

CRITICAL AREAS REPORT

March 24, 2021



Lockwood Meadows Subdivision La Center, Washington

> Prepared for PLS Engineering 604 W. Evergreen Blvd. Vancouver, Washington 98660 (360) 944-6519

Prepared by Ecological Land Services

1157 3rd Avenue, Suite 220A • Longview, WA 98632 (360) 578-1371 • Project Number 2245.14

NWS-2020-1015

SIGNATURE PAGE

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

1 M/

Annie Jean Rendleman Biologist

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INTRODUCTION

Ecological Land Services, Inc. (ELS) has completed this critical areas report on behalf of PLS Engineering for the purpose of constructing a residential subdivision. The project site consists of Clark County Parcel 209113-000 located at 2000 NE Lockwood Creek Road in La Center, Washington. The site is located within the southeast portion of Section 10, Township 3 North, and Range 2 East of the Willamette Meridian (Sheet 1). This report discusses onsite critical areas in accordance with *La Center Municipal Code (LCMC) Title 18 Development Code* (December 2020).

Project History

- ELS conducted a broad-scope assessment of the site March of 2020.
- ELS delineated wetlands and mapped critical areas September 8, 2020.
- During a site visit with Miranda Adams (Department of Ecology) on November 10, 2020, the Wetland A boundary was confirmed. Five additional test plots were taken near Wetland A to further support the delineation (TPs AA AE). The pond area was also re-delineated (Wetland B), encompassing a larger area than what was originally outlined. Three additional test plots were taken to support the Wetland B delineation.
- ELS collected additional data from test plots made during the November site visit with Ecology, as well as TP-6, on February 24, 2021.

SITE DESCRIPTION

The project site can be accessed from the southwest via NE Lockwood Creek Road. The 20-acre site is zoned Urban Holding (UH-10) and currently has a single-family residence, barn, and existing well. NE Lockwood Creek Road abuts the southeastern portion of the site and NE 24th Avenue abuts the site to the east. The site is surrounded by high-density subdivision lots to the north and west, and low-density single-family parcels to the south (Sheet 2).

The majority of the site consists of mowed field grasses with scattered trees, including Oregon white oaks (*Quercus garryana*). The eastern portion of the site is a decommissioned Christmas tree farm. The site contains two Category IV wetlands and one priority habitat Oregon white oak (Sheet 2).

Site History

General

The property has been used as both a hobby and commercial farm operation for several decades that included agricultural activities such as livestock, hay, and Christmas tree production, as well as rental pasture and barn stalls for horses. The Christmas trees were grown on a third-party lease arrangement and the last selective tree harvest occurred during the winter of 2020/2021. Site feature and recent maintenance activities performed in the past two years are discussed below.

Ditch Maintenance

The ditch along the north property boundary appears to have been installed circa 2005, according to aerial imagery (Clark County GIS). The owner at that time was concerned about future development activities upslope releasing uncontrolled stormwater onto the property. The ditch

funneled seasonal flow (only in winter) to a swale underlaid by a 4-inch perforated flex pipe (drain tile shown on Sheet 2). The tile drains south to Wetland B, which was excavated to serve as a livestock water pond between 2000 and 2002. In the past two years, the property line ditch was cleaned to original depth and the swale had minor maintenance performed by cleaning deposited silt. As the 4-inch pipe below the swale was plugged in places, it was replaced with a 6-inch flex pipe. The increased pipe size was intended to account for stormwater discharge volumes from upslope developments. Care was taken to daylight the downstream end of the pipe in the Wetland B area (pond) in a flat spot to avoid erosive flows during high rainfall events.

Well Maintenance

An existing hand-dug well, approximately three feet in diameter with a partial brick well casing, is located northeast of Wetland B. The well was a potential falling hazard, as it was previously unmarked. The well perked water to the surface during high ground water events and saturated the immediate downslope area making it further hazardous, as the well casing could slough. As part of the recent maintenance work, the farm contractor filled the well and collapsed the vertical sides to prevent cave-ins and for the site's overall safety. A 4-inch drainpipe was installed downslope of the well to ensure that water no longer saturated the surface area during high groundwater events. The pipe also drains to Wetland B.

Blackberry Removal on Dam

The old pond (Wetland B) was originally constructed by building an earthen dam across the swale before it exited the property toward the south. The dam was overgrown with Himalayan blackberries (*Rubus armeniacus*) and there was evidence of erosion on the downstream side of the dam where the old pond drainpipe went through the dam. This risked a complete dam failure and subsequent downstream damage to a neighboring home and property. The farm contractor removed the blackberries on the dam, removed the pipe, and cut an overflow swale that is open and has gradual grades, to allow water to exit the pond. This prevents high water events from flooding the pond and threatening downstream properties with a dam blow-out.

Noxious Weed Removal

The western portion of the site previously had internal fences. Recent maintenance in this area included removal the internal fences as well as some tree removal, in order to aid in annual mowing, either for hay production or, at minimum, for weed mowing. After horses were removed, there was an infestation of County-listed noxious weeds Canada thistle (*Cirsium arvense*) and tansy ragwort (*Jacobaea vulgaris*) that has since and is currently being routinely maintained with mowing and spraying.

METHODOLOGY

Wetlands

The wetland delineation followed the Routine Determination Method according to the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010).

The Routine Determination Method examines three parameters-vegetation, soils, and hydrology-to determine if wetlands exist in a given area. Hydrology is critical in determining what is wetland, but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for a long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or 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, as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the City of La Center.

ELS biologists completed fieldwork on September 8, 2020 and February 24, 2021 to determine the presence or absence of critical areas and if present, to map their approximate locations. Prior to conducting the initial fieldwork, an ELS biologist reviewed current and historic aerial photographs dating back to 1955 and reviewed the Clark County GIS database (2020) for information regarding soils, topography, wetlands, and habitat conservation areas. ELS biologists collected vegetation, soil, and hydrology information from 18 test plots to determine the presence or absence of wetlands onsite (Sheet 2). Test plot locations were determined based on changes in elevation, vegetation, the presence of hydrology, and according to potential wetland signatures based on an interpretation of aerial imagery. ELS biologists flagged the test plots and wetland boundaries in the field and recorded the locations with a hand-held GPS unit with sub meter accuracy under ideal conditions.

Wetland signatures were observed on aerial imagery within the tree farm area. Wetland A was delineated within a wet signature area in September, and the delineation was supported with several additional test plots in the vicinity during the site visit with Ecology. Wetland A was delineated primarily using vegetation: Pennyroyal (Mentha pulegium, OBL), creeping St. John's wort (Hypericum anagalloides, OBL), and soft rush (Juncus effusus, FACW) were observed within the wetland boundary. Additionally, oxeye daisy (Leucanthemum vulgare, FACU) and Himalayan blackberry (FAC) were observed outside of the wetland. Black cottonwood (Populus balsamifera, FAC) trees and shrubs are established within Wetland A as well as the area southeast of the wetland. Several test plots were taken in the signature southeast of the wetland (Sheet 2). These test plots contained similar vegetation as Wetland A, but soils were not hydric. Additionally, during the February site visit, standing water was not observed in these areas, but was observed within the wetland.

Wetland B was delineated with Ecology based on changes in vegetation, soils, and hydrology. The permanently ponded portion of the wetland is dominated by black cottonwood and Scouler's willow (Salix scouleriana, FAC) and the remainder of the wetland is dominated by creeping buttercup (Ranunculus repens, FAC) and mowed grass with some Himalayan blackberry. Hydric soils were observed within Wetland B, including the hydric soil indicator Hydrogen Sulfide (A4). Soils in the wetland buffer contained depleted matrices relatively deeper in the soil with little to no redoximorphic features (1 percent or less). During the follow-up fieldwork in February, less than an inch of standing water was observed at TP-BB, but not outside the wetland boundary.

VEGETATION

The indicator status, following the scientific names indicate the likelihood of a plant species to be established in wetlands. Listed from most likely to least likely, the indicator status categories are:

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

Wetlands

Wetland A is a forested slope located within the decommissioned tree farm in the eastern portion of the site. Wetland B is forested depressional wetland located in the central southern portion of the site. Wetland A is dominated by **grasses**: sweet vernal grass (*Anthoxanthum odoratum*, FACU), velvet grass (*Holcus lanatus*, FAC), and soft rush (FACW); and **trees**: black cottonwood (FAC) and planted Nordmann fir (*Abies nordmanniana*, assumed to be FACU).

Wetland B is dominated by **herbs**: chickweed (*Stellaria media*, FACU), marsh cudweed (*Gnaphalium uliginosum*, FAC), marsh willowherb (*Epilobium palustre*, OBL), and creeping buttercup (FAC); and **trees**: black cottonwood and Scouler's willow (FAC).

Uplands

Onsite uplands within the field areas were dominated by **herbs and grasses**: sweet vernal grass, colonial bentgrass (*Agrostis capillaris*, FAC), tall fescue (*Schedonorus arundinaceus*, FAC), orchard grass (*Dactylis glomerata*, FACU), and English plantain (*Plantago lanceolata*, FACU); with scattered **shrubs**: Himalayan blackberry and **trees**: Oregon white oak and black cottonwood. The tree farm portion of the site is dominated by **grasses**: sweet vernal grass and colonial bentgrass; and **trees**: Nordmann fir and black cottonwood (Wetland A vicinity only). Regularly mowed Himalayan blackberry is also scattered throughout the tree farm area.

SOILS

Soil onsite is mapped as:

- Gee silt loam, 0 to 8 percent slopes (GeB),
- Gee silt loam, 8 to 20 percent slopes (GeD),
- Hillsboro silt loam, 0 to 3 percent slopes (HoA),
- Hillsboro silt loam, 8 to 15 percent slopes (HoC), and
- Odne silty clay loam, 0 to 3 percent slopes (OdB),

as referenced on the Natural Resources Conservation Service (NRCS) website (2020; Sheet 4).

Gee silt loam, 0 to 8 percent slopes and Gee silt loam, 8 to 20 percent slopes are characterized as moderately well-drained soils with an approximate depth to water table of about 24 to 48 inches

below ground surface (BGS). These soils are generally found on terraces. A typical profile consists of silt loam from 0 to 22 and silty clay loam from 22 to 60 inches BGS.

Hillsboro silt loam, 0 to 3 percent slopes and Hillsboro silt loam, 8 to 15 percent slopes are characterized as well-drained soils with an approximate depth to water table of more than 80 inches BGS. These soils are generally found on terraces. A typical profile consists of silt loam from 0 to 60 inches BGS.

Odne silty clay loam, 0 to 3 percent slopes is characterized as a poorly-drained soil with an approximate depth to water table of about 0 to 18 inches BGS. This soil is generally found on terraces and drainageways. A typical profile consists of ashy silt loam from 0 to 5, silt loam from 5 to 33, and loam from 33 to 60 inches BGS. Odne silty clay loam, 0 to 3 percent slopes is listed as a hydric soil on the *Washington State Hydric Soils List* (NRCS 2019).

Wetland test plots met primary hydric soil indicators Hydrogen Sulfide (A4), Depleted Below Dark Surface (A11), and Depleted Matrix (F3). Soil data from the test plots can be found in Appendix A.

HYDROLOGY

Precipitation data were gathered from the Battle Ground WETS Station and are summarized in the table below from data in Appendix C. Rainfall was below the 30-year monthly average in July and October and was above the 30-year monthly average in June, September, January, and February. In August, November, and December, rainfall did not deviate from the 30-year monthly average. February received 88 percent of its normal rainfall by the day of the site visit on February 24th.

			Prec	ipitation (in	ches)		
Field-	Prior	3 Mont	hs Prior		Deviation		
work Dates	14 Day Total	Month	Monthly Total	30 Year Monthly Average	from 30 Year Monthly Average	30% Below	30% Above
		02/2021	6.69	5.36	+1.33	3.65	6.40
2/24/21	3.19	01/2021	9.70	7.31	+2.39	5.70	8.45
		12/2020	7.10	7.98	-0.88	6.33	9.18
		11/2020	8.51	7.67	+0.84	5.50	9.06
11/10/20	2.19	10/2020	2.59	4.81	-2.22	3.29	5.74
		09/2020	2.69	2.20	+0.49	1.12	2.65
9/8/2020	0.00	08/2020	0.44	0.80	-0.36	0.37	0.94

Table 1. Precipitation Data.

			Prec	ipitation (in	ches)		
Field-	Prior	3 Mont	hs Prior		Deviation		
work Dates	14 Day Total	Month	Monthly Total	30 Year Monthly Average	from 30 Year Monthly Average	30% Below	30% Above
		07/2020	0.18	0.63	-0.45	0.23	0.70
		06/2019	3.88	2.31	+1.57	1.61	2.75

Oxidized Rhizospheres on Livings Roots (C3) were observed within Wetland A test plots in September and November, and Surface Water (A1), High Water Table (A2), and Saturation (A3) were observed within Wetland A in February. The secondary hydrology indicator Saturation Visible on Aerial Imagery (C9) was also noted during September fieldwork, due to the wet signatures discussed in the *Methodology* section above.

Oxidized Rhizospheres on Livings Roots (C3) were observed within Wetland B test plots during each site visit, and Surface Water (A1), High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1) were observed within Wetland B in February. The recorded hydrological data from test plots are in Appendix A.

According to the Washington Department of Natural Resources Stream Type Map (WDNR 2020), a Type Ns stream is mapped onsite, flowing south through the center of the site (Sheets 5 and 6). The Type Ns stream is mapped originating approximately 700 feet offsite to the north, through the center of the site, and continuing offsite southwesterly for another 975 feet before a water type break (Sheet 6). From there, the Type F stream continues southwest for approximately 0.5 miles before reaching a wetland adjacent to East Fork Lewis River. The site lies within Water Resource Inventory Area (WRIA) 27 Lewis and Hydrologic Unit Code (HUC) 170800020507 Lockwood Creek – East Fork Lewis River.

ELS biologists did not observed flowing water, nor any signs of a waterbody in the onsite mapped area onsite. According to *LCMC 18.300.030 Definitions*, "streams" are defined as "those areas where surface waters produce a defined channel or bed excluding streams and lakes regulated under the State Shorelines Management Act." The presence of a stream can be indicated by either hydraulically sorted sediments or by the removal of vegetation from the action of moving water. Photos 7 and 8 show the onsite mapped area, which does not feature a channel, bed, bank, or signs of regular water flow, seasonal or otherwise. An ordinary high water mark (OHWM) could not be delineated because, although slight changes in topography were present, the area does not exhibit changes in vegetation or sediment. Test plots located along the mapped riparian area (TPs 3, 4, and 6) did not contain hydric soils, nor hydrologic indicators. Therefore, ELS has determined that the mapped stream does not meet stream criteria.

WETLAND INVENTORY

The National Wetlands Inventory (NWI 2020) shows a palustrine wetland in the vicinity of Wetland A, and Wetland B is not mapped (Sheet 7). The NWI and Clark County Inventory (Clark

County GIS 2020) show an offsite wetland north of the site, aligned with the Type Ns stream mapping. ELS findings differ somewhat from the mapped critical areas, as an additional wetland was delineated in the southern portion of the site (Wetland B). Wetland inventory maps should be used with discretion, as they are typically used to gather wetland information about a region and, because of the large scale necessary for regional mapping, are limited in accuracy for localized analyses.

CRITICAL AREAS SUMMARY

Wetlands

Two wetlands (Wetlands A and B) were delineated onsite based on topography and soil, vegetative, and hydrologic indicators. The wetland determination data forms are in Appendix A and the wetland rating forms are in Appendix B. Table 2 summarizes the onsite wetlands. All wetland buffers were designated assuming high land use intensity.

Wetland A

Wetland A is a Category IV forested, slope wetland located near the center of the decommissioned tree farm, totaling 0.05 acres (Sheet 2). Wetland A receives most of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. The wetland is saturated only and functions to recharge groundwater. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (rating system), Wetland A is a Category IV wetland scoring 5 points for water quality functions, 5 points for hydrologic functions, and 4 points for habitat functions with a total of 14 points. According to *LCMC 18.300.090(5)(d) Exempted Wetlands*, Wetland A is exempted from La Center buffer regulations.

Wetland B

Wetland B is a Category IV emergent and forested, depressional wetland located in the central southern portion of the site, totaling 0.08 acres (Sheet 2). The wetland receives it hydrology from groundwater and precipitation. Wetland B is permanently flooded and saturated only and functions to recharge groundwater. According to the rating system, Wetland B is a Category IV wetland scoring 5 points for water quality functions, 6 points for hydrologic functions, and 4 points for habitat functions with a total of 15 points. The designated buffer width for a Category IV wetland with a habitat score of 4 is 50 feet, as listed in *LCMC Table 18.300.090(5)(i)(i)-1*.

 Table 2. Wetland Summary.

Wetland	Category ¹	HGM Class ²	Cowardin Class ³	Habitat Score	Wetland Area (ac.)	Buffer ⁴ (ft.)
А	IV	Slope	Forested	4	0.05	Exempted ⁵
В	IV	Depressional	Emergent, Forested	4	0.08	50

¹*Hruby 2014*

² NRCS 2008

³ Cowardin et al. 1979

⁴LCMC Table 18.300.090(5)(i)(i)-1

⁵ LCMC 18.300.090(5)(d)

Oregon White Oaks

According to *LCMC 18.300.090(2) Fish and Wildlife Conservation Areas*, oaks are considered a priority habitat by the Washington Department of Fish and Wildlife (WDFW) and locally by the City of La Center. In urban or urbanizing areas west of the Cascades, WDFW defines priority oak habitat as single oaks, or stands of pure oak, or oak/conifer associations, 1 acre or greater in size (2008). WDFW may also consider individual Oregon white oak trees a priority habitat when found to be particularly valuable to wildlife (i.e., contains many cavities, has a large diameter at breast height (DBH), is used by priority species, or has a large canopy) (Larsen and Morgan, 1998). WDFW recommendation is that in urban and urbanizing areas, single trees should be maintained if they are deemed important to species highly associated with Oregon white oak. Oaks and their associated floras comprise distinct woodland ecosystems with various plant communities providing valuable habitat that contributes to wildlife diversity; Oak woodlands provide a mix of feeding, resting, and breeding habitat for many wildlife species (Larsen and Morgan, 1998). WDFW considers oak trees with a DBH of greater than 20 inches to be large and greater than 12 inches to be medium.

Fifteen small oaks were observed onsite with DBHs ranging from 2 to 8 inches (Photo 12). An additional oak in the southwestern corner of the site has a DBH of 40 inches and is considered priority habitat. The priority oak canopy is approximately 0.10 acres (Sheet 2). *LCMC Table 18.300.090(2)(a)* states that nonriparian priority habitats and species require a buffer of 300 feet or a threshold based upon consultation with WDFW. Appendix D shows email correspondence with WDFW Habitat Specialist, Isaac Holowatz, stating that the dripline is adequate to protect the priority oak tree (February 17, 2021).

CONCLUSION

One depressional wetland and one slope wetland were delineated onsite. The wetland boundaries were confirmed by Ecology on November 10, 2020. One priority habitat Oregon white oak is located in the southwestern corner of the site. The mapped Type Ns stream was not observed onsite, as no channel, bed, bank, or signs of regular water flow were observed onsite. Upon the forthcoming site plan design for a residential subdivision development, a mitigation plan will be submitted to satisfy any necessary critical areas impacts.

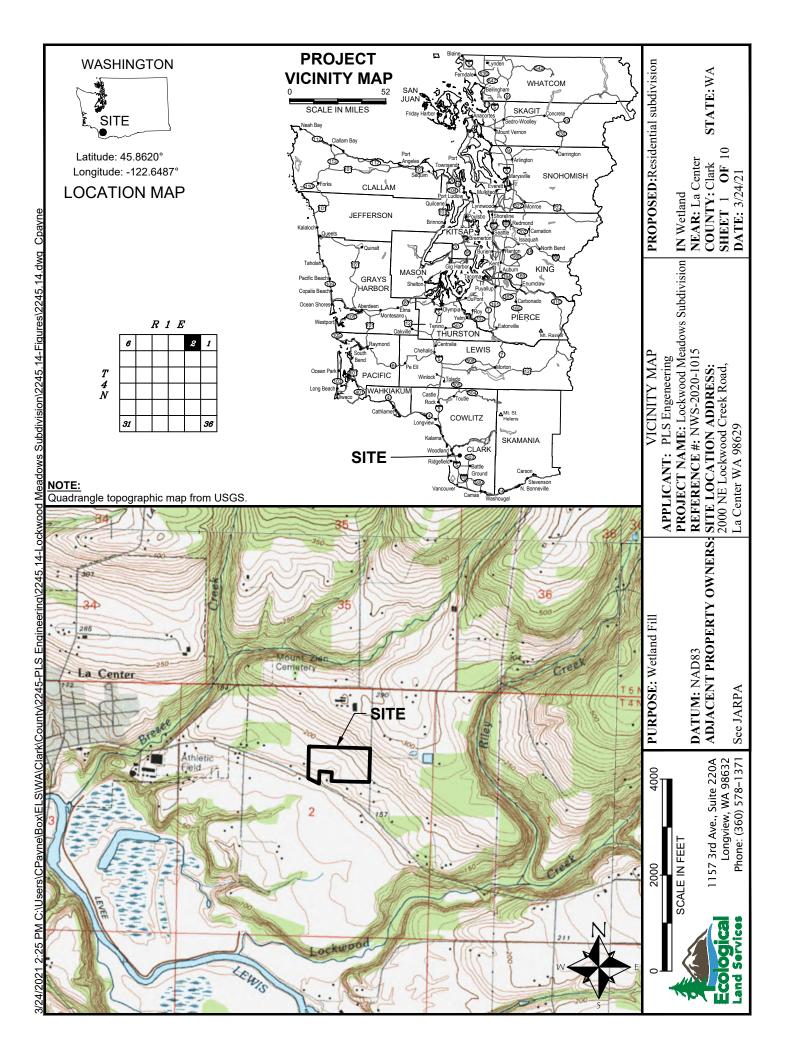
LIMITATIONS

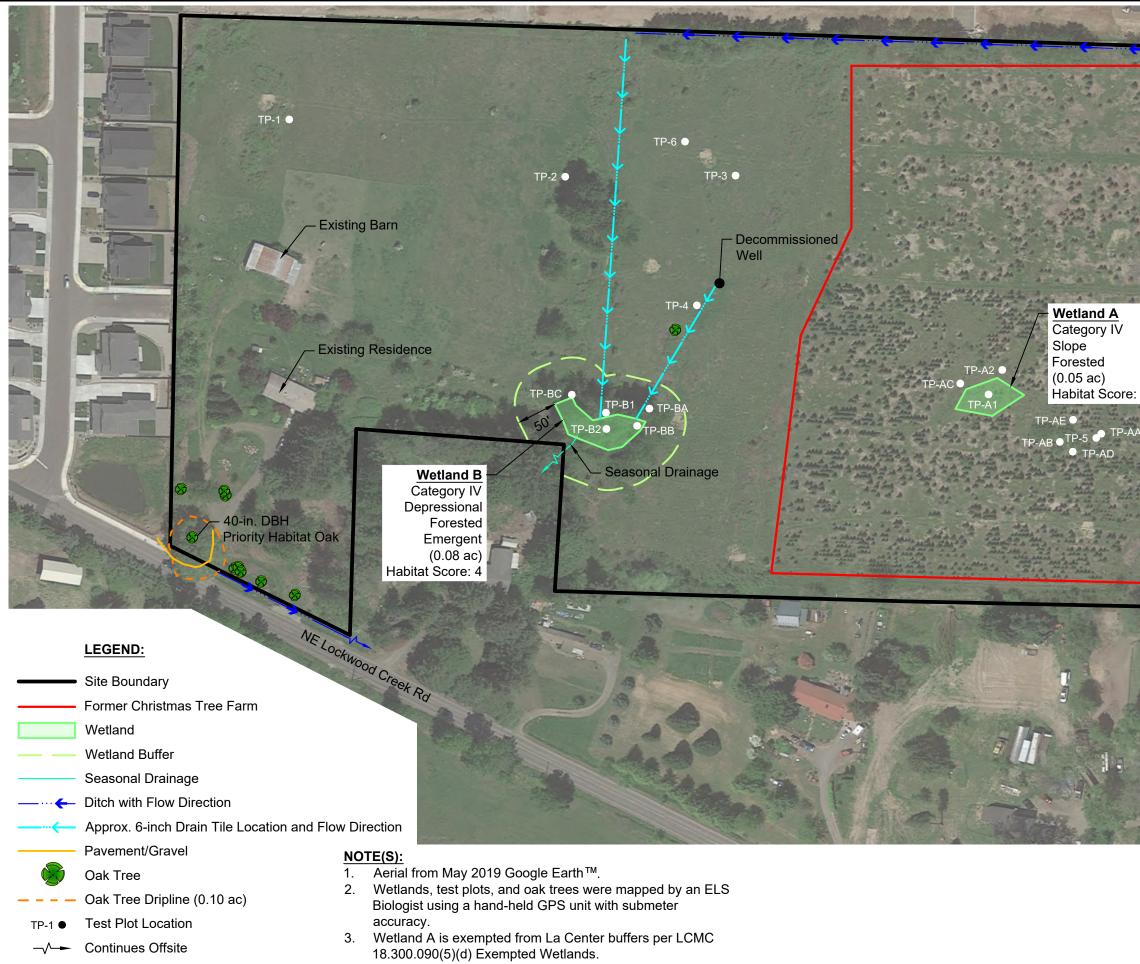
ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at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

REFERENCES

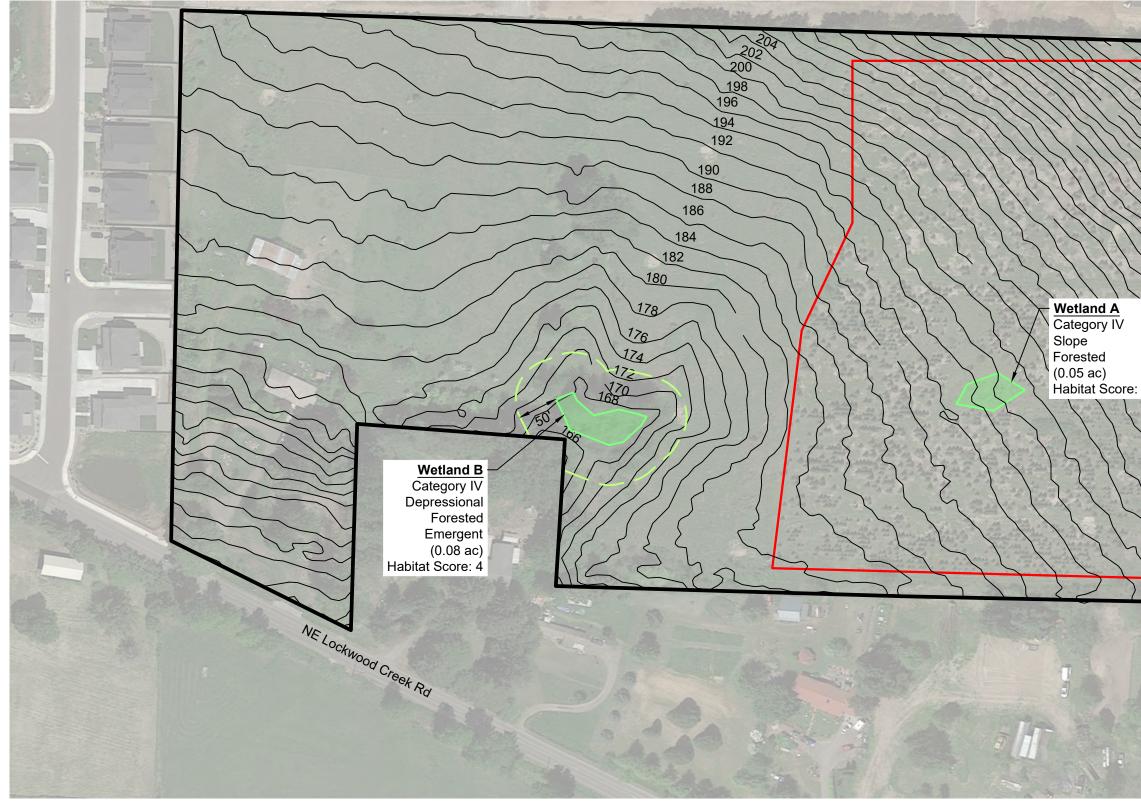
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SHEET SET & PHOTOPLATES





	PROPOSED: Residential subdivision	IN Wetland	Center	COUNTY: Clark STATE: WA	DATE: 3/24/21
4	SITE MAP	APPLICANT: PLS Engeneering PROJECT NAME: Lockwood Meadows Subdivision	REFERENCE #: NWS-2020-1015	CRTY OWNERS: SITE LOCATION ADDRESS: 2000 NF 1 orbitioned Creek Road	La Center WA 98629
In E 24th Ave.	PURPOSE: Wetland Fill		DATUM: NAD83	ADJACENT PROPERTY OWNERS:	See JARPA
	120 240	FEET		1157 3rd Ave., Suite 220A	LOTIGVIEW, WA 98032 Phone: (360) 578–1371
W E	0			E colorica	Land Services



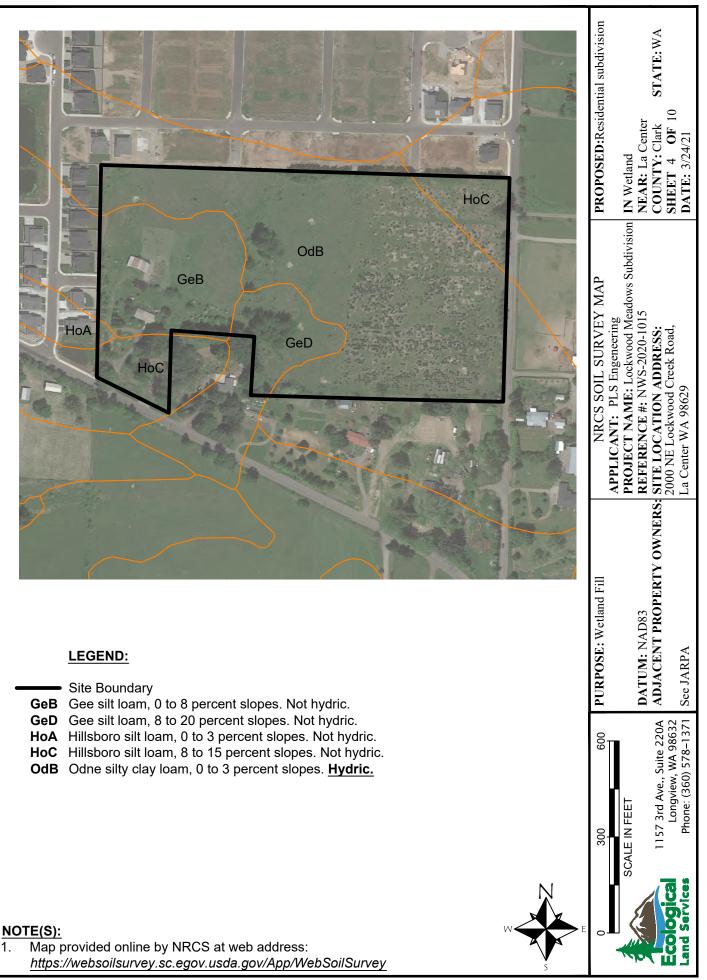


- Site Boundary
- Former Christmas Tree Farm
- Wetland
- Wetland Buffer

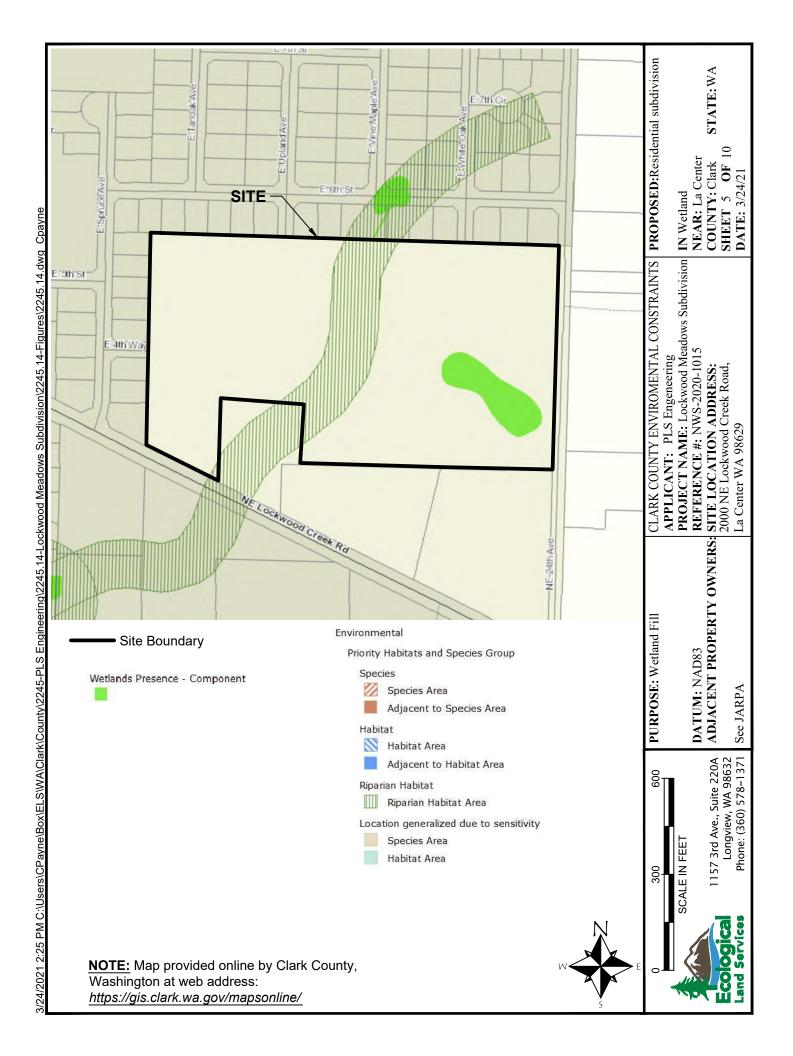
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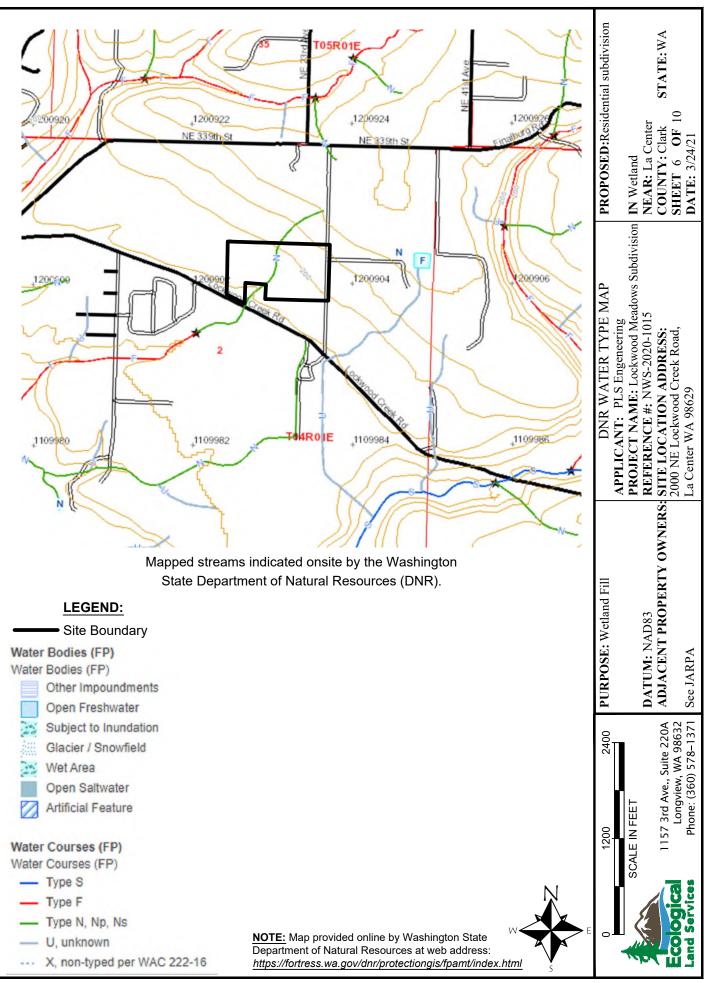
- 1. Aerial from May 2019 Google Earth™.
- 2. Wetlands, test plots, and oak trees were mapped by an ELS Biologist using a hand-held GPS unit with submeter accuracy.
- 3. Wetland A is exempted from La Center buffers per LCMC 18.300.090(5)(d) Exempted Wetlands.

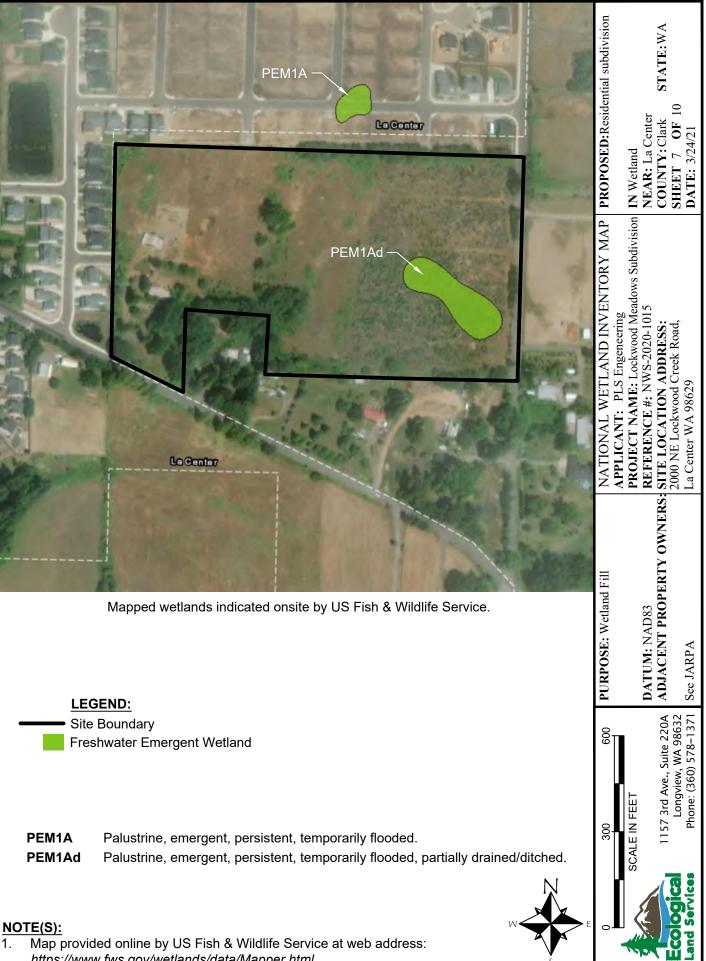
		NE 24th Ave.	4 Ave.	
W			-	
E	L	E		
0	240	PURPOSE: Wetland Fill	AERIAL WITH TOPO APPLICANT: PLS Engeneering	PROPOSED: Residential subdivision
SCALE IN FEET	EET		PROJECT NAME: Lockwood Meadows Subdivision IN Wetland REFERENCE #: NWS-2020-1015 NEAR: La	Center
11	1157 3rd Ave., Suite 220A Longview, WA 98632	T PROPE	SRTY OWNERS: SITE LOCATION ADDRESS: 2000 NE Lockwood Creek Road,	COUNTY: Clark STATE: WA SHEET 3 OF 10
Land Services Pho	Phone: (360) 578–1371	See JARPA	La Center WA 98629	DATE: 3/24/21



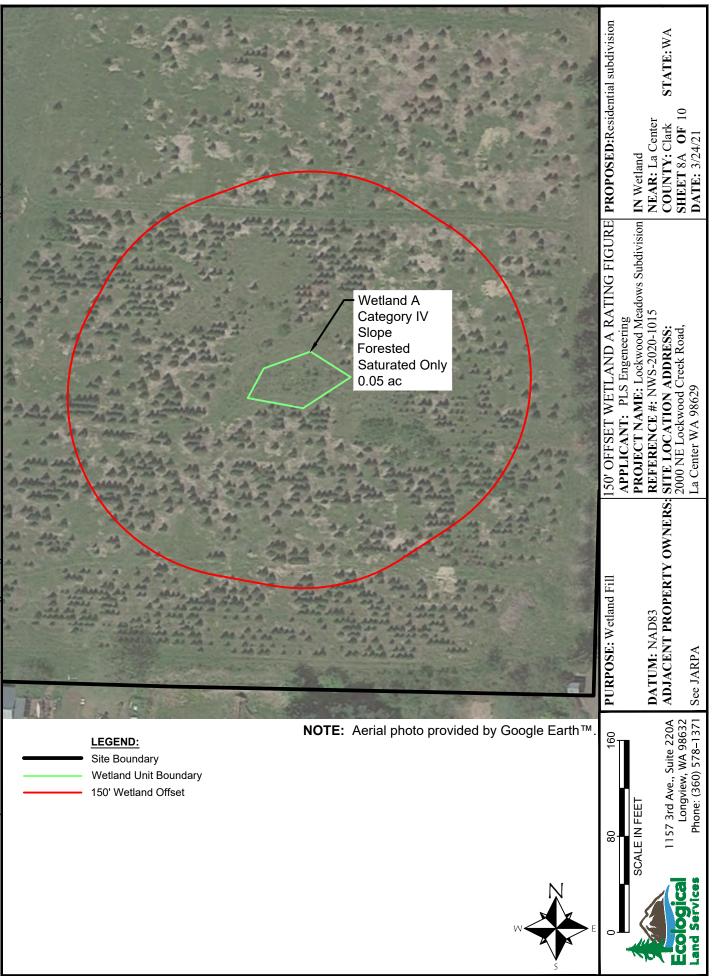
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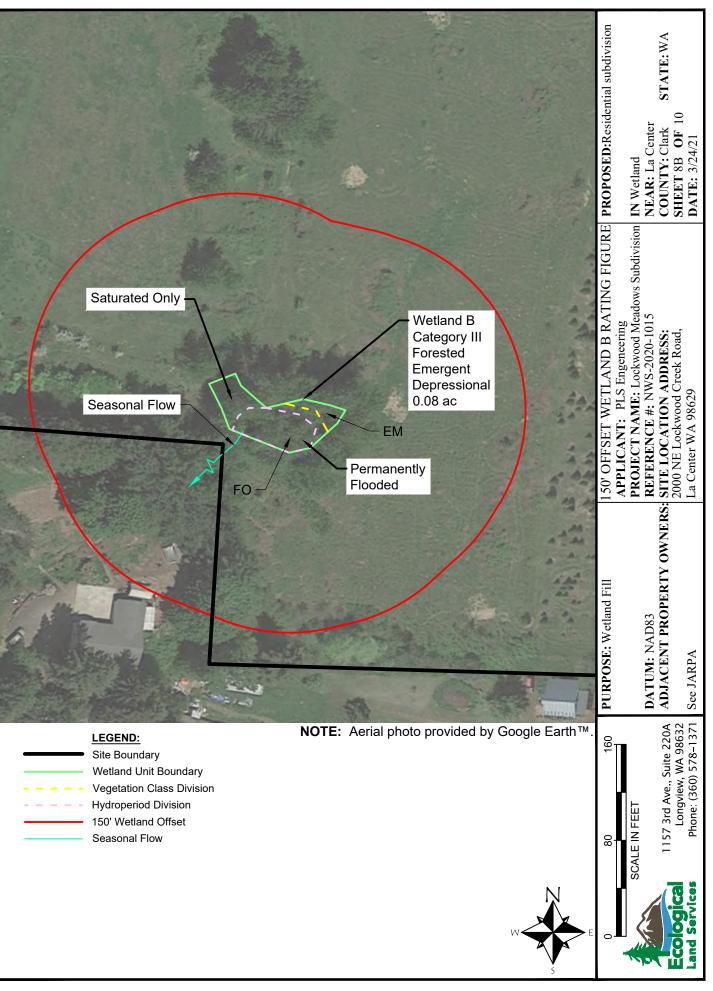


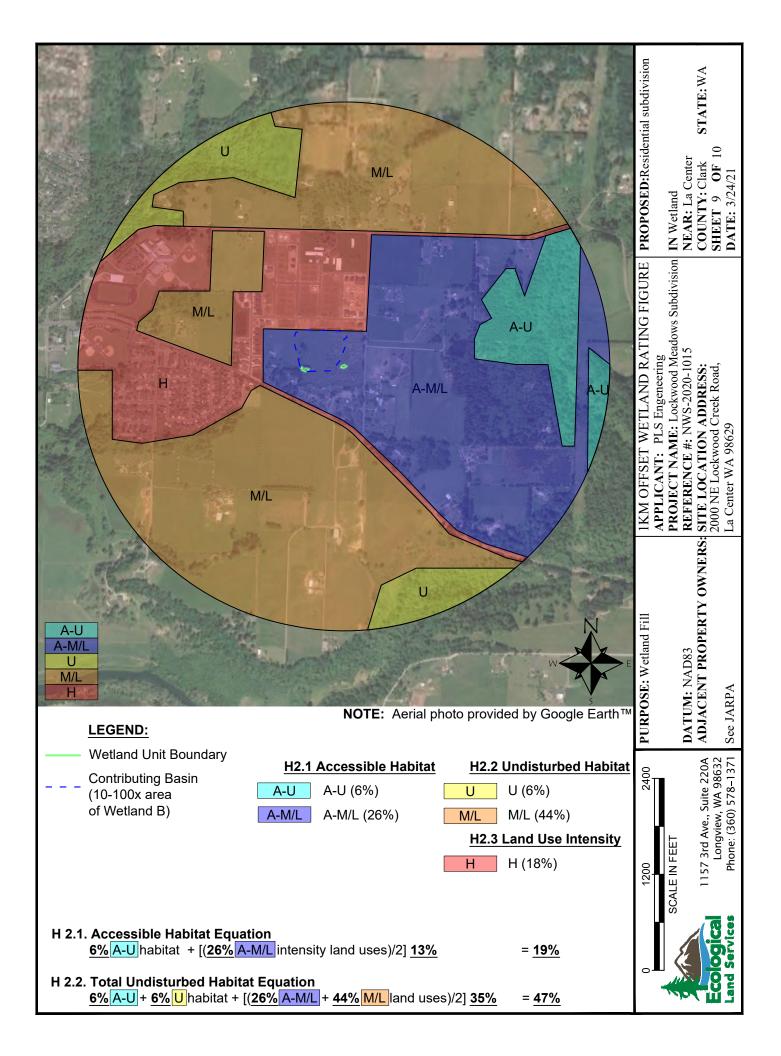




https://www.fws.gov/wetlands/data/Mapper.html







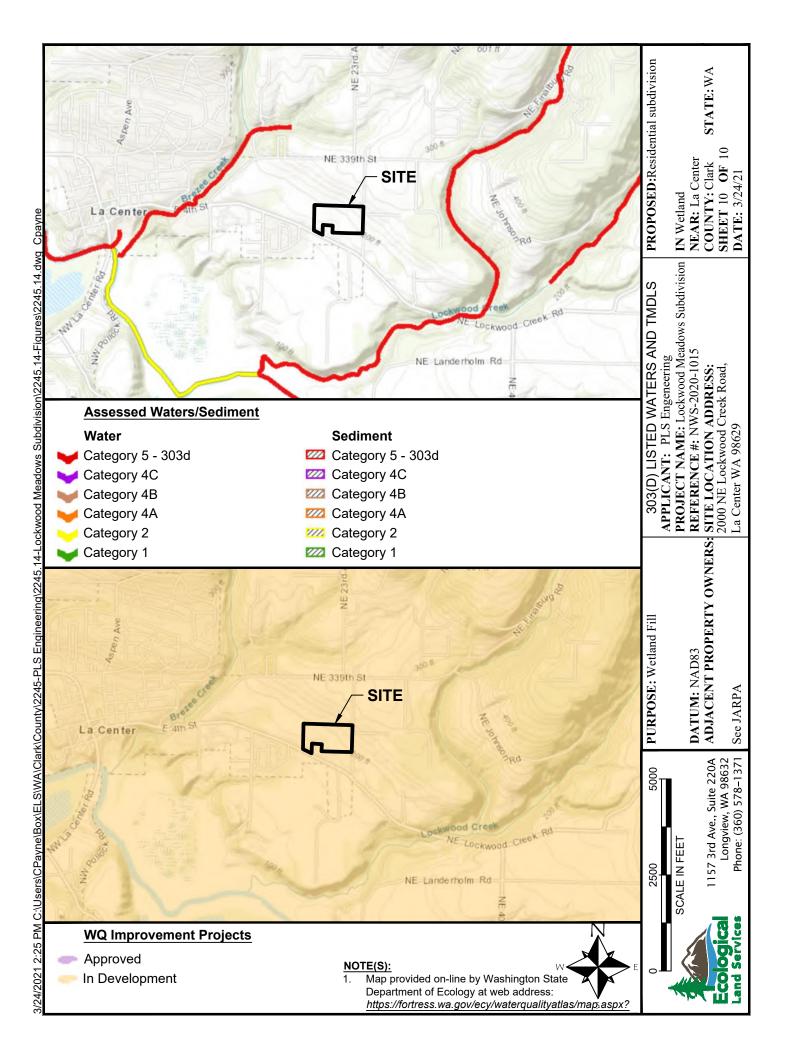




Photo 1. Mowed grass portion of the site that was previously used for livestock, facing south. Photo taken September 2020.



Photo 3. View facing SW from the NE corner of the site. Nordmann firs from the tree farm can be seen. Photo taken September 2020.



Photo 2. View facing south from TP-2. Photo taken September 2020.



Photo 4. Cottonwood trees growing in the decommissioned tree farm area, near Wetland A. Photo taken September 2020.

1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305	DATE: 3/24/2021 DWN: AJR PRJ. MGR: AJR PROJ #: 2245.14 NWS-2020-1015	Photoplate 1 Site Photos Lockwood Meadows Subdivision PLS Engineering La Center, Washington Section 2, Township 4N, Range 1E, W.M.
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Photo 5. View facing southwest near TP-A1, within Wetland A. Nordmann firs can be seen outside the wetland boundary in background. Photo taken February 2021.



Photo 7. View facing north of tile location where Type Ns stream is mapped. Photo taken September 2020.



Photo 6. Cottonwood patch southeast of Wetland A. Photo taken February 2021.



Photo 8. View facing south of tile location where Type Ns stream is mapped. Photo taken February 2021.



1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305 DATE: 3/24/2021 DWN: AJR PRJ. MGR: AJR PROJ #: 2245.14 NWS-2020-1015 Photoplate 2 Site Photos Lockwood Meadows Subdivision PLS Engineering La Center, Washington Section 2, Township 4N, Range 1E, W.M.



Photo 9. View of Wetland B facing south. Photo taken September 2020.



Photo 11. Seasonal drainage south of Wetland B. Arrow shows drainage path through blackberry bushes offsite. Photo taken September 2020.



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Photo 10. Vegetation within the ponded portion of Wetland B. Photo taken September 2020.



Photo 12. Small, non-priority oaks located in the southwestern portion of the site. Photo taken February 2021.

Photoplate 3
Site Photos
Lockwood Meadows Subdivision
PLS Engineering
La Center, Washington
Section 2, Township 4N, Range 1E, W.M.

APPENDIX A: WETLAND DETERMINATION DATA FORMS

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

Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering		City/Cou	unty: <u>La Ce</u> State: V		Sampling Date Sampling Point		
Investigator(s): Naglich, Francis; Rendleman, Annie	Jean	Section		p, Range: S2, T4N, R1E		·· <u>···</u>	
Landform (hillslope, terrace, etc.): Terraces				nvex, none): None		Slope (%):0	-8%
Subregion (LRR): A	Lat: 45.862	2444	Long: -12		Datum: NA	AD83	
Soil Map Unit Name: Gee silt loam, 0 to 8 percent slo	pes			WI classification: None			
Are climatic / hydrologic conditions on the site typical							
Are Vegetation, Soil, or Hydrology significant				Circumstances" present? `			
Are Vegetation, Soil, or Hydrology naturally			-	any answers in Remarks			
SUMMARY OF FINDINGS – Attach site map	o showing s	sampling poi	int locati	ons, transects, impo	rtant featur	es, etc.	
Hydrophytic Vegetation Present?Yes ⊠NoHydric Soils Present?Yes □No	\boxtimes	Is the Sar within a V	npled Area Vetland?	a Yes⊡ No			
Wetland Hydrology Present? Yes No Remarks: This test plot is located in the northwest po			real 20011	2000 TD1 anhumations	f the three we		
therefore, it is not considered to be within a wetland.							
VEGETATION – Use scientific names of pla	ants.						
	Absolute	Dominant	Indicator	Dominance Test Work	sheet		
Tree Stratum (Plot size: 30 ft radius)	% Cover	Species?	Status				
1	%			Number of Dominant Sp		2	(A)
2	%			That Are OBL, FACW, o	or FAC:		
3	%			Total Number of Domin	ont		
4	%			Species Across All Stra		3	(B)
50% = 20% =	%	=Total Cover		opecies Acioss Ali Sila	la.		
				Percent of Dominant Sp	oecies		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, o		66	(A/B)
1. Rubus armeniacus	30%	yes	FAC	Prevalence Index wor			/
2.	%	,		Total % Cover of:	:	Multiply by:	
3.	%			OBL species	x 1=		_
4	%			FACW species	x 2=	=	_
5	%			FAC species	x 3=	=	_
$50\% = \underline{15} \ 20\% = \underline{6}$	30%	=Total Cover		FACU species	x 4=		_
Herb Stratum (Plot size: 5 ft radius)				UPL species	x 5=	=	_
1. Anthoxanthum odoratum	25%	yes	FACU	Column Totals:	(A)		_ (B)
2. Agrostis capillaris	25%	yes	FAC		Index = B/A=		
3. Leucanthemum vulgare	10%	no	FACU	Hydrophytic Vegetatio			
4. Asclepias syriaca	5%	no	FACU	1 – Rapid Test for		vegetation	
5. Lotus corniculatus	5%	no	FAC	2 – Dominance Te			
6	<u>%</u>			3 - Prevalence Ind		(Droyido	
7. 8.	%			supporting data in			2
	%			sheet)			5
9 10.	%			5 - Wetland Non-	Vaccular Plant	c ¹	
11.	<u>%</u>					5	
$50\% = 35\ 20\% = 14$	70%	=Total Cover		Problematic Hydro	onhytic Veget:	ation ¹ (Explai	in)
<u>Woody Vine Stratum</u> (Plot size: <u>15</u> ft radius)	1070				opriyae vegea		,
	%			¹ Indicators of hydric soi	I and wetland	hvdroloav	
2.	%			must be present, unless			
50% = 20% =	%	=Total Cover					
50% = 20% =				Hydrophytic			
				Vegetation			
				Present?		Yes⊠ No[
% Bare Ground in Herb Stratum <u>30%</u>							
Remarks: The hydrophytic vegetation criterion is met	due to greate	r than 50% of th	ne dominar	nt vegetation within the tes	st plot having F	-AC indicato	r
statuses.							

SOIL

					absence of indicators.)	
Dopth Matrix		Rodov Foot	1700			
Depth Matrix (inches) Color (moist) %	Color (moist)	Redox Featu %	Type ¹	Loc ²	 Texture	Remarks
0-7 10YR 3/3 100%		%	Турс	200	Silt loam	Remains
7-16 10YR 4/3 99%	10YR 4/6	1%	С	М	Silt loam	
<u> </u>		%				
%		%				
<u>%</u>		%				
<u> </u>		<u> % </u>				
<u>%</u>		<u> % </u> %				
¹ Type: C=Concentration, D=Depletion, RM:	Doducod Matrix		or Coated S	and Crain	ns. ² Location: PL=Pore	Lining M. Motrix
Hydric Soil Indicators: (Applicable to all L Histosal (A1) Histic Epipedon (A2)	RRs, unless other	r wise noted. ((S5) rix (S6))		Indicators for Problemati	ic Hydric Soils 2)
Black Histic (A3)	Loamy Mucky			LRA 1)	Very Shallow Dark Surfa	
Hydrogen Sulfide (A4)	Loamy Gleye				Other (Explain in Remark	ks)
Depleted Below Dark Surface (A11)	Depleted Mat	()				
Thick Dark Surface (A12)	Redox Dark S	. ,			³ Indicators of hydrophytic ve	
Sandy Mucky Minerals (S1)	Depleted Dar		7)		Wetland hydrology must	
Sandy Gleyed Matrix (S4)	Redox Depre	ssions (F8)			unless disturbed or prob	iemalic
Restrictive Layer (if present):						
Type: Depth (inches):				н	dric Soil Present?	Yes⊟ No⊠
Remarks: Soil was very dry and compact. No	budria apil indiaate	ra wara aha	oniad	119		
HYDROLOGY						
Wetland Hydrology Indicators:						
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check	ck all that apply)				Secondary Indicate	ors (2 or more required)
Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2)	Water-Staine and 4B)) (except M	ILRA 1, 2	, 4A,	Leaves (B9) (MLRA 1, 2,)
Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Staine and 4B)	11)		ILRA 1, 2	, 4A,	Leaves (B9) (MLRA 1, 2,) rns (B10)
Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Staine and 4B) Salt Crust (B Aquatic Inver	11) tebrates (B1	3)	ILRA 1, 2	, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2)
Primary Indicators (min. of one required; chec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Staine and 4B) Salt Crust (B ⁻¹ Aquatic Inver	11) tebrates (B1) lfide Odor (C	3) 1)		, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ole on Aerial Imagery (C9)
Primary Indicators (min. of one required; chea Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Staine and 4B) Salt Crust (B ⁻ Aquatic Inver Hydrogen Su Oxidized Rhiz	11) tebrates (B1 lfide Odor (C zospheres al	3) 1) ong Living R		, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) psition (D2)
Primary Indicators (min. of one required; chea Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or crust (B4)	Water-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F	11) tebrates (B1 lfide Odor (C zospheres al Reduced Iror	3) 1) ong Living R n (C4)	oots (C3)	, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B ⁻ Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F	11) tebrates (B1 fide Odor (C zospheres al Reduced Iror Reducetion in	3) 1) ong Living R n (C4) Tilled Soils (oots (C3) C6)	, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquitar FAC Neutral Te	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bosition (D2) rd (D3) est (D5)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St	11) Ifide Odor (C zospheres al Reduced Iror Reduction in ressed Plant	3) 1) ong Living R n (C4) Tilled Soils (s (D1) (LRR	oots (C3) C6)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai	11) Ifide Odor (C zospheres al Reduced Iror Reduction in ressed Plant	3) 1) ong Living R n (C4) Tilled Soils (s (D1) (LRR	oots (C3) C6)	, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquitar FAC Neutral Te	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai	11) Ifide Odor (C zospheres al Reduced Iror Reduction in ressed Plant	3) 1) ong Living R n (C4) Tilled Soils (s (D1) (LRR	oots (C3) C6)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai	11) tebrates (B1 lfide Odor (C zospheres al Reduced Iror Reduction in ressed Plant n in Remarks	3) 1) ong Living R n (C4) Tilled Soils (s (D1) (LRR	oots (C3) C6)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai)	11) tebrates (B1 lfide Odor (C zospheres al Reduced Iror Reduction in ressed Plant n in Remarks th (Inches):	3) i1) ong Living R i (C4) Tilled Soils (s (D1) (LRR s)	oots (C3) C6) A)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mor Frost-Heave Hu	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Primary Indicators (min. of one required; chea 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-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai)	11) tebrates (B1 lfide Odor (C zospheres al Reduced Iror Reduction in ressed Plant n in Remarks	3) 1) ong Living R n (C4) Tilled Soils (s (D1) (LRR S)	oots (C3) C6) A)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Primary Indicators (min. of one required; cheat 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 (Includes Capillary fringe)	Water-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai)	11) tebrates (B1) zospheres al Reduced Iror Reduction in ressed Plant n in Remarks th (Inches): th (Inches):	3) 1) ong Living R 1 (C4) Tilled Soils (s (D1) (LRR s)	oots (C3) C6) A)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mor Frost-Heave Hu	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
Primary Indicators (min. of one required; cheat 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 Prese	Water-Staine and 4B) Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai)	11) tebrates (B1) zospheres al Reduced Iror Reduction in ressed Plant n in Remarks th (Inches): th (Inches):	3) 1) ong Living R 1 (C4) Tilled Soils (s (D1) (LRR s)	oots (C3) C6) A)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mor Frost-Heave Hu	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
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Primary Indicators (min. of one required; cheat 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, modeling)	Water-Staine and 4B) Salt Crust (B: Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of F Recent Iron F Stunted or St Other (Explai No ⊠ Depi No ⊠ Depi	11) tebrates (B1) fide Odor (C zospheres al Reduced Iror Reduced Iror Reduction in ressed Plant n in Remarks th (Inches): th (Inches): th (Inches): photos, prev	3) ong Living R n (C4) Tilled Soils (s (D1) (LRR s)	oots (C3) C6) A)	, 4A, Water-Stained 4A, and 4B Drainage Patter Dry-Season Wa Saturation Visite Geomorphic Po Shallow Aquitar FAC Neutral Te Raised Ant Mor Frost-Heave Hu	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering		City/Cou	unty: <u>La Ce</u> State: V		Sampling Date: <u>9/8/2020</u> Sampling Point: TP2				
westigator(s): Naglich, Francis; Rendleman, Annie Jean		Sectio		p, Range: S2, T4N, R1E	N, R1E				
Landform (hillslope, terrace, etc.): Drainageways, Ter			onvex, none): None	Slope (%):0-3%					
Subregion (LRR): A	2269	Long: -12		Datum: NAD83					
Soil Map Unit Name: Odne silty clay loam, 0 to 3 percent slopes				NWI classification: None					
Are climatic / hydrologic conditions on the site typical									
Are Vegetation , Soil , or Hydrology significan		Are "Normal Circumstances" present? Yes⊠ No⊡ (If needed, explain any answers in Remarks.)							
Are Vegetation, Soil, or Hydrology naturally		•		•					
SUMMARY OF FINDINGS – Attach site ma	p showing s	sampling po	int locati	ons, transects, impo	rtant features, etc.				
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No Wetland Hydrology Present? Yes □ No	\boxtimes	within a V		Yes No					
Remarks: This test plot is located within the north-ce					mapped Type N stream. This				
test plot only met one of the three wetland parameter VEGETATION – Use scientific names of pl		P2 is not consid	dered to be	within a wetland.					
VEGETATION - Ose scientific fiames of pr									
	Absolute	Dominant	Indicator	Dominance Test Work	sheet				
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status	Number of Dominant Sp					
 Populus balsamifera 2. 	45%	yes	FAC	That Are OBL, FACW, o	1 (74)				
3.	<u>%</u>								
4.	- <u>///</u> %			Total Number of Domina	ant 4 (B)				
$50\% = 22 \ 20\% = 9$	45%	=Total Cover		Species Across All Stra	ta: (B)				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> ft. radius)				Percent of Dominant Sp That Are OBL, FACW, o					
1. Rubus armeniacus	20%	yes	FAC	Prevalence Index worl					
2.	%			Total % Cover of:					
3.	%			OBL species	x 1=				
4	%			FACW species	x 2=				
5	%	<u></u>		FAC species	x 3=				
$50\% = \underline{10} \ 20\% = \underline{5}$	20%	=Total Cover		FACU species	x 4=				
Herb Stratum (Plot size: <u>5</u> ft radius)	050/		540	UPL species	x 5= (D)				
1. <u>Agrostis capillaris</u>	25%	yes	FAC	Column Totals:	(A) (B)				
2. Ranunculus repens 3. Holcus lanatus	<u>25%</u> 5%	yes	FAC FAC		Index = B/A=				
4. Cirsium arvense	<u> </u>	no no	FAC FAC	Hydrophytic Vegetatio					
5.	%		170	 ☐ 1 – Rapid Test for Hydrophytic Vegetation ⊠ 2 – Dominance Test is >50% 					
6.				3 - Prevalence Inc					
7.				Adaptations ¹ (Provide					
8.					rting data in Remarks or on a separate				
8 9				sheet)					
10.	%			5 - Wetland Non-	/ascular Plants ¹				
11	%								
50% = 30 $20% = 12$	60%	=Total Cover		Problematic Hydro	ophytic Vegetation ¹ (Explain)				
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				4					
1	<u>%</u>			¹ Indicators of hydric soil					
2	%	Tatal Osuar		must be present, unless	s disturbed or problematic.				
50% = 20% =	%	=Total Cover		Hydrophytic					
% Bare Ground in Herb Stratum 40%				Vegetation Present?	Yes⊠ No□				
Remarks:The hydrophytic vegetation criterion is me statuses.	t due to greate	r than 50% of tl	he dominar	t vegetation within the tes	t plot having FAC indicator				

SOIL

Matrix nches) Color (moist) % 0-16 10YR 3/2 100% 0 % % 0 % <td< th=""><th>Color (moist)</th><th>% %</th><th></th><th>Loc²</th><th>Texture silt loam</th><th>Remarks</th></td<>	Color (moist)	% %		Loc ²	Texture silt loam	Remarks
0-16 10YR 3/2 100% % % % % % % % % % % % % % % % % % %		% % % % %				
% %		% % % %				
ype: C=Concentration, D=Depletion,		% % %				
% % <td< td=""><td></td><td>% % %</td><td></td><td></td><td></td><td></td></td<>		% % %				
ype: C=Concentration, D=Depletion,		% %				
		%				
% Sype: C=Concentration, D=Depletion,						
Type: C=Concentration, D=Depletion,		~ /				
	DM Deduce - Math	%				
Histosal (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Minerals (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present): ype: epth (inches): emarks: No hydric soil indicators were compared by the solution of t	all LRRs, unless other Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Mat Redox Dark Redox Depre	rwise noted. x (S5) trix (S6) y Mineral (F1 ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F	.)) (except MLR)	Indic 2 c Re A 1) Ue Ott ³ Indica We unl	² Location: PL=Pore L eators for Problematic m Muck (A10) d Parent Material (TF2) ry Shallow Dark Surface her (Explain in Remarks ators of hydrophytic veg etland hydrology must b less disturbed or proble	Hydric Soils e (TF12) s) jetation and e present,
PROLOGY etland Hydrology Indicators: imary Indicators (min. of one required;					· · · ·	s (2 or more required
] Surface Water (A1)] High Water Table (A2)	Water-Staine [] Water-Staine	u Leaves (D		(A 1, 2, 4A,	4A, and 4B)	eaves (B9) (MLRA 1 ,
] Saturation (A3)	Salt Crust (B	.11)			Drainage Pattern	es (B10)
] Water Marks (B1)	Aquatic Inver	,	3)		Dry-Season Wat	
Sediment Deposits (B2)	Hydrogen Su		,			e on Aerial Imagery (
Drift Deposits (B3)	Oxidized Rhi	•	,	to (C2)	Geomorphic Pos	•••
	—		0 0	is (C3)		
] Algal Mat or crust (B4)	Presence of I			\ \	Shallow Aquitard	
Iron Deposits (B5)	Recent Iron F				FAC Neutral Tes	
Surface Soil Cracks (B6)	Stunted or St				Raised Ant Mour	
Inundation Visible on Aerial Imagery (I		in in Remark	s)		Frost-Heave Hur	nmocks (D7)
Sparsely Vegetated Concave Surface	(B8)					
	_					
ield Observations:		oth (Inches):				
ield Observations: urface Water Present? Yes				Wetland H	ydrology Present?	
ield Observations: urface Water Present? Yes /ater Table Present? Yes Yes	No 🛛 Dep	oth (Inches):				Yes 🔲 No 🛛
ield Observations: urface Water Present? Yes [] /ater Table Present? Yes [] aturation Present? Yes []	No 🛛 Dep					
ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes ncludes Capillary fringe)	No ⊠ Dep No ⊠ Dep	oth (Inches): th (Inches):				
ield Observations: urface Water Present? Yes [] /ater Table Present? Yes [] aturation Present? Yes [] ncludes Capillary fringe) Image: Capillary fringe	No ⊠ Dep No ⊠ Dep	oth (Inches): th (Inches):			:	
ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes ncludes Capillary fringe)	No ⊠ Dep No ⊠ Dep	oth (Inches): th (Inches):			:	
ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes ncludes Capillary fringe)	No ⊠ Dep No ⊠ Dep	oth (Inches): th (Inches):			:	
ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes ncludes Capillary fringe) escribe Recorded Data (Stream gauge,	No ⊠ Dep No ⊠ Dep , monitoring well, aerial	oth (Inches): th (Inches):	vious inspection		:	
ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes ncludes Capillary fringe) escribe Recorded Data (Stream gauge,	No ⊠ Dep No ⊠ Dep , monitoring well, aerial	oth (Inches): th (Inches):	vious inspection		:	
ield Observations: Gurface Water Present? Yes [] Vater Table Present? Yes []	No ⊠ Dep No ⊠ Dep , monitoring well, aerial	oth (Inches): th (Inches):	vious inspection		:	

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

Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering	City/Coι	unty: <u>La Ce</u> State: V		Sampling Date: <u>9/8/2020</u> Sampling Point: TP3				
estigator(s): Naglich, Francis; Rendleman, Annie Jean		Section	Section, Township, Range: S2, T4N,					
Landform (hillslope, terrace, etc.): Drainageways, Ter			nvex, none): None	Slope (%):0-3%				
Subregion (LRR): A Lat: 45.862305			Long: -12		Olope (70).0 370 Datum: NAD83			
Soil Map Unit Name: Odne silty clay loam, 0 to 3 per		-000		NWI classification: None				
Are climatic / hydrologic conditions on the site typical	for this time of	vear? Yes						
Are Vegetation , Soil, or Hydrology significan				Circumstances" present? Y	∕es⊠ No□			
Are Vegetation, Soil, or Hydrology asgument		(If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site ma	•	•		-	·			
			Πιισσαι	0115, 11 an 30013, 111 por	Italit leatures, etc.			
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No Wetland Hydrology Present? Yes □ No		Is the San within a V		a Yes⊡ No[\boxtimes			
Wetland Hydrology Present? Yes No Remarks: This test plot is located within the north-ce		f Clark County	Tay Darcal	200112000 east of a DN	P manned Type N stream This			
test plot only met one of the three wetland parameter					R Inappeu Type N Stream. This			
	5, 110101010, 11							
VEGETATION – Use scientific names of pl	ants.							
	Absolute	Dominant	Indicator	Dominance Test Work	sheet			
Tree Stratum (Plot size: 30 ft radius)	% Cover	Species?	Status					
1.	%			Number of Dominant Sp				
2.	%			That Are OBL, FACW, o	r FAC:			
3.	%			1				
4.	%			Total Number of Domina	З (В)			
50% = 20% =	%	=Total Cover		Species Across All Strat	a:			
				Demonst of Dominant Cn	!			
On the allowing (Distaires 15 ft radius)				Percent of Dominant Sp				
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> radius)	F 0/		F AC	That Are OBL, FACW, o				
1. <u>Rubus armeniacus</u>	5%	yes	FAC	Prevalence Index work				
2	%	·		Total % Cover of:	Multiply by:			
3.	<u>%</u>	•		OBL species	x 1=			
4.	%			FACW species	x 2=			
5	% 5%	T-tol Cover		FAC species	x 3=			
$50\% = 2 \ 20\% = 1$	5%	=Total Cover		FACU species	x 4=			
<u>Herb Stratum</u> (Plot size: <u>5</u> ft radius)	400/			UPL species	x 5= (D)			
1. <u>Agrostis capillaris</u>	40%	yes	FAC	Column Totals:	(A) (B)			
2. Dactylis glomerata	40%	yes	FACU		Index = B/A=			
3. Leucanthemum vulgare	10%	no	FACU	Hydrophytic Vegetatio				
4. <u>Cirsium arvense</u>	10%	no	FAC		Hydrophytic Vegetation			
5. <u>Rumex crispus</u>	5%	no	FAC	\boxtimes 2 – Dominance Test is >50%				
6	%			3 - Prevalence Ind				
7	%			4 - Morphological				
8	%			supporting data in sheet)	Remarks or on a separate			
9	%			,				
10	%			5 - Wetland Non-V	ascular Plants'			
11.	%	Trial Original						
$50\% = \frac{52}{2} 20\% = \frac{21}{2}$	105%	=Total Cover		Problematic Hydro	ophytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size: <u>15</u> ft radius)	0/			1				
1	%			¹ Indicators of hydric soil				
2	%	Tatal Causa		must be present, unless	disturbed or problematic.			
50% = 20% =	%	=Total Cover						
				Hydrophytic Vegetation				
				Vegetation Present?	Yes⊠ No⊡			
% Bare Ground in Herb Stratum 0%				Flesent				
Remarks:The hydrophytic vegetation criterion is me	t due to greate	r than 50% of th	o dominar	t vegetation within the tes	t plot baying FAC indicator			
statuses.	t due to greate	1 than 50% of t		it vegetation within the tes	r plot having FAC indicator			
Sialuses.								

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth Matrix	Podex Features						
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type ¹	_oc ² Te	exture Remarks				
0-10 10YR 4/3 100%	<u> </u>		t loam				
10-16 10YR 3/2 100%	%		t loam				
%	%						
%	%						
<u> </u>	<u>%</u>						
<u> </u>	<u>%</u>						
<u>%</u>							
	=Reduced Matrix, CS=Covered or Coated Sand	Grains ² Loc	ation: PL=Pore Lining, M=Matrix				
Hydric Soil Indicators: (Applicable to all L			for Problematic Hydric Soils				
Histosal (A1)	Sandy Redox (S5)	🗌 2 cm Muo	-				
Histic Epipedon (A2)	Stripped Matrix (S6)	🗌 Red Pare	nt Material (TF2)				
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR	A 1) Uvery Shallow Dark Surface (TF12)					
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (E)	plain in Remarks)				
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)						
Thick Dark Surface (A12)	Redox Dark Surface (F6)		f hydrophytic vegetation and				
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)	Wetland hydrology must be present,					
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless di	sturbed or problematic				
Restrictive Layer (if present):							
Type:							
Depth (inches):		Hydric Soil Present? Yes No⊠					
Remarks: No hydric soil indicators were obse	erved.						
HYDROLOGY							
Wetland Hydrology Indicators:							
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher	ck all that apply)	Sec	condary Indicators (2 or more required)				
Primary Indicators (min. of one required; che			condary Indicators (2 or more required)				
Primary Indicators (min. of one required; cher	Water-Stained Leaves (B9) (except MLR		Water-Stained Leaves (B9) (MLRA 1, 2,				
Primary Indicators (min. of one required; cher Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLR and 4B)	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)				
Primary Indicators (min. of one required; cher Surface Water (A1) High Water Table (A2) Saturation (A3)	 Water-Stained Leaves (B9) (except MLR and 4B) Salt Crust (B11) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)				
Primary Indicators (min. of one required; cher Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 ☐ Water-Stained Leaves (B9) (except MLR and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) 	▲ 1, 2, 4A, □	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)				
Primary Indicators (min. of one required; cher Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 ☐ Water-Stained Leaves (B9) (except MLR and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)				
Primary Indicators (min. of one required; chea Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)				
Primary Indicators (min. of one required; cheat 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 MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)				
Primary Indicators (min. of one required; chear 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 MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5)				
Primary Indicators (min. of one required; chea 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 MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)				
Primary Indicators (min. of one required; cher 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 MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5)				
Primary Indicators (min. of one required; cher 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 MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)				
Primary Indicators (min. of one required; chea 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 MLR and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)				
Primary Indicators (min. of one required; chea 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 MLR and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Root □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks) > □ Depth (Inches):	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)				
Primary Indicators (min. of one required; cheat 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 Ves	□ Water-Stained Leaves (B9) (except MLR and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Root □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks))	A 1, 2, 4A,	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)				
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Lockwood Meadows Subdivision		City/Cou	unty: <u>La Ce</u> State: V		Sampling Date: <u>9/8/2020</u> Sampling Point: TP4		
					ampling Point.	174	
nvestigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E andform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): None Slope (%):8						-20%	
Subregion (LRR): A	2.648692	Datum: NAD		2070			
Soil Map Unit Name: Gee silt loam, 8 to 20 percent s	Lat: <u>45.861</u> lopes		<u> </u>	NWI classification: None			
Are climatic / hydrologic conditions on the site typical	for this time of						
Are Vegetation, Soil, or Hydrology significan	tly disturbed?			Circumstances" present? Y			
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If need	ed, explain	any answers in Remarks.))		
SUMMARY OF FINDINGS – Attach site may	p showing s	sampling po	int locati	ons, transects, impoi	tant features	s, etc.	
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No No No No	a Yes⊡ No⊠						
Wetland Hydrology Present? Yes No Remarks: This test plot is located in the central porti		unty Tax Paras	1 20011200	0 south of the existing we	I This test plat	only mot	one of
the three wetland parameters; therefore, TP4 is not co	onsidered to be						
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator	Dominance Test Works	shoot		
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status				
1.	%			Number of Dominant Sp That Are OBL, FACW, o		3	(A)
2	%			That Ale OBL, FAGW, 0	TFAC.		
3.	%			Total Number of Domina	ant	4	
4 20% =	<u>%</u> %	=Total Cover		Species Across All Strat		4	(B)
50 % = <u> </u>	70			Percent of Dominant Sp			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, o		75	(A/B)
1. Rubus armeniacus	5%	yes	FAC	Prevalence Index work			
2.	%			Total % Cover of:	Μ	lultiply by:	
3.	%			OBL species	x 1=		_
4	%			FACW species	x 2=		
5	%			FAC species	x 3=		
$50\% = 2 \ 20\% = 1$	5%	=Total Cover		FACU species	x 4=		
Herb Stratum (Plot size: <u>5</u> ft radius)	000/		540	UPL species	x 5=		— (D)
1. <u>Schedonorus arundinaceus</u>	20%	yes	FAC	Column Totals:	(A)		_ (B)
 Agrostis capillaris Plantago lanceolata 	20%	yes	FAC FACU		Index = B/A=		
 Plantago lanceolata Asclepias syriaca 	15%	yes	FACU				
5. Cirsium arvense	10%	no no	FAC				
6. Leucanthemum vulgare	10%	no	FACU				
7.	%			4 - Morphological Adapta			
8.	%				supporting data in Remarks or on a sepa		
9.	%			sheet)			
10.	%			5 - Wetland Non-V	ascular Plants ¹		
11	%						
$50\% = \underline{47} \ 20\% = \underline{19}$	95%	=Total Cover		Problematic Hydro	phytic Vegetatic	on¹ (Explai	in)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)							
1	%			¹ Indicators of hydric soil			
2	%	TILO		must be present, unless	disturbed or pro	blematic.	
50% = 20% =	%	=Total Cover		Uudronhutio			
				Hydrophytic Vegetation Present?	Y	es⊠ No[7
% Bare Ground in Herb Stratum <u>5%</u>							
Remarks: The hydrophytic vegetation criterion is met	due to greate	r than 50% of th	ne dominar	nt vegetation within the test	t plot having FA	C indicato	r
statuses.							

· · · · · · · · · · · · · · · · · · ·	needed to document the indicator or cont	irm the absenc	•••••••••••	
Depth Matrix	Redox Features			
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0-9 10YR 3/2 100%	<u> </u>		Silt loam	
9-16 10YR 4/3 100%	%		Silt loam	
%	%			
<u> </u>	<u>%</u>			
<u> </u>	%			
<u>%</u>	<u>%</u> %			
<u>%</u>				
¹ Type: C=Concentration, D=Depletion, RM=		d Grains	² Location: PL=Pore L	ining M-Matrix
Hydric Soil Indicators: (Applicable to all L			tors for Problematic	
Histosal (A1)	Sandy Redox (S5)		n Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)	🗌 Red	Parent Material (TF2))
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLI	RA 1) 🗌 Very	Shallow Dark Surface	e (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	🗌 Othe	er (Explain in Remarks	5)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)			
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicat	ors of hydrophytic veg	etation and
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)		land hydrology must b	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unle	ss disturbed or proble	matic
Restrictive Layer (if present):				
Туре:				
Depth (inches):		Hydric Soi	I Present?	Yes No
Remarks: No hydric soil indicators were obse	rved.			
HYDROLOGY				· · · ·
HYDROLOGY Wetland Hydrology Indicators:				
Wetland Hydrology Indicators:	ok oll that apply)			
	ck all that apply)		Secondary Indicator	s (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	ck all that apply) □ Water-Stained Leaves (B9) (except ML	RA 1, 2, 4A,	Water-Stained Le	rs (2 or more required) eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except ML and 4B)	RA 1, 2, 4A,	Water-Stained Le	eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	 ☐ Water-Stained Leaves (B9) (except ML and 4B) ☐ Salt Crust (B11) 	RA 1, 2, 4A,	Water-Stained Lo 4A, and 4B)	eaves (B9) (MLRA 1, 2, ns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except ML and 4B)	RA 1, 2, 4A,	Water-Stained Le	eaves (B9) (MLRA 1, 2, ns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 ☐ Water-Stained Leaves (B9) (except ML and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 		Water-Stained Lo 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 ☐ Water-Stained Leaves (B9) (except ML and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) 		Uster-Stained Lo 4A, and 4B) Drainage Patterr Dry-Season Wat	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 □ Water-Stained Leaves (B9) (except ML and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Row 	ots (C3)	Water-Stained Le 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9) iition (D2) I (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 ML and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Rom □ Presence of Reduced Iron (C4) 	ots (C3)	Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitard	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) t (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 ML and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Rom □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C4) 	ots (C3)	 Water-Stained Le 4A, and 4B) □ Drainage Pattern □ Dry-Season Wat □ Saturation Visible □ Geomorphic Pos □ Shallow Aquitand □ FAC Neutral Tes 	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) tt (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 ML and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C0) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	ots (C3)	 Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitard FAC Neutral Tes Raised Ant Mour 	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) tt (D5) nds (D6) (LRR A)
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nvestigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E Local relief: (concave, convex, none): None Slope (%):0-3%	Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering		City/Cou	unty: <u>La Ce</u> State: V		Sampling Dat Sampling Poir		
andom (hillslope, ferrace, etc.): Dranageways, Terraces Local relief (concave, convex, none): None Slope (F6):0-3% Solit Map Unit Name: One sity day loam, 0 to 3 percent slopes NW (classification: None NAD83 Solit Map Unit Name: One sity day loam, 0 to 3 percent slopes NW (classification: None NAD83 Ver Vectation() Solit(), or tytydolog) significantly disturbed? Are 'Normal Circumstances' present? Noc Ver Vegetation() Solit(), or tytydolog) significantly disturbed? Are 'Normal Circumstances' present? Noc Vegetation() Solit(), or tytydolog) significantly disturbed? Are 'Normal Circumstances' present? Noc Vegetation() Yes () No () is the Sampled Area Yes () Noc Vegetation Present? Yes () No () is the sampled Area Yes () Noc Velsand Hydrology Present? Yes () No () within a Wetland? Yes () Noc Velsand Hydrology Present? Yes () No () Species / FAC Not () Not () Total Number of Dominant for exerce 2011 3000, southeast of Wetland A. This test plot only met one of the three wetland parameters; therefore, TP5 is not considered to be within a wetland.		lean	Sectio				<u> </u>	
Subregion (LRR): A Lat. 45.82205 Long122.648275 Datum: NADB3 Submay Link and record stopes NWI classification. None NWI classification. None NWI classification. None Ve edentation (LRR): A Sol[], or Hydrologic conditions on the site typical for this time of year? Yes [] No[] NWI classification. None NWI classification. None Ve Vegetation [] Sol[], or Hydrologic [] anturally problematic? If the edeed, explain any answers in Remarks.) SUMMARY OF TALCAs is tem pay showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes [] No [] Is the Sampled Area within the southeast portion of Classification (Yes) [] No [] Walland Hydrology. Present? Yes [] No [] Is the Sampled Area within the southeast portion of Classification (Yes) [] Not [] Weight Hydro Site Site Site Site Site Site Site Site							Slope (%):	0-3%
Image: Construct No Image: Image:<	Subregion (LRR): A					Datum: N		
vev vegetation [Soil Map Unit Name: Odne silty clay loam, 0 to 3 perc	ent slopes		1	WI classification: None			
Vieve depetation []. Soll_, or Hydrology	Are climatic / hydrologic conditions on the site typical f	or this time of						
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 Wetland Hydrology Present? Yes No Its the Sampled Area within a Wetland? Yes No Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 209113000, southeast of Wetland A. This test plot only met nee of the three wetland parameters; therefore, TP5 is not considered to be within a wetland. Image: Stratum (Plot size: 30 ft radius) Absolute % Cover Species? Status Species? Dominant Species? Mumber of Dominant Species 4 (A) 1 <i>Populus balsamilera</i> 15% yes FACU Total Number of Dominant Species (A) (A) 3 50% 10 20% = 4 20% = Total Cover For outhant Species (A) (B) 2 2006 10 5% yes FAC Total Number of Dominant Species (A) (A) 3 50% = 10 20% = 4 20% = Total Cover For outhant Species (A) (B) 2 2006 51% 70% = Total Cover FAC]	
Hydrochylic Vegetation Present? Yes ⊡ No ⊡ Is the Sampled Area within a Wetland? Yes ⊡ No ⊡ Wetland Hydrology Present? Yes ⊡ No ⊡ Is the Sampled Area within a Wetland? Yes ⊡ No ⊡ Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 209113000, southeast of Wetland A. This test plot only met net of the three wetland parameters, therefore, TP5 is not considered to be within a wetland. //EGETATION – Use scientific names of plants. Dominant Indicator Dominant Species 4 1. Absolute Dominant Indicator Number of Dominant Species 4 (A) 2. Mobies nordmanniana 5% yes FAC Total Number of Dominant Species 4 (A) 3. = 76% yes FAC Total Number of Dominant Species 4 (A) 4. 20% =Total Cover Fac Total Northstet 10% Yes Fac Total Northstet (A) 1. Multiply by: 10% yes FAC Prevalence Index workshet Multiply by: 10% Secies x2 = (A) Secies (A) (B) <t< td=""><td>Are Vegetation, Soil, or Hydrology naturally p</td><td>roblematic?</td><td>(If need</td><td>ed, explain</td><td>any answers in Remarks</td><td>.)</td><td></td><td></td></t<>	Are Vegetation, Soil, or Hydrology naturally p	roblematic?	(If need	ed, explain	any answers in Remarks	.)		
Hydro: Solie Present? Yes No ⊠ Internet and wethand? Yes No ⊠ Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 2091 13000, southeast of Wetland A. This test plot only met one of the three wetland parameters; therefore, TP5 is not considered to be within a wetland. Yes No ⊠ VEGETATION – Use scientific names of plants. Tree Stratum (Plot size: 20 ft radius) Absolute Secientific names of plants. 1 Poculus baisamifera 5% yes FAC 1 Poculus baisamifera 6% yes FAC 2 Yobies nordmanniana 5% yes FAC Total Number of Dominant Species 4 (A) 3 7% 9 FAC Total Number of Dominant Species 50% (AB) 10% yes FAC Total Number of Dominant Species 4 (A) 1 8 20% = Total Cover Freelence Index worksheet FAC FacU species x 2a = FAC FAC FAC FAC FACU species x 2a = FACU FACU species x 2a =	SUMMARY OF FINDINGS – Attach site map	່ showing ຄ	sampling poi	int locati	ons, transects, impo	ortant featu	ires, etc.	
Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 209113000, southeast of Wetland A. This test plot only met prevented to be within a wetland. VEGETATION – Use scientific names of plants. Trea Stratum (Plot size: 30 ft radius) 1. Populus balsamitera 15% yes FAC 3. 9% yes FAC 4. 9% yes FAC 3. 9% yes FAC 4. 9% =Total Cover Species Across All Strata: (B) Species Across All Strata (B) Species Across All Strata: (B) 1. 9% =Total Cover Fercent of Dominant Species x1= 1. 9% =Total Cover FAC Species x1= (B) 1. 9% =Total Cover FAC Species x1= (B) 2. 9% =Total Cover FAC Species x2= (A) 3. 9% = Total Cover FAC Species x3= (A) (B) 3. 9% = Total Cover FAC Species x3= (C) (A) (B)	Hydric Soils Present? Yes 🗌 No 🕻	\boxtimes						
A bit of the three welland parameters; therefore, TP5 is not considered to be within a welland. VEGETATION – Use scientific names of plants. Image: Scientific names of plants. Scientific names of plants. Image: Scientific names of plants. Image: Scientific names of plants. Image: Scientific names of plants. Scientific names of plants. Scientific names of plants. Scientif	Remarks: This test plot is located within the southeas		lark County Ta	Parcel 20	9113000 southeast of W	etland A This	s test plot or	lv met
Absolute Dominant Indicator 1 Populus balsamilera 15% yes 2 'Abies nordmanniana 5% yes 3	one of the three wetland parameters; therefore, TP5 is	s not considere						
Tree Stratum (Plot size 30 ft radius) % Cover Species? Status 1. Populus balsamitera 15% yes FAC 3. Abies nordmanniana 5% yes FAC 3. Abies nordmanniana % FAC 4	VEGETATION – Use scientific names of pla		Dominant	Indiantar	Dominanaa Taat War			
1. Populus balsamifera 15% yes FAC Number of Dominant Species 4 (A) 2. 'Ables nordmanniana 5% yes FACU That Are OBL, FACW, or FAC: (A) 3	Trop Stratum (Diat aiza:20 ft radius)				Dominance Test Worl	ksneet		
2 Tables nordmanniana 5% yes FACU That Are OBL, FACW, or FAC: 1			·		Number of Dominant S	nacias	4	()
3			·				4	(A)
4.			yes	FACU		0117(0.		
50% = 10 20% =Total Cover Species Across All Strata: Y Sapling/Shrub Stratum (Plot size: 15 ft. radius) 1 Percent of Dominant Species That Are OBL, FACW, or FAC 66 (A/B) 1. Rubus armeniacus 10% yes FAC Prevalence Index worksheet Multiply by: 3. % OBL species x 1= (A/B) 5. % FAC Vspecies x 2= (A/B) 50% = 5 20% = 2 10% =Total Cover FAC Vspecies x 3= (A/B) 50% = 5 20% = 2 10% =Total Cover FAC Vspecies x 4= (A/C) (A/B) 1. Anthoxanthum odoratum 40% yes FAC Prevalence Index #A= (A) (B) 2. Agrostic capillaris 30% yes FAC Prevalence Index = B/A= (A) (B) 3. Holcus lanatus 20% yes FAC Prevalence Index is 53.0° (A) (B) 4. Cirsium arvense 5% no FAC 1 - Rapid Test for Hydrophytic Vegetation S* (A) (B) 2 - Dominance Test is >50%					Total Number of Domin	ant	6	(B)
Sapling/Shrub Stratum (Plot size: 15 ft. radius) 10% yes FAC Percent of Dominant Species 1. Rubus armeniacus 10% yes FAC Total % Cover of: Multiply by: 3. % Status % OBL species x 1= 4. % FAC W species x 2= % 5. % FAC Species x 3= % 5. 50% = 5 20% = 2 10% =Total Cover FACU species x 3= Herb Stratum (Plot size: 5 ft radius) 10% yes FACU Column Totals: (A) (B) 2. Antroxanthum adoratum 40% yes FACU Prevalence Index = B/a= W 3. Holcus lanatus 20% yes FAC Prevalence Index = B/a= (A) (B) 4. Cirsium arvense 5% no FAC Hydrophytic Vegetation Indicators: (A) (C) 5. % 1 Rapid Test for Hydrophytic Vegetations (Provide supporting data in Remarks or on a separate sheet) (Provide supporting data in Remarks or on a separate sheet) (Provide supporting data in Remarks or on a separate sheet) So(% = 20% = 19 % So(% = 20%			-Total Cover		Species Across All Stra	ita:	0	_ (D)
Saping/Shrub Stratum (Plot size: 15 ft. radius) In Aubus armeniacus In Aubus armeniacus In Are OBL, FACW, or FAC 66 (A/B) 1. Rubus armeniacus 9% In Call % Cover of: Multiply by: In Call % Cover of: Multiply by: 3. 9% In Call % Cover of: Multiply by: In Call % Cover of: Multiply by: 4. 9% In Call % Cover of: X 1= In Call % Cover of: Multiply by: 5. 9% In Call % Cover of: X 1= In Call % Cover of: Multiply by: 1. Anthoxanthum odoratum 40% yes FAC Species x 3= In Call % Cover of: X 4= In Call % Cover of: Multiply by: In Call % Cover of: X 4= In Call % Cover % In Call % Cover % In Call % Cover % X 4= In Call % Cover % In Call % Cover % In Call % Cover % X 4= In Call % Cover % In Call % Cover % In Call % Cover % X 4= In Call % In Call % Cover % In Call % Cover % X 4= In Call % In Call % Cover % In Call % Cover % X 4= In Call % In Call % In Call % X 4= In Call % In Call % In Call %	$30\% = 10^{\circ} 20\% = 4^{\circ}$	2070						
1. Rubus armeniacus 10% yes FAC Prevalence index worksheet 2. 76 Total % Cover of: Multiply by: 3. % OBL species x 1= 4. % FACW species x 2= 50% = 5_20% = 2 10% =Total Cover FAC species x 4= Herb Stratum (Plot size: 5 ft radius) 9 =Total Cover FACU Species x 4= UPL species x 4= UPL species x 4= UPL species x 5= (B) 2. Agrostic capillaris 30% yes FACU Column Totals: (A) (B) 3. Holcus lanatus 20% yes FACU Prevalence Index = B/A=								
2.							<u>66</u>	(A/B)
3.			yes	FAC	i			
4.								/:
5.						x 1	=	
50% = 5 20% = 2 10% =Total Cover FACU species x 4= Herb Stratum (Plot size: 5 ft radius) 0% yes FACU Column Totals: (A) (B) 1. Anthoxanthum odoratum 40% yes FACU Column Totals: (A) (B) 2. Agrostis capillaris 30% yes FAC Hydrophytic Vegetation Indicators: (B) 3. Holcus lanatus 20% yes FAC Hydrophytic Vegetation Indicators: (B) 4. Cirsium arvense 5% no FAC Hydrophytic Vegetation Indicators: (B) 5. 0 9 2 Dominance Test is >50% (B) 2 Dominance Test is >50% 6. % 1 - Repaid Test for Hydrophytic Vegetation (B) 2 Dominance Test is >50% 7. % 1 - Repaid Test for Hydrophytic Vegetation 2 2 Dominance Test is >50% 8. 9 3 - Prevalence Index is ≤3.01° 1 4 Worphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet) 10. 5 Wordy is set an Remarks or on a separate sheet) 5 So								
Herb Stratum (Plot size: 5 ft radius) UPL species x 5= 1. Anthoxanthum odoratum 40% yes FACU Column Totals: (A) (B) 2. Agrostis capillaris 30% yes FAC Prevalence Index = B/A= 3. Holcus lanatus 20% yes FAC Hydrophytic Vegetation Indicators: 4. Cirsium arvense 5% no FAC Hydrophytic Vegetation Indicators: 5. % 1 - Rapid Test for Hydrophytic Vegetation 6. % 1 - Rapid Test for Hydrophytic Vegetation 7. % 1 - Rapid Test for Hydrophytic Vegetations' (Provide supporting data in Remarks or on a separate sheet) 10. % 1 5 - Wetland Non-Vascular Plants' 11. % 1 Problematic Hydrophytic Vegetation' (Explain) 12. 95% =Total Cover Problematic Hydrophytic Vegetation' (Explain) 13. % 1 1 50% = % 1 1 50% =		-	·			x 3	3=	
1. Anthoxanthum odoratum 40% yes FACU Column Totals: (A) (B) 2. Agrostis capillaris 30% yes FAC Prevalence Index = B/A=		10%	=Total Cover					
2. Agrostis capillaris 30% yes FAC Prevalence Index = B/A=								
3. Holcus lanatus 20% yes FAC Hydrophytic Vegetation Indicators: 4. Cirsium arvense 5% no FAC 1 - Rapid Test for Hydrophytic Vegetation 5. % 3 - Prevalence Index is <50%			yes					(B)
4. Cirsium arvense 5% no FAC 1 - Rapid Test for Hydrophytic Vegetation 5. % 3 - Prevalence Index is ≤3.01 3 - Prevalence Index is ≤3.01 6. % 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet) 10. % 50% = 47 20% = 19 95% = Total Cover Problematic Hydrophytic Vegetation1 (Explain) 11. % 11ndicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2. % = Total Cover Hydrophytic Vegetation Present? % Bare Ground in Herb Stratum 5% % Total Cover Hydrophytic Vegetation Present? % Bare Ground in Herb Stratum 5% % Total Cover Hydrophytic Vegetation Present?			yes					
5.			yes					
6.			no	FAC			Vegetation	
7.								
8.								
9.								
10. %						n Remarks or	on a separa	ite
11.					,		. 1	
50% = 47 20% = 19 95% =Total Cover □ Problematic Hydrophytic Vegetation ¹ (Explain) 1. % 1Indicators of hydric soil and wetland hydrology 2. % must be present, unless disturbed or problematic. 50% = 20% = % =Total Cover % Bare Ground in Herb Stratum 5% Yes No Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant					5 - Wetland Non-	Vascular Plar	nts ¹	
Woody Vine Stratum (Plot size: 15 ft radius) 1. % 2. % 50% = 20% = % Solve = 20% = % Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant								
1. % 1 Indicators of hydric soil and wetland hydrology 2. % must be present, unless disturbed or problematic. 50% = 20% = % = Total Cover Hydrophytic Vegetation % Bare Ground in Herb Stratum 5% Yes No Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant		95%	= I otal Cover		Problematic Hydr	ophytic Vege	tation' (Expl	ain)
2.		0/			1			
50% = 20% = * Total Cover 50% = 20% = * Total Cover Hydrophytic Vegetation Vegetation Present? Yes No Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant								
30 % = 20 % = Hydrophytic Vegetation Vegetation % Bare Ground in Herb Stratum 5% Yes⊠ No□ Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant	-		Tatalo		must be present, unles	s disturbed or	problematio).
% Bare Ground in Herb Stratum 5% Yes No Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant	50% = 20% =	%	= I otal Cover		l hudron hutio			
% Bare Ground in Herb Stratum <u>5%</u> Yes⊠ No□ Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant								
% Bare Ground in Herb Stratum <u>5%</u> Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant					-		Voc 🕅 No	
Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant	% Bare Ground in Herb Stratum 5%				FICSCILL			,
			onhytic vegetat	ion criterior	is met due to greater the	on 50% of the	dominant	
							dominant	

Prome Description: (Describe to the depth	n needed to document the indicator or conf	rm the absence	of mulcators.	
Depth Matrix	Redox Features			
Depth Matrix (inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0-8 10YR 4/2 100%	<u> </u>		Silt loam	
8-16 10YR 3/2 100%	%		Silt loam	
%	%			
<u> </u>	<u>%</u>			
<u> </u>	<u>%</u>			
<u>%</u>	<u>%</u>			
<u></u>				
	=Reduced Matrix, CS=Covered or Coated Sar	d Grains 2	Location: PL=Pore L	ining M=Matrix
Hydric Soil Indicators: (Applicable to all L			ors for Problematic	
Histosal (A1)	Sandy Redox (S5)		Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)	🗌 Red I	Parent Material (TF2))
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR	A 1) 🗌 Very	Shallow Dark Surfac	e (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	🗌 Othei	r (Explain in Remarks	s)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)			
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicato	ors of hydrophytic veg	getation and
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)		and hydrology must b	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unles	s disturbed or proble	ematic
Restrictive Layer (if present):	· · · · ·			
Туре:				
Depth (inches):		Hydric Soil	Present?	Yes⊡ No⊠
Remarks: No hydric soil indicators were obse	erved.			
HYDROLOGY				· · ·
HYDROLOGY				
Wetland Hydrology Indicators:				
	ck all that apply)		Secondary Indicator	rs (2 or more required)
Wetland Hydrology Indicators:	ck all that apply) ☐ Water-Stained Leaves (B9) (except MLF	XA 1, 2, 4A,		rs (2 or more required) eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check		RA 1, 2, 4A,		
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	Water-Stained Leaves (B9) (except MLF	RA 1, 2, 4A,	Water-Stained Lo	eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLF and 4B)	RA 1, 2, 4A,	Water-Stained Lo 4A, and 4B)	eaves (B9) (MLRA 1, 2, ns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) 	RA 1, 2, 4A,	Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat	eaves (B9) (MLRA 1, 2, ns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) 		Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat	eaves (B9) (MLRA 1, 2, ns (B10) rer Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 		Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9) sition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc 	ts (C3)	Water-Stained L 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos	eaves (B9) (MLRA 1, 2, ns (B10) er Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) 	ts (C3))	Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes	eaves (B9) (MLRA 1, 2, ns (B10) eer Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ Presence of Reduced Iron (C4) 	ts (C3))	Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitare	eaves (B9) (MLRA 1, 2, ns (B10) eer Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks) 	ts (C3))	Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, ns (B10) eer Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks) 	ts (C3))	Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, ns (B10) eer Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	ts (C3)	 Water-Stained Lu 4A, and 4B) □ Drainage Patterr □ Dry-Season Wat □ Saturation Visible □ Geomorphic Pos □ Shallow Aquitarc □ FAC Neutral Tes □ Raised Ant Mour □ Frost-Heave Hur 	eaves (B9) (MLRA 1, 2, ns (B10) eer Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	ts (C3)	Water-Stained Lu 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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	□ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	ts (C3)	 Water-Stained Lu 4A, and 4B) □ Drainage Patterr □ Dry-Season Wat □ Saturation Visible □ Geomorphic Pos □ Shallow Aquitarc □ FAC Neutral Tes □ Raised Ant Mour □ Frost-Heave Hur 	eaves (B9) (MLRA 1, 2, ns (B10) eer Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Includes Capillary fringe)	□ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	ts (C3)	 Water-Stained Lu 4A, and 4B) □ Drainage Patterr □ Dry-Season Wat □ Saturation Visible □ Geomorphic Pos □ Shallow Aquitarc □ FAC Neutral Tes □ Raised Ant Mour □ Frost-Heave Hur 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Includes Capillary fringe)	□ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	ts (C3)	 Water-Stained Lu 4A, and 4B) □ Drainage Patterr □ Dry-Season Wat □ Saturation Visible □ Geomorphic Pos □ Shallow Aquitarc □ FAC Neutral Tes □ Raised Ant Mour □ Frost-Heave Hur 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Includes Capillary fringe)	□ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	ts (C3)	 Water-Stained Lu 4A, and 4B) □ Drainage Patterr □ Dry-Season Wat □ Saturation Visible □ Geomorphic Pos □ Shallow Aquitarc □ FAC Neutral Tes □ Raised Ant Mour □ Frost-Heave Hur 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)
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Project/Site: Lockwood Meadows Subdivision		City/Cou	unty: La Ce		pling Date: 2/24/202	21
Applicant/Owner: PLS Engeneering		<u></u>	State: <u>N</u>		pling Point: TP6	
Investigator(s): Naglich, Francis; Rendleman, An	nie Jean			o, Range: <u>S2, T4N, R1E</u>		
Landform (hillslope, terrace, etc.): Drainageways,				nvex, none): <u>Convex</u>	Slope (%)	: <u>0-3%</u>
Subregion (LRR): A	Lat: 45.86	24002	Long: -122		Datum: NAD83	
Soil Map Unit Name: Odne silty clay loam, 0 to 3	percent slopes			WI classification: None		
Are climatic / hydrologic conditions on the site typi	cal for this time of	f year? Yes⊠	No□ (If	no, explain Remarks.)		
Are Vegetation, Soil, or Hydrology signific	cantly disturbed?	Are	e "Normal C	ircumstances" present? Yes	🛛 No🗌	
Are Vegetation, Soil, or Hydrology natura	ally problematic?	(If need	ed, explain	any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site r	• •	sampling po	int locatio	ons, transects, importa	nt features, etc.	
	No 🗌	Is the Sar	npled Area			
,	No 🛛	within a V		Yes⊟ No⊠		
	No 🛛					
Remarks: This test plot is located in the northern		the site, along	the DNR m	apped Type N stream. Becau	use all three wetland	
indicators were not met, TP-6 was considered to b	be in uplands.					
VEGETATION – Use scientific names of	plants.					
	Absolute	Dominant	Indicator	Dominance Test Workshe	ot	
Tree Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status			
1.	<u>% 00ver</u> %	opecies:	Olalus	Number of Dominant Speci	es 1	(A)
	%			That Are OBL, FACW, or FA		(A)
2					10.	
3	%			Total Number of Dominant		
4.	%			Species Across All Strata:	1	(B)
50% = 20% =	%	=Total Cover		opecies Across Air Strata.		
				Percent of Dominant Specie	26	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FA		(A/B)
1.	%			Prevalence Index worksho		(//////
2	<u>%</u>			Total % Cover of:	Multiply b	
3.	%			OBL species	x 1=	<u>y.</u>
4.	%			FACW species	x 2=	
5.	%			FAC species	x 3=	
50% = 20% =	%	=Total Cover		FACU species	x 4=	
Herb Stratum (Plot size: 5 ft radius)				UPL species	x 5=	
1. <u>*Poa sp.</u>	90%	yes	FAC	Column Totals:	(A)	(B)

1. *Poa sp.	90%	yes	FAC	Column Totals:	(A)	(B)
2. Rumex acetosella	10%	no	FACU	Prevalence Index	к = B/A=	
3.	%			Hydrophytic Vegetation Inc	licators:	
4.	%			1 – Rapid Test for Hydr	rophytic Vegetation	
5.	%			🛛 2 – Dominance Test is	>50%	
6	%			3 - Prevalence Index is	≤ 3 .0 ¹	
7	%			🔄 🗌 4 - Morphological Adap		
8	%			supporting data in Rem	arks or on a separate	
9	%			sheet)		
10	%			🔄 🗍 5 - Wetland Non-Vascu	Ilar Plants ¹	
11	%					
50% = 50 $20% = 20$	100%	=Total Cover		Problematic Hydrophyt	ic 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 distu	urbed or problematic.	
50% = 20% =	%	=Total Cover				
		-		Hydrophytic		
				Vegetation		
% Bare Ground in Herb Stratum 0%				Present?	Yes⊠ No⊡	

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

Profile Description: (Describe to the depth	needed to document the indicator or conf	rm the absence	of indicators.)	
Depth Matrix	Redox Features			
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0-16 10YR 3/2 100%	<u> </u>		Silt loam	
<u> </u>				
<u> </u>	%			
%	%			
<u>%</u>	%			
<u> </u>	<u>%</u>			
<u>%</u>	<u>%</u>		·	<u> </u>
	=Reduced Matrix, CS=Covered or Coated Sar	d Grains. ² I	ocation: PL=Pore L	ining, M=Matrix
Hydric Soil Indicators: (Applicable to all L			rs for Problematic	
Histosal (A1)	Sandy Redox (S5)	🗌 2 cm N	/luck (A10)	•
Histic Epipedon (A2)	Stripped Matrix (S6)	🗌 Red P	arent Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLF	A 1) 🗌 Very S	Shallow Dark Surface	e (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other	(Explain in Remarks	5)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)			
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicator	s of hydrophytic veg	etation and
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)		nd hydrology must b	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless	disturbed or proble	matic
Restrictive Layer (if present):				
Type: Depth (inches):		Hydric Soil F	Prosent?	Yes⊡ No⊠
Remarks: No indicators of hydric soil were ob	sorved in the test plot during the site visit			
Remarks. No indicators of flydric soil were ob				
HYDROLOGY				
HYDROLOGY Wetland Hydrology Indicators:				
	ck all that apply)		Secondary Indicator	s (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check			-	· · /
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	Water-Stained Leaves (B9) (except MLI		Water-Stained Le	s (2 or more required) eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLI and 4B)	RA 1, 2, 4A,	Water-Stained Le	eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	 ☐ Water-Stained Leaves (B9) (except MLI and 4B) ☐ Salt Crust (B11) 	RA 1, 2, 4A,	Water-Stained Le 4A, and 4B)	eaves (B9) (MLRA 1, 2, s (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 ☐ Water-Stained Leaves (B9) (except MLI and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) 	RA 1, 2, 4A,	Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 ☐ Water-Stained Leaves (B9) (except MLI and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 	RA 1, 2, 4A,	Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 □ Water-Stained Leaves (B9) (except MLI and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roce 	RA 1, 2, 4A , ts (C3)	Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLI and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ Presence of Reduced Iron (C4) 	RA 1, 2, 4A, ts (C3)	Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLI and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	RA 1, 2, 4A, ts (C3)	 Water-Stained Let 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Position Shallow Aquitard FAC Neutral Test 	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLI and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A 	RA 1, 2, 4A, ts (C3)	 Water-Stained Let 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Position Shallow Aquitard FAC Neutral Test Raised Ant Mountain 	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLI and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 	RA 1, 2, 4A, ts (C3)	 Water-Stained Let 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Position Shallow Aquitard FAC Neutral Test Raised Ant Mountain 	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLI and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	RA 1, 2, 4A, ts (C3)	 Water-Stained Let 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC Neutral Test Raised Ant Moun Frost-Heave Hun 	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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?	□ Water-Stained Leaves (B9) (except MLI and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	RA 1, 2, 4A, ts (C3)	 Water-Stained Let 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Position Shallow Aquitard FAC Neutral Test Raised Ant Mountain 	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLI and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roc □ 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):	RA 1, 2, 4A, ts (C3)	 Water-Stained Let 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC Neutral Test Raised Ant Moun Frost-Heave Hun 	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) nds (D6) (LRR A) nmocks (D7)
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Project/Site: Lockwood Meadows Subdivision		City/Co	unty: La Ce		Sampling Date: <u>9/8/2020</u>
Applicant/Owner: PLS Engeneering	1	0	State: V		Sampling Point: TPA1
Investigator(s): Naglich, Francis; Rendleman, Annie Landform (hillslope, terrace, etc.): Drainageways, Te				p, Range: <u>S2, T4N, R1E</u> onvex, none): Concave	<u>=</u>
Subregion (LRR): A	Lat: 45.86		Long: -12		
Soil Map Unit Name: Odne silty clay loam, 0 to 3 per		1590		NWI classification: None	
Are climatic / hydrologic conditions on the site typical	for this time of	vear? Yes			
Are Vegetation, Soil, or Hydrology significan				Circumstances" present?	Yes No
Are Vegetation , Soil , or Hydrology naturally				any answers in Remarks	
SUMMARY OF FINDINGS – Attach site ma		,		•	
Hydrophytic Vegetation Present? Yes 🛛 No	· ·		Introduci		
Hydric Soils Present? Yes X No			npled Area		
Wetland Hydrology Present? Yes X No		within a V	Vetland?	Yes 🛛 No	
Remarks: This test plot is located within the souther		lark County Ta	x Parcel 20	9113000, within Wetland	A. This test plot met all three
wetland parameters; therefore, TPA1 is considered to					· · · · · · · · · · · · · · · · · · ·
VEGETATION – Use scientific names of pl					
	Absolute	Dominant	Indicator	Dominance Test Wor	ksheet
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	<u>% Cover</u>	Species?	Status	Number of Dominant S	
1. Populus balsamifera	30%	yes	FAC	Number of Dominant S That Are OBL, FACW,	
2	%	·			0117(0.
3	%			Total Number of Domir	nant 4 (B)
$\frac{1}{50\% = 15} \ 20\% = 6$	30%	=Total Cover		Species Across All Stra	$\frac{4}{100}$
30% = 10/20% = 0/00					
				Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)	0/			That Are OBL, FACW,	
1	%	·		Prevalence Index wor	
2	<u>%</u> %	·		Total % Cover of	
3	%%	·		OBL species FACW species	x 1= x 2=
5.	%	·		FAC species	x 3=
50% = 20% =	<u> </u>	=Total Cover		FACU species	x 4=
<u>Herb Stratum</u> (Plot size: <u>5</u> ft radius)	/0			UPL species	x 5=
1. Holcus lanatus	60%	yes	FAC	Column Totals:	(A) (B)
2. Anthoxanthum odoratum	20%	yes	FACU		e Index = B/A=
3. Juncus effusus	20%	yes	FACW	Hydrophytic Vegetati	on Indicators:
4. Mentha pulegium	15%	no	OBL	1 – Rapid Test fo	r Hydrophytic Vegetation
5. Hypericum anagalloides	10%	no	OBL	🛛 2 – Dominance T	
6.	%			3 - Prevalence In	
7	%				I Adaptations ¹ (Provide
8	%				n Remarks or on a separate
9	%			sheet)	Marca las Dissista
10	<u>%</u> %	·		5 - Wetland Non-	Vascular Plants
11. $\frac{50\% = 62}{50\% = 20\% = 25}$	125%	=Total Cover		D Problematic Hydr	rophytic Vegetation ¹ (Explain)
$\frac{50\% = 62}{\text{Woody Vine Stratum}} \text{(Plot size: } \frac{15}{15} \text{ ft radius)}$	12376				
4	%			¹ Indicators of hydric so	il and wetland hydrology
2.	<u> </u>	·			s disturbed or problematic.
	%	=Total Cover			
50% = 20% =		-		Hydrophytic	
				Vegetation	
				Present?	Yes⊠ No⊡
% Bare Ground in Herb Stratum <u>0%</u>					
Remarks: The hydrophytic vegetation criterion is me	t due to greate	r than 50% of tl	he dominar	nt vegetation within the te	st plot having either OBL, FACW,
or FAC indicator statuses.					

	n needed to document the indicator or confi	rm the absence of indicators.)	
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ² Texture Re	marks
0-4 10YR 4/2 100%	<u> </u>	Silt loam	
4-16 10YR 4/1 85%	10YR 4/6 15% C	M Silt loam	
<u> </u>	%		
<u>%</u>	%		
<u> </u>	<u>%</u>		
<u> </u>	<u>%</u>		
<u>%</u>	<u>%</u>		
	=Reduced Matrix, CS=Covered or Coated San	d Grains. ² Location: PL=Pore Lining, M=N	latrix
Hydric Soil Indicators: (Applicable to all L		Indicators for Problematic Hydric So	
Histosal (A1)	Sandy Redox (S5)	\square 2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR		
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	_ 、,	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and	ł
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)	Wetland hydrology must be present,	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic	
Restrictive Layer (if present):			
Restrictive Layer (il present).			
Туре:			
Depth (inches):		Hydric Soil Present? Yes	I No□
Remarks: The hydric soil indicator Depleted I	Matrix (F3) was met.		
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (min. of one required; che	ck all that apply)	Secondary Indicators (2 or mo	e required)
Primary Indicators (min. of one required; cher	ck all that apply) Utater-Stained Leaves (B9) (except MLF and 4B)		
Surface Water (A1)	U Water-Stained Leaves (B9) (except MLF	RA 1, 2, 4A, Uter-Stained Leaves (B9)	
☐ Surface Water (A1) ☐ High Water Table (A2)	Water-Stained Leaves (B9) (except MLF and 4B)	A 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B)	(MLRA 1, 2,
□ Surface Water (A1) □ High Water Table (A2) □ Saturation (A3)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) 	A 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B) Drainage Patterns (B10)	(MLRA 1, 2, 2)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) 	 □ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) 	A 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C Saturation Visible on Aerial	(MLRA 1, 2, 2)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) 	 □ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) ☑ Oxidized Rhizospheres along Living Room 	RA 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C Saturation Visible on Aerial ts (C3) Geomorphic Position (D2)	(MLRA 1, 2, 2)
 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) ☑ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) 	RA 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C Saturation Visible on Aerial ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)	(MLRA 1, 2, 2)
 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) ☑ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6) 	KA 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C Saturation Visible on Aerial ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5)	(MLRA 1, 2, 2) Imagery (C9)
 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A) 	RA 1, 2, 4A, Water-Stained Leaves (B9) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C Saturation Visible on Aerial ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (L	(MLRA 1, 2, 2) Imagery (C9) RR A)
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Project/Site: Lockwood Meadows Subdivision		City/Cou	-	enter/Clark	Sampling Date	
Applicant/Owner: PLS Engeneering			State: V		Sampling Poin	it: TPA2
Investigator(s): Naglich, Francis; Rendleman, Annie				p, Range: S2, T4N, R1	E	0 (2() 0 02(
Landform (hillslope, terrace, etc.): Drainageways, Ter				nvex, none): <u>None</u>	Deturn N	Slope (%): <u>0-3%</u>
Subregion (LRR): A Soil Map Unit Name: Odne silty clay loam, 0 to 3 per	Lat: 45.86	16/7	Long: -12		Datum: N	AD83
Are climatic / hydrologic conditions on the site typical	for this time of	woor? Voc		NWI classification: None		
Are Vegetation, Soil, or Hydrology significan				Circumstances" present?		
Are Vegetation, Soil, or Hydrology asgninican				any answers in Remarks		
SUMMARY OF FINDINGS – Attach site ma	-	-		-		ros oto
		samping po		ons, transects, imp	ortant leatur	165, 610.
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No		Is the Sar	npled Area	a		
Wetland Hydrology Present? Yes Ves		within a V	Vetland?	Yes N	o⊠	
Remarks: This test plot is located within the southea		lark County Ta	x Parcel 20	9113000 just north of W	letland A This	test plot only met
one of the three wetland parameters; therefore, TPA2						toot plot only mot
				••		
VEGETATION – Use scientific names of pl		Deminent	la dia ata a	Deminence Test Wes		
Tree Stratum (Plat size: 20 ft radius)	Absolute	Dominant	Indicator	Dominance Test Wor	rksheet	
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status FAC	Number of Dominant S	Spacios	0 (A)
1. Populus balsamifera	20%	yes		That Are OBL, FACW,		<u> </u>
2. <u>*Abies nordmanniana</u>	10%	yes	FACU		0117(0.	
3	<u> </u>			Total Number of Domi	nant	5 (B)
4. $50\% = 15\ 20\% = 6$	30%	=Total Cover		Species Across All Str		<u> </u>
50% = <u>15</u> 20% = <u>5</u>	5078					
				Percent of Dominant S		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> radius)				That Are OBL, FACW,		<u>60</u> (A/E
1. <u>Rubus armeniacus</u>	10%	yes	FAC	Prevalence Index wo		
2	%	·		Total % Cover o		Multiply by:
3	<u>%</u>			OBL species	x 1:	
4	<u>%</u>			FACW species	x 2:	
5	<u>%</u> 10%	=Total Cover		FAC species	x 3:	
50% = <u>5</u> 20% = <u>2</u> <u>Herb Stratum</u> (Plot size: <u>5</u> ft radius)	10%			FACU species UPL species	x 4 x 5	
1. Holcus lanatus	30%	yes	FAC	Column Totals:	(A)	
2. Anthoxanthum odoratum	30%	yes	FACU		e Index = B/A=	
3. Cirsium arvense	20%	no	FAC	Hydrophytic Vegetati		
4. Mentha pulegium	10%	no	OBL	1 – Rapid Test fo		
5. Leucanthemum vulgare	10%	no	FAC	2 – Dominance	• • •	
6. Hypochaeris radicata	5%	no	FACU	3 - Prevalence Ir		
7.	%	·		4 - Morphologica		(Provide
8.	%			supporting data	in Remarks or o	on a separate
9.	%			sheet)		
10.	%			5 - Wetland Non	-Vascular Plant	ts ¹
11	%					
50% = 52 $20% = 21$	105%	=Total Cover		Problematic Hyd	Irophytic Vegeta	ation ¹ (Explain)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)						
1	%	·		¹ Indicators of hydric so		
2	<u>%</u>			must be present, unles	ss disturbed or	problematic.
50% = 20% =	%	=Total Cover		l hadne a haatte		
				Hydrophytic Vegetation		
				Present?		Yes⊠ No⊡
% Bare Ground in Herb Stratum 0%				Fiesent:		
Remarks:*Abies nordmanniana is assumed to be FA	CU. The hvdr	ophytic vegetat	ion criterio	n is met due to greater th	an 50% of the	dominant
vegetation within the test plot having FAC indicator st		oprijao rogolal		The mot due to grouter th		dominant

	needed to document		rm the at	bsence of indicators.)	
Depth Matrix	Rede	ox Features			
(inches) Color (moist) %		% Type ¹	Loc ²	Texture	Remarks
0-11 10YR 4/2 99%	10YR 4/6	1% C	М	Silt loam	
11-16 10YR 4/2 95%	10YR 4/6 5	5% C	М	Silt loam	
%		%			
<u>%</u>		<u>%</u>			
<u>%</u>		%			
<u></u>		<u>%</u>			
<u> </u>	·	<u></u>			
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix. CS=C		d Grains.	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LI				Indicators for Problemat	
Histosal (A1)	Sandy Redox (S5)] 2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S			Red Parent Material (TF	
Black Histic (A3)		eral (F1) (except MLR	-	Very Shallow Dark Surfa	
Hydrogen Sulfide (A4)	Loamy Gleyed Ma			Other (Explain in Remar	ks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F	,			
Thick Dark Surface (A12)	Redox Dark Surfa	. ,	3	ndicators of hydrophytic ve	
Sandy Mucky Minerals (S1)	Depleted Dark Sur			Wetland hydrology must	
Sandy Gleyed Matrix (S4)	Redox Depression	ns (F8)		unless disturbed or prob	iematic
Restrictive Layer (if present):					
Type:			Lincola	in Call DescentO	
Depth (inches): Remarks: No hydric soil indicators were obse			Hyar	ic Soil Present?	Yes□ No⊠
HYDROLOGY					
Wetland Hydrology Indicators:					
	k all that apply)			Secondary Indicate	ors (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chec		aves (B9) (except MLF	A 1. 2. 4		
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)		aves (B9) (except MLF	RA 1, 2, 4	A, 🗌 Water-Stained	Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2)	Water-Stained Lea and 4B)	aves (B9) (except MLF	RA 1, 2, 4	A, Water-Stained 4A, and 4B	Leaves (B9) (MLRA 1, 2,)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	Water-Stained Lea and 4B)		RA 1, 2, 4	A, 🗌 Water-Stained	Leaves (B9) (MLRA 1, 2,) rns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Lea and 4B)	tes (B13)	RA 1, 2, 4	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa	Leaves (B9) (MLRA 1, 2,) rns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 □ Water-Stained Lea and 4B) □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide 	tes (B13) Odor (C1)		A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 □ Water-Stained Lea and 4B) □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide □ Oxidized Rhizosph 	tes (B13) Odor (C1) neres along Living Roo		A, Uater-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) psition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 □ Water-Stained Lea and 4B) □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide □ Oxidized Rhizosph □ Presence of Reduct 	tes (B13) Odor (C1) neres along Living Roo	ts (C3)	A, ☐ Water-Stained 4A, and 4B ☐ Drainage Patte ☐ Dry-Season Wa ⊠ Saturation Visit	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Lea and 4B) □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide □ Oxidized Rhizosph □ Presence of Reduce □ Recent Iron Reduce 	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4)	ts (C3))	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Lea and 4B) □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide □ Oxidized Rhizosph □ Presence of Reduce □ Recent Iron Reduce 	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4) ction in Tilled Soils (C6 ed Plants (D1) (LRR A)	ts (C3))	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3) est (D5) unds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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?	Water-Stained Lea and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4) ction in Tilled Soils (C6 ed Plants (D1) (LRR A) Remarks) ches):	ts (C3)	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mon Frost-Heave He	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Lea and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc Stunted or Stresse Other (Explain in F)	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4) ction in Tilled Soils (C6 ed Plants (D1) (LRR A) Remarks) 	ts (C3)	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant More	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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	Water-Stained Lea and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc Stunted or Stresse Other (Explain in F)	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4) ction in Tilled Soils (C6 ed Plants (D1) (LRR A) Remarks) ches):	ts (C3)	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mon Frost-Heave He	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Includes Capillary fringe)	Water-Stained Lea and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F Other (Explain in F Depth (In No Depth (In No Depth (In	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4) ction in Tilled Soils (C6 ed Plants (D1) (LRR A) Remarks) 	ts (C3)) Wetla	A, Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mo Frost-Heave Hu Market Market State Note: State St	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; chect 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 Includes Capillary fringe) Describe Recorded Data (Stream gauge, mor Remarks:Wetland hydrology secondary indicators	Water-Stained Lea and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stressed Other (Explain in F No No Depth (In No Saturation Visible of	tes (B13) Odor (C1) neres along Living Roo ced Iron (C4) ction in Tilled Soils (C6 ed Plants (D1) (LRR A) Remarks) ches): ches): ches): ches): ches): ches): ches): ches): ches):	ts (C3)) Wetla (s), if avai was met;	A, Uvater-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mor Frost-Heave He Nd Hydrology Present? lable:	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7) Yes 🗌 No 🖂

Project/Site: Lockwood Meadows Subdivision		City/Cou	unty: <u>La Ce</u>	
Applicant/Owner: PLS Engeneering			State: V	
Investigator(s): Rendleman, Annie Jean				p, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terr	aces	Local relief: (c	oncave, co	onvex, none): Convex Slope (%):0-3%
Subregion (LRR): A	Lat: 45.86	1438	Long: -12	2.646694 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 perc	ent slopes			NWI classification: None
Are climatic / hydrologic conditions on the site typical f	or this time of	f year? Yes⊠	No (If	f no, explain Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed?	Are	e "Normal (Circumstances" present? Yes⊠ No⊡
Are Vegetation, Soil, or Hydrology naturally p		(If need	ed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing s	-	-	
Hydrophytic Vegetation Present? Yes 🛛 No		Is the Sar	npled Area	3
Hydric Soils Present? Yes 🗌 No		within a V		Yes⊡ No⊠
Wetland Hydrology Present? Yes No				
		ea where Cottor	nwood sapl	lings are established. Because all three wetland indicators
were not met, TP-AA was considered to be in uplands				
VEGETATION – Use scientific names of pla	ants			
		D	1 12 4	
	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30 ft radius)	% Cover	Species?	Status	
1. *Abies nordmanniana	25%	yes	FACU	Number of Dominant Species <u>3</u> (A)
2	%			That Are OBL, FACW, or FAC:
3.	%			
4.	%			Total Number of Dominant 5 (B)
50% = 13 20% = 5	25%	=Total Cover		Species Across All Strata:
		-		
				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FAC 60 (A/B)
1. <u>Rubus armeniacus</u>	10%	yes	FAC	Prevalence Index worksheet
2. <u>Populus balsamifera</u>	8%	yes	FAC	Total % Cover of: Multiply by:
3	%			OBL species x 1=
4	%			FACW species x 2=
5.	%			FAC species x 3=
50% = 9 $20% = 4$	18%	=Total Cover		FACU species x 4=
Herb Stratum (Plot size: 5 ft radius)		-		UPL species x 5=
1. Holcus lanatus	70%	yes	FAC	Column Totals: (A) (B)
2. Anthoxanthum odoratum	30%	ves	FACU	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.	%			\square 4 - Morphological Adaptations ¹ (Provide
8.	<u>%</u>			supporting data in Remarks or on a separate
	<u>~~~</u> %			sheet)
9				,
10	<u>%</u>			5 - Wetland Non-Vascular Plants ¹
11	%			
50% = 50 $20% = 20$	100%	=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
% Bare Ground in Herb Stratum 0%				Present? Yes⊠ No⊡

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

	h needed to document the indicator or conf	irm the absence	of indicators.)	
Depth Matrix	Redox Features			
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
<u>0-16 10YR 3/1 100%</u>	%		Clay loam	
<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	I=Reduced Matrix, CS=Covered or Coated Sar	nd Grains. ²	Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all L		Indicat	ors for Problemation	c Hydric Soils
Histosal (A1)	Sandy Redox (S5)		Muck (A10)	- ,
Histic Epipedon (A2)	Stripped Matrix (S6)		Parent Material (TF2	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLF		Shallow Dark Surfac	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	U Other	(Explain in Remark	(S)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	21 1		
Thick Dark Surface (A12)	Redox Dark Surface (F6)		rs of hydrophytic ve Ind hydrology must	
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)	unles	s disturbed or probl	ematic
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unics		emaile
Restrictive Layer (if present):				
Time				
Type: Depth (inches):		Hydric Soil	Present?	Yes⊡ No⊠
Remarks: No indicators of hydric soil were o	beerved in the test plot during the site visit	Tryano con		
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (min. of one required; che	ock all that apply)		Secondary Indicato	
	tok all that apply)			ors (2 or more required)
Surface Water (A1)				ors (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except ML	RA 1, 2, 4A,	Water-Stained L	Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	Water-Stained Leaves (B9) (except ML and 4B)	RA 1, 2, 4A,	Water-Stained L 4A, and 4B)	Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	 ☐ Water-Stained Leaves (B9) (except MLI and 4B) ☐ Salt Crust (B11) 	RA 1, 2, 4A,	Water-Stained L 4A, and 4B)	Leaves (B9) (MLRA 1, 2, ms (B10)
 High Water Table (A2) Saturation (A3) Water Marks (B1) 	 Water-Stained Leaves (B9) (except MLI and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	RA 1, 2, 4A,	Water-Stained L 4A, and 4B)	Leaves (B9) (MLRA 1, 2, ms (B10) ater Table (C2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) 	 Water-Stained Leaves (B9) (except MLI 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, ms (B10) ater Table (C2) ble on Aerial Imagery (C9)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) 	 Water-Stained Leaves (B9) (except MLI and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 		Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) sition (D2)
 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 MLI and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) 	ots (C3)	□ Water-Stained L 4A, and 4B) □ Drainage Patter □ Dry-Season Wa □ Saturation Visib □ Geomorphic Po □ Shallow Aquitar	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) sistion (D2) rd (D3)
 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 MLI and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	ots (C3)	Water-Stained L 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar FAC Neutral Te	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) sition (D2) rd (D3) st (D5)
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Project/Site: Lockwood Meadows Subdivision		City/Cou	unty: <u>La C</u> e	enter/Clark Samp	bling Date: 2/24/2021		
Applicant/Owner: PLS Engeneering			State: V		ling Point: TPAB		
Investigator(s): Rendleman, Annie Jean		Sectio	n, Townshi	p, Range: S2, T4N, R1E			
Landform (hillslope, terrace, etc.): Drainageways, Ter	races	Local relief: (c	oncave, co	nvex, none): Convex	Slope (%):0-3%		
Subregion (LRR): A	Lat: 45.86	1406					
Soil Map Unit Name: Odne silty clay loam, 0 to 3 percent	cent slopes			NWI classification: None			
Are climatic / hydrologic conditions on the site typical	for this time o	f year? Yes⊠	No (It	no, explain Remarks.)			
Are Vegetation, Soil, or Hydrology significant				Circumstances" present? Yes⊵	3 No□		
Are Vegetation, Soil, or Hydrology naturally				any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map	showing		-		t features, etc.		
Hydrophytic Vegetation Present? Yes No		Is the Sar	npled Area	1			
Hydric Soils Present? Yes No		within a V		Yes⊡ No⊠			
Wetland Hydrology Present? Yes No					<u> </u>		
Remarks: This test plot is located southeast of Wetla were not met, TP-AB was considered to be in uplands		ea where Cottor	nwood sap	ings are established. Because	all three wetland indicators		
······································							
VEGETATION – Use scientific names of pla	ants.						
	Absolute	Dominant	Indicator	Dominance Test Workshee	۶t.		
Tree Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status				
1. Abies grandis	10%	yes	FACU	Number of Dominant Specie	- (,,,		
2. *Abies nordmanniana	10%	yes	FACU	That Are OBL, FACW, or FA	C:		
3.	%						
4.	%	· · · · · · · · · · · · · · · · · · ·		Total Number of Dominant	5 (B)		
$50\% = 10\ 20\% = 4$	20%	=Total Cover		Species Across All Strata:	()		
				Percent of Dominant Species			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FA			
1. <u>Populus balsamifera</u>	60%	yes	FAC	Prevalence Index workshe	et		
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 3= x 4=		
Herb Stratum (Plot size: 5 ft radius)		-		UPL species	x 5=		
1. Holcus lanatus	80%	yes	FAC	Column Totals:	(A) (B)		
2. Anthoxanthum odoratum	20%	ves	FACU	Prevalence Inde			
3.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ycs	17,00	Hydrophytic Vegetation Inc			
	<u>%</u>			1 – Rapid Test for Hyd			
4		·					
5	<u>%</u>			2 – Dominance Test is			
6	%			3 - Prevalence Index is			
7	%			4 - Morphological Adap			
8	%			supporting data in Ren	arks or on a separate		
9.	%			sheet)			
10.	%			5 - Wetland Non-Vascu	ular Plants ¹		
11.	%						
50% = 50 $20% = 20$	100%	=Total Cover		Problematic Hydrophyt	ic 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 dist			
	%	=Total Cover					
50% = 20% =	70			Hydrophytic			
				Vegetation			
					Yes⊡ No⊠		
				Present?			

% Bare Ground in Herb Stratum 0%

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is not met due to less than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

Profile D	escription: (Dese	cribe to the dept	h needed to docu	iment the ind	licator or co	ntirm the	e absence	e of indicators.)	
Depth	Matri	x		Redox Feat	ures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks
0-9	10YR 3/2	100%		%				Clay loam	
9-16	10YR 3/2	99%	10YR 4/6	1%	C	М		Clay loam	
		%		<u>%</u> %					
·		%		<u>%</u>					
		<u> </u>		<u> </u>					
		%		%					
		%		%					
			I=Reduced Matrix			and Grai		Location: PL=Pore	
		pplicable to all I	RRs, unless oth		.)			ors for Problemat	ic Hydric Soils
Histos			Sandy Redo					Muck (A10) Parent Material (TF	.J)
	Epipedon (A2) Histic (A3)		Loamy Muc		1) (avaant M			Shallow Dark Surfa	
	gen Sulfide (A4)		Loamy Gley				-	r (Explain in Remar	
-	ted Below Dark S	urface (A11)	Depleted M		.)				K3)
-	Dark Surface (A1)		Redox Dark				³ Indicato	ors of hydrophytic v	egetation and
	/ Mucky Minerals	,	Depleted Da	. ,				and hydrology must	
	/ Gleyed Matrix (S	. ,	Redox Depi	,	')			s disturbed or prob	
-						- 1		-	
Restrict	ve Layer (if prese	ent):							
Type:									
Depth (in	ches):					H	ydric Soil	Present?	Yes∏ No⊠
HYDROI	LOGY								
	Hydrology Indica	ators:							
			ock all that apply)						(0
Primary I	ndicators (min. of	one required, che	eck all that apply)				_		ors (2 or more required)
	ce Water (A1)		Water-Stain		9) (except M	LRA 1, 2	2, 4A,		Leaves (B9) (MLRA 1, 2,
-	Water Table (A2)		and 4B	, ,				4A, and 4B	
Satura	. ,		Salt Crust (I	,	-			Drainage Patte	
	Marks (B1)		Aquatic Inve					Dry-Season W	
	nent Deposits (B2))	Hydrogen S	-		anta (CO)	`		ble on Aerial Imagery (C9)
	Deposits (B3)			hizospheres al		00ts (C3)	Geomorphic Po	
-	Mat or crust (B4) eposits (B5)				. ,	C (c)		□ Shallow Aquita □ FAC Neutral Te	
	ce Soil Cracks (B6	:)	☐ Recent Iron ☐ Stunted or \$		•	,			unds (D6) (LRR A)
	ation Visible on A					~)		Frost-Heave H	
	ely Vegetated Co	••••			.5)				
	servations:		- /						
	Vater Present?	Yes 🗌	No 🛛 🛛 De	pth (Inches):					
	ble Present?	Yes 🗌		pth (Inches):		We	etland Hyd	drology Present?	
	n Present?	Yes 🗌	No 🛛 🛛 De	pth (Inches):					Yes 🗌 No 🛛
	Capillary fringe)	Stroom gougo m	onitoring well, aeria	al photos prov	vious increat	ione) if a	wailabla:		
Describe	Recolueu Dala (Sileani gauge, mo	Shiloning well, aena	ai priotos, pre-	vious irispeci	10115 <i>)</i> , 11 a	avallable.		
						ne soil wa	as moist fr	om recent rainfall, l	out not saturated.
Standing	water was not ob	served at this tes	t plot, but was obs	erved within V	Vetland A.				

Project/Site: Lockwood Meadows Subdivision		City/County: La Center/Clark	Sa	ampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering		State: WA	Sa	ampling Point: TPAC
Investigator(s): Rendleman, Annie Jean		Section, Township, Range:	S2, T4N, R1E	
Landform (hillslope, terrace, etc.): Drainageways, Ter	races Local	relief: (concave, convex, none	e): Convex	Slope (%):0-3%
Subregion (LRR): A	Lat: 45.861597	Long: -122.647392		Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 per	cent slopes	NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical	for this time of year?	Yes No (If no, explain	n Remarks.)	
Are Vegetation, Soil, or Hydrology significan	tly disturbed?	Are "Normal Circumstan	ces" present? Ye	es 🛛 No 🗌
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	p showing samp	ling point locations, tran	sects, import	tant features, etc.
Hydrophytic Vegetation Present? Yes No		the Compled Area		
Hydric Soils Present? Yes No		s the Sampled Area /ithin a Wetland?	Yes⊟ No⊠	7
Wetland Hydrology Present? Yes No			Yes∐ No⊵	
Remarks: This test plot is located northwest of Wetla	and A. Because all th	ree wetland indicators were no	ot met, TP-AC wa	as considered to be in uplands.

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. *Abies nordmanniana	10%	yes	FACU	Number of Dominant Species 3	(A)
2. Abies grandis	10%	yes	FACU	That Are OBL, FACW, or FAC:	
3.	%				
4.	%			Total Number of Dominant 6	(B)
50% = 10 20% = 4	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 50	(A/B)
1. <u>Populus balsamifera</u>	25%	yes	FAC	Prevalence Index worksheet	
2. <u>Rubus armeniacus</u>	15%	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: <u>5</u> ft radius)		_		UPL species x 5=	_
1. Holcus lanatus	70%	yes	FAC	Column Totals: (A)	(B)
2. Anthoxanthum odoratum	20%	yes	FACU	Prevalence Index = B/A=	
3. Leucanthemum vulgare	10%	no	FACU	Hydrophytic Vegetation Indicators:	
4.	%			1 – Rapid Test for Hydrophytic Vegetation	
5.	%			2 – Dominance Test is >50%	
6.	%			□ 3 - Prevalence Index is $\leq 3.0^{1}$	
7.	%			☐ 4 - Morphological Adaptations ¹ (Provide	
8.	%			supporting data in Remarks or on a separate	
9.	%			sheet)	
10.	%			5 - Wetland Non-Vascular Plants ¹	
11.	%				
50% = 50 $20% = 20$	100%	=Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain	n)
Woody Vine Stratum (Plot size: 15 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 0%					

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is not met due to 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

Profile Description: (Describe to the dept	n needed to docu					
Depth Matrix		Redox Featu	ILES			
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10 10YR 3/2 100%		%			Clay loam	
10-16 10YR 3/2 93%	10YR 4/6	7%	С	М	Clay loam	
<u> </u>		%				
<u> </u>		<u>%</u>				
<u>%</u>		<u>%</u> %				
<u> </u>		%				
<u> </u>		<u> </u>				
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix,	CS=Covered	or Coated Sa	nd Grai	ns. ² Location: PL=Pore	Elining, M=Matrix
Hydric Soil Indicators: (Applicable to all L	RRs, unless othe	erwise noted.			Indicators for Problemat	
Histosal (A1)	Sandy Redo				2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Ma				Red Parent Material (TF	
Black Histic (A3)	Loamy Muck			RA 1)	Very Shallow Dark Surfa	
Hydrogen Sulfide (A4)	Loamy Gley				Other (Explain in Remar	·ks)
Depleted Below Dark Surface (A11)	Depleted Ma				•	
Thick Dark Surface (A12)	Redox Dark	· ,			³ Indicators of hydrophytic v	
Sandy Mucky Minerals (S1)	•	ark Surface (F	7)		Wetland hydrology must unless disturbed or prob	t be present,
Sandy Gleyed Matrix (S4)	Redox Depr	essions (F8)			unless disturbed of prob	nemalic
Restrictive Layer (if present):						
T						
Type: Depth (inches):				н	ydric Soil Present?	Yes⊡ No⊠
Remarks: No indicators of hydric soil were of	been used in the test	plot during th		· ·		
Tremarks. No indicators of flydric soli were of		i plot during th				
HYDROLOGY						
IIIDKOLOGI						
Wetland Hydrology Indicators:						
	ck all that apply)				Secondary Indicat	ors (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che		ed Leaves (B)) (except ML	RA 1. 2		· · ·
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1)	ck all that apply)		except ML	RA 1, 2	2, 4A, 🗌 Water-Stained	Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2)	Water-Stain and 4B))	∂) (except ML	RA 1, 2	2, 4A, Water-Stained 4A, and 4B	Leaves (B9) (MLRA 1, 2, 3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che □ Surface Water (A1) □ High Water Table (A2) □ Saturation (A3)	Water-Staine and 4B)) 311)		RA 1, 2	2, 4A, Water-Stained 4A, and 4B	Leaves (B9) (MLRA 1, 2, 3) erns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che □ Surface Water (A1) □ High Water Table (A2) □ Saturation (A3) □ Water Marks (B1)	Water-Staine and 4B) Salt Crust (E Aquatic Inve) 311) ertebrates (B1	3)	RA 1, 2	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W	Leaves (B9) (MLRA 1, 2, s) erns (B10) ater Table (C2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	☐ Water-Staine and 4B) ☐ Salt Crust (E ☐ Aquatic Inve ☐ Hydrogen St) B11) ertebrates (B1) ulfide Odor (C	3) 1)		2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visi	Leaves (B9) (MLRA 1, 2, s) erns (B10) ater Table (C2) ble on Aerial Imagery (C9)
Wetland Hydrology Indicators: 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-Stain and 4B) ☐ Salt Crust (E ☐ Aquatic Inve ☐ Hydrogen Si ☐ Oxidized Rh) 311) ertebrates (B1 ulfide Odor (C iizospheres al	3) 1) ong Living Rod		2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2)
Wetland Hydrology Indicators: 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-Stain and 4B) ☐ Salt Crust (E ☐ Aquatic Inve ☐ Hydrogen St ☐ Oxidized Rh ☐ Presence of) B11) ertebrates (B1 ulfide Odor (C nizospheres al Reduced Iror	3) 1) ong Living Roo 1 (C4)	ots (C3	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Pe Shallow Aquita	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3)
Wetland Hydrology Indicators: 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-Stain and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron	311) artebrates (B1 ulfide Odor (C iizospheres al Reduced Iror Reduction in	3) 1) ong Living Roo a (C4) Tilled Soils (C6	ots (C3	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Pe Shallow Aquita FAC Neutral Te	Leaves (B9) (MLRA 1, 2, b) erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) urd (D3) est (D5)
Wetland Hydrology Indicators: 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-Stain and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or St) B11) ertebrates (B1 ulfide Odor (C nizospheres al Reduced Iror Reduction in Stressed Plant	3) 1) ong Living Rod n (C4) Tilled Soils (C6 s (D1) (LRR A	ots (C3	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rrd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: 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-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen Si □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S □ Other (Explage)) B11) ertebrates (B1 ulfide Odor (C nizospheres al Reduced Iror Reduction in Stressed Plant	3) 1) ong Living Rod n (C4) Tilled Soils (C6 s (D1) (LRR A	ots (C3	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Pe Shallow Aquita FAC Neutral Te	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rrd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: 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-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen Si □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S □ Other (Explage)) B11) ertebrates (B1 ulfide Odor (C nizospheres al Reduced Iror Reduction in Stressed Plant	3) 1) ong Living Rod n (C4) Tilled Soils (C6 s (D1) (LRR A	ots (C3	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rrd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: 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-Stains and 4B) Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain) B11) ertebrates (B1 ulfide Odor (C nizospheres al Reduced Iror Reduction in Stressed Plant	3) 1) ong Living Rod n (C4) Tilled Soils (C6 s (D1) (LRR A	ots (C3	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rrd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: 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-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen Si □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S □ Other (Explas)	311) ertebrates (B1 ulfide Odor (C izospheres al Reduced Iror Reduction in Stressed Plant ain in Remarks	3) 1) ong Living Roo n (C4) Tilled Soils (C6 s (D1) (LRR A s)	5))	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rrd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: 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	□ Water-Stain and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen Si □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S □ Other (Expla B)	311) ertebrates (B1 ulfide Odor (C izospheres al Reduced Iror Reduction in Stressed Plant ain in Remarks pth (Inches):	3) 1) ong Living Roo 1 (C4) Tilled Soils (C6 s (D1) (LRR A S)	5))	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rrd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: 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 Includes Capillary fringe)	Water-Stains and 4B) Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	311) ertebrates (B1: ulfide Odor (C izospheres al Reduced Iror Reduction in Stressed Plant ain in Remarks pth (Inches): pth (Inches): pth (Inches):	3) 1) ong Living Roo n (C4) Tilled Soils (C6 s (D1) (LRR A s)	bts (C3) 5)) We	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) erd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
Wetland Hydrology Indicators: 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	Water-Stains and 4B) Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	311) ertebrates (B1: ulfide Odor (C izospheres al Reduced Iror Reduction in Stressed Plant ain in Remarks pth (Inches): pth (Inches): pth (Inches):	3) 1) ong Living Roo n (C4) Tilled Soils (C6 s (D1) (LRR A s)	bts (C3) 5)) We	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) erd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
Wetland Hydrology Indicators: 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 Includes Capillary fringe)	Water-Stains and 4B) Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	311) ertebrates (B1: ulfide Odor (C izospheres al Reduced Iror Reduction in Stressed Plant ain in Remarks pth (Inches): pth (Inches): pth (Inches):	3) 1) ong Living Roo n (C4) Tilled Soils (C6 s (D1) (LRR A s)	bts (C3) 5)) We	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) erd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
Wetland Hydrology Indicators: 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 Includes Capillary fringe)	Water-Stains and 4B) Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	311) ertebrates (B1: ulfide Odor (C izospheres al Reduced Iror Reduction in Stressed Plant ain in Remarks pth (Inches): pth (Inches): pth (Inches):	3) 1) ong Living Roo n (C4) Tilled Soils (C6 s (D1) (LRR A s)	bts (C3) 5)) We	2, 4A, Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visil Geomorphic Po Shallow Aquita FAC Neutral To Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) erd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)
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Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering Investigator(s): Rendleman, Annie Jean			State: V		Sampling Date: <u>2/24/2021</u> Sampling Point: <u>TPAD</u>	
Landform (hillslope, terrace, etc.): Drainageways, Terr	aces			nvex, none): Convex	Slope (%):0-3%	
Subregion (LRR): A	Lat: 45.86		Long: -12		Datum: NAD83	
Soil Map Unit Name: Odne silty clay loam, 0 to 3 perc	ent slopes		1	NWI classification: None		
Are climatic / hydrologic conditions on the site typical f						
Are Vegetation, Soil, or Hydrology significant				Circumstances" present? Y		
Are Vegetation , Soil , or Hydrology naturally p		,		any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map		sampling po	int locati	ons, transects, impoi	tant features, etc.	
Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No		Is the Sar within a V	npled Area	a Yes⊡ No[Ŋ	
Wetland Hydrology Present? Yes No						
Remarks: This test plot is located southeast of Wetla		ea where Cottor	nwood sapl	ings are established. Beca	use all three wetland indicators	
were not met, TP-AD was considered to be in uplands	•					
VEGETATION – Use scientific names of pla	nts					
Trop Stratum (Dist size:20 ft radius)	Absolute	Dominant	Indicator	Dominance Test Works	sheet	
<u>Tree Stratum</u> (Plot size: <u>30</u> ft radius) 1. *Abies nordmanniana	<u>% Cover</u> 30%	Species? yes	Status FACU	Number of Dominant Sp	ecies 2 (A)	
2. Abies grandis	5%	no	FACU	That Are OBL, FACW, o		
3.	%		17,00			
4.	%	·		Total Number of Domina	4 (B)	
50% = <u>18</u> 20% = <u>7</u>	35%	=Total Cover		Species Across All Strat	a: ``	
		-		Percent of Dominant Sp	ocios	
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> radius)				That Are OBL, FACW, o		
1. Populus balsamifera	15%	yes	FAC	Prevalence Index work		
2.	%			Total % Cover of:	Multiply by:	
3.	%			OBL species	x 1=	
4	%			FACW species	x 2=	
5	%			FAC species	x 3=	
$50\% = \underline{8} 20\% = \underline{3}$ <u>Herb Stratum</u> (Plot size: <u>5</u> ft radius)	15%	=Total Cover		FACU species UPL species	x 4=	
1. Holcus lanatus	80%	yes	FAC	Column Totals:	x 5= (B)	
2. Anthoxanthum odoratum	20%	yes	FACU	-	(X) (D)	
3.	%			Hydrophytic Vegetatio		
4.	%	·			Hydrophytic Vegetation	
5.	%			🛛 2 – Dominance Te		
6	%	·		3 - Prevalence Ind		
7	%			4 - Morphological		
8	<u>%</u>				Remarks or on a separate	
9	<u>%</u> %	·		sheet)	(accular Planta)	
11.	<u>%</u>				asculai Fiants	
50% = 50 20% = 20	100%	=Total Cover		Problematic Hydro	phytic Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size: 15 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 0%						
Remarks:*Abies nordmanniana assumed to be FACL		hytic vegetation	n criterion is	s not met due to 50% of th	e dominant vegetation within the	
test plot having either OBL, FACW, or FAC indicator s	tatuses.					

Depth Matrix		Redox Feat			_	
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
<u>0-16</u> <u>10YR 3/2</u> <u>100%</u>		<u>%</u>			Clay loam	
<u>%</u>		· <u> </u>			<u> </u>	
		<u> </u>				
		%	·			
%		%				
%		%				
%		%				
¹ Type: C=Concentration, D=Depletion, RM				and Grair		=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all I			.)		Indicators for Probl	ematic Hydric Soils
☐ Histosal (A1) ☐ Histic Epipedon (A2)	Sandy Redo				 2 cm Muck (A10) Red Parent Materia 	
Black Histic (A3)			1) (avaant M	DA 1)	Very Shallow Dark	
☐ Hydrogen Sulfide (A4)				_KA I)	Other (Explain in R	
Depleted Below Dark Surface (A11)	Depleted Ma		.)			emarks)
Thick Dark Surface (A12)	Redox Dark	. ,			³ Indicators of hydroph	vtic vogetation and
Sandy Mucky Minerals (S1)	Depleted Da	. ,			Wetland hydrology	
Sandy Gleyed Matrix (S4)	Redox Depre	•	-7)		unless disturbed of	
						•
Restrictive Layer (if present):						
Туре:						
Depth (inches):				Hv	dric Soil Present?	Yes⊡ No⊠
Wetland Hydrology Indicators:	eck all that apply)				Secondary Ir	dicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che		ed Leaves (B	9) (except M	LRA 1. 2		
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che	Water-Staine		9) (except M	LRA 1, 2,	4A, 🗌 Water-Sta	ained Leaves (B9) (MLRA 1, 2
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2)	Water-Staine and 4B)		9) (except M	LRA 1, 2,	AA, 🗌 Water-Sta 4A, an	ained Leaves (B9) (MLRA 1, 2 d 4B)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Staine and 4B)	311)		LRA 1, 2,	4A, Water-Sta 4A, an	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	☐ Water-Staine and 4B) ☐ Salt Crust (E ☐ Aquatic Inve	311) rtebrates (B1	3)	LRA 1, 2,	4A, Uater-Sta 4A, an Drainage Dry-Seas	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; che Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Staine and 4B)	311) rtebrates (B1 ulfide Odor (0	3) C1)		4A, Water-Sta 4A, an Drainage Dry-Seas Saturation	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2)
Wetland Hydrology Indicators: 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-Staine and 4B) ☐ Salt Crust (B ☐ Aquatic Inve ☐ Hydrogen St ☐ Oxidized Rh	811) rtebrates (B1 ulfide Odor (C izospheres a	3) C1) long Living R		AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2)
Wetland Hydrology Indicators: 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-Staine and 4B) Salt Crust (E Aquatic Inve	11) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro	3) C1) long Living R n (C4)	oots (C3)	AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A	Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3)
Wetland Hydrology Indicators: 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-Staine and 4B) ☐ Salt Crust (E ☐ Aquatic Inve ☐ Hydrogen St ☐ Oxidized Rh ☐ Presence of ☐ Recent Iron	811) rtebrates (B1 ulfide Odor (0 izospheres a Reduced Iro Reduction in	3) C1) long Living R n (C4) Tilled Soils ((oots (C3) C6)	AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) in Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5)
Wetland Hydrology Indicators: 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-Staine and 4B) ☐ Salt Crust (E ☐ Aquatic Inve ☐ Hydrogen Su ☐ Oxidized Rh ☐ Presence of ☐ Recent Iron ☐ Stunted or S	811) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro Reduction in tressed Plan	3) C1) long Living R n (C4) Tilled Soils (ts (D1) (LRR	oots (C3) C6)	AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised An	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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-Staine and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S) □ Other (Expla	811) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro Reduction in tressed Plan	3) C1) long Living R n (C4) Tilled Soils (ts (D1) (LRR	oots (C3) C6)	AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised An	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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 (B	□ Water-Staine and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S) □ Other (Expla	811) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro Reduction in tressed Plan	3) C1) long Living R n (C4) Tilled Soils (ts (D1) (LRR	oots (C3) C6)	AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised An	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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 (B Field Observations: Surface Water Present? Yes	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S □ Other (Expla 8)	811) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark	3) C1) long Living R n (C4) Tilled Soils ((ts (D1) (LRR s)	cots (C3) C6) A)	4A, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised Au Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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 (B Field Observations: Surface Water Present? Yes Water Table Present? Yes	□ Water-Staine and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S ○ Other (Expla 8)	a11) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches):	3) C1) long Living R n (C4) Tilled Soils (i ts (D1) (LRR s)	cots (C3) C6) A)	AA, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised An	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chell 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 (B Field Observations: Surface Water Present? Yes Saturation Present?	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S) □ Other (Expla 8) No ⊠ Dep No ⊠ Dep	811) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark	3) C1) long Living R n (C4) Tilled Soils (i ts (D1) (LRR s)	cots (C3) C6) A)	4A, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised Au Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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 (B Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe)	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S ○ Other (Explain No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	a11) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches):	3) C1) long Living R n (C4) Tilled Soils (i ts (D1) (LRR (s)	cots (C3) C6) A)	4A, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised Au Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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 (B Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe)	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S ○ Other (Explain No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	a11) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches):	3) C1) long Living R n (C4) Tilled Soils (i ts (D1) (LRR (s)	cots (C3) C6) A)	4A, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised Au Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Water Table Present? Yes	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S ○ Other (Explain No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	a11) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches):	3) C1) long Living R n (C4) Tilled Soils (i ts (D1) (LRR (s)	cots (C3) C6) A)	4A, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised Au Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: 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 (B Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (Includes Capillary fringe)	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S ○ Other (Explain No ⊠ Dep No ⊠ Dep No ⊠ Dep No ⊠ Dep	a11) rtebrates (B1 izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches):	3) C1) long Living R n (C4) Tilled Soils (i ts (D1) (LRR (s)	cots (C3) C6) A)	4A, Water-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neur Raised Au Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: 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 (B Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe) Describe Recorded Data (Stream gauge, me	□ Water-Staine and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen Su □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S) □ Other (Expla 8) No ⊠ Dep	B11) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches): oth (Inches): I photos, pre	3) C1) long Living R n (C4) Tilled Soils (ts (D1) (LRR s)	C6) A) Wet	4A, Uwater-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neu Raised An Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) vquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cha 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 (B Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (Includes Capillary fringe)	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S) □ Other (Expla 8) No ⊠ Dep No ⊠ Dep	B11) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches): oth (Inches): I photos, pre	3) C1) long Living R n (C4) Tilled Soils (ts (D1) (LRR s) vious inspect e site visit. Th	C6) A) Wet	4A, Uwater-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neu Raised An Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imagery (C hic Position (D2) vquitard (D3) tral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chell 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 (B Field Observations: Surface Water Present? Yes Saturation Present? Yes Concludes Capillary fringe) Describe Recorded Data (Stream gauge, melling) Remarks:No indicators of hydrology were of	□ Water-Stains and 4B) □ Salt Crust (E □ Aquatic Inve □ Hydrogen St □ Oxidized Rh □ Presence of □ Recent Iron □ Stunted or S) □ Other (Expla 8) No ⊠ Dep No ⊠ Dep	B11) rtebrates (B1 ulfide Odor (C izospheres a Reduced Iro Reduction in tressed Plan in in Remark oth (Inches): oth (Inches): oth (Inches): I photos, pre	3) C1) long Living R n (C4) Tilled Soils (ts (D1) (LRR s) vious inspect e site visit. Th	C6) A) Wet	4A, Uwater-Sta 4A, an Drainage Dry-Seas Saturation Geomorp Shallow A FAC Neu Raised An Frost-Hea	ained Leaves (B9) (MLRA 1, 2 d 4B) Patterns (B10) on Water Table (C2) in Visible on Aerial Imagery (C hic Position (D2) vquitard (D3) tral Test (D5) int Mounds (D6) (LRR A) ave Hummocks (D7)

Project/Site: Lockwood Meadows Subdivision		City/Cou	unty: <u>La Ce</u>		ling Date: <u>2/24/2021</u>
Applicant/Owner: PLS Engeneering			State: V		ling Point: TPAE
Investigator(s): Rendleman, Annie Jean				p, Range: <u>S2, T4N, R1E</u>	
Landform (hillslope, terrace, etc.): Drainageways, Ter			concave, co	nvex, none): <u>Convex</u>	Slope (%): <u>0-3%</u>
Subregion (LRR): A	Lat: 45.86	1483	Long: -12		tum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 per	cent slopes			NWI classification: None	
Are climatic / hydrologic conditions on the site typical	for this time o	f year? Yes⊠	No (I	no, explain Remarks.)	
Are Vegetation, Soil, or Hydrology significan	tly disturbed?	Are	e "Normal (Circumstances" present?Yes🗵] No
Are Vegetation, Soil, or Hydrology naturally	oroblematic?	(If need	ed, explain	any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site may	o showina s	sampling po	int locati	ons. transects. importan	t features. etc.
Hydrophytic Vegetation Present? Yes X No					
Hydric Soils Present? Yes No			npled Area		
Wetland Hydrology Present? Yes 🗌 No	_	within a V	Vetland?	Yes⊡ No⊠	
Remarks: This test plot is located southeast of Wetla		ea where Cotto	nwood sap	ings are established. Because	all three wetland indicators
were not met, TP-AE was considered to be in uplands			mood oup	inge ale cetablellea. Decadee	
VEGETATION – Use scientific names of pl	ants.				
	Absolute	Dominant	Indicator	Dominance Test Workshee	+
Tree Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status	Dominance rest workshee	۰ ۲
1. *Abies nordmanniana	25%	·	FACU	Number of Dominant Species	\$ 2 (4)
		yes		That Are OBL, FACW, or FA	
2. Abies grandis	5%	no	FACU		5.
3	%			Total Number of Dominant	
4.	%			Species Across All Strata:	<u> </u>
50% = <u>15</u> 20% = <u>6</u>	30%	=Total Cover			
				Percent of Dominant Species	3
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW, or FA	
1. Rubus armeniacus	10%	yes	FAC	Prevalence Index workshee	
2. Populus balsamifera	5%	yes	FAC	Total % Cover of:	Multiply by:
3.	%			OBL species	x 1=
4.	%			FACW species	x 2=
5.	%			FAC species	x 3=
50% = 8 20% = 3	15%	=Total Cover		FACU species	x 4=
<u>Herb Stratum</u> (Plot size: <u>5</u> ft radius)	1070			UPL species	x 5=
1. Holcus lanatus	80%	yes	FAC	Column Totals:	(A) (B)
2. Anthoxanthum odoratum	20%	ves	FACU	Prevalence Index	
3.	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	ycs	17.00	Hydrophytic Vegetation Inc	
4.	%	·		1 – Rapid Test for Hyd	
5.	%			\boxtimes 2 – Dominance Test is	
	%			3 - Prevalence Index is	
6	<u>~~~~</u> %				
7	<u>%</u>			4 - Morphological Adap supporting data in Rem	
8	%			sheet)	larks of on a separate
9				,	
10	%			5 - Wetland Non-Vascu	Ilar Plants
11	%				
50% = 50 $20% = 20$	100%	=Total Cover		Problematic Hydrophyt	ic Vegetation ¹ (Explain)
<u>Woody Vine Stratum</u> (Plot size: <u>15</u> ft radius)					
1				¹ Indicators of hydric soil and	
2	%	<u></u>		must be present, unless distu	urbed or problematic.
50% = 20% =	%	=Total Cover			
	·	-		Hydrophytic	
				Vegetation	
% Para Cround in Harb Stratum 00/				Present?	Yes⊠ No⊡
% Bare Ground in Herb Stratum 0%					

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

Profile D	escription: (Desc	ribe to the dept	h needed to docu	iment the inc	licator or con	firm the a	ibsence of indicators.)	
Depth	Matrix	(Redox Feat	ures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/2	100%		%			Clay loam	
10-16	10YR 3/1	100%		%			Clay loam	
		<u>%</u> %		<u>%</u> %				
		<u> </u>		<u> </u>				
		<u> </u>		<u> </u>				
		%		%				
		%		%				
			I=Reduced Matrix,			nd Grains		
		oplicable to all I	LRRs, unless othe		.)		Indicators for Problemati	c Hydric Soils
Histos			Sandy Redo				2 cm Muck (A10)	-
	Epipedon (A2)		Stripped Ma				Red Parent Material (TF2	
	Histic (A3)		Loamy Muc			-	Very Shallow Dark Surfa	
-	gen Sulfide (A4)		Loamy Gley		.)	l	Other (Explain in Remark	(S)
· ·	ted Below Dark Su	. ,	Depleted Ma	()				and the second
	Dark Surface (A12	,	Redox Dark	. ,			Indicators of hydrophytic ve Wetland hydrology must	
	/ Mucky Minerals (,	Depleted Da		.7)		unless disturbed or probl	
-	/ Gleyed Matrix (S		Redox Depr	essions (F8)				omano
Restricti	ve Layer (if prese	nt):						
Tunoi								
Type: Depth (in	ches).					Hvd	ric Soil Present?	Yes⊡ No⊠
		ydric soil were o	bserved in the test	nlot during th	na sita visit			
rtomanto				plot during t				
HYDROI	LOGY							
Wetland	Hydrology Indica	tors:						
Primary I	ndicators (min. of	one required; che	eck all that apply)				Secondary Indicate	ors (2 or more required)
	ce Water (A1)		U Water-Stain	ed Leaves (B	9) (excent MI	RA124	1∆ □ Water-Stained I	_eaves (B9) (MLRA 1, 2,
	Water Table (A2)		and 4B)			NA 1, 2, -	4A, and 4B)	
Satura			Salt Crust (E				Drainage Patter	
	Marks (B1)			-	3)		Dry-Season Wa	
	ient Deposits (B2)		Hydrogen S					le on Aerial Imagery (C9)
	Deposits (B3)				long Living Ro	ots $(C3)$	Geomorphic Po	J J ()
	Mat or crust (B4)		Presence of			010 (00)	Shallow Aquitar	
	eposits (B5)		Recent Iron		. ,	6)	FAC Neutral Te	
	ce Soil Cracks (B6	1	Stunted or S				Raised Ant Mou	· · ·
	ation Visible on Ae					•)	Frost-Heave Hu	
	ely Vegetated Cor				.5)			
-	servations:		<u> </u>					· · · · · · · · · · · · · · · · · · ·
	Water Present?	Yes 🗌	No 🖂 🛛 De	pth (Inches):				
	ble Present?	Yes 🗌		pth (Inches):		Wetla	and Hydrology Present?	
	n Present?	Yes 🗌		oth (Inches):		Î	, ,	Yes 🗌 No 🛛
	Capillary fringe)							
Describe	Recorded Data (S	tream gauge, mo	onitoring well, aeria	al photos, pre	vious inspectio	ons), if ava	ilable:	
								
						e soll was	moist from recent rainfall, b	ut not saturated.
Stanuing	water was not obs		t plot, but was obse		vellariu A.			

Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering		City/Cou	unty: <u>La Ce</u> State: V		Sampling Date: <u>9/8/2020</u> Sampling Point: TPB1
Investigator(s): Naglich, Francis; Rendleman, Annie	loon	Soctio		p, Range: S2, T4N, R1E	
Landform (hillslope, terrace, etc.): Terraces	Jean			nvex, none): None	
Subregion (LRR): A	Lat: 45.861		Long: -12		Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 percent s		400		NWI classification: None	
Are climatic / hydrologic conditions on the site typical	for this time of	Voar? Ves		fno evolain Remarks)	
Are Vegetation, Soil, or Hydrology significant Are Vegetation, Soil, or Hydrology naturally p	tly disturbed?	Are	e "Normal (Circumstances" present? any answers in Remarks	
		•	•	-	
SUMMARY OF FINDINGS – Attach site map		sampling po	Int locali	ons, transects, impo	ortant teatures, etc.
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soils Present? Yes □ No Wetland Hydrology Present? Yes □ No	\boxtimes	Is the Sar within a V	npled Area Vetland?		
Remarks: This test plot is located in the south-centra		ark County Tax	Parcel 209	9113000, north of Wetlan	d B. This test plot only met one of
the three wetland parameters; therefore, TP-B1 is not		be within a we	tland.		
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator	Dominance Test Worl	ksheet
Tree Stratum (Plot size: <u>30</u> ft radius)	% Cover	Species?	Status	Dominance rest work	ASHECT
1. Populus balsamifera	60%	yes	FAC	Number of Dominant S	Species 4 (A)
2.	%	yoo	1710	That Are OBL, FACW,	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3.	%			,,	
4.	<u> </u>			Total Number of Domin	nant 6 (B)
4. 50% = 30 20% = 12	60%	=Total Cover		Species Across All Stra	ata:
30% = 30% = 0% = 12	0070				
				Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW,	
1. <u>Salix scouleriana</u>	20%	yes	FAC	Prevalence Index wor	
2. Rubus armeniacus	5%	yes	FAC	Total % Cover of	
3.	%			OBL species	x 1=
4.	%			FACW species	x 2=
5	%			FAC species	x 3=
50% = <u>12</u> 20% = <u>5</u>	25%	=Total Cover		FACU species	x 4=
Herb Stratum (Plot size: 5 ft radius)				UPL species	x 5=
1. Dactylis glomerata	15%	yes	FACU	Column Totals:	(A) (B)
2. Gnaphalium uliginosum	10%	yes	FAC	Prevalence	e Index = B/A=
3. Vicia sativa	10%	yes	UPL	Hydrophytic Vegetation	on Indicators:
4.	%				or Hydrophytic Vegetation
5.	%			🛛 2 – Dominance T	
6.	%			3 - Prevalence In	
7.	%				I Adaptations ¹ (Provide
8.	%				n Remarks or on a separate
9.	%			sheet)	•
10.	%			5 - Wetland Non-	Vascular Plants ¹
11.	<u> </u>				
$50\% = 17 \ 20\% = 7$	35%	=Total Cover			rophytic Vegetation ¹ (Explain)
<u>Woody Vine Stratum</u> (Plot size: <u>15</u> ft radius)	0070				
	%			¹ Indicators of bydric so	il and wetland hydrology
2.	<u> </u>				s disturbed or problematic.
	<u> </u>	=Total Cover		indst be present, dnies	s disturbed of problematic.
50% = 20% =	/0			Hydrophytic	
				Vegetation	
				Present?	Yes⊠ No⊡
% Bare Ground in Herb Stratum <u>65%</u>					
Remarks: The hydrophytic vegetation criterion is met	due to greate	r than 50% of th	ne dominar	t vegetation within the te	st plot having FAC indicator
statuses.	0			5	1 0

Profile Description: (Describe to the depth	needed to document the indicator or conf	rm the absence of indicators.)
Denth Motiv	Deday Fastures	
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type ¹	Loc ² Texture Remarks
0-10 10YR 4/4 100%	<u>%</u>	Silty clay loam
10-16 10YR 4/3 100%	%	Silty clay loam
<u> </u>		
<u> </u>	%	
%	%	
<u> </u>	%	
<u>%</u>	<u>%</u>	
Tunou C Concentration D Depletion PM	<u>%</u>	d Croine ² Lagation: DL Data Lining M Matrix
Hydric Soil Indicators: (Applicable to all Li	Reduced Matrix, CS=Covered or Coated Sar RRs, unless otherwise noted)	d Grains. ² Location: PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils
Histosal (A1)	Sandy Redox (S5)	\square 2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR	
☐ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)	Wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No⊠
Remarks: No hydric soil indicators were obse	rved.	
HYDROLOGY		
Wetland Hydrology Indicators:		
	sk all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	ck all that apply) □ Water-Stained Leaves (B9) (except MLF	
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chec		• • • • • • • • •
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	Water-Stained Leaves (B9) (except MLF	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLF and 4B)	RA 1, 2, 4A, User-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chect 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 MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)) FAC Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)) FAC Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	RA 1, 2, 4A, Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Project/Site: Lockwood Meadows Subdivision Applicant/Owner: PLS Engeneering		City/Cou	unty: <u>La Ce</u> State: V		Sampling D Sampling Po	ate: <u>9/8/2020</u>	
Investigator(s): Naglich, Francis; Rendleman, Annie	lean	Section		p, Range: S2, T4N, R1E		JIIII. TFD2	
Landform (hillslope, terrace, etc.): Terraces				onvex, none): Concave	-	Slope (%):8	-20%
Subregion (LRR): A	Lat: 45.861		Long: -12		Datum:		2070
Soil Map Unit Name: Gee silt loam, 8 to 20 percent s				NWI classification: None			
Are climatic / hydrologic conditions on the site typical	for this time of	vear? Yes⊠	No (If	f no, explain Remarks.)			
Are Vegetation, Soil, or Hydrology significant				Circumstances" present?	Yes⊠ No[
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If neede	ed, explain	any answers in Remarks	.)		
SUMMARY OF FINDINGS – Attach site may	p showing s	ampling poi	int locati	ons, transects, impo	ortant feat	tures, etc.	
Hydrophytic Vegetation Present? Yes X No		Is the San					
Hydric Soils Present? Yes 🛛 No		within a V		Yes⊠ No			
Wetland Hydrology Present? Yes X No							
Remarks: This test plot is located in the south-centra		ark County Tax	Parcel 209	9113000, within Wetland	B. Because	all three wetla	nd
parameters were met, TP-B2 is considered a wetland	•						
VEGETATION – Use scientific names of pla							
	Absolute	Dominant	Indicator	Dominance Test Worl	ksheet		
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status				
1. Populus balsamifera	90%	yes	FAC	Number of Dominant S		3	(A)
2. Salix scouleriana	10%	no	FAC	That Are OBL, FACW,	OFAC.		
3.	%			Total Number of Domin	ant	4	(D)
4.	<u>%</u> 100%	=Total Cover		Species Across All Stra		4	(B)
50% = 50 $20% = 20$	100%	= rotar Cover					
				Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				That Are OBL, FACW,		<u>75</u>	(A/B)
1	%			Prevalence Index wor			
2.	%			Total % Cover of		Multiply by:	
3.	%	·		OBL species		(1=	_
4	%			FACW species		(2=	_
5 20% =	<u>%</u> %	=Total Cover		FAC species		(3=	_
<u>50% =</u> 20% = <u>Herb Stratum</u> (Plot size: <u>5</u> ft radius)	70	= rotar Cover		FACU species UPL species		(4= (5=	_
1. Stellaria media	20%	yes	FACU	Column Totals:		A)	(B)
2. Gnaphalium uliginosum	20%	yes	FAC		= Index = B/A		_ (0)
3. Epilobium palustre	10%	yes	OBL	Hydrophytic Vegetatio			
4.	%		002	1 – Rapid Test fo			
5.	%			🛛 2 – Dominance T			
6.	%			3 - Prevalence In			
7.	%			4 - Morphological	Adaptation	s ¹ (Provide	
8.	%			supporting data in	n Remarks o	or on a separat	е
9	%			sheet)			
10	%			5 - Wetland Non-	Vascular Pla	ants ¹	
11	%						
$50\% = \frac{25}{20\%} = \frac{10}{10\%}$	50%	=Total Cover		Problematic Hydr	ophytic Veg	jetation ¹ (Expla	in)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)	0/			1 maliantana of humbrin and			
1	<u>%</u> %			¹ Indicators of hydric soi			
2		=Total Cover		must be present, unles	s disturbed (or problematic.	
50% = 20% =	%	= rotar Cover		Hydrophytic			
				Vegetation			
				Present?		Yes⊠ No	
% Bare Ground in Herb Stratum <u>50%</u>							_
Remarks: The hydrophytic vegetation criterion is met	due to greater	than 50% of th	ne dominar	nt vegetation within the te	st plot havin	g either FAC a	nd
OBL indicator statuses.				•	•	-	

Profile Description: (Describe to the depth	needed to doc	ument the ind	icator or con	firm the	absence of indicators.)	
Depth Matrix		Redox Featu	ILES			
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4 10YR 3/2 100%		%			Silty clay loam	
4-16 10YR 4/1 60%	10YR 4/6	40%	С	М	Silty clay loam	
<u>%</u>		%				
<u>%</u>		%				
<u>%</u>		%				
<u> </u>		<u>%</u> %				
<u> </u>		%				
¹ Type: C=Concentration, D=Depletion, RM	Reduced Matrix		or Coated Sa	nd Grain	s. ² Location: PL=Pore L	Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all L					Indicators for Problematic	
Histosal (A1)	Sandy Red				2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped M				Red Parent Material (TF2)	
Black Histic (A3)	-	cky Mineral (F1		RA 1)	Very Shallow Dark Surfac	
Hydrogen Sulfide (A4)		yed Matrix (F2)			Other (Explain in Remarks	s)
Depleted Below Dark Surface (A11)	Depleted M				0	
Thick Dark Surface (A12)	Redox Dar	· · /			³ Indicators of hydrophytic veg	getation and
Sandy Mucky Minerals (S1)		ark Surface (F	7)		Wetland hydrology must b unless disturbed or proble	pe present,
Sandy Gleyed Matrix (S4)	🗌 Redox Dep	ressions (F8)			unless disturbed of proble	malic
Restrictive Layer (if present):						
Turper						
Type: Depth (inches):				Hv	dric Soil Present?	Yes⊠ No⊡
Remarks: The hydric soil indicators Depleted	Below Dark Sur	face (A11) and	Depleted Ma			
	Bolow Barr Car		Doplotod ma			
HYDROLOGY						
Wetland Hydrology Indicators:						
	ck all that apply)				Secondary Indicator	rs (2 or more required)
Wetland Hydrology Indicators:		ned Leaves (BS) (except ML	.RA 1, 2,	i	· · · ·
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check		ned Leaves (BS) (except ML	.RA 1, 2,	i	rs (2 or more required) eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	Water-Stair	3))) (except ML	.RA 1, 2,	4A, Uater-Stained L 4A, and 4B)	eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1) High Water Table (A2)	Water-Stain and 4E	3)		.RA 1, 2,	4A, Water-Stained L 4A, and 4B)	eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stain and 4E	8) (B11) ertebrates (B13 Sulfide Odor (C	3) 1)		 4A, Water-Stained Line 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stain and 4E	B) (B11) rertebrates (B13	3) 1)		4A, Water-Stained L 4A, and 4B) Drainage Patterr Dry-Season Wat	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stain and 4E Salt Crust (Aquatic Inv Hydrogen S Oxidized R	8) (B11) ertebrates (B13 Sulfide Odor (C	3) 1) ong Living Ro		 4A, Water-Stained Line 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	☐ Water-Stain and 4E ☐ Salt Crust (☐ Aquatic Inv ☐ Hydrogen S ☑ Oxidized R ☐ Presence c	8) B11) ertebrates (B13 Sulfide Odor (C hizospheres ald	3) 1) ong Living Ro ı (C4)	oots (C3)	 4A, Water-Stained Li 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Post 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or crust (B4)	 □ Water-Stain and 4E □ Salt Crust (□ Aquatic Inv □ Hydrogen S ○ Oxidized R □ Presence c □ Recent Iror 	a) B11) ertebrates (B13 Sulfide Odor (C hizospheres ald f Reduced Iron	3) 1) ong Living Ro I (C4) Tilled Soils (C	ots (C3) 6)	 4A, Water-Stained Li 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitare 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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-Stain and 4E □ Salt Crust (□ Aquatic Inv □ Hydrogen S ○ Oxidized R □ Presence c □ Recent Iror □ Stunted or 	B) E11) ertebrates (B13 Sulfide Odor (C hizospheres ald of Reduced Iron on Reduction in ⁻	3) 1) ong Living Ro i (C4) Tilled Soils (C s (D1) (LRR /	ots (C3) 6)	 4A, Water-Stained Li 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarce FAC Neutral Tes 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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-Stain and 4E Salt Crust (Aquatic Inv Hydrogen S Microsoft Action Microsoft Action Presence co Recent Iror Stunted or Other (Exp 	b) (B11) (ertebrates (B13) Sulfide Odor (C hizospheres ald of Reduced Iron on Reduction in ⁻ Stressed Plants	3) 1) ong Living Ro i (C4) Tilled Soils (C s (D1) (LRR /	ots (C3) 6)	4A, Water-Stained Li 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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-Stain and 4E Salt Crust (Aquatic Inv Hydrogen S X Oxidized R Presence c Recent Iror Stunted or Other (Exp) 	B) B11) ertebrates (B13 Sulfide Odor (C hizospheres alo f Reduced Iron n Reduction in ⁻ Stressed Plants lain in Remarks	3) 1) ong Living Ro i (C4) Tilled Soils (C s (D1) (LRR /	ots (C3) 6)	4A, Water-Stained Li 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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?	Water-Stain and 4E Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or Other (Exp)	B) B11) ertebrates (B13 Sulfide Odor (C hizospheres alo f Reduced Iron n Reduction in ⁻ Stressed Plants lain in Remarks epth (Inches):	3) 1) ong Living Ro i (C4) Tilled Soils (C s (D1) (LRR / s)	oots (C3) 6) A)	 4A, Water-Stained Li 4A, and 4B) Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitarc FAC Neutral Tes Raised Ant Mour Frost-Heave Hur 	eaves (B9) (MLRA 1, 2, ns (B10) ter Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
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Project/Site: Lockwood Meadows Subdivision	City/County: La Center/Clark	Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering	State: WA	Sampling Point: TPBA
Investigator(s): Rendleman, Annie Jean	Section, Township, Range:	S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local	I relief: (concave, convex, none): Convex Slope (%):8-20%
Subregion (LRR): A Lat: 45.861482	Long: -122.648913	Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 percent slopes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explair	n Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstand	ces" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing samp	ling point locations, tran	sects, important features, etc.
Hydrophytic Vegetation Present? Yes 🛛 No 🗌	the Compled Aree	
	s the Sampled Area /ithin a Wetland?	Yes□ No⊠
Wetland Hydrology Present? Yes 🗌 No 🛛		Yes∐ No⊠
Remarks: This test plot is located northeast of Wetland B. Because all th	ree wetland indicators were not	t met, TP-BA was considered to be in uplands.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet		
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status			
1. Populus balsamifera	10%	yes	FAC	Number of Dominant Species	3	(A)
2.	%			That Are OBL, FACW, or FAC:		``
3.	%					
4.	%			Total Number of Dominant	3	(B)
50% = 52% = 20% = 22%	10%	=Total Cover		Species Across All Strata:		()
				Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> radius)				That Are OBL, FACW, or FAC	100	(A/B)
1.	%			Prevalence Index worksheet		<i></i>
2.	%			Total % Cover of:	Multiply by:	
3.	0/			OBL species	x 1=	_
1	0/_			FACW species	x 2=	-
5.	%			FAC species	x 3=	-
50% = 20% =	%	=Total Cover		FACU species	x 4=	-
Herb Stratum (Plot size: 5 ft radius)		-		UPL species	x 4= x 5=	-
1. *Poa sp.	80%	ves	FAC	Column Totals:	(A)	(B)
2. Ranunculus repens	20%	ves	FAC	Prevalence Index =	()	_ (=)
3.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>}</u>	17.0	Hydrophytic Vegetation Indica		
4	%			1 – Rapid Test for Hydrop		
5	%			\boxtimes 2 – Dominance Test is >50		
6	%			\square 3 - Prevalence Index is \leq 3		
7.	%			☐ 4 - Morphological Adaptat	-	
0	<u> </u>			supporting data in Remark		
9.	<u>%</u>			sheet)		,
10	%			5 - Wetland Non-Vascular	Dianta ¹	
11.	<u>%</u>				Plants	
		Tatal Osuan			/	->
$50\% = \frac{50}{20\%} = \frac{20}{20\%}$	100%	=Total Cover		Problematic Hydrophytic \	regetation (Explain	n)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)	0/				d	
1	%			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 0%				Present?	Yes⊠ No⊡	

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

Profile Description: (Describe to the depth	needed to docum				absence of mulcators.	
Dopth Matrix		Redox Features				
Depth Matrix (inches) Color (moist) %	Color (moist)			.0C ²	Texture	Remarks
0-8 10YR 3/2 100%		<u></u>		.00	Clay loam	Remains
8-16 10YR 4/2 99%	10YR 4/6	1%	С	М	Clay loam	
%		%			· ·	
%		%				
<u>%</u>		%				
<u> </u>		%	·			
<u>%</u>		<u> % </u>			·	
¹ Type: C=Concentration, D=Depletion, RM=	-Reduced Matrix C		Coated Sand	Grains	3. ² Location: PL=Pore L	ining M-Matrix
Hydric Soil Indicators: (Applicable to all L				Oranic	Indicators for Problematic	
Histosal (A1)	Sandy Redox				2 cm Muck (A10)	,
Histic Epipedon (A2)	Stripped Matri	ix (S6)			Red Parent Material (TF2))
Black Histic (A3)	Loamy Mucky	Mineral (F1) (e	xcept MLRA	. 1)	Very Shallow Dark Surface	e (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed	d Matrix (F2)			Other (Explain in Remarks	5)
Depleted Below Dark Surface (A11)	Depleted Mati	rix (F3)				
Thick Dark Surface (A12)	Redox Dark S	urface (F6)		:	³ Indicators of hydrophytic veg	
Sandy Mucky Minerals (S1)	Depleted Dark	k Surface (F7)			Wetland hydrology must b	
Sandy Gleyed Matrix (S4)	Redox Depres	ssions (F8)			unless disturbed or proble	matic
Restrictive Layer (if present):						
Type:						
Depth (inches):			,	Нус	Iric Soil Present?	Yes⊡ No⊠
Remarks: No indicators of hydric soil were ob	pserved in the test p	lot during the sit	ie visit.			
HYDROLOGY						
HYDROLOGY Wetland Hydrology Indicators:						
	ck all that apply)				Secondary Indicator	s (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check			voont MI DA		· · · · · · · · · · · · · · · · · · ·	s (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1)	Water-Stained	d Leaves (B9) (e	xcept MLRA	A 1, 2, 4	4A, 🗌 Water-Stained Le	s (2 or more required) eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; checking) Surface Water (A1) High Water Table (A2)	Water-Stained and 4B)		xcept MLRA	A 1, 2, -	4A, Water-Stained Le 4A, and 4B)	eaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3)	☐ Water-Stained and 4B) ☐ Salt Crust (B1	1)	xcept MLRA	A 1, 2, -	4A, Water-Stained Le 4A, and 4B) Drainage Pattern	eaves (B9) (MLRA 1, 2, ns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained and 4B) Salt Crust (B1	1) ebrates (B13)	xcept MLRA	A 1, 2, -	4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained and 4B) Salt Crust (B1	1) ebrates (B13) fide Odor (C1)	-		4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained and 4B) Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz	1) ebrates (B13) fide Odor (C1) ospheres along	Living Roots		4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Pos	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 and 4B) Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R 	1) ebrates (B13) fide Odor (C1) ospheres along teduced Iron (C4	Living Roots		4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Pos	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 and 4B) □ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Oxidized Rhiz □ Presence of R □ Recent Iron R 	1) ebrates (B13) fide Odor (C1) ospheres along Reduced Iron (C4 eduction in Tille	Living Roots 4) d Soils (C6)		4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Pos Shallow Aquitard FAC Neutral Tes	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) t (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 and 4B) Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str 	1) ebrates (B13) fide Odor (C1) ospheres along educed Iron (C4 eduction in Tille essed Plants (D	Living Roots 4) d Soils (C6)		4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Pos Shallow Aquitard FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) t (D5) nds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 and 4B) Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain) 	1) ebrates (B13) fide Odor (C1) ospheres along teduced Iron (C4 eduction in Tiller essed Plants (D n in Remarks)	Living Roots 4) d Soils (C6)		4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Pos Shallow Aquitard FAC Neutral Tes Raised Ant Mour	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) t (D5) nds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; check 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 Describe Recorded Data (Stream gauge, model)	Water-Stained and 4B) □ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sult □ Oxidized Rhiz □ Presence of R □ Recent Iron R □ Stunted or Str □ Other (Explair) No ⊠ Deptt No ⊠ Dept No ⊠ Dept nitoring well, aerial	1) ebrates (B13) fide Odor (C1) ospheres along educed Iron (C4 eduction in Tiller essed Plants (D n in Remarks) h (Inches): h (Inches): photos, previous	Living Roots 4) d Soils (C6) 1) (LRR A)	Wetl	4A, Water-Stained Le 4A, and 4B) Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Pos Shallow Aquitard FAC Neutral Tes Raised Ant Mourn Frost-Heave Hun and Hydrology Present?	eaves (B9) (MLRA 1, 2, as (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) I (D3) t (D5) nds (D6) (LRR A) nmocks (D7) Yes 🗌 No 🖂

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Project/Site: Lockwood Meadows Subdivision		City/Co	unty: <u>La Ce</u>		Sampling Dat		
Applicant/Owner: PLS Engeneering			State: V		Sampling Poir	nt: TPBB	
Investigator(s): Rendleman, Annie Jean				o, Range: <u>S2, T4N, R1</u>	E	01 (01) 0	
Landform (hillslope, terrace, etc.): Terraces		Local relief: (c		nvex, none): Concave		_Slope (%):8	-20%
Subregion (LRR): A	Lat: 45.861	1437	Long: -122		Datum: N	AD83	
Soil Map Unit Name: Gee silt loam, 8 to 20 percent s				WI classification: None	9		
Are climatic / hydrologic conditions on the site typical							
Are Vegetation, Soil, or Hydrology significan				Circumstances" present			
Are Vegetation, Soil, or Hydrology naturally	-		-	any answers in Remark			
SUMMARY OF FINDINGS – Attach site ma		sampling po	int locatio	ons, transects, imp	ortant featu	res, etc.	
Hydrophytic Vegetation Present? Yes X No		Is the Sar	npled Area	l			
Hydric Soils Present? Yes ⊠ No		within a W		Yes⊠ N	lo		
Wetland Hydrology Present? Yes X No			a all three			ia aanaidara	4 0
Remarks: This test plot is located in the easternmos	a portion of we	епапо в. весач	ise all three	weitand parameters we	еге тец, тр-вв	is considered	ua
wetland.							
VEGETATION – Use scientific names of pl	ants.						
	Absolute	Dominant	Indicator	Dominance Test Wo	rksheet		
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status				
1. Populus balsamifera	50%	yes	FAC	Number of Dominant		2	(A)
2. Salix scouleriana	5%	no	FAC	That Are OBL, FACW	, or FAC:		_ 、 /
3.	%						
4.	%			Total Number of Dom		3	(B)
50% = <u>28</u> 20% = <u>11</u>	55%	=Total Cover		Species Across All St	rata:	-	
				Dereent of Deminent	Province		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> radius)				Percent of Dominant		67	(A/B)
1.	%			Prevalence Index wo		<u>07</u>	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
0	<u> </u>			Total % Cover of		Multiply by:	
3.	<u> </u>			OBL species	x 1		
4.	%			FACW species	x 2		_
5.	<u> </u>			FAC species	x 3		_
50% = 20% =	<u>%</u>	=Total Cover		FACU species	x 4		_
Herb Stratum (Plot size: 5 ft radius)				UPL species	x 5		
1. *Poa sp.	60%	yes	FAC	Column Totals:	(A)	-	(B)
2. Stellaria media	20%	yes	FACU		e Index = B/A=		_ ~ /
3. Gnaphalium uliginosum	10%	no	FAC	Hydrophytic Vegeta			
4. Epilobium palustre	5%	no	OBL	1 – Rapid Test 1			
5.	%			2 – Dominance		5	
6.	%			3 - Prevalence I			
7.	%			4 - Morphologic		(Provide	
8.	%			supporting data			е
9.	%			sheet)		·	
10.	%			5 - Wetland Nor	-Vascular Plan	nts ¹	
11.	%			. —			
50% = <u>48</u> 20% = <u>19</u>	95%	=Total Cover		Problematic Hyd	drophytic Veget	tation ¹ (Explai	in)
Woody Vine Stratum (Plot size: 15 ft radius)		-				、 I -	,
1.	%			¹ Indicators of hydric s	oil and wetland	hydrology	
2.	%			must be present, unle			
50% = 20% =	%	=Total Cover					
JU /0 2U /0		-		Hydrophytic			

Hydrophyti Vegetation Present?

% Bare Ground in Herb Stratum 5%

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

Yes⊠ No□

Profile D	escription: (Desc	ribe to the dep	oth needed to docu	iment the inc	licator or co	onfirm	the al	bsence of indicators.)	
Depth	Matri	x		Redox Feat	ures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Lo	C ²	Texture	Remarks
0-5	10YR 3/2	100%		%				Clay loam	
5-16	10YR 4/1	80%	10YR 4/6	20%	<u> </u>	N	Λ	Clay loam	
. <u> </u>		%		%					
		%		%					
		<u>%</u> %		- <u>%</u> %					
		<u> %</u>		<u>%</u>					
·		<u> </u>		%	<u> </u>				
¹ Type:	C=Concentration.		M=Reduced Matrix,		or Coated S	Sand G	Grains.	² Location: PL=Pore	Lining, M=Matrix
			LRRs, unless oth					Indicators for Problemat	
Histos	•	••	Sandy Red		,] 2 cm Muck (A10)	
Histic	Epipedon (A2)		Stripped Ma	atrix (S6)			Ľ	Red Parent Material (TF	2)
Black	Histic (A3)		🗌 Loamy Muc	ky Mineral (F	1) (except M		1) [Very Shallow Dark Surfa	ace (TF12)
🛛 Hydro	gen Sulfide (A4)		Loamy Gley	ed Matrix (F2	2)		Ľ	Other (Explain in Remar	ks)
Deple	ted Below Dark Su	urface (A11)	Depleted M	atrix (F3)					
☐ Thick	Dark Surface (A12	2)	Redox Dark	Surface (F6)			3	ndicators of hydrophytic v	egetation and
Sand	y Mucky Minerals (S1)	Depleted Data	ark Surface (F	7)			Wetland hydrology must	
Sand	y Gleyed Matrix (S	4)	Redox Depi	ressions (F8)				unless disturbed or prob	lematic
Restricti	ve Layer (if prese	ent):							
		,.							
Type:									
Depth (in								ic Soil Present?	Yes⊠ No⊡
			ed Below Dark Suff				, and F	lydrogen Sulfide (A4) were	e met due to a matrix
value of 4	4, CHIOHA OF 1, AN		, leatures nom 5-10	Inches below	the surface.				
HYDRO	LOGY								
Wetland	Hydrology Indica	ators:							
Primary I	ndicators (min. of	one required; cl	neck all that apply)					Secondary Indicat	ors (2 or more required)
🖂 Surfa	ce Water (A1)		U Water-Stain	ed Leaves (B	9) (except M	ILRA	1. 2. 4	A.	Leaves (B9) (MLRA 1, 2,
	Water Table (A2)		and 4B	•	-, (-,_, -	4A, and 4B	
-	ation (A3)		Salt Crust (I					Drainage Patte	
	r Marks (B1)		Aquatic Inve		3)			Dry-Season W	
	nent Deposits (B2)		Hydrogen S	•	,				ble on Aerial Imagery (C9)
	Deposits (B3)		Oxidized Rh		,	Roots ((C3)	Geomorphic P	0,()
	Mat or crust (B4)		Presence of	-			()	Shallow Aquita	
	eposits (B5)		Recent Iron			C6)		FAC Neutral T	
	ce Soil Cracks (B6)	Stunted or S						unds (D6) (LRR A)
	ation Visible on Ae					,		Frost-Heave H	
	ely Vegetated Cor	•••	, _ , ,						
-	servations:		20)						
	Water Present?	Yes 🖂	No 🗌 🛛 De	pth (Inches):	0.5				
	able Present?	Yes 🖾		pth (Inches):		İ	Wetla	nd Hydrology Present?	
Saturatio	n Present?	Yes 🗵	No 🗌 🛛 De	pth (Inches):	0	ĺ		, .,	Yes 🖂 No 🗌
	Capillary fringe)								
Describe	Recorded Data (S	Stream gauge, r	nonitoring well, aeria	al photos, prev	vious inspect	tions),	if avai	lable:	
Derest	The method is the t	ala antia Prost	Out	\ ; e.l. \ \ / - (0	A		Odan (04)
Remarks	: The wetland hydr	ology indicators	Surrace Water (A1), Hign Water	i able (A2), S	Satura	ation (A	A3), and Hydrogen Sulfide	Odor (C1) were met.

Project/Site: Lockwood Meadows Subdivision		City/County: La Center/Clark	S	ampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering		State: WA	S	ampling Point: TPBC
Investigator(s): Rendleman, Annie Jean		Section, Township, Range:	S2, T4N, R1E	
Landform (hillslope, terrace, etc.): Terraces	Loca	I relief: (concave, convex, none	e): Convex	Slope (%):8-20%
Subregion (LRR): A	Lat: 45.861519	Long: -122.649297		Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 percent slo	opes	NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical f	or this time of year?	Yes 🛛 No 🗌 (If no, explain	n Remarks.)	
Are Vegetation, Soil, or Hydrology significant	ly disturbed?	Are "Normal Circumstan	ces" present? Y	es 🛛 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic?	(If needed, explain any answe	ers in Remarks.)	1
SUMMARY OF FINDINGS – Attach site map	showing samp	ling point locations, tran	sects, impor	tant features, etc.
Hydrophytic Vegetation Present? Yes 🛛 No [the Sempled Area		
Hydric Soils Present? Yes 🗌 No [XI	s the Sampled Area /ithin a Wetland?	Yes⊟ No	3
Wetland Hydrology Present? Yes 🛛 No [
Remarks: This test plot is located north of Wetland B	. Because all three	wetland indicators were not me	t, TP-BC was c	onsidered to be in uplands.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet		
Tree Stratum (Plot size:30 ft radius)	% Cover	Species?	Status			
1. Populus balsamifera	15%	yes	FAC	Number of Dominant Species	4	(A)
2.	%			That Are OBL, FACW, or FAC:		-
3.	%					
4	%			Total Number of Dominant	4	(B)
$50\% = 8 \ 20\% = 3$	15%	=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. Rubus armeniacus	15%	ves	FAC	Prevalence Index worksheet	<u></u>	(, , _)
2.	%			Total % Cover of:	Multiply by:	
3.	%			OBL species	x 1=	
4.	%			FACW species	x 2=	
5.	%			FAC species	x 3=	
50% = 8 20% = 3	15%	=Total Cover		FACU species	x 4=	
Herb Stratum (Plot size: 5 ft radius)		-		UPL species	x 5=	
1. *Poa sp.	50%	yes	FAC	Column Totals:	(A)	(B)
2. Ranunculus repens	50%	yes	FAC	Prevalence Index =	B/A=	
3.	%			Hydrophytic Vegetation Indica	ators:	
4.	%			1 – Rapid Test for Hydrop	hytic Vegetation	
5.	%			☑ 2 – Dominance Test is >5	0%	
6.	%			☐ 3 - Prevalence Index is ≤3	5.0 ¹	
7.	%			4 - Morphological Adaptat		
8	%			supporting data in Remark	ks or on a separate	Э
9	%			sheet)		
10	%	<u> </u>		5 - Wetland Non-Vascular	Plants ¹	
11	%					
50% = 50 $20% = 20$	100%	=Total Cover		Problematic Hydrophytic \	/egetation ¹ (Explai	n)
Woody Vine Stratum (Plot size: <u>15</u> ft radius)						
1	%			¹ Indicators of hydric soil and we		
2	%			must be present, unless disturbe	ed or problematic.	
50% = 20% =	%	=Total Cover				
		-		Hydrophytic		
				Vegetation Present?	Yes⊠ No	- I
% Bare Ground in Herb Stratum 0%						

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

Trome Description. (Describe to the depti	n needed to document the indicator or confi	rm the absend	e or mulcators.	
Depth Matrix	Redox Features			
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0-5 10YR 3/2 100%			Clay loam	
5-16 10YR 4/1 100%	%		Clay loam	
%	%			
<u>%</u>	<u>%</u>			
<u> </u>	%			
<u> </u>	%	·		
<u>%</u>	<u>%</u> %			
	=Reduced Matrix, CS=Covered or Coated San		² Location: PL=Pore	
Histosal (A1)	Sandy Redox (S5)		n Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)		Parent Material (TF	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR		/ Shallow Dark Surfa	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	🗌 Othe	er (Explain in Remar	ks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)			
Thick Dark Surface (A12)	Redox Dark Surface (F6)		ors of hydrophytic ve	
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)		land hydrology must	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unle	ess disturbed or prob	lematic
Restrictive Layer (if present):				
Type: Depth (inches):		Hydric Soi	il Present?	Yes∏ No⊠
Remarks: No indicators of hydric soil were of	oserved in the test plot during the site visit.			
HYDROLOGY				
HYDROLOGY				
Wetland Hydrology Indicators:				
	ck all that apply)		Secondary Indicate	ors (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chematric chematri	Water-Stained Leaves (B9) (except MLF	RA 1, 2, 4A,	Water-Stained	Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chematric chematri	Water-Stained Leaves (B9) (except MLF and 4B)	RA 1, 2, 4A,	Water-Stained 4A, and 4B	Leaves (B9) (MLRA 1, 2,)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chematric chematri	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) 	RA 1, 2, 4A,	Water-Stained 4A, and 4B	Leaves (B9) (MLRA 1, 2,) rns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; chematical content of the second conten	 ☐ Water-Stained Leaves (B9) (except MLF and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) 	RA 1, 2, 4A,	Water-Stained 4A, and 4B Drainage Patte	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 □ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) 		Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 □ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roo 		Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) 	ts (C3)	Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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 MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	ts (C3))	Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bsition (D2) rd (D3) est (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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 MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 	ts (C3))	Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks)	ts (C3))	Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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 MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks)	ts (C3))	Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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 MLF and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	ts (C3))	Water-Stained 4A, and 4B Drainage Patte Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquita FAC Neutral Te Raised Ant Mod	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; cher 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?	□ Water-Stained Leaves (B9) (except MLF and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living Roo □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soils (C6 □ Stunted or Stressed Plants (D1) (LRR A) □ Other (Explain in Remarks) B)	ts (C3)	 □ Water-Stained 4A, and 4B □ Drainage Patte □ Dry-Season Wa □ Saturation Visite □ Geomorphic Pote □ Shallow Aquitate □ FAC Neutral Tee □ Raised Ant Mote □ Frost-Heave Her 	Leaves (B9) (MLRA 1, 2,) rns (B10) ater Table (C2) ble on Aerial Imagery (C9) bition (D2) rd (D3) est (D5) unds (D6) (LRR A)
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APPENDIX B: WETLAND RATING FORMS

RATING SUMMARY – Western Washington

Name of wetland (or ID #):Wetland ADate of site visit: 9/8/2020Rated byAJ RendlemanTrained by Ecology? YesXNoDate of training 11/2020HGM Class used for ratingSlopeWetland has multiple HGM classes?YXN

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>IV</u> (based on functions <u>X</u> or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 – 27

Category II – Total score = 20 – 22

Category III – Total score = 16 – 19

v	_Category IV – Total score	-0 - 15
X	_calegoly iv - rolar score	= = = 15

FUNCTION	Improving Water Quali		Habitat	
		Circle the ap	propriate ratings	
Site Potential	H M (L) H M (L)	H M(L)	
Landscape Potential	H M L) H M L	H M L	
Value	(H) M L	(H) M L	H M(L)	TOTAL
Score Based on	5	5	4	14
Ratings				

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATE	GORY
Estuarine	Ι	II
Wetland of High Conservation Value	I	
Bog	I	
Mature Forest	I	
Old Growth Forest	I	
Coastal Lagoon	Ι	II
Interdunal	III	III IV
None of the above		I/A)

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
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)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

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	8A
Hydroperiods	H 1.2	8A
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	8A
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	8A
(can be added to figure above)		
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	8A
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	9
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	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	10

HGM Classification of Wetlands in Western Washington

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

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

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

NO - go to 2

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

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

NO - Saltwater Tidal Fringe (Estuarine) *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 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).

NO – go to 4

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
 - <u>x</u> The wetland is on a slope (*slope can be very gradual*),
 - <u>x</u> 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,
 - <u>x</u> The water leaves the wetland **without being impounded**.

NO – go to 5

YES The wetland class is **Slope**

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

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

Wetland name or number <u>A</u>

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.*

 $\overbrace{N0}$ 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.

Wetland name or number <u>A</u>

SLOPE WETLANDS Water Quality Functions - Indicators that the site functio	ns to improve water quality	
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertic 100 ft of horizontal distance) 4 / 88 = 4.5% (See 2-ft contours on Sheet 3).	cal drop in elevation for every	1
Slope is 1% or less	points = 3	
Slope is > 1%-2%	points = 2	
Slope is > 2%-5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NF</i>	RCS definitions): Yes = 3 No = 0	0
Choose the points appropriate for the description that best fits the plants in th have trouble seeing the soil surface (>75% cover), and uncut means not grazed than 6 in.	or mowed and plants are higher	
Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > ½ of area	points = 6 points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > ¼ of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
Total for S 1 Ad	d the points in the boxes above	4
Rating of Site Potential If score is:12 = H6-11 = M _x _0-5 = L	Record the rating on t	he first pa
S 2.0. Does the landscape have the potential to support the water quality fun	ction of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses the tree farm is no longer in use (not sprayed or mowed).	that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not liste Other sources	d in question S 2.1? Yes = 1 No = 0	0
	d the points in the boxes above	0

S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream 303(d) list?	, river, lake, or marine water that is on the Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an iss on the 303(d) list.	sue? At least one aquatic resource in the basin is Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as import if there is a TMDL for the basin in which unit is found.	cant for maintaining water quality? Answer YES Yes = 2 No = 0	2
Total for S 3	Add the points in the boxes above	3
Rating of Value If score is: x 2-4 = H1 = M0 = L	Record the rating on th	ne first page

Wetland name or number <u>A</u>

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion		
S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > ¹ / ⁸		
in), or dense enough, to remain erect during surface flows.		
Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1		
All other conditions points = ()	
Rating of Site Potential If score is: 1 = M x 0 = L Record the ratin	g on the first page	

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site	e?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that gene	rate excess	0
surface runoff?	Yes = 1 No = 0	
Define of Londonne Determine I for an in the New York	Descurd the number of the	the first serves

Rating of Landscape Potential If score is: 1 = M x 0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:	
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or	
natural resources (e.g., houses or salmon redds) points = 2	
Surface flooding problems are in a sub-basin farther down-gradient points = 1	
No flooding problems anywhere downstream points = 0	
S 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	
Total for S 6Add the points in the boxes above	2

Rating of Value If score is: <u>x</u> 2-4 = H <u>1</u> = M <u>0</u> = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands	s of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provid	le important habitat	
H 1.0. Does the site have the potential to provide habitat?		
H 1.1. Structure of plant community: Indicators are Cowardin classes and sta Cowardin plant classes in the wetland. Up to 10 patches may be commo of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add th Aquatic bed Emergent	bined for each class to meet the threshold	0
Scrub-shrub (areas where shrubs have > 30% cover) Sorested (areas where trees have > 30% cover) If the unit has a Forested class, check if:	2 structures: points = 2 2 structures: points = 1 1 structure: points = 0	
The Forested class has 3 out of 5 strata (canopy, sub-canopy, shown in that each cover 20% within the Forested polygon	rubs, herbaceous, moss/ground-cover)	
H 1.2. Hydroperiods		0
Check the types of water regimes (hydroperiods) present within the v more than 10% of the wetland or ¼ ac to count (<i>see text for descripti</i>		
Permanently flooded or inundated	4 or more types present: points = 3	
Seasonally flooded or inundated	3 types present: points = 2	
Occasionally flooded or inundated	2 types present: points = 1	
<u>x</u> Saturated only	1 type present: points = 0	
Permanently flowing stream or river in, or adjacent to, the wetla	and	
Seasonally flowing stream in, or adjacent to, the wetland		
Lake Fringe wetland	2 points	
Freshwater tidal wetland	2 points	
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least	10 ft ²	1
Different patches of the same species can be combined to meet the si the species. Do not include Eurasian milfoil, reed canarygrass, pur	ize threshold and you do not have to name	
If you counted: > 19 species	points = 2	
5 - 19 species	points = 1	
< 5 species	points = 0	
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowa the classes and unvegetated areas (can include open water or mudfl have four or more plant classes or three classes and open water, the p	ats) is high, moderate, low, or none. If you	0
None = 0 points Low = 1 point	Moderate = 2 points	
All three diagrams in this row are HIGH = 3points		

H 1.5. Special habitat features:	1
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m	1)
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	,
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
x Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	
strata)	
Total for H 1Add the points in the boxes above	2
Rating of Site Potential If score is: 15-18 = H 7-14 = M x 0-6 = L Record the rating	g on the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	1
<i>Calculate:</i> % undisturbed habitat $\underline{6}$ + [(% moderate and low intensity land uses)/2] <u>13</u> = <u>19</u> % If total	
accessible habitat is:	
> 1/3 (33.3%) of 1 km Polygon points = 3	3
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.	<u> </u>
<i>Calculate:</i> % undisturbed habitat $12 + [(\% moderate and low intensity land uses)/2] 44 = 47 \%$	1
	5
Undisturbed habitat 10-50% and in 1-3 patches points = 2	
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	0
H 2.3. Land use intensity in 1 km Polygon: If	-
> 50% of 1 km Polygon is high intensity land use points = (- 2)	
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	
Rating of Landscape Potential If score is: 4-6 = H x 1-3 = M < 1 = L	on the first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only	0
the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points =	: 2
 It has 3 or more priority habitats within 100 m (see next page) 	
— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal list	ts)
 It is mapped as a location for an individual WDFW priority species 	
 It is a Wetland of High Conservation Value as determined by the Department of Natural Resources 	
 It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan 	
Site has 1 or 2 priority habitats (listed on next page) within 100 m points =	1
Site does not meet any of the criteria above points =	U
Total for U 2 Add the points in the house shows	<u> </u>
Total for H 3 Add the points in the boxes above	· ·
Rating of Value If score is: $2 = H$ $1 = M$ $x = 0 = L$ Record the rating	on the first page

Wetland name or number <u>A</u>

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 multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. <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*).
- **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- Talus: Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA	
Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate</i>	
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 ppt) 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?	ſ
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less	
than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).	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	
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:	
 Long Beach Peninsula: Lands west of SR 103 Grayland-Westport: Lands west of SR 105 	Cat I
 Orayland-Westport: Lands west of SR 105 Ocean Shores-Copalis: Lands west of SR 115 and SR 109 	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	Þ
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
Yes = Category II No – Go to SC 6.3	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 <u>A</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #):Wetland BDate of site visit: 9/8/2020Rated byAJ RendlemanTrained by Ecology? YesXNoDate of training 11/2020HGM Class used for ratingDepressionalWetland has multiple HGM classes?YX No

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>IV</u> (based on functions <u>X</u> or special characteristics___)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 – 27

Category II – Total score = 20 – 22

Category III – Total score = 16 – 19

Х	Category	IV – Total	score = 9 - 15
<i>.</i>	Catcher,	10 10101	30010 3 13

FUNCTION	Improving Water Quality		Ну	/drolo	ogic		Habit	at		
					Circle	the ap	propi	riate ra	atings	
Site Potential	Н	Μ		Н	(M)) L	Н	M	(L)	
Landscape Potential	H	Μ	Ū	H	M		Н	(M)		
Value	(H)	Μ	L	H) M	L	Н	Μ		TOTAL
Score Based on		5			6			4		15
Ratings										

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H 8 = H,H,M 7 = H,H,L 7 = H,M,M 6 = H,M,L 6 = M,M,M 5 = H,L,L 5 = M,M,L 4 = M,L,L 3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY		
Estuarine	I II		
Wetland of High Conservation Value	I		
Bog	I		
Mature Forest	I		
Old Growth Forest	I		
Coastal Lagoon	I II		
Interdunal			
None of the above	(N/A)		

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	8B
Hydroperiods	D 1.4, H 1.2	8B
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	8B
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	8B
Map of the contributing basin	D 4.3, D 5.3	9
1 km Polygon: Area that extends 1 km from entire wetland edge - including	Н 2.1, Н 2.2, Н 2.3	9
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	10

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	Н 1.1, Н 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	

HGM Classification of Wetlands in Western Washington

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

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

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

NO - go to 2

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

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

NO - Saltwater Tidal Fringe (Estuarine) *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 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).

 $\boxed{\text{NO}-\text{go to }4}$

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
 - ____The wetland is on a slope (*slope can be very gradual*),
 - ____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, ____The water leaves the wetland **without being impounded**.

NO - go to 5

YES – The wetland class is **Slope**

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

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

Wetland name or number <u>B</u>

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	Depressional
within boundary of depression	
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. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	2
points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > ¹ / ₁₀ of area points = 1 Wetland has persistent, ungrazed plants < ¹ / ₁₀ of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: This is the area that is ponded for at least 2 months. See description in manual. Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland	0
Total for D 1 Add the points in the boxes above	5
Rating of Site Potential If score is: 12-16 = H6-11 = MX 0-5 = L Record the rating on the first particular terms of the statement of	age
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	0
Total for D 2Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M x 0 = L <i>Record the rating on the fi</i>	rst page
D 3.0. Is the water quality improvement provided by the site valuable to society?	r
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (<i>answer YES if there is a TMDL for the basin in which the unit is found</i>)? Yes = 2 No = 0	2
Total for D 3Add the points in the boxes above	3

 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 degradat	ion
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 outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outletpoints = 7Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	3
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4Add the points in the boxes above	8
Rating of Site Potential If score is: 12-16 = H x 6-11 = M 0-5 = L Record the rating on the	e first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	-
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
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	0
Total for D 5Add the points in the boxes above	0
Rating of Landscape PotentialIf score is:3 = H1 or 2 = Mx 0 = LRecord the rating on the	e first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
 D 6.1. <u>The unit is in a landscape that has flooding problems</u>. <i>Choose the description that best matches conditions around the wetland unit being rated</i>. <i>Do not add points</i>. <u><i>Choose the highest score if more than one condition is met</i></u>. 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. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0 	2
There are no problems with flooding downstream of the wetland. points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6Add 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	e first page

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitatH 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the thresh of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points Forested (areas where trees have > 30% cover) 1 structure: points The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)	anold = 4 2 = 2 = 1 = 0
that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). <u>x</u> Permanently flooded or inundated 4 or more types present: points <u>Seasonally flooded or inundated</u> 3 types present: points <u>Coccasionally flooded or inundated</u> 2 types present: points <u>x</u> Saturated only 1 type present: points <u>Permanently flowing stream or river in, or adjacent to, the wetland</u> 2 types <u>Seasonally flowing stream in, or adjacent to, the wetland</u> 2 type	= 3 = 2 = 1 = 0
Freshwater tidal wetland 2 points and 2 point species of plant species count the number of plant species in the wetland that cover at least 10 ft ² . Different patches of the same species can be combined to meet the size threshold and you do not have to not the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points 5 - 19 species points 5 - 19 species points for the species of the species points for the species points poi	ame 1 = 2 = 1
< 5 species points H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1 the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Low = 1 point	1), or
All three diagrams in this row are HIGH = 3points	

 H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number Large, downed, woody debris within the wetland (> 4 in diameter a Standing snags (dbh > 4 in) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhar over a stream (or ditch) in, or contiguous with the wetland, for at l Stable steep banks of fine material that might be used by beaver o slope) OR signs of recent beaver activity are present (cut shrubs o 	nd 6 ft long). nging plants extends at least 3.3 ft (1 m) least 33 ft (10 m) r muskrat for denning (> 30 degree	1
where wood is exposed) At least ¼ ac of thin-stemmed persistent plants or woody branches permanently or seasonally inundated (structures for egg-laying by <u>x</u> Invasive plants cover less than 25% of the wetland area in every st strata) Total for H 1	v amphibians) ratum of plants (see H 1.1 for list of	6
Rating of Site Potential If score is: 15-18 = H 7-14 = M x 0-6 = L	Add the points in the boxes above Record the rating on	
H 2.0. Does the landscape have the potential to support the habitat fur	-	the jist page
		1
 H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit Calculate: % undisturbed habitat<u>6</u> + [(% moderate and low intensity l accessible habitat is: > ¹/₃ (33.3%) of 1 km Polygon 20-33% of 1 km Polygon 	and uses)/2] <u>13</u> = <u>19</u> % If total points = 3 points = 2	1
10-19% of 1 km Polygon	points = 1	
< 10% of 1 km Polygon H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % undisturbed habitat <u>12</u> + [(% moderate and low intensity Undisturbed habitat > 50% of Polygon	points = 0 y land uses)/2] <u>44</u> = <u>47</u> % points = 3	1
Undisturbed habitat 10-50% and in 1-3 patches	points = 3 points = 2	
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		0
> 50% of 1 km Polygon is high intensity land use	points = (- 2)	
≤ 50% of 1 km Polygon is high intensity	points = 0	2
Total for H 2 Rating of Landscape Potential If score is: 4-6 = H x 1-3 = M < 1 =	Add the points in the boxes above L Record the rating on a	2
Rating of Landscape Potential If score is:4-6 = Hx1-3 = M<1 = H 3.0. Is the habitat provided by the site valuable to society?		ine jirst puge
		0
H 3.1. Does the site provide habitat for species valued in laws, regulations, o the highest score that applies to the wetland being rated. Site meets ANY of the following criteria:	r policies? Choose only points = 2	0
 It has 3 or more priority habitats within 100 m (see next page) It provides habitat for Threatened or Endangered species (any pla It is mapped as a location for an individual WDFW priority species 	nt or animal on the state or federal lists)	
 It is a Wetland of High Conservation Value as determined by the E It has been categorized as an important habitat site in a local or re Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m 	-	
Site does not meet any of the criteria above	points = 0	
Total for H 3	Add the points in the boxes above	0
Rating of Value If score is: 2 = H 1 = M x 0 = L	Record the rating on	the first page

Wetland name or number <u>B</u>

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 multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. <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*).
- **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- Talus: Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

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

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APPENDIX C: PRECIPITATION DATA

WETS Station: BATTLE GROUND, WA

Requested years: 1991 - 2021

	Temperature (°F)			Precipitation (inches)					
Month	Avg Avg daily daily			Avg	30% chance will have		Avg number of days with 0.10 inch	Average total	
	max	min	mean		less than	more than	or more	snowfall	
Jan	46.4	33.0	39.7	7.31	5.70	8.45	15	1.2	
Feb	50.4	32.8	41.6	5.36	3.65	6.40	13	1.1	
Mar	55.0	35.6	45.3	5.59	4.26	6.50	14	0.4	
Apr	59.9	38.9	49.4	4.54	3.32	5.34	12	0.0	
May	66.7	44.4	55.6	3.31	2.00	4.01	9	0.0	
Jun	71.4	48.4	59.9	2.31	1.61	2.75	6	0.0	
Jul	78.9	51.7	65.3	0.63	0.23	0.70	2	0.0	
Aug	79.9	51.2	65.6	0.80	0.37	0.94	2	0.0	
Sep	74.7	46.7	60.7	2.20	1.12	2.65	5	0.0	
Oct	62.7	40.9	51.8	4.81	3.29	5.74	10	0.0	
Nov	51.9	36.6	44.2	7.67	5.50	9.06	14	0.1	
Dec	45.3	32.8	39.1	7.98	6.33	9.18	15	0.4	
Annual:					47.35	56.14			
Average	61.9	41.1	51.5	-	-	-	-	-	
Total	_	-	_	52.51			118	3.3	

Climatological Data for BATTLE GROUND, WA - February 2021

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Dept
2021-02-01	54	45	49.5	10	0	0.27	М	М
2021-02-02	49	43	46.0	6	0	0.46	М	М
2021-02-03	48	37	42.5	3	0	0.57	М	М
2021-02-04	42	35	38.5	0	0	0.05	М	М
2021-02-05	42	37	39.5	0	0	0.53	М	М
2021-02-06	49	37	43.0	3	0	0.18	М	М
2021-02-07	44	37	40.5	1	0	0.45	М	М
2021-02-08	46	34	40.0	0	0	0.02	М	М
2021-02-09	43	25	34.0	0	0	0.00	М	М
2021-02-10	45	25	35.0	0	0	0.00	М	М
2021-02-11	44	31	37.5	0	0	0.03	М	М
2021-02-12	36	26	31.0	0	0	0.15	М	М
2021-02-13	28	22	25.0	0	0	0.90	11.0	М
2021-02-14	31	25	28.0	0	0	0.21	1.0	М
2021-02-15	32	31	31.5	0	0	0.55	М	М
2021-02-16	43	31	37.0	0	0	0.10	М	М
2021-02-17	45	34	39.5	0	0	0.04	М	М
2021-02-18	46	31	38.5	0	0	0.03	М	М
2021-02-19	40	32	36.0	0	0	0.23	М	М
2021-02-20	47	35	41.0	1	0	0.05	М	М
2021-02-21	47	38	42.5	3	0	0.17	М	М
2021-02-22	47	40	43.5	4	0	0.22	М	М
2021-02-23	48	35	41.5	2	0	0.51	М	М
2021-02-24	46	32	39.0	0	0	0.15	М	М
2021-02-25	48	32	40.0	0	0	0.13	М	М
2021-02-26	45	37	41.0	1	0	0.54	М	М
2021-02-27	47	37	42.0	2	0	0.15	М	М
2021-02-28	49	36	42.5	3	0	0.00	М	М
Average Sum	44.0	33.6	38.8	39	0	6.69	12.0	М

Climatological Data for BATTLE GROUND, WA - January 2021

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2021-01-01	51	44	47.5	8	0	0.15	0.0	0
2021-01-02	55	45	50.0	10	0	0.46	0.0	0
2021-01-03	49	40	44.5	5	0	1.73	0.0	0
2021-01-04	52	40	46.0	6	0	0.48	0.0	0
2021-01-05	50	41	45.5	6	0	0.54	0.0	0
2021-01-06	51	41	46.0	6	0	0.37	0.0	0
2021-01-07	47	43	45.0	5	0	0.40	0.0	0
2021-01-08	54	40	47.0	7	0	0.15	0.0	0
2021-01-09	48	30	39.0	0	0	0.19	0.0	0
2021-01-10	44	31	37.5	0	0	0.10	0.0	0
2021-01-11	45	38	41.5	2	0	0.03	0.0	0
2021-01-12	52	39	45.5	6	0	1.39	0.0	0
2021-01-13	57	44	50.5	11	1	1.50	0.0	0
2021-01-14	53	34	43.5	4	0	0.40	0.0	0
2021-01-15	54	35	44.5	5	0	0.25	0.0	0
2021-01-16	48	38	43.0	3	0	0.05	0.0	0
2021-01-17	45	38	41.5	2	0	0.10	0.0	0
2021-01-18	50	34	42.0	2	0	0.00	0.0	0
2021-01-19	51	28	39.5	0	0	0.00	0.0	0
2021-01-20	53	27	40.0	0	0	0.00	0.0	0
2021-01-21	45	27	36.0	0	0	0.19	0.0	0
2021-01-22	44	36	40.0	0	0	0.00	0.0	0
2021-01-23	51	25	38.0	0	0	0.00	0.0	0
2021-01-24	45	24	34.5	0	0	0.00	0.0	0
2021-01-25	38	34	36.0	0	0	0.42	0.0	0
2021-01-26	39	34	36.5	0	0	0.04	0.0	0
2021-01-27	41	33	37.0	0	0	0.17	0.0	0
2021-01-28	43	35	39.0	0	0	0.15	0.0	0
2021-01-29	45	39	42.0	2	0	0.04	0.0	0
2021-01-30	44	39	41.5	2	0	0.28	0.0	0
2021-01-31	51	41	46.0	6	0	0.12	0.0	0
Average Sum	48.2	36.0	42.1	98	1	9.70	0.0	0.0

Climatological Data for BATTLE GROUND, WA - December 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-12-01	48	28	38.0	0	0	0.27	0.0	0
2020-12-02	50	27	38.5	0	0	0.05	0.0	0
2020-12-03	56	29	42.5	3	0	0.00	0.0	0
2020-12-04	47	27	37.0	0	0	0.00	0.0	0
2020-12-05	53	26	39.5	0	0	0.00	0.0	0
2020-12-06	52	27	39.5	0	0	0.16	0.0	0
2020-12-07	46	37	41.5	2	0	0.00	0.0	0
2020-12-08	48	33	40.5	1	0	0.00	0.0	0
2020-12-09	54	33	43.5	4	0	0.34	0.0	0
2020-12-10	51	32	41.5	2	0	0.04	0.0	0
2020-12-11	41	35	38.0	0	0	0.20	0.0	0
2020-12-12	41	32	36.5	0	0	0.42	0.0	0
2020-12-13	43	32	37.5	0	0	0.15	0.0	0
2020-12-14	41	37	39.0	0	0	0.21	0.0	0
2020-12-15	45	39	42.0	2	0	0.05	0.0	0
2020-12-16	47	40	43.5	4	0	0.20	0.0	0
2020-12-17	51	39	45.0	5	0	0.47	0.0	0
2020-12-18	48	40	44.0	4	0	0.06	0.0	0
2020-12-19	51	43	47.0	7	0	0.31	0.0	0
2020-12-20	50	49	49.5	10	0	1.91	0.0	0
2020-12-21	50	44	47.0	7	0	0.51	0.0	0
2020-12-22	57	38	47.5	8	0	0.30	0.0	0
2020-12-23	46	29	37.5	0	0	0.00	0.0	0
2020-12-24	41	25	33.0	0	0	0.00	0.0	0
2020-12-25	46	23	34.5	0	0	0.08	0.0	0
2020-12-26	45	31	38.0	0	0	0.55	0.0	0
2020-12-27	49	40	44.5	5	0	0.18	0.0	0
2020-12-28	50	26	38.0	0	0	0.00	0.0	0
2020-12-29	45	25	35.0	0	0	0.00	0.0	0
2020-12-30	37	29	33.0	0	0	0.13	0.0	0
2020-12-31	45	37	41.0	1	0	0.51	0.0	0
Average Sum	47.5	33.3	40.4	65	0	7.10	0.0	0.0

Climatological Data for BATTLE GROUND, WA - November 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Dep
2020-11-01	59	30	44.5	5	0	0.00	0.0	0
2020-11-02	68	30	49.0	9	0	0.00	0.0	0
2020-11-03	65	31	48.0	8	0	0.00	0.0	0
2020-11-04	59	36	47.5	8	0	0.40	0.0	0
2020-11-05	64	57	60.5	21	11	0.01	0.0	0
2020-11-06	57	47	52.0	12	2	1.28	0.0	0
2020-11-07	48	34	41.0	1	0	0.39	0.0	0
2020-11-08	44	28	36.0	0	0	0.09	0.0	0
2020-11-09	46	25	35.5	0	0	0.00	0.0	0
2020-11-10	41	28	34.5	0	0	0.33	0.0	0
2020-11-11	47	36	41.5	2	0	0.17	0.0	0
2020-11-12	50	28	39.0	0	0	0.01	0.0	0
2020-11-13	47	30	38.5	0	0	1.30	0.0	0
2020-11-14	49	38	43.5	4	0	0.31	0.0	0
2020-11-15	47	39	43.0	3	0	1.06	0.0	0
2020-11-16	53	42	47.5	8	0	0.14	0.0	0
2020-11-17	52	40	46.0	6	0	0.20	0.0	0
2020-11-18	56	40	48.0	8	0	0.54	0.0	0
2020-11-19	46	41	43.5	4	0	0.55	0.0	0
2020-11-20	49	37	43.0	3	0	0.02	0.0	0
2020-11-21	43	31	37.0	0	0	0.01	0.0	0
2020-11-22	39	37	38.0	0	0	0.00	0.0	0
2020-11-23	42	28	35.0	0	0	0.36	0.0	0
2020-11-24	50	35	42.5	3	0	0.20	0.0	0
2020-11-25	48	38	43.0	3	0	0.60	0.0	0
2020-11-26	46	40	43.0	3	0	0.12	0.0	0
2020-11-27	47	37	42.0	2	0	0.01	0.0	0
2020-11-28	44	34	39.0	0	0	0.11	0.0	0
2020-11-29	43	35	39.0	0	0	0.04	0.0	0
2020-11-30	50	31	40.5	1	0	0.26	0.0	0
Average Sum	50.0	35.4	42.7	114	13	8.51	0.0	0.0

Climatological Data for BATTLE GROUND, WA - October 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-10-01	81	48	64.5	25	15	0.00	0.0	0
2020-10-02	76	52	64.0	24	14	0.01	0.0	0
2020-10-03	79	52	65.5	26	16	0.01	0.0	0
2020-10-04	76	51	63.5	24	14	0.00	0.0	0
2020-10-05	66	47	56.5	17	7	0.00	0.0	0
2020-10-06	72	47	59.5	20	10	0.00	0.0	0
2020-10-07	77	47	62.0	22	12	0.00	0.0	0
2020-10-08	73	48	60.5	21	11	0.00	0.0	0
2020-10-09	60	53	56.5	17	7	0.00	0.0	0
2020-10-10	73	53	63.0	23	13	0.84	0.0	0
2020-10-11	61	49	55.0	15	5	0.40	0.0	0
2020-10-12	56	50	53.0	13	3	0.61	0.0	0
2020-10-13	61	49	55.0	15	5	0.10	0.0	0
2020-10-14	61	45	53.0	13	3	0.39	0.0	0
2020-10-15	61	36	48.5	9	0	0.01	0.0	0
2020-10-16	63	35	49.0	9	0	0.00	0.0	0
2020-10-17	61	44	52.5	13	3	0.02	0.0	0
2020-10-18	63	49	56.0	16	6	0.00	0.0	0
2020-10-19	63	52	57.5	18	8	0.01	0.0	0
2020-10-20	61	44	52.5	13	3	0.00	0.0	0
2020-10-21	62	43	52.5	13	3	0.00	0.0	0
2020-10-22	58	30	44.0	4	0	0.00	0.0	0
2020-10-23	56	29	42.5	3	0	0.00	0.0	0
2020-10-24	51	30	40.5	1	0	0.02	0.0	0
2020-10-25	48	36	42.0	2	0	0.00	0.0	0
2020-10-26	46	25	35.5	0	0	0.00	0.0	0
2020-10-27	53	26	39.5	0	0	0.00	0.0	0
2020-10-28	57	26	41.5	2	0	0.00	0.0	0
2020-10-29	65	31	48.0	8	0	0.00	0.0	0
2020-10-30	58	36	47.0	7	0	0.00	0.0	0
2020-10-31	60	31	45.5	6	0	0.17	0.0	0
Average Sum	63.2	41.7	52.5	399	158	2.59	0.0	0.0

Climatological Data for BATTLE GROUND, WA - September 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-09-01	73	49	61.0	21	11	0.00	0.0	0
2020-09-02	86	48	67.0	27	17	0.00	0.0	0
2020-09-03	88	52	70.0	30	20	0.00	0.0	0
2020-09-04	93	53	73.0	33	23	0.00	0.0	0
2020-09-05	84	55	69.5	30	20	0.00	0.0	0
2020-09-06	73	49	61.0	21	11	0.00	0.0	0
2020-09-07	87	48	67.5	28	18	0.00	0.0	0
2020-09-08	89	52	70.5	31	21	0.00	0.0	0
2020-09-09	80	50	65.0	25	15	0.00	0.0	0
2020-09-10	88	49	68.5	29	19	0.00	0.0	0
2020-09-11	87	50	68.5	29	19	0.00	0.0	0
2020-09-12	62	45	53.5	14	4	0.00	0.0	0
2020-09-13	63	44	53.5	14	4	0.00	0.0	0
2020-09-14	62	43	52.5	13	3	0.00	0.0	0
2020-09-15	70	51	60.5	21	11	0.00	0.0	0
2020-09-16	74	50	62.0	22	12	0.00	0.0	0
2020-09-17	68	49	58.5	19	9	0.00	0.0	0
2020-09-18	71	49	60.0	20	10	0.21	0.0	0
2020-09-19	64	56	60.0	20	10	0.34	0.0	0
2020-09-20	68	53	60.5	21	11	0.15	0.0	0
2020-09-21	74	50	62.0	22	12	0.00	0.0	0
2020-09-22	73	49	61.0	21	11	0.04	0.0	0
2020-09-23	72	57	64.5	25	15	0.16	0.0	0
2020-09-24	63	56	59.5	20	10	1.22	0.0	0
2020-09-25	69	56	62.5	23	13	0.12	0.0	0
2020-09-26	61	48	54.5	15	5	0.44	0.0	0
2020-09-27	67	49	58.0	18	8	0.01	0.0	0
2020-09-28	72	44	58.0	18	8	0.00	0.0	0
2020-09-29	87	43	65.0	25	15	0.00	0.0	0
2020-09-30	87	45	66.0	26	16	0.00	0.0	0
Average Sum	75.2	49.7	62.5	681	381	2.69	0.0	0.0

Climatological Data for BATTLE GROUND, WA - August 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-08-01	86	55	70.5	31	21	0.00	0.0	0
2020-08-02	78	54	66.0	26	16	0.00	0.0	0
2020-08-03	82	54	68.0	28	18	0.00	0.0	0
2020-08-04	82	53	67.5	28	18	0.00	0.0	0
2020-08-05	84	53	68.5	29	19	0.00	0.0	0
2020-08-06	81	54	67.5	28	18	0.00	0.0	0
2020-08-07	70	47	58.5	19	9	0.20	0.0	0
2020-08-08	75	46	60.5	21	11	0.00	0.0	0
2020-08-09	75	48	61.5	22	12	0.00	0.0	0
2020-08-10	82	47	64.5	25	15	0.00	0.0	0
2020-08-11	86	46	66.0	26	16	0.00	0.0	0
2020-08-12	76	46	61.0	21	11	0.00	0.0	0
2020-08-13	70	42	56.0	16	6	0.00	0.0	0
2020-08-14	75	42	58.5	19	9	0.00	0.0	0
2020-08-15	85	46	65.5	26	16	0.00	0.0	0
2020-08-16	96	52	74.0	34	24	0.00	0.0	0
2020-08-17	93	59	76.0	36	26	0.00	0.0	0
2020-08-18	90	59	74.5	35	25	0.00	0.0	0
2020-08-19	82	53	67.5	28	18	0.00	0.0	0
2020-08-20	83	53	68.0	28	18	0.00	0.0	0
2020-08-21	81	58	69.5	30	20	0.15	0.0	0
2020-08-22	74	56	65.0	25	15	0.09	0.0	0
2020-08-23	78	51	64.5	25	15	0.00	0.0	0
2020-08-24	80	49	64.5	25	15	0.00	0.0	0
2020-08-25	77	48	62.5	23	13	0.00	0.0	0
2020-08-26	78	48	63.0	23	13	0.00	0.0	0
2020-08-27	80	47	63.5	24	14	0.00	0.0	0
2020-08-28	81	47	64.0	24	14	0.00	0.0	0
2020-08-29	81	49	65.0	25	15	0.00	0.0	0
2020-08-30	73	43	58.0	18	8	0.00	0.0	0
2020-08-31	74	42	58.0	18	8	0.00	0.0	0
Average Sum	80.3	49.9	65.1	786	476	0.44	0.0	0.0

Climatological Data for BATTLE GROUND, WA - July 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-07-01	68	51	59.5	20	10	0.04	0.0	0
2020-07-02	62	51	56.5	17	7	0.06	0.0	0
2020-07-03	68	48	58.0	18	8	0.01	0.0	0
2020-07-04	68	49	58.5	19	9	0.00	0.0	0
2020-07-05	71	49	60.0	20	10	0.00	0.0	0
2020-07-06	72	49	60.5	21	11	0.00	0.0	0
2020-07-07	66	50	58.0	18	8	0.00	0.0	0
2020-07-08	64	53	58.5	19	9	0.07	0.0	0
2020-07-09	71	49	60.0	20	10	0.00	0.0	0
2020-07-10	73	50	61.5	22	12	0.00	0.0	0
2020-07-11	77	49	63.0	23	13	0.00	0.0	0
2020-07-12	73	49	61.0	21	11	0.00	0.0	0
2020-07-13	74	46	60.0	20	10	0.00	0.0	0
2020-07-14	78	46	62.0	22	12	0.00	0.0	0
2020-07-15	83	47	65.0	25	15	0.00	0.0	0
2020-07-16	83	50	66.5	27	17	0.00	0.0	0
2020-07-17	80	55	67.5	28	18	0.00	0.0	0
2020-07-18	70	46	58.0	18	8	0.00	0.0	0
2020-07-19	84	46	65.0	25	15	0.00	0.0	0
2020-07-20	87	52	69.5	30	20	0.00	0.0	0
2020-07-21	90	56	73.0	33	23	0.00	0.0	0
2020-07-22	84	57	70.5	31	21	0.00	0.0	0
2020-07-23	77	57	67.0	27	17	0.00	0.0	0
2020-07-24	72	51	61.5	22	12	0.00	0.0	0
2020-07-25	69	45	57.0	17	7	0.00	0.0	0
2020-07-26	80	45	62.5	23	13	0.00	0.0	0
2020-07-27	98	49	73.5	34	24	0.00	0.0	0
2020-07-28	96	56	76.0	36	26	0.00	0.0	0
2020-07-29	85	54	69.5	30	20	0.00	0.0	0
2020-07-30	88	53	70.5	31	21	0.00	0.0	0
2020-07-31	91	56	73.5	34	24	0.00	0.0	0
Average Sum	77.5	50.5	64.0	751	441	0.18	0.0	0.0

Climatological Data for BATTLE GROUND, WA - June 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Dept
2020-06-01	62	39	50.5	11	1	0.02	0.0	0
2020-06-02	69	39	54.0	14	4	0.00	0.0	0
2020-06-03	75	42	58.5	19	9	0.00	0.0	0
2020-06-04	71	46	58.5	19	9	0.00	0.0	0
2020-06-05	70	47	58.5	19	9	0.00	0.0	0
2020-06-06	67	48	57.5	18	8	0.01	0.0	0
2020-06-07	59	46	52.5	13	3	0.61	0.0	0
2020-06-08	57	46	51.5	12	2	0.16	0.0	0
2020-06-09	62	48	55.0	15	5	0.80	0.0	0
2020-06-10	62	49	55.5	16	6	0.21	0.0	0
2020-06-11	77	55	66.0	26	16	0.00	0.0	0
2020-06-12	73	55	64.0	24	14	0.00	0.0	0
2020-06-13	57	50	53.5	14	4	0.17	0.0	0
2020-06-14	58	46	52.0	12	2	0.42	0.0	0
2020-06-15	65	46	55.5	16	6	0.45	0.0	0
2020-06-16	62	49	55.5	16	6	0.30	0.0	0
2020-06-17	63	46	54.5	15	5	0.47	0.0	0
2020-06-18	71	46	58.5	19	9	0.00	0.0	0
2020-06-19	79	50	64.5	25	15	0.00	0.0	0
2020-06-20	84	50	67.0	27	17	0.00	0.0	0
2020-06-21	68	57	62.5	23	13	0.21	0.0	0
2020-06-22	72	48	60.0	20	10	0.00	0.0	0
2020-06-23	83	48	65.5	26	16	0.00	0.0	0
2020-06-24	90	56	73.0	33	23	0.00	0.0	0
2020-06-25	76	53	64.5	25	15	0.00	0.0	0
2020-06-26	82	55	68.5	29	19	0.00	0.0	0
2020-06-27	83	55	69.0	29	19	0.00	0.0	0
2020-06-28	66	52	59.0	19	9	0.01	0.0	0
2020-06-29	66	51	58.5	19	9	0.00	0.0	0
2020-06-30	70	53	61.5	22	12	0.04	0.0	0
Average Sum	70.0	49.0	59.5	595	295	3.88	0.0	0.0

APPENDIX D: EMAIL COMMUNICATION WITH WDFW

Annie Jean Rendleman

From:	Holowatz, Isaac T (DFW) <isaac.holowatz@dfw.wa.gov></isaac.holowatz@dfw.wa.gov>
Sent:	Wednesday, February 17, 2021 5:03 PM
То:	Annie Jean Rendleman
Subject:	RE: Oregon white oak protection- La Center

Annie Jean,

It was great talking with you earlier today. Thank you for the Picture ... what a beautiful Oak tree. Yes, I think that dripline would cover the adequate amount of space to protect the Oak Tree. If you have any further questions please let me know. Thank you,

Isaac Holowatz Habitat Biologist Washington Department of Fish and Wildlife Cell: 360.773.8943



From: Annie Jean Rendleman <AnnieJean@eco-land.com>
Sent: Tuesday, February 16, 2021 5:00 PM
To: Holowatz, Isaac T (DFW) <Isaac.Holowatz@dfw.wa.gov>
Subject: Oregon white oak protection- La Center

External Email

Hi Isaac,

I'm working on a project in the City of La Center on Clark County parcel 209113000 with a large white oak tree (40-inch DBH). The City code says to consult with WDFW on an appropriate buffer for priority oaks. I have never dealt with a buffer off of an oak, other than the dripline. Is this something you would need to make a site visit for? I plan to go out next week and could take more photos for you, if that's preferable.

Feel free to forward this on if I should be reaching out to someone else!

Thanks,

Please note: I am no longer working on Fridays. Please call our office at the number below if you need immediate assistance.



Annie-Jean Rendleman | Biologist Port of Camas/Washougal Satellite Office 3805 Truman Road, Suite 2, Washougal, WA 98671 P: 360-835-9082 ext 1104 Longview Office 1157 3rd Avenue, Suite 220A Longview, WA 98632 P: 360-578-1371 ext 1104 | F: 360-414-9305 www.eco-land.com | AnnieJean@eco-land.com

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From: Spoo, Ethan <<u>ethan.spoo@wsp.com</u>>
Sent: Tuesday, February 16, 2021 11:21 AM
To: Annie Jean Rendleman <<u>AnnieJean@eco-land.com</u>>; Sarah Dollar <<u>sdollar@ci.lacenter.wa.us</u>>
Cc: Anthony Cooper <<u>acooper@ci.lacenter.wa.us</u>>; Matt Jenkins <<u>mjenkins@ci.lacenter.wa.us</u>>
Subject: RE: Hung Annexation - ELS - Wetland Boundary

Hi Annie,

Please take a look at Table 18.300.090(2)(a) which requires a standard buffer of 300 feet around non-riparian PHS point sites *or as recommended in consultation with WDFW*. Assuming this is priority oak habitat we are talking about, please reach out to WDFW and come to concurrence with them about what buffer would protect the oak since I'm assuming you won't want to use 300 feet. In the past WDFW requires priority oak habitat be protected to the driplines. Once you come to an agreement with WDFW, please submit a letter or email from them stating what they require the buffer to be.

Let me know if you have any other questions.

Thanks, Ethan

From: Annie Jean Rendleman <<u>AnnieJean@eco-land.com</u>>
Sent: Tuesday, February 16, 2021 9:27 AM
To: Sarah Dollar <<u>sdollar@ci.lacenter.wa.us</u>>
Cc: Anthony Cooper <<u>acooper@ci.lacenter.wa.us</u>>; Matt Jenkins <<u>mjenkins@ci.lacenter.wa.us</u>>; Spoo, Ethan
<<u>ethan.spoo@wsp.com</u>>
Subject: RE: Hung Annexation - ELS - Wetland Boundary

Good morning,

I'm working on the critical areas report for the Hung parcel. In looking at the La Center code (18.300.090(2) Fish and Wildlife Conservation Areas), I noticed it mentions a buffer non-riparian priority habitat and species. I've completed many permitting projects with priority oaks, but never seen a buffer for them. I looked through the WDFW Management

Recommendations and didn't see anything regarding setbacks or buffers. Could you clarify what the City requires for oak buffers?

Thanks so much, Annie Jean

Please note: I am no longer working on Fridays. Please call our office at the number below if you need immediate assistance.



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