · · · · · · · · · · · · · · ·	(A)	(B)
2.	Phalaris arundinacea	20%	ves	FACW	Prevalence Index = B	()	_ (D)
2. 3.			·	OBL			
-	Typha latifolia	10%	no	UBL	Hydrophytic Vegetation Indicate		
4.		%	·		□ 1 – Rapid Test for Hydrophy		
5.		%	·		2 – Dominance Test is >50%		
6.		%	·		3 - Prevalence Index is ≤3.0		
7.		%	·		4 - Morphological Adaptation		
8.		%			supporting data in Remarks	or on a separate	9
9.		%			sheet)		
10.		%			5 - Wetland Non-Vascular P	Plants ¹	
11.		%					
	50% = 40 20% = 16	80%	=Total Cover		Problematic Hydrophytic Ve	getation ¹ (Explai	n)
	oody Vine Stratum (Plot size: <u>15</u> ft radius)						
1.		%	<u>.</u>		¹ Indicators of hydric soil and wetla		
2.		%			must be present, unless disturbed	l or problematic.	
	50% = 20% =	%	=Total Cover				
	<u> </u>		-		Hydrophytic		
					Vegetation		_
0/	Data Cround in Llark Stratum 20**0/				Present?	Yes⊠ No	
	Bare Ground in Herb Stratum 20**%						
Re	marks:*Salix spp. has an assumed FAC indicator s	status. **Bare	e ground consist	ts of open v	water.		

SOIL Profile Description: (Describe to	the depth needed to docu	ument the indicato	or or confirm t	he absence of indicators.)	Sampling Point: <u>TP-3</u>
Depth Matrix		Redox Features			
(inches) Color (moist) %	6 Color (moist)		pe ¹ Loc	² Texture	Remarks
	%	%		Clay Loam	
	%	<u>%</u>			
	<u>%</u>	%			
	%	%	<u></u>		
· ·	%	<u> </u>			
	%	%			
	%	%			
¹ Type: C=Concentration, D=Depl			oated Sand Gr		ore Lining, M=Matrix
Hydric Soil Indicators: (Applicab				Indicators for Problem	atic Hydric Soils
☐ Histosal (A1) ☐ Histic Epipedon (A2)	Sandy Red Stripped Ma			☐ 2 cm Muck (A10) ☐ Red Parent Material (1	F2)
Black Histic (A3)		ky Mineral (F1) (ex	(cent MI RA 1)		
Hydrogen Sulfide (A4)	-	/ed Matrix (F2)		Other (Explain in Rem	
Depleted Below Dark Surface (A					untoy
☐ Thick Dark Surface (A12)	Redox Dark			³ Indicators of hydrophytic	vegetation and
Sandy Mucky Minerals (S1)		ark Surface (F7)		Wetland hydrology mu	ist be present,
Sandy Gleyed Matrix (S4)	Redox Dep			unless disturbed or pro	oblematic
Restrictive Layer (if present):					·
Туре:					
Depth (inches): Remarks: 1 inch of standing water				Hydric Soil Present?	Yes⊠ No⊡
HYDROLOGY Wetland Hydrology Indicators:					
Primary Indicators (min. of one requ	uired; check all that apply)			Secondary Indic	ators (2 or more required)
Surface Water (A1)		ned Leaves (B9) (e x	cept MLRA 1		d Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	and 4B	,		4A, and 4	-
Saturation (A3)	Salt Crust (Drainage Pat	
Water Marks (B1)	— •	ertebrates (B13)		-	Water Table (C2)
 Sediment Deposits (B2) Drift Deposits (B3) 		Sulfide Odor (C1) nizospheres along l	iving Poote (C		sible on Aerial Imagery (C9)
Algal Mat or crust (B4)		f Reduced Iron (C4		Shallow Aqui	
\square Iron Deposits (B5)		Reduction in Tilled		FAC Neutral	
Surface Soil Cracks (B6)		Stressed Plants (D'			lounds (D6) (LRR A)
☐ Inundation Visible on Aerial Ima		ain in Remarks)	.) (,		Hummocks (D7)
Sparsely Vegetated Concave Si		,			(_ ·)
Field Observations:					
Surface Water Present? Yes 🛛		pth (Inches): <u>1</u>			
Water Table Present? Yes		pth (Inches):		Vetland Hydrology Present	
Saturation Present? Yes] No 🗌 De	pth (Inches):	-		Yes 🛛 No 🗌
(Includes Capillary fringe) Describe Recorded Data (Stream g	auge, monitoring well, aeri	al photos, previous	inspections), it	f available:	
	,				
Remarks:Up to 6 inches of surface	water present within test pl	lot radius.			
Remarks:Up to 6 inches of surface	water present within test p	lot radius.			
Remarks:Up to 6 inches of surface	water present within test p	lot radius.			
Remarks:Up to 6 inches of surface	water present within test p	lot radius.			
Remarks:Up to 6 inches of surface	water present within test p	lot radius.			

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

Project/Site: Segale Delineation		City/Cou	unty: <u>Kelso</u>	/Cowlitz County Sam	pling Date: 12/8/2021		
Applicant/Owner: Trammell Crow Company			State: WA Sampling Point: TP-4				
Investigator(s): Baker, Erin; Taylor, Steffanie		Sectio	n, Townshi	p, Range: S12, T07N, R02W			
Landform (hillslope, terrace, etc.): Floodplain	Local relief: (concave, convex, none): Convex Slope (%):0-3 %						
Subregion (LRR): A2	Lat: 46.09	77601	Long: -12	2.8756306 Da	atum: NAD83		
Soil Map Unit Name: Caples silty clay loam				NWI classification: PEM1/SSC			
Are climatic / hydrologic conditions on the site typical feedback							
Are Vegetation, Soil, or Hydrology significant	y disturbed?	Are	e "Normal (Circumstances" present? Yes	🛛 No🗌		
Are Vegetation, Soil, or Hydrology naturally p	roblematic?	(If need	ed, explain	any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map	showing s	sampling po	int locati	ons, transects, importar	nt features, etc.		
Hydrophytic Vegetation Present? Yes 🛛 No [-			· · · ·			
Hydric Soils Present? Yes No [npled Area				
Wetland Hydrology Present? Yes No		within a V	Vetland?	Yes No 🛛			
Remarks: General study area is located on a large ar		spoils. TP-4 wa	as taken ne	ar the southernmost extent of	the parcel on a steep slope		
approximately 7 feet above TP-3. Neither hydric soil no							
		areiegy nere p					
VEGETATION – Use scientific names of pla	nts						
	Absolute	Dominant	Indicator	Dominance Test Workshee	et		
Tree Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status				
1. Salix spp.*	40%	yes	FAC	Number of Dominant Specie			
2	%			That Are OBL, FACW, or FA	C:		
3	%						
4	%			Total Number of Dominant	4 (B)		
$50\% = \underline{20} \ 20\% = \underline{8}$	40%	=Total Cover		Species Across All Strata:			
				Dereent of Deminant Specie			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				Percent of Dominant Specie That Are OBL, FACW, or FA			
1.	%			Prevalence Index workshe			
2.	%			Total % Cover of:	Multiply by:		
3.	%			OBL species	x 1=		
4.	%			FACW species	x 2=		
5.	%			FAC species	x 3=		
50% = 20% =	%	=Total Cover		FACU species	x 4=		
Herb Stratum (Plot size: 5 ft radius)	/0			UPL species	x 5=		
1. Various grasses and mosses*	55%	yes	FAC	Column Totals:	(A) (B)		
2. Phalaris arundinacea	30%	yes	FACW	Prevalence Inde			
3. Cirsium vulgare	15%	no	FACU	Hydrophytic Vegetation In			
4.	<u> </u>	110	TACO	1 – Rapid Test for Hyc			
				\boxtimes 2 – Dominance Test is			
5. 6.	<u> % </u> %			\square 3 - Prevalence Index is			
7	<u>%</u>			4 - Morphological Ada			
	<u>%</u>				marks or on a separate		
0	<u> </u>			sheet)	haiks of on a separate		
10.	<u> </u>	·		5 - Wetland Non-Vasc	ular Planta ¹		
11.	<u>~~</u> %	·					
$\frac{11.}{50\% = 50\ 20\% = 20}$	100%	=Total Cover			tic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size: 15 ft radius)	100 %				lic vegetation (Explain)		
	40%	VOC	FAC	Indicators of hydric soil and	watland bydrology		
1. Rubus armeniacus 2.	<u>40%</u>	yes	FAC	¹ Indicators of hydric soil and must be present, unless dist			
		=Total Cover		must be present, unless dist	urbed of problematic.		
$50\% = \underline{20} \ 20\% = \underline{8}$	40%	= rotar Cover					
				Hydrophytic Veretetion			
				Vegetation Present?			
% Bare Ground in Herb Stratum 0%				riesent?	Yes⊠ No⊡		
Remarks:*Assumed FAC indicator status.							
Nemarks. Assumed FAC Indicator status.							

SOIL

Profile Description: (Describe to the depth	needed to docum	ent the indicator or co	onfirm	the abser	nce of indicators.)	
Depth Matrix		Redox Features				
	Color (moist)	% Type ¹	Lo	c^2	Texture	Remarks
0-2 10YR 2/1 100%		%		<u> </u>	Sandy loam	
2-16 10YR 4/1 100%		%			Sand	
<u> </u>		%				
%		%				
<u> </u>		%				
<u>%</u>		%				
<u> </u>		%				
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix C		Sand C		² Lagation: DL Darg	Lining M. Motrix
Hydric Soil Indicators: (Applicable to all LF			Sanu G		² Location: PL=Pore cators for Problemat	
Histosal (A1)	Sandy Redox				cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix				ed Parent Material (TF	2)
Black Histic (A3)		Mineral (F1) (except M	ILRA 1		ery Shallow Dark Surfa	
☐ Hydrogen Sulfide (A4)	Loamy Gleyed			-	her (Explain in Remar	
Depleted Below Dark Surface (A11)	Depleted Matri					
Thick Dark Surface (A12)	Redox Dark Si	. ,		³ Indic	ators of hydrophytic v	egetation and
Sandy Mucky Minerals (S1)	Depleted Dark				etland hydrology must	
Sandy Gleved Matrix (S4)	Redox Depres	()			less disturbed or prob	
_ ; ; ()						
Restrictive Layer (if present):						
Туре:						
Depth (inches):				Hydric S	oil Present?	Yes⊡ No⊠
Remarks:				,		
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (min. of one required; chec	k all that apply)				Secondary Indicat	ors (2 or more required)
Surface Water (A1)	U Matar Stainad	Leaves (B9) (except N		1 2 11	UNeter Steined	Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	and 4B)			1, 2, 4A,	4A, and 4B	
\Box Saturation (A3)	Salt Crust (B1	1)			Drainage Patte	
Water Marks (B1)		-			Dry-Season W	
		 Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 				
Sediment Deposits (B2)			Dente ((00)		ble on Aerial Imagery (C9)
Drift Deposits (B3)		spheres along Living R	Roots ((C3)		
Algal Mat or crust (B4)	Presence of R		(00)		Shallow Aquita	
Iron Deposits (B5)		eduction in Tilled Soils (FAC Neutral Te	
Surface Soil Cracks (B6)		essed Plants (D1) (LRR	R A)			unds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)	Other (Explain	in Remarks)			Frost-Heave H	ummocks (D7)
Sparsely Vegetated Concave Surface (B8)						
Field Observations:						
Surface Water Present? Yes		(Inches):	- I,	Watland L	hydrology Brocont?	
Water Table Present?YesSaturation Present?Yes		(Inches):		wettand r	lydrology Present?	Yes 🗌 No 🖂
(Includes Capillary fringe)	No 🛛 Depth	(Inches):	ł			
Describe Recorded Data (Stream gauge, mor	nitoring well, aerial p	hotos, previous inspect	tions).	if available):	
	5 , , , , , , , , , ,	····,				
Remarks:						

Project/Site: Segale Delineation		City/Co	unty: Kelso	/Cowlitz County Sa	ampling Date: 12/8/2021
Applicant/Owner: Trammell Crow Company			State: V		mpling Point: TP-5
Investigator(s): Baker, Erin; Taylor, Steffanie		Sectio	n, Townshi	p, Range: S12, T07N, R02	2W
Landform (hillslope, terrace, etc.): Floodplain		Local relief: (c	concave, co	onvex, none): Convex	Slope (%):0-3 %
Subregion (LRR): A2	Lat: 46.09	79105	Long: -12	2.8775998	Datum: NAD83
Soil Map Unit Name: Caples silty clay loam				NWI classification: PEM1/S	SC
Are climatic / hydrologic conditions on the site typical f					
Are Vegetation, Soil, or Hydrology significant				Circumstances" present? Ye	es⊠ No⊡
Are Vegetation, Soil, or Hydrology naturally p	roblematic?	(If need	ed, explain	any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing s	sampling po	int locati	ons, transects, import	ant features, etc.
Hydrophytic Vegetation Present? Yes 🛛 No [7			· · · · · · · · · · · · · · · · · · ·	
Hydric Soils Present? Yes No			npled Area		7
Wetland Hydrology Present? Yes Ves No		within a V	Vetland?	Yes⊡ No⊠	
Remarks: General study area is located on a large ar		spoils. TP-5 wa	as taken in	the southwest portion of the	e parcel on a steep slope
approximately 4 feet above TP-6. Neither hydric soil neither hydri					
	-				-
VEGETATION – Use scientific names of pla	ints.				
	Absolute	Dominant	Indicator	Dominance Test Works	heet
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status		
1. Alnus rubra	30%	yes	FAC	Number of Dominant Spe	cies 3 (A)
2.	%	·		That Are OBL, FACW, or	
3.	%			-	
4.	%	·	-	Total Number of Dominan	4 (D)
$50\% = 15\ 20\% = 6$	30%	=Total Cover		Species Across All Strata	: ()
Combine (Ohmuh, Chartum (District AF ft. redive)				Percent of Dominant Spec	
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> radius)	000/			That Are OBL, FACW, or	FAC <u>75</u> (A/B)
1. <u>Cytisus scoparius</u>	20%	yes	UPL	Prevalence Index works	
2	<u>%</u> %	·		Total % Cover of:	Multiply by:
3	<u>%</u>	·		OBL species	x 1=
4	<u> % </u> %	·		FACW species	x 2=
5. 50% = 10 20% = 4	20%	=Total Cover		FACU species	x 3= x 4=
$\frac{10}{10} \frac{20\%}{20\%} = \frac{4}{20\%}$	20%			UPL species	
1. Various grasses and weeds*	90%	yes	FAC	Column Totals:	(A) (B)
2.	<u> </u>	yes	170	Prevalence In	
3.	<u> </u>	·		Hydrophytic Vegetation	
4.	%	·		1 – Rapid Test for F	
5.	%	·		2 – Dominance Tes	
6.	%	·		3 - Prevalence Inde	
7	%	·		4 - Morphological A	
8.	%	·			Remarks or on a separate
9.	%	·		sheet)	
10.	%	·		5 - Wetland Non-Va	iscular Plants ¹
11.	%	·			
50% = 45 20% = 18	90%	=Total Cover		Problematic Hydrop	hytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)					
1. Rubus armeniacus	30%	yes	FAC	¹ Indicators of hydric soil a	nd wetland hydrology
2.	%			must be present, unless d	
	30%	=Total Cover			
$50\% = \underline{15} \ 20\% = \underline{6}$				Hydrophytic	
				Vegetation	
				Present?	Yes 🛛 No
% Bare Ground in Herb Stratum <u>10%</u>					
Remarks:*Asssumed FAC indicator status.				·	

SOIL								Sampling Point: <u>TP5</u>
Profile D	escription: (Desc	ribe to the dep	th needed to docu	ment the ind	icator or confi	rm the	absence of indicators.)	
Depth	Matrix			Redox Feat			_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
<u>0-15</u> 15-16	10YR 4/2 10YR 4/1	<u> 100% </u>		<u>%</u> %			Sand Sand	
	10YR5/3	2%		<u> </u>	·		Clay	See Remarks Below
		%		%				
		%		%				
		%		%				
		<u>%</u>		%				·
	C. Concentration	<u> </u>	A Doducod Motrix	%	or Coated San	d Croin	2L_postion: DL_Dor	
			M=Reduced Matrix, LRRs, unless othe			u Grain	s. ² Location: PL=Por Indicators for Problema	
Histos			Sandy Redo		/		\Box 2 cm Muck (A10)	
	Epipedon (A2)		Stripped Ma				Red Parent Material (TI	F2)
Black	Histic (A3)		Loamy Muck	ky Mineral (F1) (except MLR	A 1)	Very Shallow Dark Surf	ace (TF12)
Hydro	ogen Sulfide (A4)		Loamy Gley	ed Matrix (F2))		Other (Explain in Rema	ırks)
	eted Below Dark Su		Depleted Ma	atrix (F3)				
	Dark Surface (A12		Redox Dark				³ Indicators of hydrophytic v	
-	y Mucky Minerals (Depleted Da		7)		Wetland hydrology mus	
Sandy	y Gleyed Matrix (S4	4)	Redox Depresentation	essions (F8)			unless disturbed or pro	Diematic
Restricti	ve Layer (if prese	nt):						
Type:								
Depth (in	iches):					Hy	dric Soil Present?	Yes⊡ No⊠
Remarks	: Clay inclusions p	resent between	15 and 15 inches de	epth.				
HYDRO	LOGY							
	Hydrology Indica	tors:						
	ndicators (min. of o		eck all that apply)				Secondary Indica	tors (2 or more required)
	ce Water (A1)		U Water-Staine	ad Laavas (B		2412		Leaves (B9) (MLRA 1, 2,
	Water Table (A2)		and 4B)			\A I, <u>2</u> ,	4A, and 4I	
-	ation (A3)		Salt Crust (E				Drainage Patt	
	Marks (B1)		Aquatic Inve		3)		Dry-Season W	
	nent Deposits (B2)		Hydrogen Su					ible on Aerial Imagery (C9)
Drift D	Deposits (B3)		Oxidized Rh			ts (C3)	🗌 Geomorphic F	
🗌 Algal	Mat or crust (B4)		Presence of	Reduced Iror	n (C4)		Shallow Aquita	ard (D3)
🗌 Iron D	eposits (B5)		Recent Iron	Reduction in	Tilled Soils (C6)	FAC Neutral T	est (D5)
Surfac	ce Soil Cracks (B6))	Stunted or S	tressed Plant	s (D1) (LRR A))	Raised Ant Mo	ounds (D6) (LRR A)
🗌 Inund	ation Visible on Ae	rial Imagery (B7) 🗌 Other (Expla	ain in Remark	s)		Frost-Heave H	lummocks (D7)
	ely Vegetated Con	cave Surface (E	38)					
	servations:							
	Water Present?	Yes 🗌		oth (Inches):				
	able Present? In Present?	Yes 🗌		oth (Inches):		wet	land Hydrology Present?	Yes 🗌 No 🖂
	Capillary fringe)	Yes 🗌	No 🛛 🛛 Dep	oth (Inches):				
		tream daude. m	onitoring well, aeria	l photos, prev	vious inspectior	ns). if av	ailable:	
		3 3 3 3	j ,	1,1		- / 1		
Remarks								

Project/Site: Segale Delineation		City/Co	untv: Kelso	/Cowlitz County Sampling Date: 12/8/2021
Applicant/Owner: Trammell Crow Company			State: V	
Investigator(s): Baker, Erin; Taylor, Steffanie		Sectio		p, Range: S12, T07N, R02W
Landform (hillslope, terrace, etc.): Floodplain				nvex, none): Concave Slope (%):0-3 %
Subregion (LRR): A2	Lat: 46.09			2.8776484 Datum: NAD83
Soil Map Unit Name: Caples silty clay loam	Eut. 40.00	10000		NWI classification: PEM1/SSC
Are climatic / hydrologic conditions on the site typical	for this time of	fvear? Yes		
Are Vegetation, Soil, or Hydrology significar				Circumstances" present? Yes \square No \square
Are Vegetation, Soil, or Hydrology naturally				any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing s	•	•	-
		Is the Sar	npled Area	3
		within a V		Yes⊠ No⊡
Wetland Hydrology Present? Yes 🛛 No				with TD 5 was taken in the southwast parties of the
				with TP-5, was taken in the southwest portion of the
				e spoil slope. Evidence of beaver activity in the vicinity of
TP-6All wetland indicators were present; therefore, it	was concluded	d that TP-6 was	s in a wetlar	nd.
VEGETATION – Use scientific names of pl	ante			
	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status	
1. <u>Salix spp.*</u>	60%	yes	FAC	Number of Dominant Species <u>6</u> (A)
2. Alnus rubra	30%	yes	FAC	That Are OBL, FACW, or FAC:
3.	%			1
4.	%			Total Number of Dominant 6 (B)
50% = 45 20% = 18	90%	=Total Cover		Species Across All Strata:
		-		
				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC <u>100</u> (A/B)
1. Cornus sericea	30%	yes	FACW	Prevalence Index worksheet
2. Alnus rubra	10%	yes	FAC	Total % Cover of: Multiply by:
3	%			OBL species x 1=
4.	%			FACW species x 2=
5	%			FAC species x 3=
$50\% = \underline{20} \ 20\% = \underline{8}$	40%	=Total Cover		FACU species x 4=
Herb Stratum (Plot size: 5 ft radius)				UPL species x 5=
1. Phalaris arundinacea	20%	yes	FACW	Column Totals: (A) (B)
2. Various weeds*	15%	yes	FAC	Prevalence Index = B/A=
3.	%	- <u> </u>		Hydrophytic Vegetation Indicators:
4.	%			□ 1 – Rapid Test for Hydrophytic Vegetation
5.	%			\boxtimes 2 – Dominance Test is >50%
6.	%			\square 3 - Prevalence Index is $\leq 3.0^1$
7	%			\square 4 - Morphological Adaptations ¹ (Provide
Q	%			supporting data in Remarks or on a separate
0	%			sheet)
	%			5 - Wetland Non-Vascular Plants ¹
10				
11.	%			
$50\% = 18 \ 20\% = 7$	35%	=Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1	%			¹ Indicators of hydric soil and wetland hydrology
2.	%			must be present, unless disturbed or problematic.
50% = 20% =	%	=Total Cover		
		-		Hydrophytic
				Vegetation
				Present? Yes No
% Bare Ground in Herb Stratum 65%				

Remarks:*Assumed FAC indicator status.

SOIL							Sampling Point: TP-6
Profile Description: (D	escribe to the dept	h needed to doc	ument the ind	icator or co	nfirm the	absence of indicators.)	
			. . –				
	atrix	<u> </u>	Redox Featu		. 2		5 .
(inches) Color (mois 0-6 10YR 3/3		Color (moist)	%	Type ¹	Loc ²	Texture Sandy Loam	Remarks
6-10 10YR 3/3	90%	7.5YR 4/6	10%	C	М	Clayey Sand	See Remarks Below
10-16 Gley1 4/N		10YR 4/2	5%	<u> </u>	M	Fine Sand	See Remarks Delow
	<u> </u>	10111(1/2	%				
	%		%	·			
	%		%				
	%		%				
	%		%				
¹ Type: C=Concentration					and Grair	ns. ² Location: PL=Por	re Lining, M=Matrix
Hydric Soil Indicators:	(Applicable to all I)		Indicators for Problema	tic Hydric Soils
Histosal (A1)		Sandy Red				2 cm Muck (A10)	
Histic Epipedon (A2)		Stripped Ma				Red Parent Material (TI	,
Black Histic (A3)		Loamy Muc			_RA 1)	Very Shallow Dark Surf	
Hydrogen Sulfide (A	,	Loamy Gley	yed Matrix (F2))		Other (Explain in Remains)	arks)
Depleted Below Dark	. ,	Depleted M	latrix (F3)				
Thick Dark Surface (A12)	Redox Dark	<pre>surface (F6)</pre>			³ Indicators of hydrophytic v	
Sandy Mucky Minera	als (S1)	Depleted D	ark Surface (F	7)		Wetland hydrology mus	
Sandy Gleyed Matrix	(S4)	🗌 Redox Dep	ressions (F8)			unless disturbed or pro	blematic
Restrictive Layer (if pr	esent):						
	,						
Туре:							
Depth (inches):					Hy	dric Soil Present?	Yes⊠ No⊡
Remarks: Ample roots in	n first layer of soil pr	ofile.					
HYDROLOGY Wetland Hydrology Ind	dicators:						
Primary Indicators (min.	of one required; che	eck all that apply)				Secondary Indica	ators (2 or more required)
Surface Water (A1)		Water-Stair	ned Leaves (B) (except M	LRA 1. 2	. 4A. 🗆 Water-Stained	d Leaves (B9) (MLRA 1, 2,
High Water Table (A	2)	and 4B				4A, and 4I	
Saturation (A3)		Salt Crust (B11)			Drainage Patt	
Water Marks (B1)		Aquatic Inv	ertebrates (B1	3)		Dry-Season W	Vater Table (C2)
Sediment Deposits (B2)	Hydrogen S				Saturation Vis	sible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidized R	hizospheres al	ong Living R	oots (C3)	🛛 Geomorphic F	Position (D2)
Algal Mat or crust (B	4)	Presence o	f Reduced Iror	n (C4)		Shallow Aquita	ard (D3)
Iron Deposits (B5)		Recent Iron	Reduction in	Tilled Soils (0	C6)	🗌 FAC Neutral T	Fest (D5)
Surface Soil Cracks	(B6)	Stunted or	Stressed Plant	s (D1) (LRR	A)	🗌 Raised Ant Mo	ounds (D6) (LRR A)
Inundation Visible on	Aerial Imagery (B7)) 🗌 Other (Expl	ain in Remarks	s)		Frost-Heave H	Hummocks (D7)
Sparsely Vegetated	Concave Surface (B	8)					
Field Observations:		<u> </u>					
Surface Water Present?	Yes 🗌	No 🛛 🛛 De	pth (Inches):				
Water Table Present?	Yes 🗌		pth (Inches):		We	tland Hydrology Present?	
Saturation Present?	Yes 🗌	No 🛛 🛛 De	pth (Inches):				Yes 🛛 No 🗌
(Includes Capillary fring			al photos prov	iouo inonooti	ana) if a	voilable	
Describe Recorded Data	a (Stream gauge, mo	onitoring well, aen	ai priotos, prev	nous inspect	ons), ii av		
Remarks:							

Project/Site: Segale Delineation	City/County: Kelso/Cowlitz Count	sy Sampling Date: 12/8/2021			
Applicant/Owner: Trammell Crow Company	State: WA	Sampling Point: TP-7			
Investigator(s): Baker, Erin; Taylor, Steffanie	Section, Township, Range: S1	2, T07N, R02W			
Landform (hillslope, terrace, etc.): Floodplain Loca	I relief: (concave, convex, none):	Concave Slope (%):0-3 %			
Subregion (LRR): A2 Lat: 46.1030139	Long: -122.8778142	Datum: NAD83			
Soil Map Unit Name: Caples silty clay loam	NWI classification: PEM1/SSC				
Are climatic / hydrologic conditions on the site typical for this time of year?	?Yes🛛 No🗌 (If no, explain R	emarks.)			
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 i	n Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing samp	ling point locations, transe	cts, important features, etc.			
HVdric Solis Present? Yes IXI No LI	s the Sampled Area within a Wetland?	∕es⊠ No□			
Remarks: General study area is located on a large area of dredge spoils maintenance access. TP-7 is located beyond the fill slope. TP-7, a paired wetland indicators were present; therefore, it was concluded that TP-7 was	plot with TP-8, was taken in along				

VEGETATION – Use scientific names of plants.

		Absolute	Dominant	Indicator	Dominance Test Worksheet		
	ee Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status			
1.	Salix spp.*	15%	yes	FAC	Number of Dominant Species	3	(A)
2.		%			That Are OBL, FACW, or FAC:		
3.		%			Total Number of Dominant		
4.		%				3	(B)
	50% = 8 20% = 3	15%	=Total Cover		Species Across All Strata:		
					Percent of Dominant Species		
\$	apling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC	100	(A/B)
<u>3</u>	Spiraea douglasii	30%	200	FACW	Prevalence Index worksheet	100	(A/D)
1. 2.	Spiraea uougiasii	<u> </u>	yes	FACW	Total % Cover of:	Multiply by	
∠. 3.		<u>~~~</u> %				Multiply by:	
-			·		OBL species	x 1=	-
4.		%			FACW species	x 2=	_
5.		%			FAC species	x 3=	-
	$50\% = 15\ 20\% = 6$	30%	=Total Cover		FACU species	x 4=	-
	erb Stratum (Plot size: <u>5</u> ft radius)				UPL species	x 5= (A)	
1.	Phalaris arundinacea	75%	yes	FACW	Column Totals:		(B)
2.	Juncus effusus	15%	no	FACW	Prevalence Index =		
3.	Typha latifolia	10%	no	OBL	Hydrophytic Vegetation Indica		
4.		%			1 – Rapid Test for Hydropl	hytic Vegetation	
5.		%			2 – Dominance Test is >50	0%	
6.		%			3 - Prevalence Index is ≤3	.0 ¹	
7.		%			4 - Morphological Adaptati	ons ¹ (Provide	
8.		%			supporting data in Remark	s or on a separate	9
9.		%			sheet)		
10.		%			5 - Wetland Non-Vascular	Plants ¹	
11.		%					
	50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		Problematic Hydrophytic V	egetation ¹ (Explai	n)
W	oody Vine Stratum (Plot size: <u>15</u> ft radius)		-				
1.		%			¹ Indicators of hydric soil and wet	land hydrology	
2.		%			must be present, unless disturbe	ed or problematic.	
	50% = 20% =	%	=Total Cover				
	50 /8 = 20 /8 =		-		Hydrophytic		
					Vegetation		
					Present?	Yes🛛 No	
%	Bare Ground in Herb Stratum <u>0%</u>						
Re	marks:*Assumed FAC indicator status.						

SOIL Profile D	Description: (Descr	ibe to the depth	needed to docu	ument the ind	icator or confir	rm the ab	sence of indicators.)	Sampling Point: <u>TP-7</u>
Depth	Matrix	-		Redox Featu	ures			
(inches)	Color (moist)	%	Color (moist)	%		Loc ²	Texture	Remarks
0-6	10YR 4/1	90%		%			Coarse Sand	
	7.5YR 2.5/2	10%		%		·	Silty Sand	See Remarks Below
		<u> % </u>				·		
		<u></u>		<u>%</u>				
		<u> </u>		<u> </u>				
<u> </u>		%		%		·		
		%		%				
	C=Concentration, E						² Location: PL=Pore	
	Soil Indicators: (Ap	plicable to all L)		ndicators for Problemat	ic Hydric Soils
			Sandy Red] 2 cm Muck (A10)] Red Parent Material (TF	.J)
	Epipedon (A2) Histic (A3)) (except MLR		Very Shallow Dark Surfa	
	ogen Sulfide (A4)		Loamy Gley				Other (Explain in Remar	
	eted Below Dark Su	face (A11)	Depleted M					K3)
· · ·	Dark Surface (A12)	()	Redox Dark			31,	ndicators of hydrophytic v	agatation and
	y Mucky Minerals (S		Depleted D	. ,	7)		Wetland hydrology must	
	y Gleyed Matrix (S4		Redox Dep		,		unless disturbed or prob	
						<u> </u>		
Restrict	ive Layer (if preser	17):						
Type:								
Depth (ir	nches):					Hydri	ic Soil Present?	Yes⊠ No⊡
Remarks	s: Soils between 0 a	nd 6 inches are p	part of a mixed m	atrix. Soils bel	ow 6 inches wer	re uncons	solidated, unable to color	or differentiate matrix
features.								
HYDRO	LOGY							
Wetland	Hydrology Indicat	ors:						
	Indicators (min. of o		ck all that apply)				Secondary Indicat	ors (2 or more required)
		• · · ·				<u> </u>		· · ·
	ce Water (A1) Water Table (A2)				except MLR	A 1, 2, 4/		Leaves (B9) (MLRA 1, 2,
-	ation (A3)		and 4B	,			4A, and 4B ☐ Drainage Patte	
	r Marks (B1)		Aquatic Inv	-	2)		Drainage Patte	
	nent Deposits (B2)		Hydrogen S	,	,		- •	ble on Aerial Imagery (C9)
	Deposits (B3)				ong Living Root	e (C3)	Geomorphic Po	
	Mat or crust (B4)		Presence o			3 (00)	Shallow Aquita	
-	Deposits (B5)				Tilled Soils (C6)		FAC Neutral Te	. ,
	ce Soil Cracks (B6)				s (D1) (LRR A)			unds (D6) (LRR A)
	ation Visible on Aer	ial Imagery (B7)	Other (Expl				Frost-Heave H	
	sely Vegetated Cond		— 、 ・		-)			
	servations:		/					
	Water Present?	Yes 🗌	No 🛛 🛛 De	pth (Inches):				
Water Ta	able Present?	Yes 🖂	No 🗌 🛛 De	pth (Inches):	4	Wetlar	nd Hydrology Present?	
	on Present?	Yes 🛛	No 🗌 🛛 De	pth (Inches):	<u>2</u>			Yes 🛛 No 🗌
	Capillary fringe)							
Describe	Recorded Data (St	ream gauge, moi	nitoring well, aeri	al photos, prev	vious inspection:	s), if avail	able:	
Remarks	,.							
- Normai AS								
L								

Project/Site: Segale Delineation		City/County: Kels	so/Cowlitz County	Sampling Date: 12/8/2021
Applicant/Owner: Trammell Crow Company		State	WA	Sampling Point: TP-8
Investigator(s): Baker, Erin; Taylor, Steffanie		Section, Towns	hip, Range: S12, T07N,	R02W
Landform (hillslope, terrace, etc.): Floodplain	Loc	cal relief: (concave,	convex, none): Convex	Slope (%):0-3 %
Subregion (LRR): A2	Lat: 46.102972	28 Long: - 1	22.8778659	Datum: NAD83
Soil Map Unit Name: Caples silty clay loam			NWI classification: PEM	1/SSC
Are climatic / hydrologic conditions on the site typical f	for this time of yea	ır? Yes⊠ No⊡	(If no, explain Remarks.)	
Are Vegetation, Soil, or Hydrology significant	ly disturbed?	Are "Norma	I Circumstances" present	?Yes⊠ No□
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, expla	in any answers in Remark	(S.)
SUMMARY OF FINDINGS – Attach site map	o showing sam	pling point loca	tions, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No Wetland Hydrology Present? Yes □ No	\boxtimes	Is the Sampled Ar within a Wetland?		lo⊠
Remarks: General study area is located on a large a maintenance access. TP-8 was taken along the easte nor wetland hydrology were present; therefore, it was	rn boundary of the	e parcel on a steep s	slope approximately 6 feet	
VEGETATION – Use scientific names of pla	ants.			
	Absolute D	ominant Indicato	or Dominance Test Wo	rksheet
Tree Stratum (Plot size:30 ft radius)	% Cover S	pecies? Status	;	
1.	%		Number of Dominant	Species 2 (A)

1.	%			Number of Dominant Species	2	(A)
2.	%			That Are OBL, FACW, or FAC:		
3.	%					
4.	%			Total Number of Dominant	2	(B)
50% = 20% =	%	=Total Cover		Species Across All Strata:		<u> </u>
				Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC	<u>100</u>	(A/B)
1	%			Prevalence Index worksheet		
2	%			Total % Cover of:	Multiply by:	
3	%			OBL species	x 1=	
4.	0/			FACW species	x 2=	_
5.	%			FAC species	x 3=	
50% = 20% =	%	=Total Cover		FACU species	x 4=	
Herb Stratum (Plot size: 5 ft radius)		-		UPL species	x 5=	
1. Phalaris arundinacea	60%	yes	FACW	Column Totals:	(A)	(B)
2. Galium aparine	15%	no	FACU	Prevalence Index =	B/A=	
3. Dipsacus fullonum	15%	no	FAC	Hydrophytic Vegetation Indica	ators:	
4. Equisetum arvense	10%	no	FAC	1 – Rapid Test for Hydrop		
5.	%			2 – Dominance Test is >50		
6.	%			 ☐ 3 - Prevalence Index is ≤3	.0 ¹	
7.	%			4 - Morphological Adaptati	ons ¹ (Provide	
8.	%			supporting data in Remark		e
0	%			sheet)	·	
10.	%			5 - Wetland Non-Vascular	Plants ¹	
11.	%					
50% = 50 20% = 20	100%	=Total Cover		Problematic Hydrophytic \	/egetation ¹ (Explai	n)
Woody Vine Stratum (Plot size: 15 ft radius)		-			0 1	,
1. Rubus armeniacus	60%	ves	FAC	¹ Indicators of hydric soil and we	tland hvdrology	
2.	%		-	must be present, unless disturbe		
	60%	=Total Cover				
$50\% = 30\ 20\% = 12$		-		Hydrophytic		
				Vegetation		
				Present?	Yes⊠ No	
% Bare Ground in Herb Stratum 0%						
Remarks:						

SOIL Profile De	escription: (Desc	ribe to the dept	th needed to docu	ment the inc	licator or con	firm the a	absence of indicators.)	Sampling Point: <u>TP-8</u>
		-					absence of maleators.	
Depth (inches)	Color (moist)	%	Color (moist)	Redox Feat %	Type ¹	Loc ²	Texture	Remarks
		%		<u>%</u>	Туре	LUC	Texture	See Remarks Below
		<u> </u>		<u> </u>			·	
		%		%			·	
		%		%				
		%		%				
		%		%				
		%		%				· . <u></u>
<u> </u>		%		%				·
			M=Reduced Matrix			nd Grains		e Lining, M=Matrix
		oplicable to all	LRRs, unless oth		.)		Indicators for Problema	tic Hydric Soils
	Epipedon (A2)		Sandy Red				2 cm Muck (A10) Red Parent Material (TI	=2)
	Histic (A3)				1) (oxcopt ML)		Very Shallow Dark Surf	
	gen Sulfide (A4)		Loamy Gley				Other (Explain in Rema	
				-	.)	l		liks)
	ed Below Dark Su		Depleted M					
	Dark Surface (A12	,	Redox Dark	()			³ Indicators of hydrophytic v Wetland hydrology mus	
-	Mucky Minerals (Depleted D	•	-7)		unless disturbed or pro	
☐ Sandy	Gleyed Matrix (S4	1)	🗌 Redox Dep	ressions (F8)				biematic
Restrictiv	/e Layer (if prese	nt):						
Type:								
Depth (inc	ches):					Hyd	Iric Soil Present?	Yes⊡ No⊠
Remarks:	Profile consists e	ntirely of gravel	fill. Test plot is loca	ated approxim	ately 6 feet hig	her in ele	evation than the adjacent w	etland plot.
HYDROL	.OGY							
	Hydrology Indica							
	ndicators (min. of c	ne required, chi						tors (2 or more required)
	e Water (A1)		Water-Stair D		9) (except ML	RA 1, 2, 4		l Leaves (B9) (MLRA 1, 2,
Satura	Vater Table (A2)			,			4A, and 4I	-
	· · ·		Salt Crust (0)		Drainage Patt	
	Marks (B1)		Aquatic Invo				Dry-Season W	
	ent Deposits (B2)		Hydrogen S					ible on Aerial Imagery (C9
	eposits (B3)			-		ots $(C3)$	Geomorphic F	
-	Mat or crust (B4)		Presence o		()	•	Shallow Aquita	
	eposits (B5)		Recent Iron		,	,	FAC Neutral T	
	e Soil Cracks (B6)		Stunted or			()		bunds (D6) (LRR A)
	ation Visible on Ae	•••	, , ,	ain in Remark	S)		Frost-Heave H	lummocks (D7)
	ely Vegetated Con	cave Surrace (B	0)					
	servations: Vater Present?	Yes 🗌	No 🖂 🛛 De	pth (Inches):				
	ble Present?	Yes 🗌		pth (Inches):		Woth	and Hydrology Present?	
	Present?	Yes 🗌		pth (Inches):		Weth	and right foogy i resent:	Yes 🗌 No 🖂
	Capillary fringe)			p (ee).				
		tream gauge, m	onitoring well, aeri	al photos, pre	vious inspectio	ns), if ava	ailable:	
Remarks:								
Normal No.								

Project/Site: Segale Delineation	City/County: Kelso/Cowlitz County	Sampling Date: 12/8/2021
Applicant/Owner: Trammell Crow Company	State: WA	Sampling Point: TP-9
Investigator(s): Baker, Erin; Taylor, Steffanie	Section, Township, Range: S12, T07N,	R02W
Landform (hillslope, terrace, etc.): Floodplain Lc	cal relief: (concave, convex, none): Concave	Slope (%):0-3 %
Subregion (LRR): A2 Lat: 46.10585	08 Long: -122.8814694	Datum: NAD83
Soil Map Unit Name: Caples silty clay loam	NWI classification: PEM	1/SSC
Are climatic / hydrologic conditions on the site typical for this time of year	ar? 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 Remark	(S.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □ Hydric Soils Present? Yes ⊠ No □ Wetland Hydrology Present? Yes ⊠ No □	Is the Sampled Area within a Wetland? Yes⊠ N	lo 🗌
Remarks: General study area is located on a large area of dredge spo maintenance access. TP-9 is located beyond the fill slope. TP-9, a pair wetland indicators were present; therefore, it was concluded that TP-9	ed plot with TP-10, was taken along the northe	

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet	
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status		
1	%			Number of Dominant Species	<u> </u>
2	%			That Are OBL, FACW, or FAC:	
3.	%			Total Number of Dominant	
4	%	· ·			<u> </u>
50% = 20% =	%	=Total Cover		Species Across All Strata:	
				Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC	100 (A/B)
1. Populus balsamifera	15%	ves	FAC	Prevalence Index worksheet	
2.	%			Total % Cover of:	Multiply by:
3.	%	·			x 1=
4.	%	·			x 2=
5.	%	·		· · · · · · · · · · · · · · · · · · ·	x 3= x 4=
50% = 8 20% = 3	15%	=Total Cover			x 4=
Herb Stratum (Plot size: 5 ft radius)	•				x 5=
1. Phalaris arundinacea	65%	yes	FACW	· ·	(A) (B)
2. Lemma minor	20%	yes	OBL	Prevalence Index = B/	
3. Juncus effusus	10%	no	FACW	Hydrophytic Vegetation Indicato	ors:
4.	%	·		1 – Rapid Test for Hydrophy	
5.	%	·		2 – Dominance Test is >50%	
6.	%			\square 3 - Prevalence Index is $\leq 3.0^{1}$	1
7.	%			4 - Morphological Adaptation	ns ¹ (Provide
8.	%			supporting data in Remarks	or on a separate
9.	%			sheet)	
10.	%			5 - Wetland Non-Vascular Pl	lants ¹
11.	%				
50% = <u>48</u> 20% = <u>19</u>	95%	=Total Cover		Problematic Hydrophytic Veg	getation ¹ (Explain)
Woody Vine Stratum (Plot size: 15 ft radius)					
1	%			¹ Indicators of hydric soil and wetlan	nd hydrology
2.	%			must be present, unless disturbed	or problematic.
50% = 20% =	%	=Total Cover			
2070 2070				Hydrophytic	
				Vegetation	
% Bare Ground in Herb Stratum <u>5*%</u>				Present?	Yes⊠ No⊡
Remarks:*Bareground consisted of open water.					

SOIL Profile De	escription: (Desc	ribe to the dept	h needed to doo	cument the ind	licator or conf	irm the a	absence of indicators.)	Sampling Point: <u>TP-9</u>
Depth	Matrix	-		Redox Feat			,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
		%		%				See Remarks Below
		%		%			<u> </u>	
		<u>%</u> %		%				·
		<u> </u>		<u>%</u> %	·			·
		<u> </u>		<u> </u>				·
		%		%				
		%		%				
	C=Concentration, I					nd Grains		
	oil Indicators: (Ap	oplicable to all L			.)		Indicators for Problema	tic Hydric Soils
Histos	ai (A1) Epipedon (A2)		Sandy Red				2 cm Muck (A10) Red Parent Material (Tf	=2)
	Histic (A3)			icky Mineral (F			□ Very Shallow Dark Surf	
	gen Sulfide (A4)			eyed Matrix (F2			Other (Explain in Rema	
	ted Below Dark Su	rface (A11))			into)
	Dark Surface (A12			rk Surface (F6)			³ Indicators of hydrophytic v	regetation and
	Mucky Minerals (,		Dark Surface (F	7)		Wetland hydrology mus	
-	Gleyed Matrix (S4		— •	pressions (F8)	.,		unless disturbed or prol	
	ve Layer (if prese	*						
Restriction								
Type: Depth (ind	ches).					Hvo	dric Soil Present?	Yes⊠ No⊡
	Test plot area inu	ndated with appr	ovimatoly 6 inch	os of wator. No	tost pit dug so			
HYDROL Wetland	LOGY Hydrology Indica	tors:						
	ndicators (min. of c		eck all that apply)				Secondary Indica	tors (2 or more required)
	e Water (A1)			ined Leaves (B	9) (except ML	RA 1, 2,		Leaves (B9) (MLRA 1, 2,
•	Vater Table (A2)		and 4	,			4A, and 4E	-
Satura	. ,		Salt Crust		0)		Drainage Patte	
	Marks (B1) ent Deposits (B2)			vertebrates (B1 Sulfide Odor (C			Dry-Season W	
	eposits (B3)			Rhizospheres a		te(C3)	Geomorphic P	ible on Aerial Imagery (C9)
	Mat or crust (B4)			of Reduced Iro		15 (03)	Shallow Aquita	
-	eposits (B5)			n Reduction in	. ,	5)	FAC Neutral T	
	e Soil Cracks (B6)			Stressed Plan				ounds (D6) (LRR A)
	ation Visible on Ae			plain in Remark		/	Frost-Heave F	
	ely Vegetated Con	••••	· ·		- /			
	servations:		,					
	Vater Present?	Yes 🖂	No 🗌 🛛 D	epth (Inches):	<u>6</u>			
	ble Present?	Yes 🗌		epth (Inches):		Wetl	land Hydrology Present?	
	n Present?	Yes 🗌	No 🗌 🛛 D	epth (Inches):				Yes 🛛 No 🗌
	Capillary fringe) Recorded Data (S	tream gauge mo	nitoring well ae	rial photos prev	vious inspection	ns) if av	ailable:	
Decense		liouni gaugo, me	shittering wen, de	nai priotoo, pro		10), ii uv		
Remarks:	:							

Applicant/Owner: Trammell Crow Company State: WA Sampling Point: TP-10 Investigator(s): Baker, Erin; Taylor, Steffanie Section, Towship, Range: S12, T07N, R02W Landform (hildslope, terrace, etc.): Floodplain Local relief: (concave, convex, none): Convex, none): Convex Slope (%):0-3 % Solid Map Unit Name: Caples sitty clay loam Null classification: PEMI/SSC Are climatic / hydrologic conditions on the site typical for this time of year? Yes No No Pare Normal Circumstances" present? Yes No Are Vegetation , Soil[], or Hydrology in aturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Hydrophytic varea is located on a large area of dredge spoils. The eastern portion of the study area also contains fill for utility pole maintenance access. TP-10 is located beyond the fill slope. TP-10 was taken near the northeastern boundary of the parcel on a steep slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area is concluded that TP-10 was in an upland area is concluded on a large area of dredge syes? VEGETATION – Use scientific names of plants.	Project/Site: Segale Delineation		City/Co	intv: Kelso	/Cowlitz County Sampl	ling Date: 12/8/2021
Investigator(s): Eaker, Emit, Taylor, Steffanie Section, Township, Range: S12, TOTA, RO2W Subregion (LRR): Acad relat: (Cad relat: Concex, convex, nons): Canvex Slope (%): D.3 %. Subregion (LRR): Acz Lat: 46.1065234 Long - 122.8810031 Datum: NADR3 Subregion (LRR): Acz Solid pet Hydrologic conditions on the site typical for this time of year? Yes Nol: (Hindeed, explain any answers in Remarks.) Are Vegetation (Solid) or Hydrolog) signification and the site of year? Yes No.: Is the Sampled Area Hydrologic Present? Yes No.: Is the Sampled Area Yes No.: Hydrologic Present? Yes No.: Is the Sampled Area Yes No.: Hydrologic Present? Yes No.: Is the Sampled Area Yes No.: Hydrologic Present? Yes No.: Is the Sampled Area Yes No:: Hydrologic Present? Yes No.: Is the Sampled Area Yes No:: Hydrologic Present? Yes No						
Landform (hillsige, terrace, etc): Floodplain Local relit: (concave, convex, none): Convex Stope (%):0-3 % Solt Map Unit Name: Cages sity day loam NW (classification: PENI/ISC: NAD83 Yend Control (Notogic conditions on the site bylical for this time of year? Yes: Not (If (no. explain Remarks.)) Not classification: PENI/ISC: Not Yend Vogetation: Soll () = Hydrology: significantly disturbed? Are "Normal Circumstances" present? Yes: No. SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydro hydro toppic reparts on Pensent? Yes: No. Hydro hydro toppic reparts on Pensent? Yes: No. Is the Sampled Area within a Watemark? No. Weidand Hydrology Present? Yes: No. Is the Sampled Area within a Watemark? No. VEGETATION - Use scientific names of plants. Indicator Dominant Mack taken part the nothereas thor hydrology on the step slope approximately 15 feet above TP-9. Neither hydro soll nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area and the step slope approximately 15 feet above TP-9. Neither hydro: soll nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area and the step slope approximately 15 feet above TP-9. Neither hydro: soll nor wetland hydrology were present; therefore, it was concludes that TP-10 was in an upland area and the docus preses			Sectio			<u></u>
Subregion (LRR): A2 Lat: 46.1058234 Long: -122.8116031 Datum: NADB3 Are climatic / hydrologic conditions on the site typical for this time of year? Yes2 NoC (If no. explain Remarks.) AVX Are vegetation() Soll_or of Hydrology) signification in the site typical for this time of year? Yes2 NoC (If needed, oxplain any answers in Remarks.) Are Vegetation() Soll_or of Hydrology) signification in the site of the site size of Hydrology in the size of the data size motion of the size size of Hydrology in the size of the data size motion of the size size of the data size motion of the size size of the data size motion of the size size of the data size motion of the size size motion of the size size of the data size motion of the size size motis motion of the size size motion of the size size mot						Slope (%):0-3 %
Sold Map Description NVI classification: PLAINSC Are climatic / Nytologic conditions on the site typical for this time of year? Yes⊆ No. (If no, explain Remarks.) NVI classification: PLAINSC Are Vegetation [_ Soli or Hydrology] asymptotic conditions, transects, important features, etc. NVI classification: (If neglect explain any nearest in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. No. (If no, explain Remarks.) Hydro hydrix Vegetation Present? Yes (If no, explain Remarks.) No. (If no, explain Remarks.) Remarks: General study area is located on a large area of dredge spoils. Is the Sampled Area within a Westad? Yes (If No, explain Remarks.) VEGETATION – Use scientific names of plants. Absolute file (Source Present?) Dominant findicator Dominant file (Source Present?) Yes (If No, explain Remarks.) Absolute file (Source Present?) Number of Dominant Species (If No, explain Remarks.) VEGETATION – Use scientific names of plants. Dominant file (Source Present?) Number of Dominant Species Number of Dominant Species (If No, explain Remarks.) 1 Populus balasmitere 20% Yes (If No, explain Remarks.) (If No Remarks Remarks.) (If No Remarks.) 2		Lat: 46.10				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes⊡ No⊡ (if no, explain Remarks.) Are Vegetation.] Are Vegetation.[], Soli or Hydrology					NWI classification: PEM1/SSC	
Are Vegetation[]. Soil[], or Hydrology] significantly disturbed? Are Normal Circumstances' present? Yes[] No[] Are Vegetation[]. Soil[], or Hydrology] notally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes [] No [] Hydrophytic Vegetation Present? Yes [] No [] Remarks. General study area is located beyond the fill slope. TP-10 was taken near the northeastern boundary of the parcel on a steep slope approximately 15 feet above TP-9. Neither hydre soil nor wettand hydrology were present; therefore, it was contains fill for utility pole Remarks. General study area is located beyond the fill slope. TP-10 was taken near the northeastern boundary of the parcel on a steep slope approximately 15 feet above TP-9. Neither hydre soil nor wettand hydrology were present; therefore, it was contains fill for utility pole Tree Statum (Plot size: 30 tradius) % Cover Status 1. Pseudotsuga menziosii % Status 2		for this time of	vear? Yes			
Are Vegetation []. Soli [], or Hydrology [] naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes [] No [] Is the Sampled Area within a Westand? Yes [] No [] Remarks. General study. Joils located beyon on targe and dredge point. The eastern portion of the study area also contains fill for utility pole approximately 15 feet above TP-0. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area VEGETATION – Use scientific names of plants. Tree Stratum (Plot size: 30 ft radius) Absolute % Cover Dominant Indicator hydro QB mapper present; therefore, it was concluded that TP-10 was in an upland area 1. Pseudotsuga menziesii Absolute % Cover Dominant Species? Status Yes 3						No
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydro Sole Present? Yes No 2 No 2 within a Wetland? Yes No 2 No 2 Wetland Hydrology Present? Yes No 2 No 2 within a Wetland? Yes No 2 No 2 Wetland Hydrology Present? Yes No 2 No 2 within a Wetland? Yes No 2 No 2 Wetland Hydrology Present? Yes No 2 Wetland Hydrology Present? Yes No 2 VECETATION – Use scientific names of plants. VECETATION – Use scientific names of plants. VECETATION – Use scientific names of plants. Veceto 10 colspan="2">Normant Indicator Status Absolute Dominant Indicator Status Normant Status region and step size Status Absolute Dominant Indicator Status Normant Status region and step size Status Normant Status region and step size Status Absolute <						
Hydric Solas Present? Yes No Ø International sector Yes No Ø Remarks: General study area is located on al arge area of dredge spoils. The estern portion of the study area also contains fill for utility pole maintenance access: TP-0 is located beyond the fill slope. TP-10 was inten north estudy area also contains fill for utility pole Approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area VECETATION – Use scientific names of plants. Tree Stratum (Plot size: 20 ft radius) Absolute Dominant Indicator 1. Pseudotsuga menziesii 45% yes FACU 3.			,		-	: features, etc.
Product Solar Present? Yes No ⊠ within a Wettand? Yes No ⊠ Remarks: General study area is located beyond theil silope. TF-10 was taken near boundary of the parcel on a steep slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present: therefore, it was concluded that TP-10 was in an upland area also contains fill for utility pole maintenance access. TP-10 is located beyond theil slope. TF-10 was taken near the northestet moundary of the parcel on a steep slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present: therefore, it was concluded that TP-10 was in an upland area also contains fill for utility pole maintenance access. TP-10 is located beyond theil slope. TF-10 was in an upland area also contains fill for utility pole maintenance access. TP-10 is located beyond their soil nor wetland hydrology were present: therefore, it was concluded that TP-10 was in an upland area also contains fill for utility pole maintenance access. TP-10 is located beyond their soil nor wetland hydrology were present: therefore, it was concluded that TP-10 was in an upland area also contains fill for utility pole. VECETATION – Use scientific names of plants. Dominant Species Dominant Species Q (A) 1. Paeudosuga menziesii 45% FACU Number of Dominant Species Q (A) 2. % Total Row orksheet Total No cover of: Nultiply by: Species Across All Strata: Q (B) 3. 20% ys FAC Prevalence index worksheet X (A) <	Hydrophytic Vegetation Present? Yes No		Is the Sar	npled Area	a	
Remarks: General study area is located beyond the fill slope. The astern portion of the study area also contains fill for utility pole maintenance access: TP-10 is located beyond the fill slope. TP-10 was taken area the northeastern boundary of the parcel on a stepe slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area area to northeastern boundary of the parcel on a stepe slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area area to northeastern boundary of the parcel on a stepe slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area area to northeastern boundary of the parcel on a stepe slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area area to northeastern boundary of the parcel on a stepe slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area area to northeastern boundary of the parcel on a step and the other approximant Species TP-14 // Species Sciences All Status (Pointera to the science to thydrophytic vegetation ton the science to the science to the scien						
maintenance access TP-10 is located beyond the fill slope. TP-10 was taken near the northeastem boundary of the parcel on a steep slope approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area approximately 15 feet above TP-9. Neither hydric soil northolds: VEGETATION – Use scientific names of plants. Dominant indicator Number of Dominant Species Total Number of Dominant Species Total Cover Percent of Dominant Species Afget to thydrophydic vector of: Multiply by: Afget to thydrophydic vector of: Percent of Dominant Species <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Approximately 15 feet above TP-9. Neither hydric soil nor wetland hydrology were present; therefore, it was concluded that TP-10 was in an upland area VEGETATION – Use scientific names of plants. Tree Stratum (Plot size: 30 ft radius) Absolute % Cover 5 % Dominant % Species? Dominant Status Dominant Species 7 ACU Dominant Species 7 At are OBL, FACW, or FAC: 2 (A) 3. % % FACU Total Number of Dominant 5 % 3 (B) 3. % % FACU Total Number of Dominant 5 % 3 (B) 3. % % FAC Freerent of Dominant 5 % 3 (B) 3. % % FAC Freerent of Dominant 5 % 3 (B) 4. % % FAC Freerent of Dominant 5 % 3 (B) 5 % 10 20% = 4 20% yes FAC FacUspecies x 1 = 1. % 60% 9 FAC Wispecies x 2 = 10 (M) 1. % 60% Yes FAC Prevalence Index = B/A= 10 (M) 2. % 60% Yes FAC Courno Totals: So% 10 (M) 10 (M) 10 (M) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
VEGETATION – Use scientific names of plants. Tree Stratum (Plot size:30 ft radius) Absolute % Cover Dominant % Cover Indicator Dominance Test Worksheet 1. Pseudotsuga menzesii 45% yes FACU Number of Dominant Species 2 (A) 2. % % — Total Acover of Dominant Species 2 (A) 3. % — Total Number of Dominant Species 2 (A) 50% = 23 20% = 9 45% =Total Cover Percent of Dominant Species 7 (A) 1. Populus batismifera 20% yes FAC Total % Cover of: Multiply by: 2. %						
Tree Stratum (Plot size: <u>20</u> ft radius) Absolute % Cover Dominant Species? Indicator Status Dominance Test Worksheet 1. Pseudolsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 3.	approximately 15 feet above 1P-9. Neither hydric soll	nor wetland h	yarology were	present; the	erefore, it was concluded that T	2-10 was in an upland are
Tree Stratum (Plot size: <u>20</u> ft radius) Absolute Dominant Dominant Dominant Species 2 (A) 2.						
Tree Stratum (Plot size: <u>20</u> ft radius) Absolute % Cover Dominant Species? Indicator Status Dominance Test Worksheet 1. Pseudolsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 3.						
Tree Stratum (Plot size: <u>20</u> ft radius) Absolute % Cover Dominant Species? Indicator Status Dominance Test Worksheet 1. Pseudolsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 3.						
Tree Stratum (Plot size: <u>20</u> ft radius) Absolute % Cover Dominant Species? Indicator Status Dominance Test Worksheet 1. Pseudolsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 3.						
Tree Stratum (Plot size: <u>20</u> ft radius) Absolute % Cover Dominant Species? Indicator Status Dominance Test Worksheet 1. Pseudolsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 3.	VEGETATION – Use scientific names of pla	ants.				
Image Stratum Problematics % Cover Species? Status 1. Pseudolsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 3. % % Total Number of Dominant Species 2 (A) 4. % Total Number of Dominant Species 3 (B) 50% = 23 20% = 9 45% =Total Cover Prevalence Index worksheet 3 (B) 1. Populus balsamifera 20% yes FAC Total % Cover of: Multiply by: 3 (A) (B) 2. % 76 Total % Cover of: Multiply by: 7 (A) (B) 3. % FAC FAC Multiply by: (A) (B) 4. % FAC Species x1= (A) (B) 50% = 10 20% = 4 20% = Total Cover FAC Species x2= (A) (B) 2. % 50% Yes FAC (Colum Totals: (A) <	······································		- Desident		Dentison Test Market et al.	
1. Pseudotsuga menziesii 45% yes FACU Number of Dominant Species 2 (A) 2. % % Total Number of Dominant 3 (B) 3. % Total Number of Dominant 3 (B) 50% = 23 20% = 9 45% FOCU Species Across All Strata: 3 (B) 50% = 23 20% = 9 45% =Total Cover Species Across All Strata: 3 (B) 1. Populus balsamifera 20% yes FAC Prevalence Index worksheet 7 (A) (B) 2. % FACV species x 2= (A) (A) (B) 5. 10 20% yes FAC FAC species x 3= (A) (B) 4. 20% yes FAC Species x 4= (A) (B) 5. 10 20% yes FAC Column Totals: (A) (C) 1. Yarious weeds* 50% yes FAC Column Totals: (A) (B) 2.					Dominance Test Worksneet	i
2. 1000000000000000000000000000000000000		-	·		Number of Deminent Creater	
3.	¥		yes	FACU		
4.					I That Are OBL, FACW, of FAC	<i>.</i>
4. 70 =Total Cover Species Across All Strata: 3 (b) Sapling/Shrub Stratum (Plot size: 15 ft. radius) 20% yes FAC Percent of Dominant Species That Are OBL, FACW, or FAC 67 (AB) 1. Populus balsamifera 20% yes FAC Prevalence Index worksheet Total % Cover of: Multiply by: Multiply by: Multiply by: Multiply by: N = N					Total Number of Dominant	
Sob x = 23 20 x = 2 43 x = 10 kal Cover Sapting/Shrub Stratum (Plot size: 15 ft. radius) Percent of Dominant Species 1. Populus balsamifera 20% 2. % OBL species X 1= 4. % OBL species X 1= 4. % FAC Species X 2= 50% = 10 20% = 4 20% FAC Species X 3= 50% = 10 20% = 4 20% FAC Species X 4= Herb Stratum (Plot size: 5 ft radius) 1. Yeralence Index weeds* (A) (B) 2. % FAC Prevalence Index is >50% (A) (B) 3. % Prevalence Index is >6% (A) (B) 2. % FAC Prevalence Index is >6% (A) (B) 3. % 1 - Rapid Test for Hydrophytic Vegetation Indicators: (A) (B) 4. % 2 2 - Dominance Test is >50% (B) 2 2 - Dominance Test is >50% (Column Totals: (A) (B) 5. % 2 2 - Dominance Test is >50% (B) (B) (Column Totals: (C) (A)						<u> </u>
Sapling/Shrub Stratum (Plot size: 15 ft. radius) That Are OBL, FACW, or FAC 67 (A/B) 1. Populus balsamifera 20% yes FAC Prevalence Index worksheet 2. % 0BL species x 1= 1 4. % 0BL species x 2= 1 5. % FAC Species x 2= 1 50% = 10 20% = 4 20% =Total Cover FAC Species x 4= 1 1. Various weeds* 50% yes FAC FAC Secondary (A) (B) 2. % FAC Species x 5= (A) (B) (B) (Column Totals: (A) (B) 4. 50% yes FAC FAC Secondary (A) (B) 2. % Matrix (Plot size: 5 ft radius) 1 Facing (Column Totals: (A) (B) 4. % 1 Prevalence Index is 3:3.01 (A) (B) (A) (B) 5. % 1 1 Secondary (A) (B) (A) (B) </td <td>$50\% = \underline{23} \ 20\% = \underline{9}$</td> <td>45%</td> <td>=Total Cover</td> <td></td> <td>Species Across All Strata.</td> <td></td>	$50\% = \underline{23} \ 20\% = \underline{9}$	45%	=Total Cover		Species Across All Strata.	
Sapling/Shrub Stratum (Plot size: 15 ft. radius) That Are OBL, FACW, or FAC 67 (A/B) 1. <i>Populus balsamifera</i> 20% yes FAC Prevalence index worksheet 7 3. % 0BL species x 1= 7 4. % FAC Species x 2= 7 5. % FAC Species x 2= 7 50% = 10 20% = 4 20% =Total Cover FAC Species x 4= 7 1. Various weeds* 50% yes FAC FAC Uspecies x 4= 7 2. % FAC Species x 5= 6					Percent of Dominant Species	
1. Populus balsamilera 20% yes FAC Prevalence Index worksheet 2.	Sanling/Shrub Stratum (Plot size: 15 ft, radius)					
2.		20%	VAS	FAC		
3.			yes	170		
4.			·			
5.			·			
50% = 10 20% = 4 20% = Total Cover FACU species x 4= Herb Stratum (Plot size: 5 ft radius) 50% yes FAC UPL species x 5= 1. Various weeds* 50% yes FAC Column Totals: (A) (B) 2. % Prevalence Index = B/A=			·			
Herb Stratum (Plot size: <u>5</u> ft radius) UPL species x 5= 1. Various weeds* 50% yes FAC Column Totals: (A) (B) 2. % Hydrophytic Vegetation Indicators: (A) (B) 3. % Hydrophytic Vegetation Indicators: (A) (B) 4. % Hydrophytic Vegetation Indicators: (A) (B) 5. % Hydrophytic Vegetation Indicators: (A) (B) 6. % 1 - Rapid Test for Hydrophytic Vegetation 5. % (D) 1 - Rapid Test for Hydrophytic Vegetation 6. % (D) 2 - Dominance Test is >50% (C) 6. % (D) 3 - Prevalence Index is ≤3.01 (C) 7. % (D) 4 - Morphological Adaptations! (Provide supporting data in Remarks or on a separate sheet) (D) (D) 9. . % (D) (D) (D) (D) (D) 10. . % (D) (D) (D) (D) (D)			Total Cavar			
1. Various weeds* 50% yes FAC Column Totals: (A) (B) 2. % Prevalence Index = B/A=		20%				
2.		E00/		ГЛО		
3.			yes	FAC		
4.						
5.						
6.			·			
7.						
8.						
9.						
10.						arks or on a separate
11.					,	
50% = 25 20% = 10 50% =Total Cover Problematic Hydrophytic Vegetation ¹ (Explain) 1. % 1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2. % =Total Cover 50% = 20% = % =Total Cover % Bare Ground in Herb Stratum 50% 50% Yes X No	10				5 - Wetland Non-Vascu	lar Plants ¹
Woody Vine Stratum (Plot size: 15 ft radius) 1. % 2. % 50% = 20% = % So% = 20% = % For a construction of the stratum 50% Yes ⊠ No □		%				
1.	50% = <u>25</u> 20% = <u>10</u>	50%	=Total Cover		Problematic Hydrophytic	c Vegetation ¹ (Explain)
2.	Woody Vine Stratum (Plot size: 15 ft radius)					
2.	1.	%			¹ Indicators of hydric soil and v	wetland hydrology
50% = 20% =	2.	%				
50% = 20% = Hydrophytic Vegetation Vegetation % Bare Ground in Herb Stratum 50% Yes⊠ No□			=Total Cover			
Wegetation % Bare Ground in Herb Stratum 50% Yes ☑ No□	50% = <u>20%</u> = <u> </u>				Hydrophytic	
% Bare Ground in Herb Stratum 50% Yes⊠ No□						
% Bare Ground in Herb Stratum <u>50%</u>						Yes⊠ No⊓
Remarks:*Assumed FAC indicator status.	% Bare Ground in Herb Stratum 50%					
	Remarks:*Assumed FAC indicator status.				•	

SOIL

Profile Description: (Describe to the depth	needed to docu	ment the ind	icator or con	firm the a	absence of indicators.)	
Depth Matrix		Redox Feat	ILAS			
	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16 10YR 4/1 100%		%			Sand	
<u>%</u>		%				
<u>%</u>		<u>%</u>				
<u>%</u>		<u>%</u>			· . <u></u>	· - <u></u>
<u>%</u>		<u> % </u> %				·
<u> </u>		<u>%</u>				·
<u> </u>		%				
¹ Type: C=Concentration, D=Depletion, RM=				nd Grains	s. ² Location: PL=Por	e Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LF)		Indicators for Problema	tic Hydric Soils
Histosal (A1)	Sandy Redo				2 cm Muck (A10)	-0)
Histic Epipedon (A2)	Stripped Mat				Red Parent Material (TI	
Black Histic (A3)	Loamy Muck			-	Very Shallow Dark Surf	
Hydrogen Sulfide (A4)	Loamy Gleye	-			Other (Explain in Rema	irks)
Depleted Below Dark Surface (A11)	Depleted Ma	. ,			31	·····
Thick Dark Surface (A12)	Redox Dark	. ,	7)		³ Indicators of hydrophytic v Wetland hydrology mus	regetation and
Sandy Mucky Minerals (S1)	Depleted Da Redox Depre		()		unless disturbed or pro	
		essions (F8)		<u> </u>		
Restrictive Layer (if present):						
Туре:						
Depth (inches):				Hyc	Iric Soil Present?	Yes⊡ No⊠
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (min. of one required; chec	k all that apply)				Secondary Indica	tors (2 or more required)
Surface Water (A1)	U Water-Staine	ed Leaves (B) (except ML	RA 1, 2,	4A, 🗌 Water-Stained	Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	and 4B)				4A, and 4I	3)
Saturation (A3)	Salt Crust (B	311)			Drainage Patter	erns (B10)
Water Marks (B1)	Aquatic Inve	rtebrates (B1	3)		🗌 Dry-Season W	/ater Table (C2)
Sediment Deposits (B2)	🗌 Hydrogen Su	ulfide Odor (C	1)		Saturation Vis	ible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhi	izospheres al	ong Living Ro	ots (C3)	🗌 Geomorphic F	Position (D2)
Algal Mat or crust (B4)	Presence of	Reduced Iron	n (C4)		Shallow Aquita	ard (D3)
Iron Deposits (B5)	Recent Iron				FAC Neutral T	est (D5)
Surface Soil Cracks (B6)	Stunted or S	tressed Plant	s (D1) (LRR A	A)	Raised Ant Mo	ounds (D6) (LRR A)
□ Inundation Visible on Aerial Imagery (B7)	Other (Expla)	in in Remark	5)		Frost-Heave H	łummocks (D7)
Sparsely Vegetated Concave Surface (B8)						
Field Observations:	_					
Surface Water Present? Yes		oth (Inches):				
Water Table Present? Yes		oth (Inches):		Wetl	and Hydrology Present?	
Saturation Present? Yes (Includes Capillary fringe)	No 🛛 🛛 Dep	oth (Inches):				Yes 🗌 No 🛛
Describe Recorded Data (Stream gauge, mor	nitoring well, aeria	l photos, prev	vious inspectio	ons), if ava	ailable:	
				,		
Remarks:						

Project/Site: Segale Delineation	City/County: Kelso/Cowlitz Coun	ty Sampling Date: 12/8/2021							
Applicant/Owner: Trammell Crow Company	State: WA	Sampling Point: TP-11							
Investigator(s): Baker, Erin; Taylor, Steffanie	Section, Township, Range: S1	2, T07N, R02W							
Landform (hillslope, terrace, etc.): Floodplain Loo	cal relief: (concave, convex, none):	Concave Slope (%):0-3 %							
Subregion (LRR): A2 Lat: 46.103328	Long: -122.8858642	Datum: NAD83							
Soil Map Unit Name: Caples silty clay loam	NWI classifica	tion: PFOC							
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	o" present? Yes⊠ No⊡							
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers	in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transe	cts, important features, etc.							
Hydrophytic Vegetation Present? Yes 🛛 No 🗌	le the Sempled Area								
Hydric Soils Present? Yes ⊠ No □	Is the Sampled Area within a Wetland?	Yes⊠ No⊟							
Wetland Hydrology Present? Yes 🛛 No 🗌									
Remarks: General study area is located on a large area of dredge spot	Is. TP-11, a paired plot with TP-12,	was taken in the northwestern portion of the							
study area beyond the base of the slope near the parcel boundary. All w	vetland indicators were present; ther	efore, it was concluded that TP-11 was in a							
wetland.									

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status	Number of Deminent Oresian		
1	%			Number of Dominant Species	3	(A)
2	%			That Are OBL, FACW, or FAC:		
3.	%			Total Number of Dominant		
4	%				3	(B)
50% = 20% =	%	=Total Cover		Species Across All Strata:		
				Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC	100	(A/B)
1. Spiraea douglasii	15%	ves	FACW	Prevalence Index worksheet	100	(//////////////////////////////////////
	<u> </u>	ycs	17.000	Total % Cover of:	Multiply by:	
0	<u>%</u>			OBL species	x 1=	
	%			FACW species	x 2=	-
4 5	<u> </u>			FAC species	x 3=	-
5. $50\% = 8 20\% = 3$	15%	=Total Cover		FACU species	x 4=	-
Herb Stratum (Plot size: 5 ft radius)	1070			UPL species	x 5=	-
1. Phalaris arundinacea	10%	yes	FACW	Column Totals:	(A)	(B)
2. Lotus corniculatus	<u> </u>	yes	FAC	Prevalence Index =		(0)
3. Juncus effusus	3%	- <u> </u>	FACW	Hydrophytic Vegetation Indica		
4. Typha latifolia	2%	no	OBL			
		no	UBL	 ☐ 1 – Rapid Test for Hydrophytic Vegetation ⊠ 2 – Dominance Test is >50% 		
5.	<u>%</u> %			\square 3 - Prevalence Index is \leq 3		
6. 7.	- <u>%</u> %					
	<u>%</u>			4 - Morphological Adaptati		
8.	- <u>%</u> %			supporting data in Remark sheet)	s of on a separate	
9	- <u>%</u> %			,	Dia 1	
10				5 - Wetland Non-Vascular	Plants	
11.	%	Tatal O			/	
$50\% = 10 \ 20\% = 4$	20%	=Total Cover		Problematic Hydrophytic V	egetation (Explain	n)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)						
1.	<u>%</u>			¹ Indicators of hydric soil and we		
2	%			must be present, unless disturbe	ed or problematic.	
50% = 20% =	%	=Total Cover				
		_		Hydrophytic		
				Vegetation		-
% Bare Ground in Herb Stratum 80*%				Present?	Yes⊠ No	
Remarks:*The area surrounding the test plot was ap	mrovimotoly 0	00/ an an water				
Remarks. The area surrounding the test plot was ap	proximately o	0% open water.				

SOIL									Sam	pling Point: <u>TP-1</u>
Profile De	escription: (Desc	ribe to the dept	th needed to do	cument the inc	licator or cor	nfirm the	absence	of indicators.)		
Depth	Matrix	(Redox Feat	ures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	-	Texture		Remarks
		<u>%</u>		%					See R	emarks Below
		<u>%</u> %		%						
<u> </u>		<u>%</u> %		<u>%</u> %						
		<u> </u>		%						
		%		<u>%</u>			_			
		%		%			_			
<u> </u>		%		%						
	E=Concentration,					and Grains		ocation: PL=Po		
Hydric So	oil Indicators: (Ap	oplicable to all	LRRs, unless of		.)			ors for Problema Muck (A10)	atic Hyd	ric Solls
	Epipedon (A2)		Sandy Re					Parent Material (T	F2)	
Black H				ucky Mineral (F	1) (except MI			Shallow Dark Sur		12)
	gen Sulfide (A4)		-	eyed Matrix (F2		-	-	(Explain in Rema		12)
	ed Below Dark Su	rface (A11)	Depleted		'			1-1-1-10110		
	Dark Surface (A12	. ,		rk Surface (F6)			³ Indicator	s of hydrophytic	vegetatio	on and
	Mucky Minerals (,		Dark Surface (F			Wetla	nd hydrology mu	st be pre	esent,
-	Gleyed Matrix (S4			pressions (F8)	,		unless	s disturbed or pro	blematic	;
-	e Layer (if prese			. ()		<u> </u>				
Туре:										
Depth (inc	:hes):					Нус	dric Soil I	Present?		Yes⊠ No□
IYDROL										
	Hydrology Indica									
Primary In	dicators (min. of c	one required; che	eck all that apply)				Secondary Indica	ators (2 d	or more required)
	e Water (A1)		Water-Sta	ined Leaves (B	9) (except MI	LRA 1, 2,	4A,	Water-Staine	d Leaves	s (B9) (MLRA 1, 2
-	/ater Table (A2)		and 4	,				4A, and 4		
Saturat			Salt Crust					Drainage Patt	•	,
	Marks (B1)			vertebrates (B1	,			Dry-Season V		. ,
	ent Deposits (B2)			Sulfide Odor (C		()				Aerial Imagery (Cs
	eposits (B3)			Rhizospheres a		oots (C3)		Geomorphic I		
-	At or crust (B4)			of Reduced Iro	. ,			Shallow Aquit		
	eposits (B5)			on Reduction in r Stressed Plan	· ·	,		FAC Neutral	-	
	e Soil Cracks (B6) tion Visible on Ae			plain in Remark		A)		Raised Ant M Frost Hoove I	-	
	lon Visible on Ae	0,0	, <u> </u>		.5/			Frost-Heave I		no (UI)
	ervations:	cave ounace (D	0)							
	ater Present?	Yes 🖂	No 🗌 🛛 🛛	Pepth (Inches):	8					
	ble Present?	Yes 🗌		Depth (Inches):		Wet	land Hydi	rology Present?	•	
Saturation		Yes 🗌	No 🗌 🛛 🛛	epth (Inches):						Yes 🛛 No 🗌
	Capillary fringe)			rial photos and	viewe is a st	ono) :: -				
Describe i	Recorded Data (S	tream gauge, m	onitoring well, ae	riai photos, pre	vious inspecti	ons), if ava	allable:			
Remarks:										

Project/Site: Segale Delineation	City/County: Kelso/Cowlitz Cour	nty Sampling Date: 12/8/2021						
Applicant/Owner: Trammell Crow Company	State: WA	Sampling Point: TP-12						
Investigator(s): Baker, Erin; Taylor, Steffanie	Section, Township, Range: S	12, T07N, R02W						
Landform (hillslope, terrace, etc.): Floodplain	Local relief: (concave, convex, none):	Convex Slope (%):0-3 %						
Subregion (LRR): A2 Lat: 46	Long: -122.8858356	Datum: NAD83						
Soil Map Unit Name: Caples silty clay loam	NWI classifica	NWI classification: PFOC						
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 Vegetation, Soil, or Hydrology naturally problemation	c? (If needed, explain any answers	in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transe	ects, important features, etc.						
Hydrophytic Vegetation Present? Yes 🛛 No 🗌	la tha Camalad Area							
Hydric Soils Present? Yes 🗌 No 🖂	Is the Sampled Area within a Wetland?							
Wetland Hydrology Present? Yes No 🛛	within a wetland?	Yes No⊠						
Remarks: General study area is located on a large area of dree	dge spoils. TP-12 was taken near the north	western boundary of the parcel on a steep						
slope approximately 6 feet above TP-11. Neither hydric soil nor	wetland hydrology were present; therefore,	it was concluded that TP-12 was in an						
upland area								

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet		
1.	%	0000003	Olalus	Number of Dominant Species	2	(A)
2	%	·		That Are OBL, FACW, or FAC:	Z	(~)
3.	%	·				
4.	%	·		Total Number of Dominant	3	(B)
50% = 20% =	%	=Total Cover		Species Across All Strata:		(0)
				Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				That Are OBL, FACW, or FAC	<u>67</u>	(A/B)
1. Cystisus scoparius	25%	yes	UPL	Prevalence Index worksheet		
2.	%			Total % Cover of:	Multiply by:	_
3	%				x 1=	
4.	%				x 2=	
5.	%				x 3= x 4=	
$50\% = 13 \ 20\% = 5$	25%	=Total Cover		· · · · · · · · · · · · · · · · · · ·		
Herb Stratum (Plot size: <u>5</u> ft radius)				· · · — —	x 5=	
1. <u>Holcus lanatus</u>	75%	yes	FAC		(A)	(B)
2. Rubus ursinus	15%	no	FACU	Prevalence Index = B/		
3. Dipsacus fullonum	10%	no	FAC	Hydrophytic Vegetation Indicato		
4	%			1 – Rapid Test for Hydrophyt		
5	%	·		\boxtimes 2 – Dominance Test is >50%		
6	%	·		□ 3 - Prevalence Index is $\leq 3.0^{1}$		
7.	%	·		4 - Morphological Adaptation		
8.	%	·		supporting data in Remarks	or on a separate	
9	%			sheet)		
10	%	·		5 - Wetland Non-Vascular Pl	ants	
11.	%					
$50\% = \frac{50}{20\%} = \frac{20}{20\%}$	100%	=Total Cover		Problematic Hydrophytic Veg	jetation (Explain))
Woody Vine Stratum (Plot size: <u>15</u> ft radius)	100/		540			
1. <u>Rubus armeniacus</u>	40%	yes	FAC	¹ Indicators of hydric soil and wetlar		
2	<u>%</u>			must be present, unless disturbed	or problematic.	
$50\% = \underline{20}$ $20\% = \underline{8}$	40%	=Total Cover		l ha da a a ha sti a		
				Hydrophytic Venetation		
				Vegetation Present?	Yes⊠ No⊡	
% Bare Ground in Herb Stratum 0%				Fiesent		
Remarks:						
i contanto.						

SOIL

Profile Description: (Describe to the depth	needed to docu	ment the indicator or c	onfirn	n the a	bsence of indicators.)	
Depth Matrix		Redox Features				
(inches) Color (moist) %	Color (moist)	% Type ¹		.0C ²	Texture	Remarks
0-16 10YR 4/3 100%		<u> </u>			Sand	
<u></u>		%				
		%				
<u> </u>		%				
		%				
<u> </u>		%				
<u> </u>		<u>%</u>				
<u>%</u>		<u>%</u>	<u> </u>	<u></u>	21	Lister BA BAsta
¹ Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: (Applicable to all Lf			Sand	Grains	² Location: PL=Pore Indicators for Problemati	<u>.</u>
Histosal (A1)	Sandy Redo			ſ	2 cm Muck (A10)	c nyunc sons
Histosar (A1)	Stripped Mat				Red Parent Material (TF:	2)
Black Histic (A3)		y Mineral (F1) (except I			Very Shallow Dark Surfa	
Hydrogen Sulfide (A4)	Loamy Gleye			-	Other (Explain in Remark	
Depleted Below Dark Surface (A11)	Depleted Ma			L		(3)
Thick Dark Surface (A12)	Redox Dark			з	Indicators of hydrophytic ve	actation and
Sandy Mucky Minerals (S1)		rk Surface (F7)			Wetland hydrology must	
		. ,			unless disturbed or probl	
Sandy Gleyed Matrix (S4)	Redox Depre	essions (F8)				
Restrictive Layer (if present):						
Type:						
Type: Depth (inches):				Hvd	ric Soil Present?	Yes⊡ No⊠
Remarks:				nyu		
Itemarks.						
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (min. of one required; chec	k all that apply)				Secondary Indicate	ors (2 or more required)
Surface Water (A1)	U Watar Stains	ed Leaves (B9) (except)		4.2		Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	and 4B)	eu Leaves (D9) (except		、 1, 	4A, and 4B	
Saturation (A3)	Salt Crust (B	11)			Drainage Patter	
Water Marks (B1)	Aquatic Inve				Dry-Season Wa	
	Hydrogen Su				-	
Sediment Deposits (B2)	_ , 0	· · · /	D 4-	$\langle \mathbf{O} \mathbf{O} \rangle$		ble on Aerial Imagery (C9)
Drift Deposits (B3)		zospheres along Living	Roots	(C3)	Geomorphic Pc	
Algal Mat or crust (B4)		Reduced Iron (C4)			Shallow Aquitar	
☐ Iron Deposits (B5)		Reduction in Tilled Soils			FAC Neutral Te	
Surface Soil Cracks (B6)		tressed Plants (D1) (LR	R A)		Raised Ant Mou	
□ Inundation Visible on Aerial Imagery (B7)	Other (Expla)	in in Remarks)			Frost-Heave Hu	ummocks (D7)
Sparsely Vegetated Concave Surface (B8)						
Field Observations:						
Surface Water Present? Yes		th (Inches):	÷			
Water Table Present? Yes		th (Inches):	÷	Wetla	and Hydrology Present?	
Saturation Present? Yes	No 🛛 🛛 Dep	th (Inches):				Yes 🗌 No 🛛
(Includes Capillary fringe) Describe Recorded Data (Stream gauge, mor	itoring well oorio	I photos, provious increa	otiona) if ove	ilabla:	
Describe Recorded Data (Stream gauge, mor	illoning weil, aena	i priotos, previous inspec	5110115)), II ava	liable.	
Remarks:						

Project/Site: Segale Delineation Applicant/Owner: Trammell Crow Company			y/County: Kelso/Cowlitz County Sampling Date: 12/8/20 State: WA Sampling Point: TP-13						
Investigator(s): Baker, Erin; Taylor, Steffanie		Sectio		ip, Range: S12, T07N, F	Sampling Point: TP-13				
Landform (hillslope, terrace, etc.): Floodplain				onvex, none): Convex	Slope (%):0-3 %				
Subregion (LRR): A2	Lat: 46.103			2.8806658	Datum: NAD83				
Soil Map Unit Name: Caples silty clay loam		NWI classification: PFOC							
Are climatic / hydrologic conditions on the site typical	for this time of								
Are Vegetation, Soil, or Hydrology significant			Are "Normal Circumstances" present? Yes⊠ No□						
Are Vegetation, Soil, or Hydrology naturally			(If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map	o showing s	ampling po	int locati	ions, transects, imp	ortant features, etc.				
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No Wetland Hydrology Present? Yes □ No	\boxtimes	Is the Sar within a V	npled Area Vetland?		o⊠				
Remarks: General study area is located on a large a		spoils TP-13 v	vas taken a	as an overall representati	on of the central part of the parcel				
Neither hydric soils nor wetland hydrology were prese	nt; therefore, i								
VEGETATION – Use scientific names of pla									
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status						
1	%			Number of Dominant S That Are OBL, FACW,					
2	%	,			OFFAC.				
3	<u>%</u> %			Total Number of Domi	nant 3 (B)				
4. 50% = 20% =	<u> </u>	=Total Cover		Species Across All Str	ata: (B)				
<u> </u>	/0								
				Percent of Dominant S					
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)	400/			That Are OBL, FACW,					
Cytisus scoparius Alnus rubra	<u>40%</u> 20%	yes	UPL FAC	Prevalence Index wo Total % Cover o					
3.	<u> </u>	yes	FAC	OBL species	f: Multiply by: x 1=				
4.	%			FACW species	x 2=				
5.	%			FAC species	x 3=				
$50\% = 30\ 20\% = 12$	60%	=Total Cover		FACU species	x 4=				
Herb Stratum (Plot size: <u>5</u> ft radius)				UPL species	x 5=				
1. Various grasses and mosses*	100%	yes	FAC	Column Totals:	(A) (B)				
2	%				e Index = B/A=				
3	%			Hydrophytic Vegetat					
4	%				or Hydrophytic Vegetation				
5	<u>%</u>	,		2 – Dominance					
6	%			3 - Prevalence Ir					
7	<u>%</u> %				al Adaptations ¹ (Provide in Remarks or on a separate				
0	0/			sheet)	in Remarks of on a separate				
9 10	%			,	-Vascular Plants ¹				
11.	%								
50% = 50 20% = 20 Woody Vine Stratum (Plot size: 15 ft radius)	100%	=Total Cover		Problematic Hyd	Irophytic Vegetation ¹ (Explain)				
<u>1</u> , ,	%			¹ Indicators of hydric so	bil and wetland hydrology				
2	%			must be present, unles	ss disturbed or problematic.				
50% = 20% =	%	=Total Cover							
				Hydrophytic Vegetation Brocont?					
% Bare Ground in Herb Stratum 0%				Present?	Yes⊠ No⊡				
Remarks:*Assumed FAC indicator status.				1					

SOIL

	needed to document the ind		the absence of indicator	rs.)
Depth Matrix	Redox Feat	ures		
	Color (moist) %		DC ² Texture	Remarks
0-16 10YR 4/1 100%	%		Sand	
<u>%</u>	%			
<u>%</u>	%			
	<u>%</u>			
<u>%</u>	<u>%</u>			
<u> </u>	%%	·		
	%			
¹ Type: C=Concentration, D=Depletion, RM=				=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LF		l.)		lematic Hydric Soils
Histosal (A1)	Sandy Redox (S5)		2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Mater	
Black Histic (A3)	Loamy Mucky Mineral (F			
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2	2)	Other (Explain in F	Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		31. 1	and the second second second
Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators of hydroph	y must be present,
Sandy Mucky Minerals (S1)	Depleted Dark Surface (-7)	unless disturbed c	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)			
Restrictive Layer (if present):				
Type:				
Type: Depth (inches):			Hydric Soil Present?	Yes⊡ No⊠
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:	k all that apply)			
Primary Indicators (min. of one required; chec	k ali that apply)		Secondary	ndicators (2 or more required)
Surface Water (A1)	UWater-Stained Leaves (E	9) (except MLRA		ained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	and 4B)			nd 4B)
Saturation (A3)	Salt Crust (B11)		-	e Patterns (B10)
U Water Marks (B1)	Aquatic Invertebrates (B	,	🗌 Dry-Seas	
Sediment Deposits (B2)	Hydrogen Sulfide Odor (son Water Table (C2)
Drift Doposite (P2)				son Water Table (C2) on Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres a	long Living Roots		son Water Table (C2)
Algal Mat or crust (B4)	 Oxidized Rhizospheres a Presence of Reduced Iro 	long Living Roots n (C4)	(C3)	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3)
 Algal Mat or crust (B4) Iron Deposits (B5) 	 Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in 	long Living Roots n (C4) Tilled Soils (C6)	(C3) Geomorg Shallow FAC Neu	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5)
 ☐ Algal Mat or crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) 	 Oxidized Rhizospheres a Presence of Reduced Iro 	long Living Roots n (C4) Tilled Soils (C6)	(C3) Geomorg Shallow FAC Neu	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) 	 Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark 	Iong Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A)	(C3) Geomorp Shallow FAC Neu Raised A	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 	 Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark 	Iong Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A)	(C3) Geomorp Shallow FAC Neu Raised A	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ont Mounds (D6) (LRR A)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: 	 Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark 	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) (s)	(C3) Geomorp Shallow FAC Neu Raised A	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ont Mounds (D6) (LRR A)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes 	 Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Depth (Inches):	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes 	Oxidized Rhizospheres a Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Depth (Inches): No Depth (Inches):	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow FAC Neu Raised A	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes 	 Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Depth (Inches):	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (Includes Capillary fringe) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (Includes Capillary fringe) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (Includes Capillary fringe) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (Includes Capillary fringe) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 ☐ Algal Mat or crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ☐ Saturation Present? Yes ☐ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, more) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 ☐ Algal Mat or crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ☐ Saturation Present? Yes ☐ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, more) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 ☐ Algal Mat or crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ☐ Saturation Present? Yes ☐ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, more) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)
 ☐ Algal Mat or crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ☐ Saturation Present? Yes ☐ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, more) 	Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark No Image: Depth (Inches): No Image: No	long Living Roots n (C4) Tilled Soils (C6) ts (D1) (LRR A) ts)	(C3) Geomorp Shallow / FAC Neu Raised A Frost-He	son Water Table (C2) on Visible on Aerial Imagery (C9) ohic Position (D2) Aquitard (D3) utral Test (D5) ant Mounds (D6) (LRR A) ave Hummocks (D7)

APPENDIX B

RATING SUMMARY – Western Washington

 Name of wetland (or ID #):
 Wetland A
 Date of site visit:
 11/30/21

 Rated by S. Taylor
 Trained by Ecology?
 X
 Date of training
 2012

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

NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map <u>Google Earth</u>

OVERALL WETLAND CATEGORY <u>II</u> (based on functions <u>X</u> or special characteristics_)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 – 27

X Category II – Total score = 20 – 22

Category III – Total score = 16 – 19

Category IV – Total score = 9 – 15

FUNCTION		nprov :er Qu	ing Jality	Ну	drol	ogic		Habitat		
				(tings					
Site Potential	Н		L	Н	Μ		Н	M	L	
Landscape Potential	H	M	L	Ð	Μ	L	Н	M	L	
Value	(H)	М	L	Н	M	L	(H)	Μ	L	TOTAL
Score Based on Ratings		8			6			7		21

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		l
Bog		l
Mature Forest		I
Old Growth Forest		I
Coastal Lagoon	I	П
Interdunal	1 11	III IV
None of the above		

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	6
Hydroperiods	D 1.4, H 1.2	6
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	6
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	6
Map of the contributing basin Includes entire Coweeman River watershed	D 4.3, D 5.3	
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	7
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	8
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	8

Riverine Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	

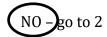
Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

HGM Classification of Wetlands in Western Washington

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

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

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



YES – the wetland class is **Tidal Fringe** – go to 1.1

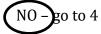
1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

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

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

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

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



YES – The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?

____The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

_____The water leaves the wetland **without being impounded**.



YES – The wetland class is **Slope**

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

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

NO - go to 6

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

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

NO - go to 7

YES – The wetland class is **Depressional**

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

NO - go to 8

YES – The wetland class is **Depressional**

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

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

HGM classes within the wetland unit	HGM class to
being rated	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	Treat as
class of freshwater wetland	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.

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing ditch. Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area	3
D 1.4. Characteristics of seasonal ponding or inundation: Most of ponding is permanentThis is the area that is ponded for at least 2 months. See description in manual.Area seasonally ponded is > ½ total area of wetlandArea seasonally ponded is > ¼ total area of wetlandArea seasonally ponded is < ¼ total area of wetland	2
Total for D 1 Add the points in the boxes above	6
Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L Record the rating on the first particular second secon	nge
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source waterfowl concentrations Yes = 1 No = 0	1
Total for D 2Add the points in the boxes above	3
Rating of Landscape Potential If score is: X 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the fi	irst page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (<i>answer YES if there is a TMDL for the basin in which the unit is found</i>)? Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	2

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

Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation		
D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream 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	0	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outletpoints = 7Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	5	
 D 4.3. <u>Contribution of the wetland to storage in the watershed</u>: <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5 Includes Coweeman River watershed as the Coweeman back-floods into wetland. 	0	
Total for D 4Add the points in the boxes above	5	
Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L Record the rating on the	first page	
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1	
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1	
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1	
Total for D 5Add the points in the boxes above	3	
Rating of Landscape Potential If score is: X 3 = H 1 or 2 = M 0 = L Record the rating on the	first page	
D 6.0. Are the hydrologic functions provided by the site valuable to society?		
 D 6.1. 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. 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. Surface flooding problems are in a sub-basin farther down-gradient. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 There are no problems with flooding downstream of the wetland. 	1	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0	
Total for D 6Add the points in the boxes above	1	
Rating of Value If score is: 2-4 = H X 1 = M 0 = L Record the rating on the	first naae	

These questions apply to wetlands of all HGM classes.	
IABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
1.0. Does the site have the potential to provide habitat?	
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. _X_Aquatic bed 4 structures or more: points = 4 _X_Emergent 3 structures: points = 2 _X_Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 _Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: _The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	2
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).	2
Count the number of plant species in the wetland that cover at least 10 ft².Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistleIf you counted: > 19 speciespoints = 25 - 19 speciespoints = 1< 5 species	2
 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. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i> None = 0 points Low = 1 point Moderate = 2 points It three diagrams this row re HIGH = 3points 	3

H 1.5. Special habitat features:		
Check the habitat features that are present in the wetland. <i>The number</i> X Large, downed, woody debris within the wetland (> 4 in diameter X Standing snags (dbh > 4 in) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhar over a stream (or ditch) in, or contiguous with the wetland, for at l	and 6 ft long). nging plants extends at least 3.3 ft (1 m) east 33 ft (10 m)	_
X Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)		4
X At least ¼ ac of thin-stemmed persistent plants or woody branches permanently or seasonally inundated <i>(structures for egg-laying by</i> Invasive plants cover less than 25% of the wetland area in every st <i>strata</i>)	amphibians)	
Total for H 1	Add the points in the boxes above	13
Rating of Site Potential If score is:15-18 = HX 7-14 = M0-6 = L	Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat fur	nctions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit) Calculate: % undisturbed habitat_0+ [(% moderate and low intensities of total accessible habitat is: 1/ (22,2%) of 1 km Dakwar		

H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> % undisturbed habitat_0+ [(% moderate and low intensity land uses)/2]2.3 =% If total accessible habitat is:	
$>^{1}/_{3}$ (33.3%) of 1 km Polygon points = 3	0
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat <u>26.8</u> + [(% moderate and low intensity land uses)/2] <u>19.3</u> = <u>46.1</u> % Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	1
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	0
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	1

H 3.0. Is the habitat provided by the site valuable to society?	
 H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: Ξ— It has 3 or more priority habitats within 100 m (see next page) Ξ— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above 	2

Rating of Value	If score is:	х	2 = H	1 = M	0 = L
Nating of Value	II 30010 IS.	<u></u>		T = 101	0 = L

Record the rating on the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>]

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: <u>Old-growth west of Cascade crest</u> Stands of at least 2 tree species, forming a multilayered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. <u>Mature forests</u> – 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*).
- **<u>E</u> 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*).
- Ξ 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.
- <u>Ξ</u> 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.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and	
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= ot an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-merced are species. 	Cat. I
mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Vetlands of High Conservation Value? Yes – Go to SC 2.2 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV	Cat. I
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <u>http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</u> Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
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? Yes = Category I No = Not a WHCV	
 SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions. SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – to to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or 	
 SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog 	Cat. I

SC 4.0. Forested Wetlands				
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA				
Department of Fish and Wildlife's forests as priority habitats? If you answer YES you will still need to rate				
the wetland based on its functions.				
— Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered				
canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of				
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.				
— Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the				
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).				
Yes = Category I No = Not a forested wetland for this section	Cat. I			
SC 5.0. Wetlands in Coastal Lagoons				
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?				
 The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from 				
marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks				
— The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 pp)				
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I			
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon				
SC 5.1. Does the wetland meet all of the following three conditions?				
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less				
than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).				
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- recursed grazeland				
mowed grassland.				
— The wetland is larger than ¹ / ₁₀ ac (4350 ft ²) Yes = Category I No = Category II				
SC 6.0. Interdunal Wetlands				
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If				
you answer yes you will still need to rate the wetland based on its habitat functions.				
In practical terms that means the following geographic areas:				
X Long Beach Peninsula: Lands west of SR 103				
 — Grayland-Westport: Lands west of SR 105 	Cat I			
 Ocean Shores-Copalis: Lands west of SR 115 and SR 109 				
Yes – Go to SC 6.1 No = not an interdunal wetland for veting				
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H of H,H,M)	Cat. II			
for the three aspects of function)? Yes = Category I No – Go to 3C 6.2				
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?				
Yes = Category II No – Go to SC 6.3	Cat. III			
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?				
Yes = Category III No = Category IV				
	Cat. IV			
Category of wetland based on Special Characteristics				
If you answered No for all types, enter "Not Applicable" on Summary Form				

Wetland name or number \underline{A}

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