

CRITICAL AREAS REPORT

Updated July 7, 2022



Mid I-5 Industrial Park Kelso, Washington

Prepared for

Trammell Crow Portland Development, Inc. Kirk Olson 1300 SW Fifth Avel, Suite 3350 Portland, OR 97201 (503) 890-5172

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

TABLE OF CONTENTS

| INTRODUCTION | 1 |
|-----------------------------|-----|
| SITE DESCRIPTION | 1 |
| Methodology | 2 |
| VEGETATION | 3 |
| Uplands | . 3 |
| Uplands Wetlands | . 3 |
| SOILS | 3 |
| Hydrology | 4 |
| NATIONAL WETLANDS INVENTORY | 5 |
| CRITICAL AREAS SUMMARY | 5 |
| Buffers | . 6 |
| Buffers | 7 |
| References | 7 |

FIGURES

| Figure 1 | Vicinity Map |
|---------------|--|
| Figure 2a | Existing Conditions |
| Figure 2b | Existing Conditions – Detail |
| Figure 3 | NRCS Soil Survey |
| Figure 4 | USFWS National Wetlands Inventory |
| Figure 5 | WDNR FPAMT |
| Figure 6 | Wetland Rating Form – 150' Offset |
| Figure 7 | Wetland Rating Form – 1KM Offset |
| Figure 8 | Wetland Rating Form – 303(d) and TMDLs |
| Photoplates 1 | through 7 |

TABLE

| Table 1 | Wetland Summary |
|---------|-----------------|
|---------|-----------------|

APPENDIX A

Wetland Determination Data Forms

APPENDIX B

Wetland Rating Form

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, Chapter 17.030 Shorelines* (2016), and the City of Kelso Shoreline Master Program (SMP), *Appendix C, Shorelines Critical Areas Regulations, Chapter 1.3 General Provisions* (2016). 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*. and City of Kelso SMP, *Appendix C, Shorelines Critical Areas Regulations*.

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; therefore, Wetland A is considered a shoreline-associated wetland and is regulated according to the City of Kelso SMP. 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 *Section 2.D* of *Appendix C Critical Areas* of the SMP, wetland buffers are based on the wetland category and habitat score from the Rating System and are listed on *Table 1-A. Wetland Buffer Requirements within Shoreline Jurisdiction*. However, *Section 2.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. A 50-foot buffer is consistent with the Shoreline Designation KS-16 (High Intensity) mapped at the northern extent of the wetland unit along the Coweeman River. This shoreline designation includes commercial land use areas along the Wetland characteristics.

| Wetland | Size in Study Area | Category ¹ /HGM Class ² /Cowardin Class ³ | Habitat Score ⁴ | Buffer Width ⁵ | |
|---|-----------------------|--|-------------------------------|------------------------------|--|
| | | Shoreline-Associated | | | |
| А | 7.58 acres | II/ Depressional and Riverine / | 7 | 50 feet | |
| | | Aquatic Bed, Emergent, and Scrub-Shrub | | | |
| ¹ Hruby 2014 | | | | | |
| ² NRCS 2008 | | | | | |
| ³ Cowardin et a | ıl. 1979 | | | | |
| ⁴ Washington State Wetland Rating System for Western Washington: 2014 Update | | | | | |
| ⁵ City of Kelso | SMP Appendix C 2 | 2.D.7 | | | |

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.

REFERENCES

- City of Kelso. 2016. Kelso Municipal Code, *Title 17 Unified Development Code Chapter17.26 Environmentally Sensitive Areas.*
- City of Kelso, 2016. Shoreline Master Plan Update, Appendix C, Shorelines Critical Areas Regulations.
- Cowardin, L.M., C. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-78/31. U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington D.C.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U.S. Army Corps of Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington: 2014 Update.* Washington State Department of Ecology Publication #04-06-025.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-13. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish & Wildlife Service (USFWS). Electronic Reference. National Wetlands Inventory. http://www.wetlandsfws.er.usgs.gov/NWI/index.html. Website accessed October 2016.
- U.S.D.A. Natural Resource Conservation Service (NRCS). 2008. *Hydrogeomorphic Wetland Classification System: An Overview and Modification to Better Meet the Needs of the Natural Resources Conservation Service*. United States Department of Agriculture Technical Note, #190-8-76.
- U.S.D.A. Natural Resource Conservation Service (NRCS). 2021a. Electronic Reference. Cowlitz County Area. <<u>http://www.or.nrcs.usda.gov/pnw_soil/wa_reports.html</u>>. Website accessed December 2021.
- U.S.D.A. Natural Resources Conservation Service (NRCS). 2021b. *Hydric Soils List for Washington*. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 2021.
- Washington State Department of Ecology. Electronic Reference. Water Quality Assessment and 303(d) List. <u>http://www.ecy.wa.gov/programs/wq/303d/index.html</u>. Website accessed October 2016.

FIGURES AND PHOTOPLATES



7/15/2022 11:21 AM C:\Users\Jennifer\Box\ELS\WA\Cowlitz\Kelso\3665-Trammell Crow Portland Development, Inc\3665.02-Segale Delineation\3665.02-Figures CAD Only\3665.02_DL.dwg Jennifer



7/15/2022 11:21 AM C:\Users\Jennifer\Box\ELS\WA\Cowlitz\Kelso\3665-Trammell Crow Portland Development, Inc\3665.02-Segale Delineation\3665.02-Figures CAD Only\3665.02_DL.dwg Jennifer









7/15/2022 11:21 AM C:\Users\Jennifer\Box\ELS\WA\Cowlitz\Kelso\3665-Trammell Crow Portland Development, Inc\3665.02-Segale Delineation\3665.02-Figures CAD Only\3665.02_DL.dwg Jennifer









| Project/Site: Segale Delineation | | City/County: Kelso/Cowlitz Co | unty | Sampling Date: | 12/8/2021 |
|--|-----------------------|--|---------------|--------------------|-------------------|
| Applicant/Owner: Trammell Crow Company | State: WA | A Sampling Point: TP-1 | | | |
| Investigator(s): Baker, Erin; Taylor, Steffanie | | Section, Township, Range: | S12, T07N, I | R02W | |
| Landform (hillslope, terrace, etc.): Floodplain | Loc | al relief: (concave, convex, none |): Convex | SI | ope (%):0-3 % |
| Subregion (LRR): A2 | Lat: 46.099134 | 5 Long: -122.8761587 | | Datum: NAD | 83 |
| Soil Map Unit Name: Caples silty clay loam | | NWI classifi | ication: PEM | 1/SSC | |
| Are climatic / hydrologic conditions on the site typical f | for this time of year | ? Yes🛛 No🗌 (If no, explair | ۱ Remarks.) | | |
| Are Vegetation, Soil, or Hydrology significant | ly disturbed? | Are "Normal Circumstand | ces" present? | ?Yes⊠ No□ | |
| Are Vegetation, Soil, or Hydrology naturally p | oroblematic? | (If needed, explain any answe | rs in Remark | s.) | |
| SUMMARY OF FINDINGS – Attach site map | showing sam | pling point locations, tran | sects, imp | ortant features | s, etc. |
| Hydrophytic Vegetation Present? Yes 🛛 No | | le the Sempled Area | | | |
| Hydric Soils Present? Yes No | X | Is the Sampled Area within a Wetland? | Yes⊟ N | lo⊠ | |
| Wetland Hydrology Present? Yes 🗌 No | \boxtimes | | | | |
| Remarks: General study area is located on a large a | rea of dredge spoil | s. TP-1 was selected to investigation | ate a topogra | phical low area in | the southeast |
| portion of the parcel. The feature apeared to be an ab | andoned excavate | d road bed. Neither hydric soils r | or wetland h | ydrology were pre | esent; therefore, |
| it was concluded that TP-1 was in an upland area. | | | | | |
| | | | | | |

VEGETATION – Use scientific names of plants.

| | Absolute | Dominant | Indicator | Dominance Test Worksheet | | |
|---|-----------------|------------------|--------------|--|--------------------------------|----------|
| Tree Stratum (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>01</u> | (,,,,,,) |
| 2. | | | | Total % Cover of: | Multiply by: | |
| 2 | 0/ | | | | x 1= | |
| 1 | 0/ | | | | x 2= | _ |
| 5. | <u>%</u> | | | | | _ |
| 50% = 20% = | | =Total Cover | | | x 3= x 4= | _ |
| Herb Stratum (Plot size: 5 ft radius) | /0 | | | UPL species | x 5= | - |
| 1. Daucus carota | 15% | | FACU | Column Totals: | | (B) |
| | | yes | FACU FAC | | (A) | (D) |
| <u> </u> | 10% | yes | FAC | Prevalence Index = B | · | |
| 3 | % | | | Hydrophytic Vegetation Indicat | | |
| 4. | % | | | 1 – Rapid Test for Hydrophy | | |
| 5 | % | | | | | |
| 6 | % | | | \Box 3 - Prevalence Index is \leq 3.0 | - | |
| 7 | % | | | 4 - Morphological Adaptatio | | |
| 8 | % | | | supporting data in Remarks | s or on a separate | е |
| 9 | % | | | sheet) | | |
| 10 | % | | | 5 - Wetland Non-Vascular F | Plants ¹ | |
| 11 | % | | | | | |
| 50% = <u>13</u> 20% = <u>5</u> | 25% | =Total Cover | | Problematic Hydrophytic Ve | egetation ¹ (Explai | in) |
| 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 | | | · | |
| | | - | | Hydrophytic | | |
| | | | | Vegetation | | |
| | | | | Present? | Yes⊠ No[| |
| % Bare Ground in Herb Stratum 75% | | | | | | |
| Remarks:*Various grasses have an assumed FAC i | ndicator status | s. Bareground in | the vicinity | y of TP-1 was covered in leaf litter. | | |
| | | | | | | |
| | | | | | | |

| SOIL | | | | | | | Sampling Point: <u>TP-1</u> |
|-------------------------------------|--------------------|----------------------|-----------------|-------------------|------------------|--------------------------------|-----------------------------|
| Profile Description: (Desc | ribe to the depth | needed to docu | iment the ind | icator or confi | rm the a | bsence of indicators.) | |
| Depth Matrix | , | | Redox Featu | ILAS | | | |
| (inches) Color (moist) | % | Color (moist) | % | | Loc ² | Texture | Remarks |
| 0-16 10YR 4/3 | 100% | | % | | | Sand | |
| | % | | % | | | | |
| | % | | % | | | | |
| | % | | % | | | | |
| | <u>%</u> | | <u>%</u> | | | | |
| | <u>%</u> | | <u>%</u> | · · | | · | |
| · · | <u> </u> | | % | | | · | |
| ¹ Type: C=Concentration, | | -Poducod Matrix | | or Costod San | d Graine | ² Location: PL=Pore | Lining M-Matrix |
| Hydric Soil Indicators: (A | | | | | | Indicators for Problematic | U. |
| Histosal (A1) | | Sandy Red | | ·) | | 2 cm Muck (A10) | |
| Histic Epipedon (A2) | | Stripped Ma | | | | Red Parent Material (TF2 |) |
| Black Histic (A3) | | | |) (except MLR | | Very Shallow Dark Surfac | |
| Hydrogen Sulfide (A4) | | Loamy Gley | | | - | Other (Explain in Remark | |
| Depleted Below Dark Su | urface (A11) | Depleted M | | , , | _ | | - / |
| Thick Dark Surface (A12 | . , | Redox Dark | . , | | 3 | Indicators of hydrophytic ve | petation and |
| Sandy Mucky Minerals (| , | Depleted Da | · · / | 7) | | Wetland hydrology must I | |
| Sandy Gleyed Matrix (S | | Redox Dep | | ., | | unless disturbed or proble | |
| Restrictive Layer (if prese | , | | | | | | |
| Restrictive Layer (ii prese | int): | | | | | | |
| Type: | | | | | | | |
| Depth (inches): | | | | | Hydr | ric Soil Present? | Yes⊡ No⊠ |
| Remarks: | | | | | - | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indica | | | | | | • | (5 |
| Primary Indicators (min. of o | one required, chec | sk all that apply) | | | | Secondary Indicato | rs (2 or more required) |
| Surface Water (A1) | | Water-Stain | ed Leaves (B | 9) (except MLR | RA 1, 2, 4 | A, 🗌 Water-Stained L | eaves (B9) (MLRA 1, 2, |
| High Water Table (A2) | | and 4B |) | | | 4A, and 4B) | |
| Saturation (A3) | | Salt Crust (I | 311) | | | 🗌 Drainage Patter | ns (B10) |
| Water Marks (B1) | | Aquatic Inve | ertebrates (B1 | 3) | | Dry-Season Wa | ter Table (C2) |
| Sediment Deposits (B2) | | Hydrogen S | ulfide Odor (C | :1) | | Saturation Visib | le on Aerial Imagery (C9) |
| Drift Deposits (B3) | | Oxidized Rh | izospheres al | ong Living Root | ts (C3) | Geomorphic Pos | |
| Algal Mat or crust (B4) | | Presence of | - | | () | ☐ Shallow Aquitar | |
| Iron Deposits (B5) | | | | Tilled Soils (C6) |) | FAC Neutral Tes | |
| Surface Soil Cracks (B6 |) | | | s (D1) (LRR A) | | Raised Ant Mou | · · / |
| Inundation Visible on Ae | | Other (Expl | | | | Frost-Heave Hu | |
| Sparsely Vegetated Cor | | | | 3) | | | |
| Field Observations: | |) | | | | | |
| Surface Water Present? | Yes 🗌 | No 🛛 🛛 De | pth (Inches): | | | | |
| Water Table Present? | Yes 🗌 | No 🛛 De | pth (Inches): | | Wetla | Ind Hydrology Present? | |
| Saturation Present? | Yes 🗌 | | pth (Inches): | | Wetta | | Yes 🗌 No 🖂 |
| (Includes Capillary fringe) | | | | | | | |
| Describe Recorded Data (S | tream gauge, mor | nitoring well, aeria | al photos, prev | vious inspection | s), if ava | ilable: | |
| Υ. | 0 0 / | 0 / | 1 /1 | · | <i>,</i> . | | |
| | | | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| 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 $2 - Dominance Test i$ | |
| 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 Mou □ 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 Moution | 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 Mou □ 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 Mou □ 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) |
| 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): | (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 Mou □ 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) |
| 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 Mou □ 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) |
| 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 Mou □ 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) |
| 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 Mou □ 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) |
| 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 Mou □ 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) |
| 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 Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mo | 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 Mou □ 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) |
| 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 Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mo | 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 Mou □ 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) immocks (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 Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mo | 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 Mou □ 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) immocks (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 Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mo | 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 Mou □ 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) immocks (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? Yes Saturation Present? Yes Cincludes Capillary fringe) Describe Recorded Data (Stream gauge, mo | 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 Mou □ 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) immocks (D7) |

| 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, | Г07N, R02W | | | |
| Landform (hillslope, terrace, etc.): Floodplain | Local relief: (concave, convex, none): Cor | ncave Slope (%):0-3 % | | | |
| Subregion (LRR): A2 Lat: 46. | 0977484 Long: -122.8756122 | 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 | e of year? Yes 🛛 No 🗌 (If no, explain Rem | arks.) | | | |
| 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 R | emarks.) | | | |
| SUMMARY OF FINDINGS – Attach site map showin | g sampling point locations, transects | , important features, etc. | | | |
| Hydrophytic Vegetation Present? Yes ⊠ No □ Hydric Soils Present? Yes ⊠ No □ Watter of Hydrophytic Present? Yes ⊠ No □ | Is the Sampled Area within a Wetland? Yes | ⊠ No□ | | | |
| Wetland Hydrology Present? Yes No | | last to the second s | | | |
| Remarks: General study area is located on a large area of dred | | | | | |
| the parcel beyond the edge of dredge spoil placement and appro | DXIMATELY 15 to 20 feet below the top of the dree | age spolls. 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 | | |
|---|----------------|-----------------|--------------|---|---------------------------------|-----|
| Tree Stratum (Plot size:30 ft radius) | % Cover | Species? | Status | | | |
| 1. Salix spp.* | 40% | yes | FAC | Number of Dominant Species | 5 (A | ٩) |
| 2. | % | | | That Are OBL, FACW, or FAC: | | |
| 3. | % | | | | | |
| 4. | % | | | Total Number of Dominant | 5 (E | 3) |
| 50% = 20 20% = 8 | 40% | =Total Cover | | Species Across All Strata: | | |
| | | _ | | Demonstrat Demois and Original | | |
| Sapling/Shrub Stratum (Plot size: 15 ft. radius) | | | | Percent of Dominant Species That Are OBL, FACW, or FAC | 100 (A | VB) |
| | 30% | VOC | FACW | Prevalence Index worksheet | <u>100</u> (F | vь) |
| 1. <u>Cornus sericea</u> 2. Spirea douglasii | 15% | yes | FACW | Total % Cover of: | Multiply by | |
| Spirea douglasii 3. | <u> </u> | yes | FACW | | Multiply by: | |
| 4. | % | | | i | x 1= | |
| 4 5. | <u>%</u> | | | | x 2= | |
| | 45% | Tatal Cavar | | | x 3= x 4= | |
| $50\% = 23 \ 20\% = 9$ | 45% | =Total Cover | | · · · · · · · · · · · · · · · · · · · | x 4= | |
| Herb Stratum (Plot size: <u>5</u> ft radius) | 500/ | | | | x 5= | |
| 1. Lemna minor | 50% | yes | OBL | | | (B) |
| 2. Phalaris arundinacea | 20% | yes | FACW | Prevalence Index = B | | |
| 3. <u>Typha latifolia</u> | 10% | no | OBL | Hydrophytic Vegetation Indicate | | |
| 4. | % | | | 1 – Rapid Test for Hydrophy | | |
| 5 | % | | | | | |
| 6 | % | | | \Box 3 - Prevalence Index is \leq 3.0 | | |
| 7. | % | | | 4 - Morphological Adaptation | | |
| 8 | % | | | supporting data in Remarks | or on a separate | |
| 9 | % | | | sheet) | | |
| 10 | % | | | 5 - Wetland Non-Vascular P | Plants ¹ | |
| 11 | % | | | | | |
| 50% = 40 $20% = 16$ | 80% | =Total Cover | | Problematic Hydrophytic Ve | getation ¹ (Explain) | |
| Woody Vine Stratum (Plot size: <u>15</u> ft radius) | | | | | | |
| 1 | % | | | ¹ Indicators of hydric soil and wetla | and hydrology | |
| 2. | % | | | must be present, unless disturbed | l or problematic. | |
| 50% = 20% = | % | =Total Cover | | | | |
| | | - | | Hydrophytic | | |
| | | | | Vegetation | | |
| 0/ Data Cround in Llath Stratum 20**0/ | | | | Present? | Yes⊠ No⊡ | |
| % Bare Ground in Herb Stratum 20**% | | | | | | |
| Remarks:*Salix spp. has an assumed FAC indicator | status. **Bare | e ground consis | 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> | | |
| · | % | % | | | |
| | % | % | | | |
| | % | % | | | |
| 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. | | | |

| Project/Site: Segale Delineation | | City/Cou | unty: <u>Kelso</u> | /Cowlitz County Sam | pling Date: 12/8/2021 |
|--|---------------------|-----------------|--------------------|---|---------------------------------------|
| Applicant/Owner: Trammell Crow Company | | | State: V | | oling Point: TP-4 |
| Investigator(s): Baker, Erin; Taylor, Steffanie | | Sectio | n, Townshi | p, Range: S12, T07N, R02W | 1 |
| Landform (hillslope, terrace, etc.): Floodplain | | | oncave, co | onvex, none): <u>Convex</u> | Slope (%): <u>0-3 %</u> |
| 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 f | | | | | |
| 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 | nte | | | | |
| | | | | 1 | |
| | Absolute | Dominant | Indicator | Dominance Test Workshe | et |
| Tree Stratum (Plot size: 30 ft radius) | % Cover | Species? | Status | | |
| 1. Salix spp.* | 40% | yes | FAC | Number of Dominant Specie | |
| 2 | % | | | That Are OBL, FACW, or FA | AC: |
| 3. | % | | | | |
| 4. | % | | | Total Number of Dominant | 4 (B) |
| $50\% = \underline{20} \ 20\% = \underline{8}$ | 40% | =Total Cover | | Species Across All Strata: | |
| | | - | | Demonst of Deminent Oracio | _ |
| Sopling/Shrub Stratum (Distaire) 15 ft radius) | | | | Percent of Dominant Specie That Are OBL, FACW, or FA | |
| Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius) | % | | | Prevalence Index workshe | |
| 2. | <u>~~~</u> % | · | | Total % Cover of: | |
| 3. | <u> </u> | · | | OBL species | Multiply by: x 1= |
| 4. | <u>%</u> | · | | FACW species | x 2= |
| 5. | <u>%</u> | | | FAC species | x 3= |
| $5.$ $\frac{50\%}{50\%} = 20\% =$ | % | =Total Cover | | FACU species | x 4= |
| Herb Stratum (Plot size: 5 ft radius) | 70 | | | 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% | · | FACU | Hydrophytic Vegetation In | |
| | <u> 15%</u> % | no | FACU | 1 – Rapid Test for Hyd | |
| 4. | | · | | | |
| 5. 6. | <u> % </u> % | · | | ☐ 2 – Dominance Test is ☐ 3 - Prevalence Index is | |
| 7 | <u>~~~</u> % | · | | 4 - Morphological Ada | |
| | <u>~~~</u> % | · | | | marks or on a separate |
| 8 | <u>~~~</u> % | · | | sheet) | harks of on a separate |
| 9 | <u>~~~</u> % | · | | 5 - Wetland Non-Vasc | ular Dianta ¹ |
| 11. | <u>~~~</u> % | · | | | |
| $\frac{11.}{50\% = 50\ 20\% = 20}$ | 100% | =Total Cover | | | tia Vagatatian ¹ (Evaluin) |
| | 100% | | | | tic Vegetation ¹ (Explain) |
| Woody Vine Stratum (Plot size: <u>15</u> ft radius) | 400/ | | FAC | Indiantary of hydrig apil and | wetlend budrelend |
| 1. <u>Rubus armeniacus</u> | <u>40%</u> % | yes | FAC | ¹ Indicators of hydric soil and | |
| 2 | | Tatal Osuan | | must be present, unless dist | urbed of problematic. |
| $50\% = \underline{20} \ 20\% = \underline{8}$ | 40% | =Total Cover | | lludrankutia | |
| | | | | Hydrophytic Veretetion | |
| | | | | Vegetation Present? | |
| % Bare Ground in Herb Stratum 0% | | | | Present? | 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) | Aquatic Inverte | - | | | Dry-Season W | |
| | | | | | | |
| Sediment Deposits (B2) | Hydrogen Sulfi | | 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): | | 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 5 7 | ····, | | | | |
| | | | | | | |
| | | | | | | |
| 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 hydric so | | | | | |
| | - | | | | - |
| | | | | | |
| | | | | | |
| | | | | | |
| 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, Chartama (Distriction 45.6), and ited | | | | 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 H | |
| 5. | % | · | | 2 – Dominance Test | |
| 6. | <u> </u> | · | | 3 - Prevalence Index | |
| 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: TP5 |
|----------------------|------------------------------|--|--|----------------|-----------------------|--------------------------|---|-----------------------------|
| Profile D | escription: (Desc | ribe to the dep | th needed to docu | ment the ind | icator or conf | irm 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> % | | | | |
| | | % | | | | | | |
| | | <u>%</u> | | % | · | | | · |
| | C. Concentration | <u> </u> | A Doducod Motrix | % | or Cooted Ser | d Croin | 2L_postion: DL_Dor | |
| | | | M=Reduced Matrix, LRRs, unless othe | | | iu 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 | RA 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 1, Z , | 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 | | | ots (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 | 5) | 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 | | - / / | | |
| | | | | | | | | |
| | | | | | | | | |
| 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 | Lut. 40.00 | 10000 | | NWI classification: PEM1/SSC |
| Are climatic / hydrologic conditions on the site typica | I for this time of | fvear? Yes | | |
| Are Vegetation, Soil, or Hydrology significant | | | | 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 metion 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 p | lante | | | |
| | | | | |
| | 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. | % | | |] |
| 4. | % | | | Total Number of Dominant 6 (B) |
| 50% = 45 20% = 18 | 90% | =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. 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. | % | · | | 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 | % | · | | 4 - Morphological Adaptations ¹ (Provide |
| 9 | % | · | | supporting data in Remarks or on a separate |
| 0 | % | | | sheet) |
| | % | | | 5 - Wetland Non-Vascular Plants ¹ |
| 10 | | | | |
| 11. | % | <u> </u> | | |
| 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 D | escription: (Desc | ribe to the dept | h needed to doc | ument the ind | licator or co | nfirm the | e absence of indicators.) | |
| | | | | | | | | |
| Depth | Matrix | | | Redox Feat | | 1 2 | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| <u>0-6</u> 6-10 | 10YR 3/3 10YR 3/1 | <u> 100% </u> | 7.5YR 4/6 | <u>%</u> | | М | Sandy Loam | See Remarks Below |
| 10-16 | Gley1 4/N | 90% | 10YR 4/2 | <u>10%</u> | <u> </u> | M | Clayey Sand Fine Sand | See Remarks Below |
| 10-10 | Gley 1 4/1 | <u> </u> | 1011 4/2 | % | | IVI | Fille Salid | |
| | | <u> </u> | | % | | | | |
| | | <u> </u> | | <u>%</u> | | | | |
| | | <u>%</u> | | % | <u> </u> | | <u> </u> | |
| | | <u>%</u> | | <u>%</u> | | | | |
| | C=Concentration, | | A-Roducod Matrix | | l or Coatod S | and Grai | ns ² l ocation: Pl –Po | re Lining, M=Matrix |
| | oil Indicators: (A | | | | | | Indicators for Problema | |
| Histos | • • | | Sandy Rec | | •) | | 2 cm Muck (A10) | |
| | Epipedon (A2) | | Stripped M | | | | Red Parent Material (T | F2) |
| | Histic (A3) | | | cky Mineral (F1 | 1) (excent M | RA 1) | Very Shallow Dark Sur | , |
| | gen Sulfide (A4) | | - | yed Matrix (F2 | | | Other (Explain in Rema | |
| | • • • • | unface (A 1 1) | | | .) | | | aiks) |
| | ted Below Dark Su | . , | | . , | | | | and the Constant of the |
| | Dark Surface (A12 | | | k Surface (F6) | ` | | ³ Indicators of hydrophytic | |
| - | Mucky Minerals (| | | Oark Surface (F | -7) | | Wetland hydrology mus unless disturbed or pro | |
| ☐ Sandy | Gleyed Matrix (S | 4) | 🗌 Redox Dep | pressions (F8) | | | diffess disturbed of pro | blematic |
| Restrictiv | ve Layer (if prese | ent): | | | | | | |
| | | - | | | | | | |
| Type: | | | | | | | | |
| Depth (in | ches): | | | | | Hy | ydric Soil Present? | Yes⊠ No⊡ |
| Remarks: | Ample roots in fir | st layer of soil pr | ofile. | | | | | |
| HYDROL Wetland | _OGY Hydrology Indica | itors: | | | | | | |
| Primary I | ndicators (min. of | one required; che | eck all that apply) | | | | Secondary Indica | ators (2 or more required) |
| | e Water (A1) | | □ Water-Stai | ned Leaves (B | 9) (excent M | IRA 1 2 | Δ | d Leaves (B9) (MLRA 1, 2, |
| | Vater Table (A2) | | and 4E | | 5) (except m | | 4A, and 4 | |
| Satura | . , | | Salt Crust | , | | | Drainage Patt | |
| | Marks (B1) | | | vertebrates (B1 | 3) | | Dry-Season V | . , |
| | | | | | | | | |
| | ent Deposits (B2) | | | Sulfide Odor (C | | +- (00) | | sible on Aerial Imagery (C9) |
| | eposits (B3) | | | hizospheres al | | 001S(C3) | | |
| - | Mat or crust (B4) | | | of Reduced Iron | () | . | Shallow Aquit | |
| | eposits (B5) | | | n Reduction in | • | | FAC Neutral | |
| | e Soil Cracks (B6 | • | | Stressed Plant | | A) | | ounds (D6) (LRR A) |
| | ation Visible on Ae | | | lain in Remark | s) | | Frost-Heave I | Hummocks (D7) |
| Sparse | ely Vegetated Cor | cave Surface (B | 8) | | | | | |
| | servations: | | | | | | | |
| Surface V | Vater Present? | Yes 🗌 | No 🛛 🛛 Do | epth (Inches): | | | | |
| | ble Present? | Yes 🗌 | | epth (Inches): | | We | tland Hydrology Present? | |
| | n Present? | Yes 🗌 | No 🖂 🛛 De | epth (Inches): | | ļ | | Yes 🛛 No 🗌 |
| | Capillary fringe) | | | | | | | |
| Describe | Recorded Data (S | stream gauge, me | onitoring well, aer | ial photos, prev | vious inspect | ions), if a | vailable: | |
| | | | | | | | | |
| | | | | | | | | |
| Doment | | | | | | | | |
| Remarks | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Project/Site: Segale Delineation | City/County: Kelso/Cowlitz County | 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: S12 | , T07N, R02W |
| Landform (hillslope, terrace, etc.): Floodplain Loca | I relief: (concave, convex, none): C | oncave Slope (%):0-3 % |
| Subregion (LRR): A2 Lat: 46.1030139 | Long: -122.8778142 | 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 of year? | ?Yes🛛 No🗌 (If no, explain Rei | 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 samp | ling point locations, transec | ts, important features, etc. |
| HVdric Solis Present? Yes IXI No LI | s the Sampled Area within a Wetland? Ye | 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 wa | plot with TP-8, was taken in along t | |

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 doc | ument the ind | icator or confir | m the ab | sence of indicators.) | Sampling Point: <u>TP-7</u> |
|--|---|-------------------|--------------------|------------------|------------------|-----------------------|---------------------------|-----------------------------|
| Depth | Matrix | | | Redox Feat | ures | | | |
| (inches) | Color (moist) | % | Color (moist) | % | | Loc ² | Texture | Remarks |
| 0-6 | 10YR 4/1 | 90% | | | | | | |
| | 7.5YR 2.5/2 | | | | | | Silty Sand | See Remarks Below |
| | | | | | | | | |
| | | | | | | | | |
| | file Description: (Describe to the depth needed to document the indicator apph Matrix Redox Features bes 10YR 4/1 90% 10% 7.5YR 2.5/2 10% % 10% 7.5YR 2.5/2 10% % 9% 9.6 % 9% 9% 9.6 % 9% 9% 9.6 % 9% 9% 9.7.5YR 2.5/2 10% % 9% 9.6 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % 9% 9% 9.7 % | | | | | | | |
| | | % | | | | | | |
| . <u></u> | | | | | | | | |
| | | | | | | | | |
| | | plicable to all L | | | .) | | | ic Hydric Soils |
| | | | | | | | | 2) |
| | | | | |) (except MI R | | | |
| | | | | | | - | - | |
| | • • • • | face (A11) | | | | | | |
| · · | | () | | | | ³ In | dicators of hydrophytic y | egetation and |
| | · · · | | | · · / | 7) | | Wetland hydrology must | t be present, |
| | | | | | - / | | unless disturbed or prob | olematic |
| | | | | | | | | |
| Restrict | | | | | | | | |
| Type: | | | | | | | | |
| | , | | | | | - | | |
| features. | | | | | | | | |
| HYDRO | LOGY | | | | | | | |
| Wetland | Hydrology Indicat | ors: | | | | | | |
| Primary I | ndicators (min. of o | ne required; cheo | ck all that apply) | | | | Secondary Indicat | tors (2 or more required) |
| | | | | | 9) (except MLR | A 1, 2, 4A | | |
| - | | | | , | | | | - |
| | | | | - | 3) | | | |
| | · · · | | • | | , | | _ , | |
| | | | | | | s (C3) | | |
| | | | | | • • | 0 (00) | | |
| - | . , | | | | | | | |
| | | | | | . , | | | |
| | | ial Imagery (B7) | | | | | | · · · · |
| | | | · · | | , | | _ | |
| Field Ob | servations: | | | | | | | |
| | | | | I (/ | | | | |
| | | | | • • • | | Wetlan | d Hydrology Present? | |
| | | Yes 🖂 | No 📋 🛛 De | pth (Inches): | <u>2</u> | | | Yes 🖂 No 🗋 |
| | | | nitoring well aeri | al photos prev | vious inspection | s) if availa | ahle [.] | |
| Describe | | ream gauge, moi | intoring weil, den | ai priotos, prev | nous inspection. | <i>5)</i> , ii avaiid | able. | |
| | | | | | | | | |
| | | | | | | | | |
| Remarks | Torbite Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Defeatures TorK end in the indicator or confirm the absence of indicators.) Defeatures TorK end in the indicator or confirm the absence of indicators.) Defeatures TorK end in the indicators of consets Sand Defeatures Site indicators in the indicator of consets and indicators in the indicators of problematic Hydric Solis Type: Concentration Depth (Redox (So) Defeatures Site indicators: (Applicable to all LRes, unless otherwise noted.) Indicators for problematic Hydric Solis Histosal (A1) Depth (Matrix (S6) Image (Redox (So) Image (Redox (A1)) Histosal (A1) Depth (Matrix (Si) Image (Redox (So) Image (Redox (So) Histosal (A1) Deptieved Matrix (Se) Image (Redox (So) Image (Redox (So) Histosal (A1) Deptieved Matrix (Se) Image (Redox (So) Image (Redox (So) Hydrig on Suffice (A1) Deptieved Matrix (Se) Image (Redox (So) Image (Redox (So) Hydrig on Suffice (A1) Deater Matrix (So) Image (Redox (So) Image (Redox (So) Hydrig on Suffice (A1) Deater Matrix (S | | | | | | | |
| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Type' Loc ² Texture Remarks 0-6 10YR 4.1 90% % % Sitty Sand See Remarks Below 0 % % % Sitty Sand See Remarks Below 0 % % % Sitty Sand See Remarks Below 0 % % % Sitty Sand See Remarks Below 0 % % % Sitty Sand See Remarks Below 1 % % % Sitty Sand See Remarks Below 1 % % % Sitty Sand See Remarks Melow 1 % % % Sitty Sand See Remarks Index (At | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| 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) |

| • • | 70 | | | Number of Borninant Opecies | 2 | (A) |
|--|----------|--------------|------|---|---------------------------------|-----|
| 2. | % | | | That Are OBL, FACW, or FAC: | | |
| 3. | % | | | - | | |
| | % | | | Total Number of Dominant | 2 | (B) |
| 50% = 20% = | % | =Total Cover | | Species Across All Strata: | | () |
| | | | | Percent of Dominant Species | | |
| Sapling/Shrub Stratum (Plot size: <u>15 f</u> t. radius) | | | | That Are OBL, FACW, or FAC | <u>100</u> | (A/ |
| | % | | | Prevalence Index worksheet | | |
| | % | | | Total % Cover of: | Multiply by: | |
| | % | | | OBL species | x 1= | _ |
| | % | | | FACW species | x 2= | _ |
| | % | | | FAC species | x 3= | |
| 50% = 20% = | % | =Total Cover | | FACU species | x 3= x 4= | |
| lerb Stratum (Plot size: <u>5</u> ft radius) | | _ | | UPL species | x 5= | |
| Phalaris arundinacea | 60% | yes | FACW | Column Totals: | (A) | _ (|
| Galium aparine | 15% | no | FACU | Prevalence Index = | B/A= | |
| Dipsacus fullonum | 15% | no | FAC | Hydrophytic Vegetation Indica | ators: | |
| Equisetum arvense | 10% | no | FAC | 1 – Rapid Test for Hydrop | | |
| - | % | | | 2 – Dominance Test is >5 | | |
| | % | | | 3 - Prevalence Index is ≤3 | .0 ¹ | |
| | % | | | 4 - Morphological Adaptat | ions ¹ (Provide | |
| | % | | | supporting data in Remark | | Э |
| | % | | | sheet) | | |
|). | % | | | 5 - Wetland Non-Vascular | Plants ¹ | |
| | % | | | | | |
| 50% = 50 $20% = 20$ | 100% | =Total Cover | | Problematic Hydrophytic \ | /egetation ¹ (Explai | n) |
| <u>Noody Vine Stratum</u> (Plot size: <u>15</u> ft radius) | 000/ | | | | | |
| . <u>Rubus armeniacus</u> | 60% | yes | FAC | ¹ Indicators of hydric soil and we | | |
| | <u>%</u> | | | must be present, unless disturbe | ed or problematic. | |
| 50% = 30 $20% = 12$ | 60% | =Total Cover | | Hydrophytic | | |
| | | | | Vegetation | | |
| | | | | Present? | Yes⊠ No | ٦ |
| 6 Bare Ground in Herb Stratum 0% | | | | | | _ |
| | | | | | | |
| 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 | | iiks) |
| | 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 (| | | | |
| | | 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 | | 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) spintching showing sampling point locations; transects, important features, etc. Hydrologic Present? Yes No. Hydrologic Present? Yes No. Is the Sampled Area within a Wetland? Yes No. Hydrologic Present? Yes No. Is the Sampled Area within a Wetland? Yes No. Hydrologic Present? Yes No. Is the Sampled Area within a Wetland? Yes No. Hydrologic Present? Yes No. Is the Sampled Area within a Wetland? Yes No. Hydrologic Present? Yes No. Is the Sampled Area within a Wetland? < | | | | | | |
| 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 on the sates proton of the study area is located on a large area of dredge spoils. The eastem portion of the study area tas desp stope 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 and the stope stope in a step | | | 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 Spocies (A) 1 Paulos Absolute file (Source Present?) Yes (If No, explain Remarks.) (B) VEGETATION – Use scientific names of plants. Total Number of Dominant Spocies (A) 1 Paulos Absolute file (Source Present?) Yes (If No, explain Remarks.) (B) 2 Solid (H) | | 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 Momber of Dominant Species 2 (A) 1 Pseudotsuga menziesii 3 (B) Status 3 (B) 50% = 23 20% = 9 45% yes FACU Number of Dominant Species 2 (A) 1 Psecies Across All Strata: 3 (B) Species Across All Strata: 3 (B) (B) | | 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 Indicator Status Absolute Dominant Indicator Status Assolute Assolute Assolute Assolute Assolute Assolute Assolute Assolute | | | | | | |
| 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 Rower FAC Total Norber of Dominant Species Q (A) 3. % FACU Prevalence Index vorksheet Y (A) 4. % FAC Pr | 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 is 00% = 20% = 10 20% = 4 45% = Total Cover Dominant Species TP-16 (A) 1. Prevalence Index worksheet Total % Cover of: Multiply by: 2. 9% Total Cover FAC Prevalence Index worksheet 3. 9% FAC Prevalence Index worksheet 3. 9% FAC Prevalence Index es 2/A = 4. 9% FAC Prevalence Index es 2/A | | | | | | |
| 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 hydro the orthold northold northydrophydicol Negatation fore the hydrophydic Negatation for the | | | | | | |
| 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 | | Dentised a Test Montal and | |
| 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% (Column Totals: (A) (B) 5. % 2 2 - Dominance Test is >50% (Column Cortals: (S) (A) (B) 6. % 2 - Dominance Test is > | | | | | | <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. % G Hydrophytic Vegetation Indicators: (A) (A) (B) 4. % G 1 Rapid Test for Hydrophytic Vegetation Secondary Secondary (B) 5. % G 1 Secondary Secondary (A) (B) | $50\% = \underline{23} \ 20\% = \underline{9}$ | 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> | | % | | | | |
| 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 | r?Yes⊠ No⊡ (If no, explain R | emarks.) |
| 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: <u>5</u> 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 | 1 – Rapid Test for Hydrop | | |
| | | no | UBL | \boxtimes 1 – Rapid Test for Hydropi \boxtimes 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. | % | Tatalo | | | / | |
| $50\% = 10 \ 20\% = 4$ | 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 | ition: 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 disturbe | ed? Are "Normal Circumstances | s" present? Yes⊠ No□ | | | | | |
| 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 | % | | | 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 | | City/Co | | /Cowlitz County | Sampling Date: 12/8/2021 |
|---|---------------------|--------------------------|---------------------|---|---|
| Investigator(s): Baker, Erin; Taylor, Steffanie | | Sectio | State: <u>\</u> | 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 | year? Yes⊠ | No (I | f no, explain Remarks.) | |
| Are Vegetation, Soil, or Hydrology significant | | | | Circumstances" present? | |
| Are Vegetation, Soil, or Hydrology naturally | | | | any answers in Remark | |
| 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 | | 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 | | Habita | at | |
|---------------------------|-----|-----------------|---------------|----|--------|--------|-------|---------|-------|-------|
| | | | | (| Circle | the ap | propr | iate ra | 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 | I | | |
| 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 degradati | on |
| 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 least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland, for at least for a stream (or ditch) in, or contiguous with the wetland (or ditch) in, or contiguous with the wetland (or ditch) in, or contiguous with the wetland (or ditch) in | 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) | | | |
| 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 intens If total accessible habitat is: | | | |

| H 2.0. Does the landscape have the potential to support the habitat functions | of the site? | |
|--|--|--------------|
| 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 If total accessible habitat is: | l uses)/2] <u>2.3</u> = 2.3 % | |
| > 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. | | |
| <i>Calculate:</i> % undisturbed habitat <u>26.8</u> + [(% moderate and low intensity lan | d uses)/2] <u>19.3</u> = 46.1 % | |
| Undisturbed habitat > 50% of Polygon | points = 3 | 1 |
| Undisturbed habitat 10-50% and in 1-3 patches | points = 2 | T |
| 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 | d the points in the boxes above | 1 |
| Rating of Landscape Potential If score is:4-6 = HX1-3 = M< 1 = L | Record the rating on t | he first pad |

| 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 does not meet any of the criteria above | 2 |

| Rating of Value If score is: X 2 = H 1 = M 0 = L | Rating of Value | If score is: | х | 2 = H | 1 = M | 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>Ξ</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, | |
| With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland | |
|))) | |
| SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area | |
| Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2 | Cat. I |
| SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? | |
| — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less | |
| than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25) | Cat. I |
| — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- | |
| mowed grassland. | Cat. II |
| — 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 | |
| | |
| 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 Wetlands of High | Cat. I |
| Conservation Value? Yes – Go to SC 2.2 No – to to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? | Cutif |
| Yes = Category I No = Not a WHCV | |
| SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? | |
| http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf | |
| 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 – o 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 tog of a lake or | |
| pond? Yes – Go to SC 3.3 No =)s not a bog | |
| SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% | |
| cover of plant species listed in Table 4? Yes = 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 | Cat. I |
| 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 No = Is not a bog | |

| 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 | Cat. II |
| than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). | Cat. II |
| — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- | |
| mowed grassland. | |
| — The wetland is larger than ¹ / ₁₀ ac (4350 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 reting | |
| 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 SC 6.2 | \frown |
| SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? | \smile |
| 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}

This page left blank intentionally



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.





1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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.





1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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.







1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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.









1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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.





1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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.







1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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.



1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305

DATE: 1/4/2022 DWN: EB PRJ. MGR: ST PROJ.#: 3665.02

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