

# Wetlands and Waterbodies Delineation Report

**Boardman Wetland Design** Clackamas County, Oregon

January 9, 2017

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# 1 Landscape Setting and Land Use

Oak Lodge Sanitary District (OLSD) is proposing to improve wetland functions for approximately half of the 8.4-acre wetland known as the Boardman Wetlands, which is part of the Boardman Wetland Design project (project), (Figure 1; all figures are located in Appendix A). The project would provide rehabilitation or replacement of the sanitary sewer line and manholes in the wetland, wetland enhancement, and construction areas of the public boardwalk trail system through a portion of the wetland. OLSD has a sewer maintenance easement through the site and recently purchased approximately half of the wetland area and two adjacent residential lots on SE Addie Street: parcels 22E18CA04200 and 22E18CA04300 (Figure 2). At least one of the residential lots would be re-developed to provide parking, a public restroom, and an outdoor classroom for the nearby Candy Lane Elementary School. These lots have a direct connection to the Boardman Wetlands.

The 5.5-acre Boardman Wetland Design project study area is located within the United States Geological Survey (USGS) Gladstone Quadrangle Map (USGS 1984), Township 2 South, Range 2 East, Section 18 (Figure 1). The study area lies within the Portland Metropolitan region (Metro) urban growth boundary (UGB) in the northwestern portion of Clackamas County, Oregon, east of Oregon Route 99E, and north of the City of Gladstone. The Boardman Wetlands are bordered by SE Boardman Avenue to the north, SE Cook Street to the west, SE Jennings Avenue to the south, and SE Addie Road to the west.

As defined by the Environmental Protection Agency (EPA), the project study area occurs within the Willamette Valley Ecoregion. The Willamette Valley Ecoregion is defined by the Willamette River and consists of broad alluvial flats and low basalt hills, with soils of deep alluvial silts from river deposits and dense heavy clays from fluvial deposits. The Willamette Valley Ecoregion is relatively low gradient, and historically, the Willamette River was extensively braided. These factors contribute to the current hydrology of the valley, characterized by numerous oxbow lakes, ponds and wetlands as well as sluggish, meandering streams and rivers (EPA 2016). The project study area occurs in the EPA Level IV Ecoregion 3c, Prairie Terraces. This ecoregion supports Oregon white oak prairies, and in wetter areas supports Oregon ash and Douglas fir. This ecoregion was historically comprised of seasonal wetlands and ponds, and currently many streams are channelized, ditched, and/or diverted (EPA 2016).

The Boardman Creek drainage basin, comprised of the South and North Boardman basins, covers approximately 1,327 acres. The basin consists of 21 miles of piped creek and 4 miles of open stream. Boardman Creek begins in the Boardman Wetlands, flows along the Trolley Trail, through Stringfield Family Park, and enters the Willamette River at Walta Vista Street (NCUWC 2016). The majority of Boardman Creek is piped beneath existing development in the area. The Boardman Wetlands habitat is classified as a Palustrine Emergent (persistent) Seasonally Flooded (PEM1C) wetland by the National Wetland Inventory (NWI, Figure 3; [USFWS 2016a]).

Elevations within the Boardman Wetland Design project study area are between 67 and 75 feet above sea level. The majority of the study area is flat with slopes of less than

3 percent occurring mainly along the boundaries where the wetland area transitions to residential development. Boardman Creek enters the study area from a culvert beneath SE Jennings Avenue and travels approximately 1,500 feet from southeast to northwest forming several ponds through the central portion of the study area (Figure 5A). The creek discharges to a culvert beneath SE Boardman Avenue north of the East Side Athletic Club, located at 4606 SE Boardman Avenue (Figure 5A).

The project study area is bordered by residential development zoned R-7 (Urban Low Density Residential) occurring on SE Boardman Avenue to the north, SE Cook Street to the east, and SE Jennings Avenue to the south; development zoned MR-1 (Medium Density Residential) occurs on SE Addie Street to the west.

# 2 Site Alterations

Land surveys completed in the 1880s show that Boardman Creek was originally a large, unrestricted, terrace wetland with numerous small tributaries (WSM 2014). As the area began to be settled, the wetlands were extensively ditched and converted to a series of stream channels. In the early 1900s the wetlands were effectively drained for agricultural purposes (WSM 2014). The land was subsequently converted to commercial, industrial, and residential development, and was modified further by construction of the local road system and placement of utility infrastructure. Aerial imagery dating back to 1936 indicates the area may have been used for agricultural purposes (See Historic Aerial Imagery in Appendix E). The majority of SE Addie Street was developed with residences at this time but very little development had occurred on SE Jennings Avenue or SE Cook Street. No residences or businesses had been developed on SE Boardman Avenue and Boardman Creek appears to have been ditched. Agricultural uses of the wetland area apparently ceased between 1956 and 1966. Residential and infrastructure development in the area continued steadily until recently. A sanitary sewer trunk line was installed through the wetland, beneath Boardman Creek, in 1961. The majority of disturbance within the project study area over the past 15 years is associated with residential development on SE Briar Court, SE Cook Street, SE Nature Way, and SE Lucas Court (See Google Earth aerial imagery in Appendix E).

Currently the remaining wetlands are surrounded by residential development to the north, east, and west, and SE Jennings Avenue to the south. As shown in aerial imagery, the majority of the area surrounding the Boardman Wetlands had been previously developed (Appendix E). Between 2002 and 2005, four single-family dwellings were construction on SE Cook Street; parcels were also developed on SE Briar Court and SE Nature Way. In July 2007 parcels were developed on SE Lucas Court. By 2008, all development in residential areas surrounding the wetlands was completed and no other apparent site alterations have occurred since.

The historic and ongoing development of the surrounding area has degraded the overall quality of the vegetation and habitat in the study area. Previous development has significantly altered natural drainage in the area through ditching, piping, rerouting, and the installation of culverts. Areas with large amounts of impervious surface decrease infiltration and increase stormwater discharge to the wetland area. Residential development has resulted in fill material being placed along the borders of adjacent

parcels that surround the study area. Remaining, undeveloped portions of the Boardman Wetlands are vegetated; however, non-native and invasive species are abundant due to historic development and ongoing disturbance.

# 3 Precipitation Data and Analysis

The project study area lies within Clackamas County, which is situated at the western base of the northern Oregon Cascade Mountain Range. According to the National Climatic Data Center, the project study area is within U.S. Climate Division 2, Willamette Valley. The Oregon Climate Service describes this division as similar to a Mediterranean climate, with warm, dry summers and cool, wet winters (Taylor and Bartlett 1993). The growing season in this area lasts from February 15 to December 4 (292 days) (NRCS 2016a; Appendix D). Annual average temperatures recorded at the closest Natural Resources Conservation Service (NRCS) Climate Analysis for Wetlands (WETS) station in Oregon City (OR6334) range from 45.1°F to 64.8°F (NRCS 2016a). Average annual precipitation recorded at the WETS station is 46.05 inches (NRCS 2016a). The cooler months are the wettest, with the majority of annual rainfall occurring between November and March. Conversely, the warmer months are driest; average rainfall is less than 2 inches per month between June and September (NRCS 2016a).

Recorded precipitation data for the 3 months preceding the field survey, conducted on June 22 and June 24, 2016, were gathered from the nearest weather station in Oregon City, Oregon (Station 356334, Appendix D), and compared to the average precipitation range reported in the WETS table (Table 3-1 and Appendix D). Rainfall throughout the study area was average and normal for the month of April, below average and not within normal range during May, and below average, but within the normal range for June. Approximately 0.97 inches of rainfall was recorded during the 2 weeks prior to the field survey (June 8 - June 21, 2016). Approximately 0.52 inches of rainfall was recorded on June 22, and no rainfall was recorded on June 24. The precipitation for the water year to the date of the wetland survey (October 2015 - June 2016) is 48.62 inches; approximately 115 percent of the average water year of 42.29 inches for the same period (NRCS 2016a).

Because the current water year is above average, below average and out of normal range precipitation during the month of May is not expected to have influenced the presence or absence of vegetation, hydrologic indicators, or wetlands in the study area. Observed precipitation data in the months leading up to the field investigation was analyzed using the Direct Antecedent Rainfall Evaluation Method (NRCS 2015); climate in area was drier than normal.

Table 3-1. Summary of Precipitation between April and June 2016 in Oregon City, Clackamas County, Oregon

No. web	Recorded	Monthly Precipitation	Percent of		hance nes) <sup>1</sup>
Month	Precipitation (inches)	Average (inches)	Average Recorded	Less Than	More Than
April	3.45	3.46	99.7%	<2.44	>4.10
May	1.12	2.70	41.2%	<1.72	>3.26
June	1.49	1.83	81.4%	<1.11	>2.22

Source: NRCS 2016a (See WETS table in Appendix D)

# 4 Methods

# 4.1 Review of Existing Materials

- USGS Topographical, Gladstone Quadrangle Map
- NWI, Gladstone Quadrangle Map (U.S. Fish and Wildlife Service [USFWS] 2016a)
   (Figure 3, Appendix A)
- Soil Survey of Clackamas County, Oregon (Gerig 1985) (Figure 4, Appendix A)
- Precipitation data from Climate Analysis for Wetlands (WETS) OR6334, Oregon City,
   Oregon (NRCS 2016a, Appendix F)
- Hydric Soils List, Clackamas County, Oregon (NRCS 2016b) (Figure 4, Appendix A)

#### 4.2 Wetlands

Field investigations were conducted by HDR on June 22 and 24, 2016. The NWI identified one PEM1C wetland, which covers the majority of the study area (Figure 3, Appendix A).

The wetland area was delineated using the methods described in the United States Army Corps of Engineers' (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the USACE Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Environmental Laboratory 2010).

Sample plots (labeled SP on figures) were taken in areas to confirm the presence and characteristics of wetland and upland areas. Plots were selected by initial observation of topographic depressions, wetland vegetation, visual evidence of hydrology, and examination of soil samples. At sites exhibiting positive indicators of wetland characteristics, multiple soil pits were dug in conjunction with analysis of vegetative and hydrologic indicators to aid in the determination of wetland boundaries. Once a plot site was selected, a soil pit was dug, soils, hydrology and vegetation were investigated, and results were recorded using the USACE Wetland Determination Data Form

<sup>&</sup>lt;sup>1</sup> 30 percent chance less than or more than ranges for normal precipitation.



(Appendix B). In many areas, the wetland continues offsite and no corresponding upland plot exists within the project study area. In areas highly modified by fill placement, the wetland boundary was determined by observed changes in vegetation communities and hydrological features similar to those observed at representative wetland sample plots in which data was collected. In these cases, test soil pits were dug to confirm the presence of wetland soils. Landscape elevations were reviewed on maps and in the field to aid in determining the wetland boundary in these areas.

Sample plot locations are shown in Figure 5A-5E in Appendix A and data forms associated with sample plots are included in Appendix B. Representative site photographs from sample plots and observation points are included in Appendix C. Methods used to determine the presence of hydric soil, hydrology, and hydrophytic vegetation are discussed below. Variations to the standard methodology, if necessary, are indicated on the data forms.

#### 4.2.1 Vegetation

At each plot, the percent absolute cover for each species was visually estimated and recorded. Herbaceous cover was assessed within a 10-foot radius plot, and trees, shrubs, and woody vines were estimated within a 30-foot radius plot (Environmental Laboratory 1987, 2010). In accordance with USACE methodology, greater than 50 percent of the dominant plant species must be classified as hydrophytic or have a prevalence index less than or equal to 3.00 for a site to display a positive wetland vegetation indicator.

The dominant plant species were identified using standard taxonomic references (Guard 2010; Pojar and MacKinnon 2004; and Cooke 1997). The wetland indicator status for each species was determined in accordance with the National Wetland Plant List (Environmental Laboratory 2014; USACE 2016). Vegetation was recorded as obligate (OBL), facultative-wetland (FACW), facultative (FAC), facultative upland (FACU), or upland (UPL).

At the time of the wetland delineation surveys some of the herb species, including grasses and sedges, did not have additional characteristics present to help species identification. All dominant plants were identified to species level and the wetland indicator status was recorded on the datasheet. Non-dominant plants that could not be identified to the species level were omitted from the analysis. If necessary, the most common indicator status for the genus was selected to determine dominance based on the National Wetland Plant List. These instances are noted on the data sheets, where applicable.

#### 4.2.2 Soils

Soils at each representative wetland and upland sample plot were typically inspected to a depth of 15 to 26 inches to determine the presence or absence of hydric soil indicators based on the NRCS Indicators of Hydric Soils (NRCS 2010). Soil samples were moistened when necessary to aid in the determination of soil matrix and redoximorphic features (if present): hue, value, and chroma colors (Munsell Color Services, 2009). Soil texture was evaluated using field methods described by USACE and NRCS.

Figure 4 shows the mapped soils in the study area. Table 4-1 provides soil names, hydric status, and the approximate percentage of each soil in the study area (NRCS 2016b).

Table 4-1. Study Area Soils

Soil Type (Map Unit Symbol)	Percentage of Study Area	Hydric Status
Cove silty clay loam (25)	84.5	Hydric
Woodburn silt loam, 3 to 8 percent slopes (91B)	15.5	Non-hydric, hydric inclusions

Source: NRCS 2016b

Cove silty clay loam soils are deep, poorly-drained soils on floodplains formed in clayey alluvium. The surface layer of these soils is typically comprised of black silty clay loam (Gerig 1985). Woodburn silt loam soils are deep, moderately well-drained soil occurring on broad valley terraces. Surface layers are comprised of very dark brown and dark brown silt loam (Gerig 1985).

#### 4.2.3 Hydrology

To document wetland hydrology characteristics, primary and secondary indicators were investigated at each of the sample plots. These indicators included the presence of inundation or standing water at the surface, saturation, drainage patterns, hydrogen sulfide odor, iron deposits, high water table, and/or reduced iron when using an Alpha-alpha dipyridyl solution (alpha-alpha).

# 4.3 Ordinary High Water Mark

The ordinary high water mark (OHWM) for waterways in the study area was determined in the field using the methodology outlined in the USACE Regulatory Guidance Letter 05-05 (USACE 2005). The USACE guidance is consistent with the definition of OHWM put forth by the Oregon Department of State Lands (DSL). For purposes of the Clean Water Act (CWA), OHWM is "that line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE 2005). These indicators were not observed in the field for Boardman Creek or any other water feature present on site.

# 5 Description of All Wetlands and Other Non-Wetland Waters

### 5.1 Delineated Wetlands

The Boardman Wetlands encompass approximately 8.4 total acres (Figure 5A). One wetland, Wetland A, was delineated within the 5.5-acre study area (Figure 2). Wetland A is approximately 4.7 acres and is located in a topographic depression (Figure 5A). The majority of Wetland A classifies as Palustrine Emergent Semipermanently Flooded habitat (PEM1F, [USFWS 1979]), and classifies as a Depressional wetland

hydrogeographically (Adamus 2001). A total of 15 sample plots (SP1 to SP15) were completed in the project study area. Ten sample plots were determined to be within the wetland boundary and five sample plots were determined to be within upland areas. In many areas the wetland continues outside the boundaries of the study area; in such cases, a paired upland plot was not completed due to access restrictions.

The majority of the wetland has open herbaceous cover with isolated pockets of shrubs and trees that occur mainly along the wetland borders and within the northern portion of the project study area. Herbaceous vegetation in the wetland is dominated by reed canary grass (*Phalaris arundinacea*, FACW). The tree and shrub community of the wetland is dominated by Oregon ash (*Fraxinus latifolia*, FACW) and willow species (*Salix* ssp., FAC/FACW). The wetland and upland vine community, where present, is solely dominated by Himalayan blackberry (*Rubus armeniacus*, FAC). The surrounding upland community varies widely, but is mainly comprised of Oregon ash (*Fraxinus latifolia*, FACW), facultative willow species (*Salix* ssp.), reed canary grass (*Phalaris arundinacea*, FACW), common velvet grass (*Holcus lanatus*), and Himalayan blackberry (*Rubus armeniacus*, FAC; See datasheets in Appendix B).

The wetland hydrology is primarily influenced by Boardman Creek and stormwater runoff from surrounding residential development that is conveyed to the wetland by several stormwater outfalls (Figure 5A-5C). Boardman Creek enters the wetland area from a culvert beneath SE Jennings Avenue, flows approximately 1,500 feet northwest through the central portion of the wetland and exits the area via a culvert beneath SE Boardman Avenue. A total of five stormwater outfalls discharge to the wetland (Figure 5A-5C). Additionally, one unmapped, open air outfall was encountered just east of the project study area (PP16, Figure 5C). Due to topographic position, field observations of highly saturated conditions, and presence of surface water throughout most of the wetland area, hydrology may also be attributed to groundwater inputs. Multiple historic aerial images evaluated over a number of years at different times of the year indicate a large portion of the study area appears to be saturated/flooded for most of the year. Historical aerial images available from the US Army Corps of Engineers and Google Earth date back to July 1936 and are shown in Appendix E. Surface saturation is visible in all images beginning in 1977; high water table is assumed throughout the wetland area for all years except years of extreme drought.

Soils within the wetland area are mapped as Cove silty clay loam (25) and Woodburn silt loam, 3 to 8 percent slopes (91B); both are hydric soils (NRCS 2016b). Soils at SP4 and SP6 were problematic due to lack of hydric soil indicators; the problematic soils procedure outlined in the Western Mountains, Valley, and Coast Regional Supplement was applied (Environmental Laboratory 2010). Problematic soil situation 4b(6), Seasonally Ponded Soils, was applied when evaluating SP4 and SP6 and soils were considered hydric. Landscape setting is likely to concentrate flow away from the sample plot in both cases.

In the northeastern portion of the study area the natural landscape has been modified by placement of fill associated with residential development on SE Briar Court. This modification has likely shifted the natural wetland boundary west and modified natural hydrology. In this area hydrology and wetland vegetation were comparable to SP10 (Figure 5C) and was used primarily to determine the wetland boundary. Additionally, test pits were dug (See Photo 34 is Appendix C for example of test pit) along the boundary

and wetland soils were confirmed by strong hydrogen sulfide odor and the presence of redoximorphic features within the upper 6 inches of soil profiles (Photo 35, Appendix C).

The wetland continues offsite along the study area boundaries to the south and southeast (Figure 5B, 5C, and 5E). Most parcels that border the wetland area to the east of the study area have been filled; therefore, the wetland is not expected to continue offsite in this area.

#### 5.2 Waters of the State/United States

Boardman Creek enters the study area from a culvert beneath SE Jennings Avenue and travels approximately 1,500 feet from southeast to northwest forming several ponds through the central portion of the study area (Figure 5A). The creek discharges to a culvert beneath the east parking lot of the East Side Athletic Club located at 4606 SE Boardman Avenue (Figure 5A) and eventually discharges to the Willamette River at a point approximately 3,000 feet northwest of the project area, as the crow flies. Boardman Creek is an at-grade stream with an unconsolidated bottom and no defined bed and bank; therefore, no OHWM was determined during field surveys. Due to the relatively flat landscape and extensive presence of reed canary grass, the creek channel is not apparent though much of the wetland corridor. Large ponds, backwater channels and areas of standing water are prevalent through the study area. The thalweg of Boardman Creek is likely the lowest point in the area where water collects, channelizes and moves offsite. Based on these characteristics and considering the additional hydrologic inputs, Boardman Creek acts as a discharge point for the surrounding headwater wetland area. No fish species occur in Boardman Creek (Streamnet 2016).

# 6 Deviation from LWI or NWI

The Local Wetland Inventory (LWI) did not show any mapped wetlands within the project study area. The Boardman Wetlands are classified as a Palustrine Emergent (persistent) Seasonally Flooded (PEM1C) wetland habitat by the NWI (USFWS 2016a; Figure 4). However, based on historic aerial imagery (Appendix E) and field observations (Appendix A and Appendix C), it is likely that surface water and high water table persists throughout the year; therefore Wetland A should be classified as a Palustrine Emergent (persistent) Semipermanently flooded (PEM1F) wetland habitat.

# 7 Mapping Methods

During the field delineation, data plot locations, wetland boundaries, and OHWM boundaries were recorded using a resource grade Trimble GeoXH 6000 Global Positioning System (GPS). Mapping accuracy of the unit is 50 cm (1.64 feet) using post-processed differential data correction after being downloaded. Once post-processing was completed, the data were overlain onto the National Agriculture Imagery Program (NAIP) aerial photographs used for field maps with the project, and GPS data using GIS software. The data illustrated on Figure 5A-5C has a sub-meter mapping accuracy using post-processed differential data correction.

#### 8 Additional Information

USACE and DSL will assert jurisdiction over water and wetland features that meet regulatory authority as defined by the following:

- USACE will assert jurisdiction over traditional navigable waters, which includes all the waters described in 33 C.F.R. § 328.3(a)(1), and 40 C.F.R. § 230.3 (s)(1). The agencies will assert jurisdiction over wetlands adjacent to traditional navigable waters, including over adjacent wetlands that do not have a continuous surface connection to traditional navigable waters.
- DSL regulates "waters" (including rivers and wetlands) for the State of Oregon. DSL regulates waters using volume amounts of materials (i.e., sediments) removed or filled into a regulated water resource and location of activity. Waters of the state are regulated under the Removal/Fill Law (Oregon Revised Statue [ORS] 196.795–990) are defined under OAR 141-085-0515.

Based on observations made at the site of surface or clear subsurface connections to regulated waters, including the Willamette River, and best professional judgment, Wetland A and Boardman Creek would be considered jurisdictional and regulated by both USACE and DSL:

- Wetland A meets the jurisdictional definition of a wetland by both USACE and DSL as defined in 33 C.F.R. § 328.7 and OAR 141-085-0515(4).
- Boardman Creek is connected via surface drainage to the Willamette River, which is considered jurisdictional to USACE and DSL and would be considered jurisdictional per 33 C.F.R. § 328.3(f).
- Boardman Creek within the project study area is not a fish-bearing stream and does not serve as critical habitat to any species listed under the Endangered Species Act (USFWS 2016b). No sensitive species are known to occur within the wetland (ORBIC 2016). Many wildlife species, including ducks, songbirds, red-tailed hawks, and nutria, were observed using the wetlands during field surveys.

#### Results and Conclusions 9

Within the project study area there is one wetland (Wetland A) and one surface water resource (Boardman Creek). Wetland A is approximately 4.7 acres, classified as a PEM1F wetland habitat located in a topographic depression that receives water from Boardman Creek, stormwater conveyance system discharges, and likely from groundwater inputs. Boardman Creek is a low-gradient, perennial, non-fish bearing stream moving through developed, residential areas in unincorporated Clackamas County to its confluence with the Willamette River. Both Wetland A and Boardman Creek would be considered jurisdictional to the USACE and DSL.

# 10 Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigators. It should be considered a Preliminary Jurisdictional Determination and used at your own risk until it has been approved in writing by the DSL in accordance with OAR 141-090-0005 through 141-090-0055, and the USACE in accordance with Section 404 of the CWA (OAR 141-090-0035 [7][k]).

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#### Report

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# Appendix A. Figures

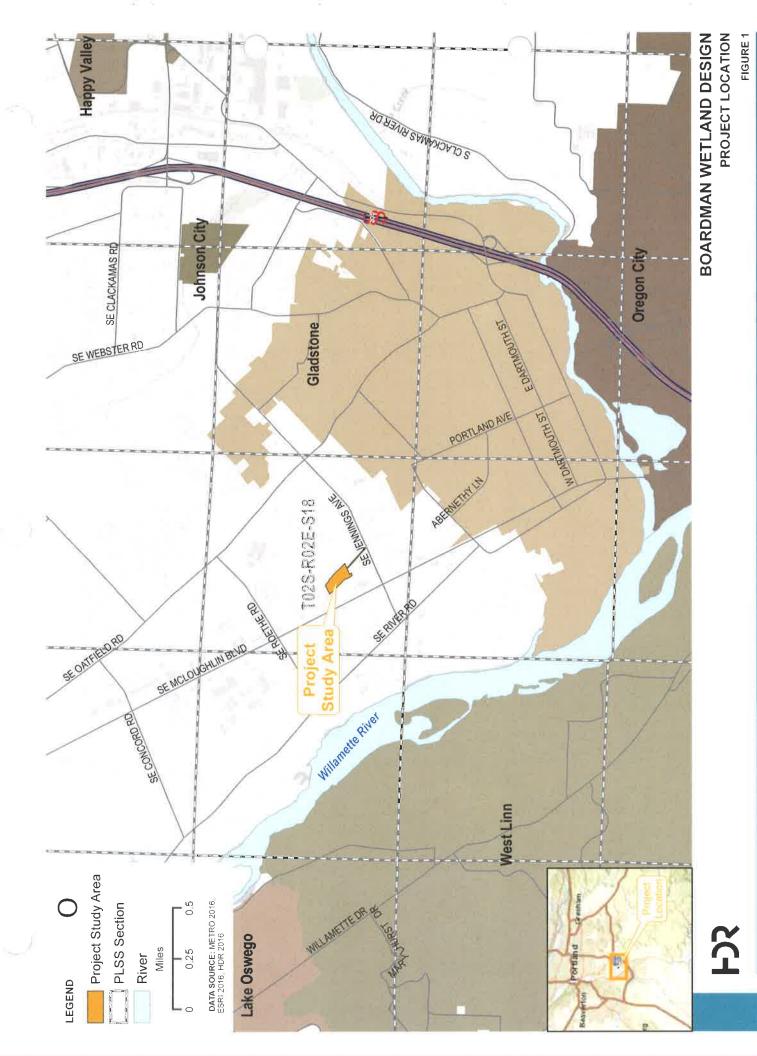
Figure 1. Project Location

Figure 2. Taxlots

Figure 3. NWI

Figure 4. NRCS Soil Survey

Figure 5. Wetland Delineation (A-E)



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BOARDMAN WETLAND DELINEATION REPORT

# FIGURE 2 INEATION REPORT TAXLOTS

BOARDMAN WETLA

# BOARDMAN WETLAND DESIGN NATIONAL WETLAND INVENTORY FIGURE 3

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MAPPED SOILS



WETLAND DELINEATION INDEX

# **BOARDMAN WETLAND DESIGN** WETLAND DELINEATION

FIGURE 5B

JINEATION REPORT

BOARDMAN WETLA

BOARDMAN WETLAND DESIGN WETLAND DELINEATION

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BOARDMAN WETLA

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BOARDMAN WETLAND DESIGN WETLAND DELINEATION

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# Appendix B. Delineation Data Forms

**Data Sheet Summary Index** 

Associated Wetland	Plot ID	Met Vegetation Criteria	Met Soils Criteria	Met Hydrology Criteria	Is Plot within a Wetland?
Wetland A	SP1	Yes	Yes	Yes	Yes
Wetland A	SP2	Yes	Yes	Yes	Yes
Wetland A	SP3	Yes	Yes	Yes	Yes
Wetland A	SP4	Yes	Yes	Yes	Yes
Wetland A	SP5	No	No	Yes	No
Wetland A	SP6	Yes	Yes	Yes	Yes
Wetland A	SP7	Yes	Yes	Yes	Yes
Wetland A	SP8	Yes	Yes	Yes	Yes
Wetland A	SP9	Yes	Yes	No	No
Wetland A	SP10	Yes	Yes	Yes	Yes
Wetland A	SP11	Yes	No	No	No
Wetland A	SP12	Yes	No	No	No
Wetland A	SP13	Yes	No	No	No
Wetland A	SP14	Yes	No	No	No
Wetland A	SP15	Yes	Yes	Yes	Yes

WETLAND DETE	ERMINATION DATA	FORM - V	Vestern M	ountains	, V⁻¹leys, ar	d Coast	Regi	on		
Project/Site: Boardman Creek	i.e.	City/County	y: CI	ackamas C	ou. ,	Sampling [	Date: 6	6/22/20	)16	
Applicant/Owner: OLSD				State	: OR	Sampling	Point:	SP1		
Investigators: Irina Lapina	Jennifer Maz	ze		Section, To	wnship, Range	S 18	T 2S	R	2E	
dform (hillslope, terrace, etc.):	loodplain	Lo	ocal Relief (co	ncave, con	vex, none): Co	ncave		Slop	e(%) 1	
Subregion (LRR): A	Lat: 45,39	92985	Long	: -122.609	865	Datu	m: NAD	)83		
Soil Map Unit Name: Cove silty clay	loam				NWI Classifica	tion: PEN	и1С			
Are climatic / hydrologic conditions on the	ne site typical for this time	of year?	Yes X	No	(If No, expl	ain in Rem	arks)			
Are Vegetation , Soil , Hyd	drology , significant	ly disturbed?	A	Are "Normal	Circumstances	present?	Yes	Х	No	
		roblematic?			explain any ans			)		
SUMMARY OF FINDINGS - A	tach a site man sh	owing sam	nlina noi	GL 4 994	20 1				res et	c
	Yes X No	owing san	ipinig pon	in locatio	nio, transco	to, impo	Lanc	reatu	100, 00	٠.
	Yes X No	Is the Sa	mpled Area							
Wetland Hydrology Present?	Yes X No		Wetland?		Yes )	( No				
Remarks: Sunny, 58-80 deg F, no rain past 3 day	S.									
VEGETATION_ Use scientific	names of plants.	Absolute	Dominant	Indicator						
Tree Stratum		% Cover	Species	<u>Status</u>	Dominance					
					Number of D That Are OB				1	(A)
Shrub Stratum					111017110 01	2, 171011,	011710			
Herb Stratum (Plot size: 6	) Ft )				Total Numbe				ai.	(B)
Phalaris arundinacea		100	Y	FACW	Species Acro	iss all Stra	ia.		1	(B)
Vine Stratum_		100	=Total Cover		Percent of De That Are OB				100.0%	(A/B)
					Prevalence	ndex Wor	ksheet:			
					Total %	Cover of:		Multi	iply by:	
					OBL species		0	x 1 =	0	
					FACW specie	es	100	x 2 =	200	
					FAC species		0	x 3 =	0	
					FACU speci		0	x 4 =	0	
					UPL species		0	x 5 =	0	
					Column Tota	le·	100	(A)	200	(B)
						ence Index			2,00	
					Hydrophytic	_				
					X Rapid Te	est for Hydi	ophytic	Veget	ation	
					X Dominar	ice Test >	50%			
					X Prevalen	ce Index ≤	3.0			
						ogical Adar temarks or				orting
					Problem	atic Hydrop	hytic V	egetati	on (Exp	plain)
					Indicators of must be pre					
% Bare Ground in Herb Stratum 0					Hydroph Vegetation F		Yes	х	No	
narks: (Include photo numbers here	or on a separate sheet.)									
Plot adjacent to Boardman Creek; appo	. ,	mentioned ob	servation of I	beaver earli	er in spring whe	n grass wa	is shorte	er.		

Sampling Point: SP1

Depth (inches) Color	Matrix			Redox Fea	itures			
(	r (moist)	%	Color (moist)			Loc <sup>2</sup>	Texture	Remarks
0 to 1 10YR	·	100	,		,,		SILTY CLAY	Oi moist
1 to 11 10YR		20	2.5YR 2.5/1	60	D		SILTY CLAY	A
1 to 11			5YR 3/4		c c	PL	SILTY CLAY	
11 to 22 G1	2.5 / 1 1	100	0111074		_		SILTY CLAY	B very black, gleyed
22 to 24 5Y		90	5YR 4/6	10	:	PL	SILTY CLAY	Depleted
Type: C=Concentration, [								
Type: 0-concentration, E	- Depiction, Tim	i-reduc	ica iviai iix, cc-c	0001000100	Jaioa (	Juliu Oru	mo. Ecodion: 1 E 1 oro E	annig, wi waank
Hydric Soil Indicators:							Indicators for Problema	tic Hydric Soils: 3
Histosol (A1)			Sandy Redox (S	5)			2 cm Muck (A10)	
Histic Epipedon (A2)			Stripped Matrix (	S6)			Red Parent Material (TF	2)
Black Histic (A3)			Loamy Mucky M	ineral (F1) (exc	cept MI	-RA 1)	Very Shallow Dark Surfa	•
Hydrogen Sulfide (A4)			Loamy Gleyed M	latrix (F2)			Other (Explain in Remar	·
✓ Depleted Below Dark Sur	face (A11)		Depleted Matrix	(F3)			Other (Explain in Nemar	N3)
Thick Dark Surface (A12)	)		Redox Dark Surf	ace (F6)			3 Indicators of hydrophytic v	regetation and wetland
Sandy Mucky Mineral (S	1)		Depleted Dark S	urface (F7)			hydrology must be present	
Sandy Gleyed Matrix (S4	)		Redox Depression	ons (F8)			unless disturbed or proble	matic.
Restrictive Layer (	if abaamad).							
	ii observed).							
Type: Depth (inches):							Hydric Soil Present?	Yes X No
emarks:								
YDROLOGY								
Wetland Hydrology Ind								
Wetland Hydrology Ind Primary Indicators (minim		quired; c	_					(minimum of two required
Primary Indicators (minim		quired; c	Water-Stai	ned Leaves (B	39) (exc	ept MLRA	Water-Stained Le	(minimum of two required eaves (B9) (MLRA 1, 2,
Primary Indicators (minim  Surface Water (A1)  High Water Table (A2)		quired; c	Water-Stai	ned Leaves (B d 4B)	39) (exc	ept MLRA	Water-Stained Le 4A, and 4B)	paves (B9) (MLRA 1, 2,
Primary Indicators (minim  Surface Water (A1)  High Water Table (A2)  Saturation (A3)		quired; c	Water-Stai 1, 2, 4A an Salt Crust	ned Leaves (B d 4B) (B11)		ept MLRA	Water-Stained Le	paves (B9) (MLRA 1, 2,
Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		quired; c	Water-Stai 1, 2, 4A an Salt Crust	ned Leaves (B d 4B) (B11) rertebrates (B1	13)	ept MLRA	Water-Stained Le 4A, and 4B)	eaves (B9) (MLRA 1, 2,
Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		quired; c	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv	ned Leaves (B d 4B) (B11) rertebrates (B1 Gulfide Odor (C	13)		Water-Stained Le 4A, and 4B)  □ Drainage Patterns □ Dry-Season Wate	eaves (B9) (MLRA 1, 2,
Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		quired; c	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S	ned Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C	l3) C1) llong Li		Water-Stained Le 4A, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posi	er Table (C2) on Aerial Imag (C9) tion (D2)
Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		quired; c	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen 9 Oxidized R	ned Leaves (B d 4B) (B11) vertebrates (B1 Gulfide Odor (C chizospheres a of Reduced Iro	13) C1) Ilong Li In (C4)	ving Roots	Water-Stained Le 4A, and 4B)  □ Drainage Patterns □ Dry-Season Wate □ Saturation Visible	er Table (C2) on Aerial Imag (C9) tion (D2)
Primary Indicators (minim 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)	num of one is rec	quired; c	Water-Stai 1, 2, 4A an 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of	ned Leaves (B d 4B) (B11) ertebrates (B1 Sulfide Odor (C chizospheres a of Reduced Iro	I3) C1) Ilong Li In (C4) Tilled S	ving Roots Soils (C6)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) t (D5)
Primary Indicators (minim 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)	num of one is rec	quired; c	Water-Stai 1, 2, 4A an 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or	ned Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C thizospheres a of Reduced Iro n Reduction in Stressed Plan	(3) (C1) (c1) (c1) (c1) (c2) (c1) (c1) (c1)	ving Roots Soils (C6)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns  ☑ Dry-Season Wate □ Saturation Visible ☑ Geomorphic Posi ☑ Shallow Aquitard	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) t (D5)
Primary Indicators (minim  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 Aer	ium of one is rec	quired; c	Water-Stai 1, 2, 4A an 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or	ned Leaves (B d 4B) (B11) ertebrates (B1 Sulfide Odor (C chizospheres a of Reduced Iro	(3) (C1) (c1) (c1) (c1) (c2) (c1) (c1) (c1)	ving Roots Soils (C6)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imag (C9) tion (D2) (D3) t (D5) ds (D6) (LRR A)
Primary Indicators (minimal 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 Aer	ium of one is rec	quired; c	Water-Stai 1, 2, 4A an 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or	ned Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C thizospheres a of Reduced Iro n Reduction in Stressed Plan	(3) (C1) (c1) (c1) (c1) (c2) (c1) (c1) (c1)	ving Roots Soils (C6)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Mount	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imag (C9) tion (D2) (D3) t (D5) ds (D6) (LRR A)
Primary Indicators (minimal 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 Aer Sparsely Vegetated Conditions:	ium of one is rec	quired; c	Water-Stain 1, 2, 4A and Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp	ned Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C thizospheres a of Reduced Iro n Reduction in Stressed Plan lain in Remark	(3) (C1) (c1) (c1) (c1) (c2) (c1) (c1) (c1)	ving Roots Soils (C6)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Mount	eaves (B9) (MLRA 1, 2, s (B10) er Table (C2) e on Aerial Imag (C9) tion (D2) (D3) t (D5) ds (D6) (LRR A)
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Primary Indicators (minimal 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 Aer Sparsely Vegetated Conditions:	num of one is rec rial Imagery (B7) cave Surface (B8)		Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or Other (Exp	ned Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C thizospheres a of Reduced Iro n Reduction in Stressed Plan lain in Remark	(3) (C1) (c1) (c1) (c1) (c2) (c1) (c1) (c1)	ving Roots Soils (C6) (LRR A)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Moun □ Frost-Heave Hum	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) tion (D2) (D3) t (D5) ds (D6) (LRR A)
Primary Indicators (minimum 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 Aer Sparsely Vegetated Conditions: Surface Water Present?	ial Imagery (B7) cave Surface (B8)	No	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror Stunted or Other (Exp	med Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C rhizospheres a of Reduced Iro n Reduction in Stressed Plan lain in Remark	(3) (C1) (c1) (c1) (c1) (c2) (c1) (c1) (c1)	ving Roots Soils (C6) (LRR A)	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Mount	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) tion (D2) (D3) t (D5) ds (D6) (LRR A)
Primary Indicators (minimal 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 Aer Sparsely Vegetated Conditions: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	ial Imagery (B7) cave Surface (B8)  Yes  Yes  Yes	No X No X No	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or Other (Exp	med Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C rhizospheres a of Reduced Iro n Reduction in Stressed Plan lain in Remark (inches): (inches):	(C1) (C1) (c1) (c1) (c2) (c1) (c2) (c2) (c2) (c2) (c3)	ving Roots Soils (C6) (LRR A)  20 14	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Moun □ Frost-Heave Hum	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) tion (D2) (D3) t (D5) ds (D6) (LRR A)
Primary Indicators (minimal 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 Aer Sparsely Vegetated Conditions: Surface Water Present? Water Table Present? Saturation Present?	ial Imagery (B7) cave Surface (B8)  Yes  Yes  Yes	No X No X No	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or Other (Exp	med Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C rhizospheres a of Reduced Iro n Reduction in Stressed Plan lain in Remark (inches): (inches):	(C1) (C1) (c1) (c1) (c2) (c1) (c2) (c2) (c2) (c2) (c3)	ving Roots Soils (C6) (LRR A)  20 14	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Moun □ Frost-Heave Hum	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) tion (D2) (D3) t (D5) ds (D6) (LRR A)
Primary Indicators (minimal 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 Aer Sparsely Vegetated Conditions: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	ial Imagery (B7) cave Surface (B8)  Yes  Yes  Yes	No X No X No	Water-Stai 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or Other (Exp	med Leaves (B d 4B) (B11) rertebrates (B1 Sulfide Odor (C rhizospheres a of Reduced Iro n Reduction in Stressed Plan lain in Remark (inches): (inches):	(C1) (C1) (c1) (c1) (c2) (c1) (c2) (c2) (c2) (c2) (c3)	ving Roots Soils (C6) (LRR A)  20 14	Water-Stained Le 4A, and 4B)  □ Drainage Patterns ✓ Dry-Season Wate □ Saturation Visible ✓ Geomorphic Posi ✓ Shallow Aquitard ✓ FAC-Neutral Test □ Paised Ant Moun □ Frost-Heave Hum	eaves (B9) (MLRA 1, 2, s (B10) or Table (C2) tion (D2) (D3) t (D5) ds (D6) (LRR A)

WETLAND DETERMINATION DATA	4 FORM - V	Vestern M	ountains	, V∽lleys, ar	nd Coas	st Regi	ion		
Project/Site: Boardman Creek	City/County	y: Cl	ackamas Co	ou.	Sampling	Date:	6/22/20	016	
Applicant/Owner: OLSD			State	: OR	Sampling	Point:	SP2		
Investigators: Irina Lapina Jennifer Ma	ze	;	Section, Tov	vnship, Range	S 18	T 2S	R	2E	
dform (hillslope, terrace, etc.): Floodplain	Lc	ocal Relief (co	ncave, conv	ex, none): No	one		Slop	e(%) 0	)
Subregion (LRR): A Lat: 45.3	93633	Long:	-122.6110	020	Dat	um: NA	D83		
Soil Map Unit Name: Cove silty clay loam				NWI Classifica	tion: Pf	EM1C			
Are climatic / hydrologic conditions on the site typical for this time	e of vear?	Yes X	No	(If No, expl	ain in Re	marks)			
	tly disturbed?			Circumstances		,	Х	No	
	problematic?	,			·			110	
		28 9		explain any an			esa.		
SUMMARY OF FINDINGS - Attach a site map sh	owing sam	ipling poir	nt locatio	ns, transec	ts, imp	ortant	featu	res, et	ic.
Hydrophytic Vegetation Present? Yes X No									
Hydric Soil Present? Yes X No		mpled Area Wetland?		Vaa	v Na				
Wetland Hydrology Present? Yes X No	WILLIIII G	Wellandi		Yes	X No				
Remarks: Sunny, 58-80 deg F, no rain past 3 days.									
<b>VEGETATION</b> Use scientific names of plants.	Absolute % Cover	<u>Dominant</u>	Indicator		_				
Tree Stratum	76 COVE	<u>Species</u>	<u>Status</u>	Dominance					
*				Number of D That Are OB				1	(A)
Shrub Stratum					_,	,			
Herb Stratum (Plot size: 6 Ft )		Var		Total Number Species Acro				1	(B)
Phalaris arundinacea	80	Υ	FACW	Species Acid	iss all St	ala.		'	(D)
Juncus effusus  Typha latifolia	10	N N	FACW	Percent of D	ominant S	Species		100.0%	. (Δ/R
Callitriche heterophylla	3	N	OBL	That Are OB	L, FACW	or FAC		100.076	(/// )
Camillo Te Teter Spriyila	103	=Total Cover	OBL	Prevalence	Index Wo	rksheet	::		
Vine Stratum_		_ =   Otal Covel		Total %	Cover of:		Multi	iply by:	
VIIIO OlididiiT				OBL species		13	x 1 =	13	
				FACW speci	es	90	x 2 =	180	
				FAC species		0	x 3 =	0	
				FACU speci		0	x 4 =	0	
				UPL species		0	x 5 =	0	
						102	(A)	193	(B)
				Column Tota	ls:	103	(A)	193	(D)
				Preval	ence Inde	ex = B/A=	=	1,87	
				Hydrophytic	Vegetati	on Indic	ators:		
				X Rapid Te				ation	
				·	,	, ,			
				X Dominar	nce Test >	20%			
				X Prevaler	ice Index	≤ 3.0			
					ogical Ada Remarks o				oorting
				Problem	atic Hydro	ophytic V	/egetati	on (Ex	plain)
				Indicators of must be pre					
% Bare Ground in Herb Stratum 0				Hydroph Vegetation F		Yes	х	No	
narks: (Include photo numbers here or on a separate sheet.)									
<del>/</del>									

Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc <sup>2</sup>	Texture	Remarks
0 to 18	1						SILTY MUCK	Muck
Type: C=Concen	tration, D=Depletion,	RM=Reduc	ced Martix, CS=Co	vered or	Coated S	and Grain	Location: PL=Po	ore Lining, M=Matrix.
Hydric Soil Indi	cators:						Indicators for Probl	ematic Hydric Soils: 3
Histosol (A1)			Sandy Redox (S5	)			2 cm Muck (A10)	
Histic Epipedon	(A2)		Stripped Matrix (S	66)			Red Parent Materia	I (TF2)
Black Histic (A3	)		Loamy Mucky Mir	neral (F1) (e	except ML	RA 1)	Very Shallow Dark	,
Hydrogen Sulfic	le (A4)		Loamy Gleyed Ma	atrix (F2)			Other (Explain in R	
Depleted Below	Dark Surface (A11)		Depleted Matrix (I	<del>-</del> 3)				
Thick Dark Surf	ace (A12)		Redox Dark Surfa	ce (F6)			3 Indicators of hydroph	ytic vegetation and wetland
Sandy Mucky M	lineral (S1)		Depleted Dark Su	rface (F7)			hydrology must be pr	esent,
Sandy Gleyed N	flatrix (S4)		Redox Depression	ns (F8)			unless disturbed or p	roblematic
Restrictive	Layer (if observe	d):						
Type:							Hydric Soil Present?	Yes X No
Depth (inches):							nyuric Soil Present?	169 V NO
HYDROLOGY								
Wetland Hydrol Primary Indicator	s (minimum of one is	required; c	F 73		(B9) (exce	ept MLRA		ators (minimum of two required
Wetland Hydrol	s (minimum of one is	required; c	check all that apply  Water-Stain 1, 2, 4A and	ed Leaves	(B9) (exce	ept MLRA		ators (minimum of two required ed Leaves (B9) (MLRA 1, 2,
Wetland Hydrol Primary Indicator Surface Water (	s (minimum of one is	required; c	Water-Stain 1, 2, 4A and Salt Crust (I	ed Leaves I 4B) 311)		ept MLRA	Water-Staine 4A, and 4B)	ed Leaves (B9) (MLRA 1, 2,
Wetland Hydrol Primary Indicator  Surface Water ( High Water Tab	s (minimum of one is A1) le (A2)	required; c	Water-Stain 1, 2, 4A and Salt Crust (I	ed Leaves (4B) (311) ertebrates (	B13)	ept MLRA	Water-Staine 4A, and 4B)  Drainage Pa	ed Leaves (B9) (MLRA 1, 2, tterns (B10)
Wetland Hydrol Primary Indicator  Surface Water ( High Water Tab  Saturation (A3)	s (minimum of one is A1) le (A2) 1)	required; c	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve	ed Leaves I 4B) 311) Intebrates ( ulfide Odor	B13)		Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V	ed Leaves (B9) (MLRA 1, 2, tterns (B10) Water Table (C2)
Wetland Hydrol Primary Indicator Surface Water ( High Water Tab Saturation (A3) Water Marks (B	s (minimum of one is A1) le (A2) 1) sits (B2)	required; c	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve	ed Leaves   4B)   311)   rtebrates (   ulfide Odor   nizospheres	B13) · (C1) s along Liv		Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V	ed Leaves (B9) (MLRA 1, 2, tterns (B10)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)  Water Marks (B  Sediment Depo	s (minimum of one is A1) le (A2) 1) sits (B2)	required; c	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh	ed Leaves (4B) (311) Intebrates ( ulfide Odor (izospheres	B13) (C1) s along Liv Iron (C4)	ring Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2)
Wetland Hydrol Primary Indicator ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)  Water Marks (B  Sediment Depo Drift Deposits (B	s (minimum of one is A1) le (A2) 1) sits (B2) 33) ust (B4)	required; c	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron	ed Leaves (4B) (311) Intebrates ( ulfide Odor (izospheres (Reduced) (Reduction	B13) (C1) s along Liv Iron (C4) in Tilled S	ving Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)  Water Marks (B  Sediment Depo Drift Deposits (B  Algal Mat or Cru	s (minimum of one is A1) le (A2) 1) sits (B2) 33) ust (B4)	required; c	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh	ed Leaves (4B) (311) Intebrates ( ulfide Odor (izospheres (Reduced) (Reduction	B13) (C1) s along Liv Iron (C4) in Tilled S	ving Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)   Water Marks (B  Sediment Depo  Drift Deposits (B  Algal Mat or Cru ✓ Iron Deposits (E  Surface Soil Cru	s (minimum of one is A1) le (A2) 1) sits (B2) 33) ust (B4)		Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron	ed Leaves (4B) (311) (artebrates ( (ulfide Odor (aizospheres (FREduced) (Reduction) (Stressed Pl	B13) (C1) s along Liv lron (C4) in Tilled S lants (D1)	ving Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant M	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓i Saturation (A3)  Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru ✓ Iron Deposits (E Surface Soil Cra Inundation Visit	s (minimum of one is A1) le (A2) 1) sits (B2) 33) ust (B4) 35) acks (B6)	7)	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S	ed Leaves (4B) (311) (artebrates ( (ulfide Odor (aizospheres (FREduced) (Reduction) (Stressed Pl	B13) (C1) s along Liv lron (C4) in Tilled S lants (D1)	ving Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant M	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)  Water Marks (B Sediment Depo Drift Deposits (B Algal Mat or Cru ✓ Iron Deposits (B Surface Soil Cru Inundation Visik	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ole on Aerial Imagery (B ated Concave Surface (	7)	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S	ed Leaves (4B) (311) (artebrates ( (ulfide Odor (aizospheres (FREduced) (Reduction) (Stressed Pl	B13) (C1) s along Liv lron (C4) in Tilled S lants (D1)	ving Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant M	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)  Water Marks (B Sediment Depo Drift Deposits (B Algal Mat or Cru ✓ Iron Deposits (B Surface Soil Cru Inundation Visik	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface (	7)	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or Si Other (Explain	ed Leaves (4B) (311) (artebrates ( (ulfide Odor (aizospheres (FREduced) (Reduction) (Stressed Pl	B13) (C1) s along Liv lron (C4) in Tilled S lants (D1)	ving Roots (	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant M	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)      Water Marks (B     Sediment Depo     Drift Deposits (B     Algal Mat or Cru ✓ Iron Deposits (E     Surface Soil Cru     Inundation Visik     Sparsely Veget	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface (  ms: esent?  Yes	7) B8)	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (4B) (311) (artebrates ( ulfide Odor (aizospheres (Reduced   (Reduction (Stressed Pl (ain in Rema	B13) (C1) s along Liv lron (C4) in Tilled S lants (D1)	ving Roots ( soils (C6) (LRR A)	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant N  Frost-Heave	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)      Water Marks (B     Sediment Depo     Drift Deposits (B     Algal Mat or Cru ✓ Iron Deposits (E     Surface Soil Cru     Inundation Visik     Sparsely Veget  Field Observation	s (minimum of one is A1) le (A2)  1) sits (B2) a3) ust (B4) a5) acks (B6) ole on Aerial Imagery (B ated Concave Surface ( ins: esent? Yes ent? Yes	7) B8) X No	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve W Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves [48] 311) Intebrates ( Interpreted of the control of the	B13) (C1) s along Liv lron (C4) in Tilled S lants (D1)	ving Roots ( doils (C6) (LRR A)	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant M	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)      Water Marks (B     Sediment Depo     Drift Deposits (B     Algal Mat or Cru ✓ Iron Deposits (E     Surface Soil Cru     inundation Visik     Sparsely Veget  Field Observation  Surface Water Pr     Water Table Preses     Saturation Preser     (Includes capillary	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface ( ms: esent? Yes ent? Yes offinge)	7) B8) X No X No X No	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves [48] 311) Intebrates ( Intebrates ( Interpreted of the control of the c	B13) (C1) s along Liv Iron (C4) in Tilled S lants (D1) arks)	ving Roots ( Soils (C6) (LRR A)  2 0	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant N  Frost-Heave	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)      Water Marks (B     Sediment Depo     Drift Deposits (B     Algal Mat or Cru ✓ Iron Deposits (E     Surface Soil Cru     inundation Visik     Sparsely Veget  Field Observation  Surface Water Pr     Water Table Preses     Saturation Preser     (Includes capillary	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface (  ms: esent? Yes ent? Yes	7) B8) X No X No X No	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves [48] 311) Intebrates ( Intebrates ( Interpreted of the control of the c	B13) (C1) s along Liv Iron (C4) in Tilled S lants (D1) arks)	ving Roots ( Soils (C6) (LRR A)  2 0	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant N  Frost-Heave	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)      Water Marks (B     Sediment Depo     Drift Deposits (B     Algal Mat or Cru ✓ Iron Deposits (E     Surface Soil Cru     inundation Visik     Sparsely Veget  Field Observation  Surface Water Pr     Water Table Preses     Saturation Preser     (Includes capillary	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface (  ms: esent? Yes ent? Yes offinge)	7) B8) X No X No X No	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves [48] 311) Intebrates ( Intebrates ( Interpreted of the control of the c	B13) (C1) s along Liv Iron (C4) in Tilled S lants (D1) arks)	ving Roots ( Soils (C6) (LRR A)  2 0	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant N  Frost-Heave	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Wetland Hydrol Primary Indicator  ✓ Surface Water ( ✓ High Water Tab ✓ Saturation (A3)      Water Marks (B     Sediment Depo     Drift Deposits (B     Algal Mat or Cru ✓ Iron Deposits (E     Surface Soil Cru     inundation Visik     Sparsely Veget  Field Observation  Surface Water Pr     Water Table Preses     Saturation Preser     (Includes capillary	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface (  ms: esent? Yes ent? Yes offinge)	7) B8) X No X No X No	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves [48] 311) Intebrates ( Intebrates ( Interpreted of the control of the c	B13) (C1) s along Liv Iron (C4) in Tilled S lants (D1) arks)	ving Roots ( Soils (C6) (LRR A)  2 0	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant N  Frost-Heave	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Wetland Hydrol Primary Indicator  V Surface Water ( V High Water Tab V Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (B Algal Mat or Cru V Iron Deposits (E Surface Soil Cru Inundation Visib Sparsely Veget Field Observation Surface Water Pr Water Table Pres Saturation Preser (includes capillary Describe Recorded I	s (minimum of one is A1) le (A2)  1) sits (B2) 33) ust (B4) 35) acks (B6) ble on Aerial Imagery (B ated Concave Surface (  ms: esent? Yes ent? Yes offinge)	7) B8)  X No X No X No	Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or Si Other (Explain Depth Depth Depth Depth A aerial photos, previous	ed Leaves [48] 311) Intebrates ( Intebrates ( Interpreted of the control of the c	B13) (C1) s along Liv Iron (C4) in Tilled S lants (D1) arks)	ving Roots ( Soils (C6) (LRR A)  2 0	Water-Staine 4A, and 4B)  Drainage Pa  Dry-Season  Saturation V  Geomorphic  Shallow Aqu  FAC-Neutral  Paised Ant N  Frost-Heave	tterns (B10) Water Table (C2) isible on Aerial Imag.(C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)

Project/Site:	WETLAND D  Boardman Creek	ETERMINA T'ON DAT	A FORM - City/Coun		ountains ackamas Co		oast Regi		016	
Applicant/Owne			<b>.</b> ,	.,.	State	7	oling Point:			
Investigators:	Irina Lapina	Jennifer M	276			vnship, Range S 18			2E	
	ope, terrace, etc.):	Floodplain			·	vex, none): None	, , , 20		e(%) 0	
2		Lat: 45.		•	: -122.612		Datum: NAI		G(70) U	
Subregion (LRR				Long	122.012			700		
Soil Map Unit N		silt loam, 3 to 8 percent slo				NWI Classification:				
•	•	on the site typical for this tim		Yes X	No	(If No, explain in	ŕ			
Are Vegetation	, Soil,	Hydrology , significa	ntly disturbed?	,	Are "Normal	Circumstances" pres	ent? Yes	Х	No	
Are Vegetation	, Soil,	Hydrology , naturally	problematic?		(If needed,	explain any answers	in Remarks	.)		
SUMMARY	OF FINDINGS	- Attach a site map s	howing sai	mpling poi	nt locatio	ns, transects, ir	nportant	featu	res, et	tc.
	egetation Present?	Yes X No		1 2 .						
Hydric Soil Pre	esent?	Yes X No	Is the S	ampled Area						
Wetland Hydro	ology Present?	Yes X No	within a	Wetland?		Yes X	No			
		fic names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test	Worksheet:		_	
Tree Stratun	<u>n</u> (Plot size	e: 30 Ft )				Number of Domina	ant Species			(4)
Salix las			50	Y	FACW	That Are OBL, FA	CW, or FAC	:	4	(A)
Salix be			20	Y	FACW	Total Number of D	ominant			
Salix sco	ouleriana		15	Υ	FAC	Species Across all			5	(B)
Shrub Stratu Rosa wa		e: 30 Ft )	20	=Total Cover	FACU	Percent of Domina That Are OBL, FAG			80.0%	(A/B
Fraxinus	s latifolia		5	N	FACW	Prevalence Index	Worksheet	:		
Salix be	bbiana		5	N	FACW	Total % Cover	of:	Mult	iply by:	
Salix sco	ouleriana		5	N	FAC	OBL species	0	x 1 =		
			35	=Total Cover		FACW species	140	x 2 =	280	
Herb Stratun	<u>n</u> (Plot size	e: 6 Ft )				FAC species	30	x 3 =	90	
Phalaris	arundinacea		60	Υ	FACW	FACU species	20	x 4 =	80	
Solanum	n dulcamara		10	N	FAC		0	x 5 =	0	
			70	=Total Cover		UPL species				(D)
Vine Stratum	<u>n_</u> ,					Column Totals:	190	(A)	450	(B)
						Prevalence i	ndex = B/A=	:	2.37	
						Hydrophytic Vege	tation Indica	ators:		
						Rapid Test for			ation	
								vogot	40011	
						X Dominance Te	est > 50%			
						X Prevalence Inc	dex ≤ 3.0			
						Morphological data in Remar				oorting
						Problematic H	ydrophytic V	egetati	ion (Ex	plain)
						Indicators of hydr must be present,				
						Hydrophytic	42			
% Bare Ground	d in Herb Stratum	0				Vegetation Prese	nt? Yes	X	No	
narks: (Inclu	de photo numbers h	ere or on a separate sheet.)								

Sampling Point: SP3

Depth	<u> </u>		0.1	0.1			eatures				-	
(inches)		(moist)	%	Color (	(moist)	%	Type <sup>1</sup> Loc <sup>2</sup>		exture		Rema	arks
0 to 21	10YR	2/1	100			-		SILT LOAM				
Type: C=Conce	entration, D	)=Depletion	, RM=Red	uced Martix	k, CS=Co	vered or	Coated Sand Gra	ins. 4	ocation: PL=Pore	Lining, M=	Matrix,	
Hydric Soil Inc	dicators:							Indica	tors for Problen	natic Hydr	ic Soils	3
Histosol (A1)				Sandy	Redox (S5	)			cm Muck (A10)			
Histic Epiped	on (A2)			Strippe	d Matrix (S	6)			ed Parent Material (*	TF2)		
Black Histic (				Loamy	Mucky Mir	eral (F1) (	except MLRA 1)		ery Shallow Dark Su	,		
✓ Hydrogen Su	` '			Loamy	Gleyed Ma	ıtrix (F2)			ther (Explain in Rem	, ,		
Depleted Bel		, ,			ed Matrix (F	,			(=,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		
Thick Dark S	urface (A12)			Redox	Dark Surfa	ce (F6)		<sup>3</sup> Indi	cators of hydrophytic	c vegetation a	and wetla	ınd
Sandy Mucky		•			ed Dark Su	, ,		hyd	ology must be prese	ent,		
Sandy Gleye	d Matrix (S4)	)		Redox	Depression	ns (F8)		unle	ss disturbed or prob	olematic.		
Restrictiv	e Layer (	if observe	ed):									
Type:								11, 12, 4	all Dana 40	V	v	Ma
Depth (inches	s):							Hydric S	Soil Present?	Yes	Х	No
Wetland Hydr Primary Indicat	ology Indi ors (minim		s required;				(B9) (except MI RA		econdary Indicato	`		
Wetland Hydr Primary Indicat  ✓ Surface Wate ✓ High Water T	ology Indi cors (minim er (A1)		s required;	w		ed Leaves	(B9) (except MLRA		econdary Indicato Water-Stained 4A, and 4B)	`		
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T	ology Indicors (minimer (A1)		s required;	W	/ater-Stain	ed Leaves 4B)	(B9) (except MLRA		Water-Stained 4A, and 4B)	Leaves (B9)		
Wetland Hydr Primary Indicat ✓ Surface Wate ✓ High Water T	ology Indicors (minimer (A1) rable (A2)		s required;	☐ W 1, ☐ S	/ater-Stain 2, 4A and alt Crust (E	ed Leaves 4B)			Water-Stained 4A, and 4B)  Drainage Patte	Leaves (B9)	(MLRA 1	
Wetland Hydr Primary Indicat  ✓ Surface Wate ✓ High Water T ✓ Saturation (A	ology Indicors (minimor (A1) Table (A2) 3) (B1)		s required;	☐ W 1, ☐ S ☐ Ad	/ater-Stain 2, 4A and alt Crust (E quatic Inve	ed Leaves 4B) 311)	B13)		Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa	Leaves (B9) rns (B10) ater Table (C	(MLRA 1 2)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks	ology Indicors (minimor (A1) cable (A2) 3) (B1) posits (B2)		s required;	☐ W 1, ☐ S ☐ Ad <b>☑</b> Hy	/ater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen St xidized Rh	ed Leaves 4B) 311) rtebrates (l ulfide Odor izospheres	B13) (C1) s along Living Roots		Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa  Saturation Visit	Leaves (B9) rns (B10) ater Table (C	(MLRA 1 2)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De	ology Indicors (minim er (A1) Table (A2) Table (B1) Table (B2) Table (B2) Table (B3)		s required;	W 1, S Ar	/ater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen St xidized Rh resence of	ed Leaves 4B) 311) rtebrates (l ulfide Odor izospheres Reduced	B13) (C1) s along Living Roots Iron (C4)		Water-Stained 4A, and 4B)  Drainage Patte Dry-Season Wa Saturation Visit  Geomorphic Po	Leaves (B9) rns (B10) ater Table (Coole on Aerial position (D2)	(MLRA 1 2)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits	ology Indicors (minimor (A1) Sable (A2) Sable (B1) posits (B2) Sable (B3) Crust (B4)		s required;	W 1, S A(V) HY	later-Stain 2, 4A and alt Crust (E quatic Inve ydrogen Si xidized Rh resence of ecent Iron	ed Leaves 4B) 311) rtebrates ( ulfide Odor izospheres Reduced I Reduction	B13) (C1) s along Living Roots lron (C4) in Tilled Soils (C6)		Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa  Saturation Visit	Leaves (B9)  rns (B10)  ater Table (Coble on Aerial position (D2)  rd (D3)	(MLRA 1 2)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (	ology Indicors (minimor (A1) Sable (A2) 3) (B1) posits (B2) 6 (B3) Crust (B4) (B5)		s required;	W N N N N N N N N N N N N N N N N N N N	Vater-Stain 2, 4A and alt Crust (Equatic Inversed States of States	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced I Reduction	B13) r (C1) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A)		Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa Saturation Visit  Geomorphic Pc Shallow Aquital	Leaves (B9)  rns (B10)  ater Table (C  ble on Aerial  position (D2)  rd (D3)  est (D5)	(MLRA 1 2) Imag.(C9	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (	ology Indicors (minimor (A1) sable (A2) sable (A2) sable (B1) posits (B2) sable (B3) Crust (B4) sable (B5) Cracks (B6)	um of one i		W N N N N N N N N N N N N N N N N N N N	Vater-Stain 2, 4A and alt Crust (Equatic Inversed States of States	ed Leaves 4B) 311) rtebrates ( ulfide Odor izospheres Reduced I Reduction	B13) r (C1) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A)		Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa Saturation Visit  Geomorphic Po Shallow Aquital FAC-Neutral Te	rns (B10) ater Table (C ole on Aerial osition (D2) rd (D3) est (D5) unds (D6) (LF	(MLRA 1 2) Imag.(C9	, 2,
Vetland Hydr Primary Indicat ✓ Surface Wate ✓ High Water T ✓ Saturation (A    Water Marks    Sediment De    Drift Deposits    Algal Mat or (I)    Iron Deposits    Surface Soil	ology Indicors (minimal or (A1) (able (A2) (A3) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B6) (B6) (B6) (B6) (B6) (B6) (B6)	um of one i	37)	W N N N N N N N N N N N N N N N N N N N	Vater-Stain 2, 4A and alt Crust (Equatic Inversed States of States	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced I Reduction	B13) r (C1) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A)		Water-Stained 4A, and 4B)  Drainage Patte Dry-Season Wa Saturation Visit  Geomorphic Po Shallow Aquital FAC-Neutral Te Paised Ant Mod	rns (B10) ater Table (C ole on Aerial osition (D2) rd (D3) est (D5) unds (D6) (LF	(MLRA 1 2) Imag.(C9	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate ✓ High Water T ✓ Saturation (A  Water Marks Sediment De Drift Deposits Algal Mat or ( Iron Deposits Surface Soil ( Inundation Vi  Sparsely Veg	ology Indicors (minimal or (A1) (able (A2) (A3) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B6) (B6) (B6) (B6) (B6) (B6) (B6)	um of one i	37)	W N N N N N N N N N N N N N N N N N N N	Vater-Stain 2, 4A and alt Crust (Equatic Inversed States of States	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced I Reduction	B13) r (C1) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A)		Water-Stained 4A, and 4B)  Drainage Patte Dry-Season Wa Saturation Visit  Geomorphic Po Shallow Aquital FAC-Neutral Te Paised Ant Mod	rns (B10) ater Table (C ole on Aerial osition (D2) rd (D3) est (D5) unds (D6) (LF	(MLRA 1 2) Imag.(C9	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (I)  Iron Deposits  Surface Soil (I)  Inundation Vi  Sparsely Veg  Surface Water	ology Indicors (minimal or (A1) (able (A2) (A3) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B5) (Cracks (B6) (B6) (B6) (B6) (B6) (B6) (B6) (B6)	um of one i ial Imagery (E ave Surface Yes	37) (B8)	W H; O P R; S C	Vater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen St xidized Rh resence of ecent Iron tunted or S ther (Expla	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced i Reduction stressed Pi sin in Rema	B13) r (C1) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A) arks)		Water-Stained 4A, and 4B)  Drainage Patte Dry-Season Wa Saturation Visit  Geomorphic Po Shallow Aquital FAC-Neutral Te Paised Ant Mod	rns (B10) ater Table (C ole on Aerial osition (D2) rd (D3) est (D5) unds (D6) (LF	(MLRA 1 2) Imag.(C9	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks Sediment De  Drift Deposits Algal Mat or (I) Iron Deposits Surface Soil (I) Inundation Vi Sparsely Veg  Surface Water  Water Table Pr	ology Indicors (minimal or (A1) (able (A2) (A2) (B1) (B3) (Crust (B4) (B5) (Cracks (B6) (B5) (Cracks (B5)	um of one i ial Imagery (E ave Surface Yes Yes	37) (B8) 3 _ X _ N	W   1   1   1   1   1   1   1   1   1	Vater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen Si xidized Rh resence of ecent Iron tunted or S ther (Expla	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced i Reduction stressed Pi nin in Rema	B13) s along Living Roots Iron (C4) in Tilled Soils (C6) lants (D1) (LRR A) arks)	s (C3)	Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa  Saturation Visit  ✓ Geomorphic Po  ✓ Shallow Aquitan  FAC-Neutral Te  Paised Ant Mou  Frost-Heave Ho	Leaves (B9)  rns (B10)  ater Table (C  ole on Aerial  osition (D2)  rd (D3)  ost (D5)  unds (D6) (LF  ummocks (D7)	(MLRA 1 2) mag.(C9 RR A)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (Iron Deposits  Surface Soil (Inundation Viiin)  Sparsely Veg  Field Observat  Surface Water  Water Table Pr  Saturation Pres	ology Indicors (minimal propertions) (A1) (able (A2) (B1) (B1) (B3) (Crust (B4) (B5) (Cracks (B6) (Cracks (B6	um of one i ial Imagery (E ave Surface Yes	37) (B8) 3 _ X _ N	W H; O P R; S C	Vater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen Si xidized Rh resence of ecent Iron tunted or S ther (Expla	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced i Reduction stressed Pi sin in Rema	B13) r (C1) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A) arks)	s (C3)	Water-Stained 4A, and 4B)  Drainage Patte Dry-Season Wa Saturation Visit  Geomorphic Po Shallow Aquital FAC-Neutral Te Paised Ant Mod	Leaves (B9)  rns (B10)  ater Table (C  ole on Aerial  osition (D2)  rd (D3)  ost (D5)  unds (D6) (LF  ummocks (D7)	(MLRA 1 2) Imag.(C9	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (Iron Deposits)  Surface Soil (Inundation Viiin)  Sparsely Veg  Field Observat  Surface Water  Water Table Presided Concludes capille	ology Indicors (minimal properties) (A1) (able (A2) (B1) (B1) (B3) (Crust (B4) (B5) (Cracks (B6) (Sible on Aericetated Concetions: (Present? (Sent? (Sent? (Sent))	ial Imagery (E ave Surface Yes Yes Yes	37) (B8) 3 _ X _ N 3 _ X _ N	W 1, S S A A P P R R S S	Jater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen Si xidized Rh resence of ecent Iron tunted or S ther (Explain Depth ( Depth (	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced I Reduction stressed Pi nin in Rema inches): inches):	B13) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A) arks)  2 0 0	s (C3)	Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa  Saturation Visit  ✓ Geomorphic Po  ✓ Shallow Aquitan  FAC-Neutral Te  Paised Ant Mou  Frost-Heave Ho	Leaves (B9)  rns (B10)  ater Table (C  ole on Aerial  osition (D2)  rd (D3)  ost (D5)  unds (D6) (LF  ummocks (D7)	(MLRA 1 2) mag.(C9 RR A)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (Iron Deposits)  Surface Soil (Inundation Viiin)  Sparsely Veg  Field Observat  Surface Water  Water Table Presided Concludes capille	ology Indicors (minimal properties) (A1) (able (A2) (B1) (B1) (B3) (Crust (B4) (B5) (Cracks (B6) (Sible on Aericetated Concetions: (Present? (Sent? (Sent? (Sent))	ial Imagery (E ave Surface Yes Yes Yes	37) (B8) 3 _ X _ N 3 _ X _ N	W 1, S S A A P P R R S S	Jater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen Si xidized Rh resence of ecent Iron tunted or S ther (Explain Depth ( Depth (	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced I Reduction stressed Pi nin in Rema inches): inches):	B13) s along Living Roots Iron (C4) in Tilled Soils (C6) lants (D1) (LRR A) arks)	s (C3)	Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa  Saturation Visit  ✓ Geomorphic Po  ✓ Shallow Aquitan  FAC-Neutral Te  Paised Ant Mou  Frost-Heave Ho	Leaves (B9)  rns (B10)  ater Table (C  ole on Aerial  osition (D2)  rd (D3)  ost (D5)  unds (D6) (LF  ummocks (D7)	(MLRA 1 2) mag.(C9 RR A)	, 2,
Wetland Hydr Primary Indicat  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment De  Drift Deposits  Algal Mat or (Iron Deposits)  Surface Soil (Inundation Viiin)  Sparsely Veg  Field Observat  Surface Water  Water Table Presided Concludes capille	ology Indicors (minimal properties) (A1) (able (A2) (B1) (B1) (B3) (Crust (B4) (B5) (Cracks (B6) (Sible on Aericetated Concetions: (Present? (Sent? (Sent? (Sent))	ial Imagery (E ave Surface Yes Yes Yes	37) (B8) 3 _ X _ N 3 _ X _ N	W 1, S S A A P P R R S S	Jater-Stain 2, 4A and alt Crust (E quatic Inve ydrogen Si xidized Rh resence of ecent Iron tunted or S ther (Explain Depth ( Depth (	ed Leaves 4B) 311) rtebrates (i ulfide Odor izospheres Reduced i Reduction stressed Pi nin in Rema inches): inches):	B13) s along Living Roots lron (C4) in Tilled Soils (C6) lants (D1) (LRR A) arks)  2 0 0	s (C3)	Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season Wa  Saturation Visit  ✓ Geomorphic Po  ✓ Shallow Aquitan  FAC-Neutral Te  Paised Ant Mou  Frost-Heave Ho	Leaves (B9)  rns (B10)  ater Table (C  ole on Aerial  osition (D2)  rd (D3)  ost (D5)  unds (D6) (LF  ummocks (D7)	(MLRA 1 2) mag.(C9 RR A)	, 2,

WETLAND DETERMINATION DAT	A FORM - Y	Western M	ountains	, ∨∽lleys, and	Coast Reg	ion		
Project/Site: Boardman Creek	City/Coun	ty: CI	ackamas Co	ou. Sa	mpling Date:	6/22/20	16	
Applicant/Owner: OLSD			State	: OR Sa	mpling Point:	SP4		
Investigators: Irina Lapina Jennifer M	aze		Section, Tov	vnship, Range S	18 T 2S	_ R :	2E	
dform (hillslope, terrace, etc.): Floodplain	L	ocal Relief (co	ncave, con	vex, none): None	•	Slop	e(%) 0	
Subregion (LRR): A Lat: 45.	394430	Long	: -122.612	396	Datum: NA	D83		
Soil Map Unit Name: Cove silty clay loam				NWI Classification	n: PEM1C			
Are climatic / hydrologic conditions on the site typical for this tim	ne of year?	Yes X	No	(If No, explain	in Remarks)			
Are Vegetation , Soil , Hydrology , significal	ntly disturbed?	,	\re "Normal	Circumstances" pi	resent? Yes	s X	No	
	problematic?			,				
				explain any answe		20 20		i
SUMMARY OF FINDINGS - Attach a site map si	howing sar	npling poi	nt locatio	ns, transects	important	teatu	res, et	c.
Hydrophytic Vegetation Present? Yes X No  Hydric Soil Present? Yes X No								
W. // 111 1 1 D //		ampled Area  Wetland?		Yes X	No			
Wetland Hydrology Present? Yes X No Remarks:				Tes A	NO			
VEGETATION Use scientific names of plants.	Absolute	Dominant	Indicator					
	% Cover	<u>Species</u>	<u>Status</u>	Dominance Te	st Worksheet	:		
Tree Stratum (Plot size: 30 Ft )  Corylus cornuta	5	Υ	FACU	Number of Don That Are OBL,			2	(A)
	5	=Total Cover		Total Number o	f Dominant			
Shrub Stratum (Plot size: 30 Ft )				Species Across			3	(B)
Physocarpus capitatus	5	Y	FACW					
Herb Stratum (Plot size: 6 Ft )	5	=Total Cover		Percent of Dom That Are OBL, I		· .	66.7%	(A/B)
Phalaris arundinacea	80	Υ	FACW	Prevalence Ind	lex Workshee	t:		
Convolvulus arvensis	2	N	NL	Total % Co			ply by:	
	82	=Total Cover		OBL species	0	x 1 =	0	
Vine Stratum				FACW species	85	x 2 =	170	
				FAC species	0	x 3 =	0	
				FACU species	5	x 4 =	20	
				UPL species	0	x 5 =	0	
				Column Totals:	90	(A)	190	(B)
				Prevalenc	ce Index = B/A	=	2.11	
				Hydrophytic Ve	getation Indic	ators:		
					for Hydrophyti		ation	
					Test > 50%	J		
				X Prevalence	Index ≤ 3.0			
				Morphologi data in Ren	cal Adaptation narks or on a s	s (Provi separate	ide supp sheet)	oorting
				Problemation	Hydrophytic '	√egetati	on (Ex	plain)
				Indicators of hy must be presen				
% Bare Ground in Herb Stratum 0				Hydrophyti Vegetation Pre		x	No	
narks: (Include photo numbers here or on a separate sheet.)	)							

Sampling Point: SP4

Depth	Matrix			Redox	Features			
	lor (moist)	%	Color (moist)	- %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
to	1		7.5YR 4/3	. 1	D	M	SILTY CLAY LOAM	Grey depleted inclus
to			2.5YR 8/4	1	С	M	SILTY CLAY LOAM	Dark when wet
0 to 1	- L							Oa layer, dry duff
1 to 13 10YR	2/1	100		-			SILTY CLAY LOAM	A
3 to 21 10YR	2 / 1	97	2.5YR 8/4	1		PL	SILTY CLAY LOAM	
Type: C=Concentration	, D=Depletion,	RM=Redu	ced Martix, CS=C	overed or	Coated	Sand Gra	ins. <sup>2</sup> Location: PL=Pore	Lining, M=Matrix.
lydric Soil Indicators	•		_				Indicators for Problem	natic Hydric Soils: 3
Histosol (A1)			Sandy Redox (S	5)			2 cm Muck (A10)	
Histic Epipedon (A2)		[	Stripped Matrix (	S6)			Red Parent Material (	TF2\
Black Histic (A3)			Loamy Mucky Mi	ineral (F1)	(except MI	LRA 1)	Very Shallow Dark Su	· ·
Hydrogen Sulfide (A4)		[	Loamy Gleyed M	latrix (F2)			Other (Explain in Rem	· ·
Depleted Below Dark	Surface (A11)	l	Depleted Matrix	(F3)			Other (Explain in Ren	iains)
Thick Dark Surface (A	12)		Redox Dark Surf	ace (F6)			<sup>3</sup> Indicators of hydrophyti	c vegetation and wetland
Sandy Mucky Mineral	(S1)	I L	Depleted Dark S	urface (F7	)		hydrology must be pres	ent,
Sandy Gleyed Matrix (	S4)		Redox Depression	ons (F8)			unless disturbed or prol	plematic.
Restrictive Laye	r (if observe	d):						
Type:							Hydric Soil Present?	Yes X No
Depth (inches):							Trydric Son Fresenti	Tes X No
emarks: Dark organic material trans aturation and high water t wea may be seasonally po ydric,	able is presentL	andscape se	etting is likely to cond	centrate wa	ater at gen	tle toe of s	cators; problematic hydric soil prod lope just east of sample plot along . Due to presence of wetland veg	transitional area of wetland bo
emarks: Dark organic material translaturation and high water the amay be seasonally polydric.  YDROLOGY  Wetland Hydrology In	able is present. L nded, 4b(6) p.11 ndicators:	andscape so	etting is likely to cond natter might mask fea	centrate wa atures in up	ater at gen	tle toe of s	lope just east of sample plot along . Due to presence of wetland veg	g transitional area of wetland bo etation and hydrology, soils con
emarks: Park organic material trans aturation and high water to see may be seasonally polydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min	able is present. L nded, 4b(6) p.11 ndicators:	andscape so	etting is likely to conditater might mask fea	centrate watures in up	ater at gen oper 12 inc	tle toe of s hes of soil	lope just east of sample plot along . Due to presence of wetland veg  Secondary Indicato	n transitional area of wetland bo etation and hydrology, soils con
emarks: Park organic material trans aturation and high water to the seasonally posture.  YDROLOGY  Vetland Hydrology In Primary Indicators (min	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	etting is likely to cond natter might mask fea	centrate wa atures in up y) ned Leave	ater at gen oper 12 inc	tle toe of s hes of soil	lope just east of sample plot along . Due to presence of wetland veg  Secondary Indicato	g transitional area of wetland bo etation and hydrology, soils con
emarks: lark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (mir Surface Water (A1)  High Water Table (A2)	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	etting is likely to conditater might mask feather might mask feather might mask feather might mask feather might make for the check all that apply water-Stain	centrate wa atures in up y) ned Leave d 4B)	ater at gen oper 12 inc	tle toe of s hes of soil	Secondary Indicate  Water-Stained 4A, and 4B)	o transitional area of wetland bo etation and hydrology, soils con or
marks: ark organic material trans aturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (mir  Surface Water (A1)  High Water Table (A2)	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	etting is likely to conditate might mask feather might mask feather might mask feather might mask feather might make the check all that apply Water-Stair 1, 2, 4A an	y) ned Leave d 4B) (B11)	ater at gen oper 12 inc s (B9) (exc	tle toe of s hes of soil	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte	etation and hydrology, soils con etation and hydrology, soils con ers (minimum of two required Leaves (B9) (MLRA 1, 2, rns (B10)
marks: ark organic material trans aturation and high water trea may be seasonally por dric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	check all that appl  Water-Stail 1, 2, 4A an  Salt Crust (	y) ned Leave d 4B) (B11) rertebrates	ater at gent oper 12 inco s (B9) (exc (B13)	tle toe of s hes of soil	Secondary Indicate  Water-Stained 4A, and 4B)  Dry-Season W	or transitional area of wetland bo etation and hydrology, soils constructed by the soils constru
marks: ark organic material trans aturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A2)  Saturation (A3)	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	check all that apply Water-Stai 1, 2, 4A an Salt Crust ( Aquatic Inv	y) ned Leave d 4B) (B11) rertebrates	s (B9) (exc (B13)	tle toe of s hes of soil	Secondary Indicate  Secondary Indicate  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit	or transitional area of wetland bo etation and hydrology, soils consists (minimum of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imag.(C9)
marks: ark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	check all that apply Water-Stail 1, 2, 4A an Aquatic Inv Hydrogen S	y) ned Leave d 4B) (B11) rertebrates Sulfide Odd	s (B9) (exc (B13) or (C1) es along Li	tle toe of s hes of soil	Secondary Indicate  Secondary Indicate  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visil	or transitional area of wetland bo etation and hydrology, soils consists (minimum of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imag.(C9) osition (D2)
marks: ark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4)	able is present. L nded, 4b(6) p.11 adicators: imum of one is	andscape so	check all that apply Water-Stair 1, 2, 4A an Salt Crust ( Aquatic Inv Hydrogen S	y) ned Leave d 4B) (B11) ertebrates Sulfide Odd	s (B9) (exc (B13) or (C1) es along Li	tle toe of s hes of soil	Secondary Indicate  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit  Geomorphic Pe	transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) eter Table (C2) ole on Aerial Imag.(C9) osition (D2) rd (D3)
emarks: lark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)	able is present. Linded, 4b(6) p.11  adicators: imum of one is	andscape so	check all that apply Water-Stair 1, 2, 4A an Salt Crust ( Aquatic Inv Hydrogen S Oxidized R	y) ned Leave d 4B) (B11) ertebrates Sulfide Odd chizosphere of Reduced	s (B9) (exc (B13) or (C1) es along Li	tle toe of s hes of soil	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit  Shallow Aquita  FAC-Neutral To	p transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) eter Table (C2) ole on Aerial Imag.(C9) osition (D2) rd (D3) est (D5)
emarks: lark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (E	able is present. Linded, 4b(6) p.11  adicators: imum of one is	andscape so	check all that apply Water-Stain 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror	y) ned Leave d 4B) (B11) rertebrates Sulfide Odd thizosphere of Reduction Stressed I	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled S	tle toe of s hes of soil	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte Dry-Season W Saturation Visil  Geomorphic Pt Shallow Aquita FAC-Neutral To	p transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imag.(C9) osition (D2) rd (D3) ast (D5) unds (D6) (LRR A)
marks: ark organic material trans aturation and high water trea may be seasonally por dric.  YDROLOGY  /etland Hydrology In Primary Indicators (min  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)	able is present. Linded, 4b(6) p.11  adicators: imum of one is  2)	andscape so 3, organic m	check all that apply Water-Stair 1, 2, 4A an Salt Crust of Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror	y) ned Leave d 4B) (B11) rertebrates Sulfide Odd thizosphere of Reduction Stressed I	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled S	tle toe of s hes of soil	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit  Shallow Aquita  FAC-Neutral To	p transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imag.(C9) osition (D2) rd (D3) ast (D5) unds (D6) (LRR A)
marks: ark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (E1)  Inundation Visible on A	able is present. Linded, 4b(6) p.11  adicators: imum of one is  2)	andscape so 3, organic m	check all that apply Water-Stain 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror	y) ned Leave d 4B) (B11) rertebrates Sulfide Odd thizosphere of Reduction Stressed I	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled S	tle toe of s hes of soil	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte Dry-Season W Saturation Visil  Geomorphic Pt Shallow Aquita FAC-Neutral To	p transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imag.(C9) osition (D2) rd (D3) ast (D5) unds (D6) (LRR A)
marks: ark organic material translaturation and high water trea may be seasonally poydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (E1)  Inundation Visible on A	able is present. Linded, 4b(6) p.11  adicators: imum of one is  2)	andscape so 3, organic m	check all that apply Water-Stain 1, 2, 4A an Salt Crust of Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	y) ned Leave d 4B) (B11) rertebrates Sulfide Odd thizosphere of Reduction Stressed I	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled S	tle toe of s hes of soil	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte Dry-Season W Saturation Visil  Geomorphic Pt Shallow Aquita FAC-Neutral To	p transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imag.(C9) osition (D2) rd (D3) ast (D5) unds (D6) (LRR A)
emarks: Park organic material translaturation and high water translaturation and high water translaturation and high water translaturation and high water translaturation.  YDROLOGY  Vetland Hydrology In Primary Indicators (min Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B1)  Surface Soil Cracks (B1)  Sparsely Vegetated Colleted Observations:	able is present. Linded, 4b(6) p.11  adicators: imum of one is  2)  6) erial Imagery (Bencave Surface (	andscape so 3, organic m required; 7) B8)	check all that apply Check all that apply Water-Stain 1, 2, 4A an Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	y) ned Leave d 4B) (B11) rertebrates Gulfide Odd chizosphere of Reduced n Reduction Stressed I	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled S	tle toe of s hes of soil	Secondary Indicate  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit  Shallow Aquita  FAC-Neutral To  Paised Ant Mo  Frost-Heave H	transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) be on Aerial Imag.(C9) besition (D2) rd (D3) aest (D5) unds (D6) (LRR A) ummocks (D7)
emarks: Park organic material translaturation and high water ture may be seasonally polydric.  YDROLOGY  Vetland Hydrology In Primary Indicators (mir  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (E1)  Surface Soil Cracks (E1)  Sparsely Vegetated Colliceld Observations:  Surface Water Present?	able is present. Linded, 4b(6) p.111  adicators: imum of one is  2)  6) herial Imagery (Boncave Surface (	andscape so 3, organic m required; 7) B8)	check all that apply Water-Stain 1, 2, 4A an Salt Crust ( Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	y) ned Leave d 4B) (B11) rertebrates Sulfide Odd thizosphere of Reduction Stressed I lain in Ren	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled S	tle toe of s hes of soil cept MLRA ving Roots Soils (C6)	Secondary Indicato  Water-Stained 4A, and 4B)  Drainage Patte Dry-Season W Saturation Visil  Geomorphic Pt Shallow Aquita FAC-Neutral To	transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) be on Aerial Imag.(C9) besition (D2) rd (D3) aest (D5) unds (D6) (LRR A) ummocks (D7)
emarks: Dark organic material translaturation and high water three may be seasonally polydric.  YDROLOGY  Wetland Hydrology In Primary Indicators (min————————————————————————————————————	able is present. Linded, 4b(6) p.111  adicators: imum of one is  because Surface (  Yes  Yes  Yes	andscape so 3, organic m required; of the second se	check all that apply Water-Stain 1, 2, 4A an Salt Crust of Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	y) ned Leave d 4B) (B11) rertebrates Gulfide Odd thizosphere of Reduction Stressed I lain in Ren (inches): (inches):	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled (Plants (D1)	tle toe of shes of soil cept MLRA ving Roots Soils (C6) (LRR A)	Secondary Indicate  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit  Shallow Aquita  FAC-Neutral To  Paised Ant Mo  Frost-Heave H	transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) be on Aerial Imag.(C9) besition (D2) rd (D3) aest (D5) unds (D6) (LRR A) ummocks (D7)
emarks: Dark organic material translaturation and high water trea may be seasonally polydric.  YDROLOGY  Wetland Hydrology In Primary Indicators (min————————————————————————————————————	able is present. Linded, 4b(6) p.111  adicators: imum of one is  berial Imagery (B boncave Surface (  Yes Yes Yes  Tream gauge, mo	andscape so 3, organic m required; of the second se	check all that apply Water-Stain 1, 2, 4A an Salt Crust of Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	y) ned Leave d 4B) (B11) rertebrates Gulfide Odd thizosphere of Reduction Stressed I lain in Ren (inches): (inches):	s (B9) (exc (B13) or (C1) es along Li I Iron (C4) in in Tilled (Plants (D1)	tle toe of shes of soil cept MLRA ving Roots Soils (C6) (LRR A)	Secondary Indicate  Water-Stained 4A, and 4B)  Drainage Patte  Dry-Season W  Saturation Visit  Shallow Aquita  FAC-Neutral To  Paised Ant Mo  Frost-Heave H	transitional area of wetland bo etation and hydrology, soils control of two required Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) be on Aerial Imag.(C9) besition (D2) rd (D3) aest (D5) unds (D6) (LRR A) ummocks (D7)

WETLAND DE Project/Site: Boardman Creek	TERMINATO	N DATA	FORM - \		<b>ountains,</b> ackamas Co	100	d Coast R	_	2016	
Applicant/Owner: OLSD			•		State:	OR S	Sampling Poi	nt: SP5		
Investigators: Irina Lapina	Je	ennifer Maz	ze		Section. Tow	nship, Range			R 2E	
dform (hillslope, terrace, etc.):	Terrace				·	ex, none): Cor			pe(%) 2	2-3
Subregion (LRR): A		Lat: 45.3		`	: -122.6136		Datum:		,p=(,0) =	
	silt loam, 3 to 8 pe			20119		NWI Classificati				
Are climatic / hydrologic conditions or				Yes X	No		in in Remark			
Are Vegetation , Soil , I	,,		ly disturbed?			Circumstances"		,	( No	
Are Vegetation , Soil , I		Ŭ	roblematic?	,					110	
		, ,			•	explain any ans				
SUMMARY OF FINDINGS -			owing sar	npling poi	nt locatio	ns, transect	s, importa	ınt feat	ures, et	tc.
Hydrophytic Vegetation Present?	Yes N	о Х								
Hydric Soil Present?	Yes N	о Х		ampled Area Wetland?		v		v		
Wetland Hydrology Present?	Yes X N	0	Within a	Wellallu!		Yes	No	X		
Remarks: Sunny, 58-80 deg F, no rain past 3 d  VEGETATION— Use scientifi		ants.	Absolute % Cover	Dominant Species	Indicator Status	B. diam.		4		
Tree Stratum			78 COVE	Opecies	Status	Dominance T				
Shrub Stratum (Plot size	20.54					Number of Do That Are OBL			1	(A)
Shrub Stratum (Plot size: Crataegus monogyna	30 Ft )		3	Υ	FAC					
			3	=Total Cover		Total Number Species Acros			4	(B)
Herb Stratum (Plot size:	6 Ft )			_ rotal dovor		·				_ ` ′
Lapsana communis	,		15	Υ	FACU	Percent of Do That Are OBL			25.0%	(A/B)
Hedera helix			7	- Y	FACU					
Phalaris arundinacea			3	N	FACW	Prevalence In		neet:		
Bromus tectorum			2	N	NL	Total % C			ultiply by:	
Convolvulus arvensis			2	N	NL	OBL species	0	x 1		
			29	_=Total Cover		FACW specie		x 2		
Vine Stratum (Plot size:	30 Ft )					FAC species	3	x 3	= 9	
Rubus armeniacus			75	Υ	FACU	FACU specie	es 97			
			75	=Total Cover		UPL species	0	x 5	= 0	
						Column Total	s: 10	(A)	403	(B)
						Prevalence Index = B/A= 3.91				
						Hydrophytic Vegetation Indicators:				
						Rapid Te	st for Hydrop	hytic Veg	etation	
						Dominano	ce Test > 509	%		
						Prevalend	ce Index ≤ 3.0	0		
						Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)				
						Problematic Hydrophytic Vegetation (Explain)				
						Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
% Bare Ground in Herb Stratum	0					Hydrophy Vegetation P	40	⁄es	No	Х
harks: (Include photo numbers he	re or on a separa	te sheet.)								
West side of plot reduced due to pos	·	,	ig lot⊭							

Depth		Matrix				atures					
(inches)	Color	(moist)	%	Color (moist)	%	Type <sup>1</sup> Loc <sup>2</sup>	Т	exture	Re	emarks	
0 to 18	10YR	2/1	100				CLAY LOA		sample		ghout
Type: C=Con	centration, D	=Depletion	, RM=Redu	ced Martix, CS=C	overed or Co	oated Sand Grains	s. 2L	ocation: PL=Pore I	Lining, M=Matri	X.	
Hydric Soil I	ndicators:						Indica	tors for Problema	atic Hydric So	ils: 3	
Histosol (A				Sandy Redox (S	5)		2 (	cm Muck (A10)			
Histic Epipe	, ,		Ĺ	Stripped Matrix				ed Parent Material (TI	F2)		
Black Histic	` '		l.	Loamy Mucky M	lineral (F1) (ex	(cept MLRA 1)		ery Shallow Dark Surf	,		
Hydrogen S	, ,		L	Loamy Gleyed N	` '			her (Explain in Rema			
rai-m	elow Dark Sur	, ,	L	Depleted Matrix	. ,						
	Surface (A12)		L	Redox Dark Sur			<sup>3</sup> India	cators of hydrophytic	vegetation and w	etland	
	ky Mineral (S1	•		Depleted Dark S			hydr	ology must be preser	nt,		
Sandy Gley	red Matrix (S4)	)		Redox Depressi	ons (F8)		unie	ss disturbed or proble	ematic.		
Restricti	ve Layer (i	if observe	d):								
Type:							Hydric 9	ioil Present?	Yes	No	х
Depth (inch	es):						nyunc s	on Fresenti	165	140	^
		icators:									
m==0	I <b>rology Indi</b> ators (minim		s required; c	check all that appl	• •	39) (except MLRA	Se	econdary Indicators	•		ed)
Wetland Hyd	trology Indi ators (minim ater (A1)		s required; o	20-3	ined Leaves (E	39) (except MLRA	Se	•	s (minimum of t eaves (B9) (MLR		red)
Wetland Hyd Primary Indica Surface Wa	Irology Indi ators (minim ater (A1) Table (A2)		s required; c	Water-Sta	ined Leaves (E nd 4B)	39) (except MLRA	Se	Water-Stained L	eaves (B9) (MLR		red)
Wetland Hyd Primary Indica Surface Wa High Water	Irology Indi ators (minim ater (A1) Table (A2)		s required; c	Water-Star 1, 2, 4A ar Salt Crust	ined Leaves (E nd 4B)			Water-Stained L 4A, and 4B)  Drainage Patterr	eaves (B9) (MLR		red)
Wetland Hyd Primary Indicator Surface Wa High Water Saturation ( Water Mark	Irology Indi ators (minim ater (A1) Table (A2)		s required; o	Water-Sta 1, 2, 4A ar Salt Crust Aquatic Inv	ined Leaves (End 4B) (B11) /ertebrates (B1	13) C1)		Water-Stained L. 4A, and 4B)  Drainage Patterr  Dry-Season Wat	eaves (B9) (MLR ns (B10) er Table (C2)	A 1, 2,	red)
Wetland Hyd Primary Indicate Surface Wa High Water Saturation ( Water Mark	arology Indicators (minimater (A1) Table (A2) (A3) (s (B1) Deposits (B2)		s required; c	Water-Sta 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen	ined Leaves (End 4B) (B11) vertebrates (B1 Sulfide Odor (C	13) C1) along Living Roots (C		Water-Stained L. 4A, and 4B)  Drainage Patterr  Dry-Season Wat	eaves (B9) (MLR ns (B10) er Table (C2) e on Aerial Imag.	A 1, 2,	red)
Wetland Hyd Primary Indicator Surface Water High Water Saturation ( Water Mark Sediment D	Arology Indicators (minimater (A1) Table (A2) (A3) (as (B1) Deposits (B2) (its (B3)		s required; c	Water-Sta 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F	ined Leaves (End 4B) (B11) vertebrates (B1 Sulfide Odor (CR Rhizospheres a	13) C1) along Living Roots (C on (C4)		Water-Stained Li 4A, and 4B)  □ Drainage Patterr ✓ Dry-Season Wat □ Saturation Visible ✓ Geomorphic Pos	eaves (B9) (MLR ns (B10) er Table (C2) e on Aerial Imag- sition (D2)	A 1, 2,	red)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi	Arology Indicators (minimater (A1) Table (A2) (A3) (as (B1) Deposits (B2) (its (B3) (r Crust (B4)		s required; c	Water-Sta 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F	ined Leaves (End 4B) (B11) vertebrates (B1 Sulfide Odor (CR Rhizospheres a	13) C1) along Living Roots (C		Water-Stained Li 4A, and 4B)  □ Drainage Patterr ✓ Dry-Season Wat □ Saturation Visible	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2)	A 1, 2,	red)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or	Arology Indicators (minimater (A1) Table (A2) (A3) (as (B1) Deposits (B2) (its (B3) (r Crust (B4)		s required; c	Water-Star 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iron	ined Leaves (End 4B) (B11) /ertebrates (B1 Sulfide Odor (CRhizospheres a por Reduced Iron Reduction in	13) C1) along Living Roots (C on (C4)		Water-Stained Li 4A, and 4B)  □ Drainage Patterr  ☑ Dry-Season Wat □ Saturation Visible ☑ Geomorphic Pos □ Shallow Aquitand □ FAC-Neutral Tes	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2)	A 1, 2,	red)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi	Arology Indicators (minimater (A1) Table (A2) (A3) (as (B1) Deposits (B2) (its (B3) (as (B4) (crust (B4) (ds (B5))	um of one is		Water-Stan 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen Soxidized Foresence Recent Iron Stunted or	ined Leaves (End 4B) (B11) /ertebrates (B1 Sulfide Odor (CRhizospheres a por Reduced Iron Reduction in	13) C1) along Living Roots (C on (C4) i Tilled Soils (C6) nts (D1) (LRR A)		Water-Stained Li 4A, and 4B)  □ Drainage Patterr  ☑ Dry-Season Wat □ Saturation Visible ☑ Geomorphic Pos □ Shallow Aquitand □ FAC-Neutral Tes	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2) d (D3) st (D5) ands (D6) (LRR A)	A 1, 2,	red)
Vetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat o Iron Deposi Surface Soi	trology Indicators (minimater (A1) Table (A2) (A3) (as (B1) Deposits (B2) (ats (B3) (ar Crust (B4) (ats (B5) (ats (B5) (ats (B6))	um of one is	37)	Water-Stan 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen Soxidized Foresence Recent Iron Stunted or	ined Leaves (End 4B) (B11) vertebrates (B1) Sulfide Odor (CR) Rhizospheres a of Reduced Iron Reduction in Stressed Plan	13) C1) along Living Roots (C on (C4) i Tilled Soils (C6) nts (D1) (LRR A)		Water-Stained Li 4A, and 4B)  Drainage Patterr  ✓ Dry-Season Wat  Saturation Visible  ✓ Geomorphic Pos  Shallow Aquitard  FAC-Neutral Tes  Paised Ant Mour	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2) d (D3) st (D5) ands (D6) (LRR A)	A 1, 2,	red)
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Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat o Iron Deposi Surface Soi Inundation V Sparsely Ve	Arology Indicators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) (Its (B3) (F Crust (B4) (Its (B5) (Its (B5) (Visible on Aericegetated Concestations:	um of one is	37) (B8)	Water-Star 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iron Stunted or	ined Leaves (End 4B) (B11) vertebrates (B1) Sulfide Odor (CR) Rhizospheres a of Reduced Iron Reduction in Stressed Plan	13) C1) along Living Roots (C on (C4) i Tilled Soils (C6) nts (D1) (LRR A)		Water-Stained Li 4A, and 4B)  Drainage Patterr  ✓ Dry-Season Wat  Saturation Visible  ✓ Geomorphic Pos  Shallow Aquitard  FAC-Neutral Tes  Paised Ant Mour	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2) d (D3) st (D5) ands (D6) (LRR A)	A 1, 2,	red)
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Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat on Iron Deposi Surface Soi Inundation Sparsely Ve Field Observation Pro (includes cap	Irology Indicators (minimal later (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) Ir Crust (B4) Its (B5) If Cracks (B6) Visible on Aericegetated Concentry Present? Present? Present?	um of one is ial Imagery (E eave Surface Yes Yes	37) (B8) . No . X No	Water-Star 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen 3 Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leaves (End 4B) (B11) (ertebrates (B1) Sulfide Odor (Carlicospheres a cof Reduced Iron Reduction in Stressed Plandain in Remark (inches): (inches):	13) C1) along Living Roots (Con (C4) Tilled Soils (C6) hts (D1) (LRR A) ks)  20 14	C3)	Water-Stained Li 4A, and 4B)  □ Drainage Patterr  ☑ Dry-Season Wat □ Saturation Visible ☑ Geomorphic Pos □ Shallow Aquitard □ FAC-Neutral Tes □ Paised Ant Mour □ Frost-Heave Hur	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2) d (D3) st (D5) ads (D6) (LRR A) ammocks (D7)	A 1, 2,	
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat on Iron Deposi Surface Soi Inundation Sparsely Ve Field Observation Pro (includes cap	Irology Indicators (minimal later (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) Ir Crust (B4) Its (B5) If Cracks (B6) Visible on Aericegetated Concentry Present? Present? Present?	um of one is ial Imagery (E eave Surface Yes Yes	37) (B8) . No . X No	Water-Stan 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen SOxidized Foresence Recent Iron Stunted or Other (Expose X Depth Depth Standard Process Control Con	ined Leaves (End 4B) (B11) (ertebrates (B1) Sulfide Odor (Carlicospheres a cof Reduced Iron Reduction in Stressed Plan Polain in Remark (inches): (inches): (inches):	13) C1) along Living Roots (Con (C4) Tilled Soils (C6) hts (D1) (LRR A) ks)  20 14	C3)	Water-Stained Li 4A, and 4B)  □ Drainage Patterr  ☑ Dry-Season Wat □ Saturation Visible ☑ Geomorphic Pos □ Shallow Aquitard □ FAC-Neutral Tes □ Paised Ant Mour □ Frost-Heave Hur	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2) d (D3) st (D5) ads (D6) (LRR A) ammocks (D7)	A 1, 2,	
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Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat on Iron Deposi Surface Soi Inundation Sparsely Ve Field Observation Pro (includes cap	Irology Indicators (minimal later (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) Ir Crust (B4) Its (B5) If Cracks (B6) Visible on Aericegetated Concentry Present? Present? Present?	um of one is ial Imagery (E eave Surface Yes Yes	37) (B8) . No . X No	Water-Star 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen 3 Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leaves (End 4B) (B11) (ertebrates (B1) Sulfide Odor (Carlicospheres a cof Reduced Iron Reduction in Stressed Plan Polain in Remark (inches): (inches): (inches):	13) C1) along Living Roots (Con (C4) Tilled Soils (C6) hts (D1) (LRR A) ks)  20 14	C3)	Water-Stained Li 4A, and 4B)  □ Drainage Patterr  ☑ Dry-Season Wat □ Saturation Visible ☑ Geomorphic Pos □ Shallow Aquitard □ FAC-Neutral Tes □ Paised Ant Mour □ Frost-Heave Hur	eaves (B9) (MLR as (B10) er Table (C2) e on Aerial Imag. sition (D2) d (D3) st (D5) ads (D6) (LRR A) ammocks (D7)	A 1, 2,	

WETLAND DETERMINATION DAT			· ·		_		246	
Project/Site: Boardman Creek	City/Count	.y: CI	ackamas Co		pling Date:		010	
Applicant/Owner: OLSD			State		pling Point:			
Investigators: Irina Lapina Jennifer M	aze	= = =	Section, Tov	vnship, Range S 1	8 T 2S		2E	
dform (hillslope, terrace, etc.): Depression	L	ocal Relief (co	ncave, conv	ex, none): Conca	/e	Slop	e(%) 0	
Subregion (LRR): A Lat: 45.	394824	Long	-122.613	523	Datum: NA	\D83		
Soil Map Unit Name: Woodburn silt loam, 3 to 8 percent slo	pes			NWI Classification:	PEM1C			
Are climatic / hydrologic conditions on the site typical for this time	ne of year?	Yes X	No	(If No, explain in	Remarks)			
Are Vegetation , Soil , Hydrology , significant	ntly disturbed?	A	re "Normal	Circumstances" pre	sent? Yes	s X	No	
Are Vegetation , Soil , Hydrology , naturally	problematic?		(If needed,	explain any answer	s in Remarks	s.)		
SUMMARY OF FINDINGS - Attach a site map si	howing sar	npling poi	nt locati <u>o</u>	ns, transects, i	mportant	t featu	res, et	ic.
Hydrophytic Vegetation Present? Yes X No								
Hydric Soil Present? Yes X No		ampled Area						
Wetland Hydrology Present? Yes X No	within a	Wetland?		Yes X	No			
Sunny, 58-80 deg F, no rain past 3 days, Transitional area, soi  VEGETATION— Use scientific names of plants.	Absolute	Dominant	Indicator					
	% Cover	<u>Species</u>	<u>Status</u>	Dominance Test	Worksheet	:		
<u>Tree Stratum</u> (Plot size: 30 Ft )  Fraxinus latifolia	20	Υ	FACW	Number of Domii That Are OBL, F			5	(A)
	20	=Total Cover		Total Number of I	Cominant			
Shrub Stratum (Plot size: 30 Ft )				Species Across a			6	(B)
Physocarpus capitatus	30	Y	FACW					
Spiraea douglasii	30	Υ	FACW	Percent of Domin			83.3%	(A/B)
Crataegus monogyna	20	Υ	FAC					
	80	=Total Cover		Prevalence Inde	x Workshee	t:		
Herb Stratum (Plot size: 6 Ft )				Total % Cove			iply by:	
Phalaris arundinacea	65	Y	FACW	OBL species	0	x 1 =	0	
Convolvulus arvensis	3	N	NL	FACW species	147	x 2 =		
Juncus effusus	2	N	FACW	FAC species	20	x 3 =	60	
Nr O I	70	=Total Cover		FACU species	15	x 4 =	60	
Vine Stratum (Plot size: 30 Ft )				UPL species	0	x 5 =	0	
Rubus armeniacus	15	Υ	FACU	Column Totals:	182	(A)	414	(B)
	15	_=Total Cover			Index = B/A	=	2.27	
				Hydrophytic Veg	etation Indic	cators:		
				Rapid Test fo	r Hydrophyti	ic Veget	ation	
				X Dominance T	est > 50%			
				X Prevalence In	ndex ≤ 3.0			
				Morphologica data in Rema				oorting
				Problematic I	Hydrophytic '	Vegetati	on (Ex	plain)
				Indicators of hyd				
% Bare Ground in Herb Stratum 5				Hydrophytic Vegetation Prese	ent? Yes	х	No	
narks: (Include photo numbers here or on a separate sheet.)	1			_	, 00			
nance. (molude prioto numbers here of on a separate sheet.)	,							

Depth		Matrix				Redox	Features			
(inches)	Color	(moist)	%		Color (moist)	%	Туре	1 Loc 2	Texture	Remarks
1 to 16	10YR	2/1	100						SILT LOAM	
16 to 18	10YR	2/1	99		10YR 4/1	1	D	M	SILT LOAM	
¹Type: C=Conce	entration, D	=Depletion,	RM=Re	educe	d Martix, CS=Co	vered or	Coated	Sand Gra	ains. 2Location: PL=Pore Lir	ning, M=Matrix.
Hydric Soil Ind	dicators:								Indicators for Problemati	ic Hydric Soils: 3
Histosol (A1)					Sandy Redox (S5	)			2 cm Muck (A10)	
Histic Epipedo	on (A2)				Stripped Matrix (S	86)			Red Parent Material (TF2)	) =
Black Histic (A	A3)				Loamy Mucky Mir	neral (F1)	(except M	LRA 1)	Very Shallow Dark Surfac	<b>,</b>
Hydrogen Sul	lfide (A4)				Loamy Gleyed Ma	atrix (F2)			Other (Explain in Remarks	
Depleted Belo	ow Dark Sur	ace (A11)			Depleted Matrix (I	F3)				-,
Thick Dark Su	urface (A12)				Redox Dark Surfa	ice (F6)			<sup>3</sup> Indicators of hydrophytic ve	getation and wetland
Sandy Mucky	Mineral (S1	)			Depleted Dark Su	ırface (F7	)		hydrology must be present,	
Sandy Gleyeo	d Matrix (S4)				Redox Depression	ns (F8)			unless disturbed or problem	natic
Restrictive	e Layer (i	f observe	d):							
Туре:									Hydric Soil Present?	Yes X No
Depth (inches	s):								Hydric Soil Fresent?	res A NO
Remarks:										
hydrophytic vegeta										
HYDROLOGY										
HYDROLOGY Wetland Hydro	ology Indi									
HYDROLOGY Wetland Hydro	ology Indi ors (minim		require		eck all that apply	)				minimum of two required)
HYDROLOGY Wetland Hydro Primary Indicato	ology Indi ors (minim		require		eck all that apply	r) ed Leave	s (B9) (ex		Water-Stained Lea	minimum of two required)
HYDROLOGY Wetland Hydro Primary Indicato Surface Wate High Water Ta	ology Indi ors (minimi or (A1) able (A2)		require		eck all that apply  Water-Stain 1, 2, 4A and	r) led Leave l 4B)	s (B9) (ex			
HYDROLOGY Wetland Hydro Primary Indicato	ology Indi ors (minimi or (A1) able (A2)		require		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I	r) led Leave I 4B) B11)	, , ,		Water-Stained Lea	ves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydro Primary Indicato Surface Wate High Water Ta	ology Indiors (minimor (A1) able (A2)		require		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I	ed Leave 148) B11) ertebrates	(B13)		Water-Stained Lea 4A, and 4B)	ves (B9) (MLRA 1, 2,
HYDROLOGY  Wetland Hydro  Primary Indicate  ✓ Surface Wate  ✓ High Water Ta  ✓ Saturation (A3	ology Indi ors (minime or (A1) lable (A2) 3) (B1)		require		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve	ed Leave 1 4B) B11) artebrates ulfide Odd	(B13) or (C1)	cept MLRA	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of	ves (B9) (MLRA 1, 2,
HYDROLOGY  Wetland Hydro Primary Indicate  Surface Wate High Water Ta  Saturation (AS  Water Marks	ology Indi ors (minimus or (A1) able (A2) 3) (B1) posits (B2)		require		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve	ed Leave 4 4B) B11) ertebrates ulfide Odo	(B13) or (C1) es along L	cept MLRA	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of	ves (B9) (MLRA 1, 2, (B10) Table (C2) on Aerial Imag.(C9)
HYDROLOGY  Wetland Hydro  Primary Indicate  ✓ Surface Wate  ✓ High Water Ta  ✓ Saturation (A3  Water Marks  Sediment Dep	ology Indi ors (minimi or (A1) able (A2) 3) (B1) posits (B2) s (B3)		require		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduced	(B13) or (C1) es along L d Iron (C4)	cept MLRA	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of	(B10) Table (C2) on Aerial Imag.(C9) on (D2)
Wetland Hydro Primary Indicate Surface Wate High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or C	ology Indi ors (minimi or (A1) sable (A2) 3) (B1) posits (B2) 6 (B3) Crust (B4) (B5)		require		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reducec Reduction	(B13) or (C1) es along L d Iron (C4) n in Tilled	cept MLRA iving Roots Soils (C6)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of  Geomorphic Position	(B10) Table (C2) on Aerial Imag.(C9) on (D2)
Wetland Hydro Primary Indicate Surface Wate High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	ology Indi ors (minimi or (A1) sable (A2) 3) (B1) posits (B2) 6 (B3) Crust (B4) (B5) Cracks (B6)	um of one is			eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I	(B10) Table (C2) on Aerial Imag.(C9) on (D2) D3)
Wetland Hydro Primary Indicate Surface Wate High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or C	ology Indi ors (minimi or (A1) sable (A2) 3) (B1) posits (B2) 6 (B3) Crust (B4) (B5) Cracks (B6)	um of one is			eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I	(B10) Table (C2) on Aerial Imag. (C9) on (D2) D3) (D5) s (D6) (LRR A)
Wetland Hydro Primary Indicate Surface Wate High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	ology Indi ors (minimus er (A1) sable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) (B5) Cracks (B6) sible on Aeri	um of one is	7)		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I  FAC-Neutral Test ( Paised Ant Mounds	(B10) Table (C2) on Aerial Imag. (C9) on (D2) D3) (D5) s (D6) (LRR A)
Wetland Hydro Primary Indicato Surface Wate High Water Ta Saturation (A3 Water Marks of Sediment Deposits Algal Mat or Color Iron Deposits Surface Soil Color Inundation Vis	ology Indi ors (minimi or (A1) able (A2) 3) (B1) posits (B2) 6 (B3) Crust (B4) (B5) Cracks (B6) sible on Aeri etated Conc	um of one is	7)		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I  FAC-Neutral Test ( Paised Ant Mounds	(B10) Table (C2) on Aerial Imag. (C9) on (D2) D3) (D5) s (D6) (LRR A)
Wetland Hydro Primary Indicato Surface Wate High Water Ta Saturation (A3 Water Marks of Sediment Deposits Algal Mat or Color Iron Deposits Surface Soil Color Inundation Vis	ology Indi ors (minimi or (A1) able (A2) 3) (B1) posits (B2) 6 (B3) Crust (B4) (B5) Cracks (B6) sible on Aeri etated Conc	um of one is	7)		eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I  FAC-Neutral Test ( Paised Ant Mounds	(B10) Table (C2) on Aerial Imag. (C9) on (D2) D3) (D5) s (D6) (LRR A)
Wetland Hydro Primary Indicate Value High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or Co Iron Deposits Surface Soil Co Inundation Vis Sparsely Vego	ology Indions (minimulations (minimulations (minimulations (minimulations)) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerioetated Concestions: Present?	um of one is al Imagery (B ave Surface (	7) B8)	ed; che	eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leave d 4B) B11) ertebrates ulfide Odd nizosphere f Reduced Reduction Stressed f ain in Ren	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6) ) (LRR A)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I FAC-Neutral Test (I Paised Ant Mounds Frost-Heave Humm	(B10) Table (C2) on Aerial Imag.(C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)
Wetland Hydro Primary Indicate Surface Wate High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or Color Iron Deposits Surface Soil Color Inundation Vis Sparsely Vegr Field Observat Surface Water F	ology Indions (minimulate (A1) (able (A2) (A2) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (B5) (Cracks (B6) (B5) (B5) (B5) (B5) (B5) (B5) (B5) (B5	um of one is al Imagery (B ave Surface ( Yes	7) B8) X	ed; che	eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaved 44B) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction Stressed F	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6) ) (LRR A)	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I  FAC-Neutral Test ( Paised Ant Mounds	(B10) Table (C2) on Aerial Imag.(C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)
Wetland Hydro Primary Indicate V Surface Wate V High Water Ta V Saturation (A3 Water Marks Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observat Surface Water F Water Table Pre Saturation Pres (includes capilla	ology Indions (minimulate (A1) (able (A2) (A2) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (B5) (B5) (B5) (B5) (B5) (B5) (B5	al Imagery (B ave Surface ( Yes Yes Yes	7) B8) X X	No No No	eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaved 48) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction Stressed F ain in Ren (inches): (inches):	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1 narks)	cept MLRA iving Roots Soils (C6) ) (LRR A)  2 9 2	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I FAC-Neutral Test (I Paised Ant Mounds Frost-Heave Humm	(B10) Table (C2) on Aerial Imag.(C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)
Wetland Hydro Primary Indicate V Surface Wate V High Water Ta V Saturation (A3 Water Marks Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observat Water Table Pre Saturation Pres	ology Indions (minimulate (A1) (able (A2) (A2) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (B5) (B5) (B5) (B5) (B5) (B5) (B5	al Imagery (B ave Surface ( Yes Yes Yes	7) B8) X X	No No No	eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaved 48) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction Stressed F ain in Ren (inches): (inches):	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1 narks)	cept MLRA iving Roots Soils (C6) ) (LRR A)  2 9 2	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I FAC-Neutral Test (I Paised Ant Mounds Frost-Heave Humm	(B10) Table (C2) on Aerial Imag.(C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)
Wetland Hydro Primary Indicate Variace Wate Whigh Water Ta Vater Marks Sediment Deposits Algal Mat or Ca Iron Deposits Surface Soil Ca Inundation Vis Sparsely Vege Field Observat Surface Water F Water Table Pre Saturation Pres (includes capilla	ology Indions (minimulate (A1) (able (A2) (A2) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (Cracks (B6) (B5) (B5) (B5) (B5) (B5) (B5) (B5) (B5	al Imagery (B ave Surface ( Yes Yes Yes	7) B8) X X	No No No	eck all that apply  Water-Stain 1, 2, 4A and Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaved 48) B11) ertebrates ulfide Odd nizosphere f Reduceto Reduction Stressed F ain in Ren (inches): (inches):	(B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1 narks)	cept MLRA iving Roots Soils (C6) ) (LRR A)  2 9 2	Water-Stained Lea 4A, and 4B)  Drainage Patterns  Dry-Season Water  Saturation Visible of Geomorphic Position  Shallow Aquitard (I FAC-Neutral Test (I Paised Ant Mounds Frost-Heave Humm	(B10) Table (C2) on Aerial Imag.(C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D7)

WETLAND DETERMINA ON DAT  Project/Site: Boardman Creek	A FORM -		ountains lackamas Co	Y =	oast Reg	i <b>on</b> 6/22/20	016	
Applicant/Owner: OLSD			State	: OR Samp	ling Point:	SP7		
Investigators: Irina Lapina Jennifer M	laze		Section, Tov	wnship, Range S 18	•	R	2E	
. dform (hillslope, terrace, etc.): Depression			,	vex, none): Concave			e(%) 0	
Subregion (LRR): A Lat: 45		,	: -122.613	· · · · · -	Datum: NA		-(/5)	
		20119	. 122.010		PEM1C			
		Yes X	No					
Are climatic / hydrologic conditions on the site typical for this tin	•			(If No, explain in	,	V	M.	
Are Vegetation , Soil , Hydrology , significa	ntly disturbed? / problematic?			Circumstances" prese explain any answers			No	
SUMMARY OF FINDINGS - Attach a site map s	howing sa	mplina poi	nt locatio	ns. transects. in	nportant	featu	res. ef	tc.
Hydrophytic Vegetation Present? Yes X No		pg po		,			,	
Hydric Soil Present? Yes X No	Is the S	ampled Area						
Wetland Hydrology Present? Yes X No		Wetland?		Yes X	No			
Remarks: Sunny, 58-80 deg F, no rain past 3 days.								
<b>VEGETATION</b> Use scientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominana Toot V	Maulcalaaa	_		
Tree Stratum (Plot size: 30 Ft )	70 00701	Ороспос	<u>Otatao</u>	Dominance Test V				
Fraxinus latifolia	20	Υ	FACW	Number of Domina That Are OBL, FAG			5	(A)
	20	=Total Cover			1/1			
Shrub Stratum (Plot size: 30 Ft )				Total Number of Do Species Across all			6	(B)
Physocarpus capitatus	30	Υ	FACW	oposios / torocs an	olidia.			(5)
Spiraea douglasii	30	Y	FACW	Percent of Domina			83.3%	(A/B)
Crataegus monogyna	20	Υ	FAC	That Are OBL, FAC	CW, or FAC	:	00.070	(,,,,)
	80	=Total Cover		Prevalence Index	Workshee	t:		
Herb Stratum (Plot size: 6 Ft )				Total % Cover	of:	Mult	iply by:	
Phalaris arundinacea	65	Υ	FACW	OBL species	0	x 1 =	0	
Convolvulus arvensis	3	N	NL	FACW species	147	x 2 =	294	
Juncus effusus	2	N	FACW	FAC species	20	x 3 =	60	
	70	=Total Cover		FACU species	15	x 4 =	60	
Vine Stratum (Plot size: 30 Ft )				UPL species	0	x 5 =	0	
Rubus armeniacus	15	Υ	FACU		100	(A)	444	(D)
	15	=Total Cover		Column Totals:	182	(A)	414	(B)
		- Total Oovel		Prevalence li	ndex = B/A	=	2.27	
				Hydrophytic Veget	ation Indic	ators:		
				Rapid Test for			ation	
						o rogo.		
				X Dominance Te	st > 50%			
				X Prevalence Inc				
				Morphological data in Remark				oorting
				Problematic Hy	drophytic '	√egetati	on (Ex	plain)
				Indicators of hydric must be present, t				
% Bare Ground in Herb Stratum 5				Hydrophytic Vegetation Preser	nt? Yes	х	No	
narks: (Include photo numbers here or on a separate sheet.)	)							

	ption: (Desc	cribe to the d	epth	neede	d to document	the indic		confirm 1	the absence of Indicators.)	
Depth (inches)	Color	(moist)	%		Color (moist)	%	Type 1	Loc 2	Texture	Remarks
·	10YR	3 / 2	100		(,5.5.)		.,,,,		SILT LOAM	
					d Martix, CS=Co	vered or	Coated	Sand Gra		M=Matrix
Type, C=Cont	centration, D	-Depletion, K	.101-176	suuce	u Martix, CS-CO	vereu or	Coaled	Janu Gra	inis. —-cocation: i t =-i ore timing, i	VI-IVIGUIX
Hydric Soil I	ndicators:								<b>Indicators for Problematic Hy</b>	dric Soils: 3
Histosol (A1	1)				Sandy Redox (S5	)			2 cm Muck (A10)	
Histic Epipe	don (A2)				Stripped Matrix (S	66)			Red Parent Material (TF2)	
Black Histic	(A3)				Loamy Mucky Mir	neral (F1)	(except Mi	_RA 1)	Very Shallow Dark Surface (TF	12)
✓ Hydrogen S	ulfide (A4)				Loamy Gleyed Ma	atrix (F2)			Other (Explain in Remarks)	12)
Depleted Be	elow Dark Surf	face (A11)			Depleted Matrix (F	-3)				
=	Surface (A12)				Redox Dark Surfa	, ,			Indicators of hydrophytic vegetation	on and wetland
	ky Mineral (S1				Depleted Dark Su	, ,			hydrology must be present,	
Sandy Gley	ed Matrix (S4)				Redox Depression	ns (F8)			unless disturbed or problematic.	
Restricti	ve Layer (i	f observed)	:							
Type:									Hydric Soil Present? Ye	es X No
Depth (inch	es):								Tiyano con trocont.	, o x
HYDROLOG  Wetland Hyd  Primary Indica	rology Indi		equire	ed; che	eck all that apply	)			Secondary Indicators (minir	num of two required)
Surface Wa	, ,				Water-Stain		s (B9) (exc	ept MLRA	, water-Stained Leaves (E	39) (MLRA 1, 2,
✓ High Water	Table (A2)				1, 2, 4A and	·			4A, and 4B)	
✓ Saturation (	A3)				Salt Crust (E	,	/B42\		Drainage Patterns (B10)	
Water Mark	, ,								Dry-Season Water Table	; (C2)
	eposits (B2)				✓ Hydrogen Si Oxidized Rh			vina Roots	Saturation Visible on Aei	rial Imag (C9)
Drift Deposi					Presence of		-	ving roots	Geomorphic Position (D2	2)
Algal Mat or					Recent Iron		, ,	Soils (C6)	Shallow Aquitard (D3)	
Iron Deposit	' '				Stunted or S			, ,	✓ FAC-Neutral Test (D5)	
	l Cracks (B6)	al Imagery (B7)			Other (Expla			(2.0.7.)	Paised Ant Mounds (D6)	,
		ar illiagery (br.) ave Surface (B8	37		Other (Explic	anii nii i (Gii	iai koj		Frost-Heave Hummocks	(D7)
Field Observa		ave odnace (be	,,							
Surface Wate		Yes	Х	No	Donth (	(inches):		6		
Water Table F		Yes	X	No		(inches):		0		
Saturation Pre		Yes	X	No		(inches):		0	Wetland Hydrology Present?	Yes X No
(includes capi		100		140	Борин	().				
		am gauge, moni	toring	well, a	erial photos, previc	ous inspec	tions), if a	vailable:		
Remarks: D2 - Adjacent to	floodplain,									

Project/Site:	WETLAND D  Boardman Creek	F I EKININA	PN DAT	City/Coun		lackamas Co		Sampling Date	_	2016	
Applicant/Owner				Oity/Oodii	ity. O	State	•	Sampling Poi		.010	
Investigators:	Irina Lapina		Jennifer Ma	370			vnship, Range			2E	
		Floodplain	Jenninei wa			,	viisilip, Ralige vex, none):    C			pe(%) 0	,
	ope, terrace, etc.):	riooupiairi	Lot: 45		,					pe(70) 0	
Subregion (LRR		1 1 .	Lat: 45.	394196	Long	j: -122.611	NWI Classifica	Datum:			
Soil Map Unit Na	,	•	-1 6 41-:- 4:	6 0	V V	Nie					
•	drologic conditions	•		•	Yes X	No	•	lain in Remark		Na	
Are Vegetation	, Soil ,		, ,	ntly disturbed?		Are Normal	Circumstances	s present?	Yes X	No	
Are Vegetation	, Soil,					,		swers in Rema			
	OF FINDINGS			nowing sa	mpling poi	nt locatio	ns, transec	cts, importa	int feati	ıres, et	C.
	egetation Present?	Yes X	No								
Hydric Soil Pre Wetland Hydro		Yes X Yes X	No No		ampled Area Wetland?		Yes	X No			
Remarks: Cloudy, 56-67 o	deg F, 0.3in precip.										
VEGETATIO	N_ Use scienti	ific names of	plants.	Absolute	Dominant	Indicator					
Tree Stratum			p	% Cover	<u>Species</u>	<u>Status</u>	Dominance	Test Worksho	eet:		
		12						Dominant Spec BL, FACW, or F		3	(A)
Shrub Stratu Rosa wo	_ (1.003.20	e: 30 Ft )		60	Y	FACU	11100111001	22,171011,011	, 10.		
	douglasii			30	- <u>'</u>	FACW		er of Dominant oss all Strata:		5	(B)
	us monogyna			25	Y	FAC	- openios / 101				(5)
Herb Stratum				115	=Total Cover			ominant Speci BL, FACW, or F		60.0%	(A/B)
	1 (Plot size arundinacea	e: 6 Ft )	0	5	Y	FACW	Prevalence	Index Worksh	neet:		
Tigano	aranaoa	Ti .		5	=Total Cover		Total %	Cover of:	Mu	ltiply by:	
Vine Stratum	/Dl	20.51					OBL species	s 0	x 1 =	= 0	
	— (Plot size	e: <u>30 Ft</u> )	}	7	Υ	FACU	FACW spec	ies 35	x 2 =	= 70	
Nubus ai	inieniacus			7	=Total Cover		FAC species	s 25	x 3 =	= 75	
							FACU spec	ies 67	x 4 =	= 268	
							UPL species	0	x 5 =	= 0	
							Column Tota	als: 12	7 (A)	413	(B)
							Preva	lence Index = E	B/A=	3.25	
							Hydrophytic	Vegetation In	dicators:		
							Rapid T	est for Hydropl	nytic Vege	tation	
							X Domina	nce Test > 50%	6		
							Prevale	nce Index ≤ 3.0	)		
								logical Adaptat Remarks or on			oorting
							Problem	natic Hydrophyt	tic Vegeta	tion (Ex	plain)
								of hydric soil an esent, unless d			
% Bare Ground	in Herb Stratum	<1					Hydrop Vegetation	D 40	es X	No	

X No

% Bare Ground in Herb Stratum <1

narks: (Include photo numbers here or on a separate sheet.)

to 15	10YR 10YR ntration, E icators: on (A2) A3) fide (A4) w Dark Sul rface (A12) Mineral (S- Matrix (S4) e Layer ( ): o alpha, alp ors (minim r (A1)	face (A11)  i)  if observed  ha-dipyridyl re	d <b>):</b> agent. So	bils sat	Sandy Redo Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Da Redox Depu	S=Covered or Gox (S5) atrix (S6) atrix (S6) atrix (F2) atrix (F3) atrix (F3) atrix (F3) atrix (F3) atrix (F6) ark Surface (F6) ark Surface (F7) ressions (F8)	C Coated		Indicators for Pi 2 cm Muck (A1 Red Parent Ma	10) Dark Surface (TF In Remarks) Irophytic vegetati pe present, or problematic.	A - Loam, mucky  M=Matrix.  ydric Soil:	s: <sup>3</sup>
ype: C=Concenty dric Soil India Histosol (A1) Histic Epipedor Black Histic (A3 Hydrogen Sulfic Sandy Mucky Manager Sandy Gleyed In Restrictive Type: Depth (inches): narks: sitive reaction to surface Water High Water Table Saturation (A3) Water Marks (E Sediment Depo	ntration, Edicators:  on (A2) (A3) (A3) (A4) (A4) (A4) (A4) (A4) (A4) (A4) (A4	2 / 1 D=Depletion,  face (A11)  if observed  ha-dipyridyl re	95 RM=Rei	bils sat	Sandy Redo Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Dark Redox Dept	S=Covered or ( ox (S5) atrix (S6) kky Mineral (F1) (e yed Matrix (F2) atrix (F3) a Surface (F6) ark Surface (F7) ressions (F8)	Coated	Sand Grain	LOAM  S. 2Location: PL  Indicators for PI 2 cm Muck (A1 Red Parent Ma Very Shallow E Other (Explain  3 Indicators of hyd hydrology must b unless disturbed	roblematic Hy  10)  Dark Surface (TF  in Remarks)  Irophytic vegetati  pe present,  or problematic.	M=Matrix.  ydric Soil:  12)	s: <sup>3</sup>
ype: C=Concenty dric Soil India Histosol (A1) Histic Epipedor Black Histic (A3) Hydrogen Sulfic Depleted Below Thick Dark Surd Sandy Mucky M Sandy Gleyed I  Restrictive Type: Depth (inches): narks: sitive reaction to a  DROLOGY etland Hydrol rimary Indicator Surface Water High Water Tab Saturation (A3) Water Marks (E Sediment Depo	ntration, E icators: on (A2) A3) iide (A4) w Dark Sul rface (A12) Mineral (S' Matrix (S4) c Layer ( ): o alpha, alp ors (minim	D=Depletion,  face (A11)  if observed  ha-dipyridyl re	d):	bils sat	Sandy Redo Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Dark Redox Dept	S=Covered or ( ox (S5) atrix (S6) kky Mineral (F1) (e yed Matrix (F2) atrix (F3) a Surface (F6) ark Surface (F7) ressions (F8)	Coated	Sand Grain	S. 2Location: PL  Indicators for PI 2 cm Muck (A1 Red Parent Ma Very Shallow I Other (Explain  Indicators of hyd hydrology must b unless disturbed	roblematic Hy  10)  Dark Surface (TF  in Remarks)  Irophytic vegetati  pe present,  or problematic.	ydric Soil:	s: <sup>3</sup>
Histosol (A1) Histosol (A1) Histosol (A1) Histic Epipedor Black Histic (A3) Hydrogen Sulfic Depleted Below Thick Dark Surd Sandy Mucky M Sandy Gleyed I  Restrictive Type: Depth (inches): marks: sitive reaction to  TOROLOGY etland Hydrol rimary Indicator Surface Water High Water Tab Saturation (A3) Water Marks (E Sediment Depo	icators: on (A2) A3) w Dark Surface (A12) Mineral (S' Matrix (S4) e Layer ( ): o alpha, alp ology Ind ors (minim	face (A11)  i)  if observed  ha-dipyridyl re	d <b>):</b> agent. So	bils sat	Sandy Redo Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Da Redox Depu	ox (S5) atrix (S6) cky Mineral (F1) (e yed Matrix (F2) atrix (F3) c Surface (F6) ark Surface (F7) ressions (F8)			Indicators for Pr 2 cm Muck (A1 Red Parent Ma Very Shallow E Other (Explain  Indicators of hyd hydrology must b unless disturbed	roblematic Hy  10)  Dark Surface (TF  in Remarks)  Irophytic vegetati  pe present,  or problematic.	ydric Soil:	s: <sup>3</sup>
Histosol (A1) Histic Epipedor Black Histic (A3) Hydrogen Sulfic Depleted Below Thick Dark Sund Sandy Mucky M Sandy Gleyed I  Restrictive Type: Depth (inches): narks: sitive reaction to Surface Water High Water Tab Saturation (A3) Water Marks (E Sediment Depo	on (A2) A3) iide (A4) w Dark Sui rface (A12) Mineral (S Matrix (S4) e Layer ( ): o alpha, alp ors (minim r (A1)	if observed ha-dipyridyl re	agent. So		Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted Da Redox Depr	atrix (S6) cky Mineral (F1) (exped Matrix (F2) atrix (F3) c Surface (F6) ark Surface (F7) ressions (F8)	except M	LRA 1)	2 cm Muck (A1 Red Parent Ma Very Shallow I Other (Explain  Indicators of hyd hydrology must b unless disturbed	10) Dark Surface (TF In Remarks) Irophytic vegetati pe present, or problematic.	i12) ion and wet	land
Type: Depth (inches): narks: sitive reaction to a  TDROLOGY etland Hydrol rimary Indicator Surface Water High Water Tab Saturation (A3) Water Marks (E Sediment Depo	o alpha, alp blogy Ind ors (minim	ha-dipyridyl re	agent. So			apply)			Hydric Soil Presen	nt? Y	es X	No
etland Hydrol rimary Indicator Surface Water I High Water Tab Saturation (A3) Water Marks (E Sediment Depo	ors (minim		required	d; che	eck all that	apply)						
Saturation (A3) Water Marks (E					Water	-Stained Leaves	(B9) (ex	cept MLRA	Water-S	ndicators (minir		
Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visit Sparsely Veget	B1) osits (B2) (B3) rust (B4) (B5) racks (B6)				Salt C Aquati Hydro Oxidiz Prese Recer	crust (B11) ic Invertebrates (I gen Sulfide Odor zed Rhizospheres ance of Reduced I at Iron Reduction ed or Stressed Pla (Explain in Rema	(C1) s along L Iron (C4) in Tilled lants (D1	Soils (C6)	Dry-Sea	e Patterns (B10) ason Water Table on Visible on Ae rphic Position (D Aquitard (D3) autral Test (D5) Ant Mounds (D6) eave Hummocks	e (C2) rial Imag (C 2)	9)
eld Observatio												
Surface Water Pr		Yes		No		Depth (inches):						
Water Table Pres		Yes	X	No		Depth (inches):		7	Wetland Hydrolo	av Present?	Yes	X No
Saturation Preser		Yes	X	No		Depth (inches):		0	**edand riyulolo	y i ieseliti	169	7. INO
(includes capillar) scribe Recorded		am gauge, mo	onitoring w	well, as	erial photos,	previous inspecti	ions), if a	vailable:				
narks:												

2 V		72			12.			
WETLAND DETERMINATION DA	ATA FORM - 1	Western M	lountains	V~lleys, and Coa	ast Regi	on		
Project/Site: Boardman Creek	City/Coun	ty: C	lackamas Co	oui. Samplir	ng Date:	6/24/20	16	
Applicant/Owner: OLSD			State	OR Sampli	ng Point:	SP9		
Investigators: Irina Lapina Jennife	r Maze		Section, Tov	vnship, Range S 18	T 2S	R 2	ĽΕ	
dform (hillslope, terrace, etc.): Terrace	L	ocal Relief (c	oncave, conv	ex, none): None		Slope	e(%) 2°	% to w
oubregion (LRR): A Lat:	45.394624	Long	j: -122.6119	928 D	atum: NA	)83		
Soil Map Unit Name: Cove silty clay loam				NWI Classification:	None			
Are climatic / hydrologic conditions on the site typical for this	time of year?	Yes X	No	(If No, explain in R	emarks)			
Are Vegetation , Soil , Hydrology , signif	ficantly disturbed?	,	Are "Normal	Circumstances" preser	nt? Yes	Х	No	
Are Vegetation, Soil, Hydrology, natur	ally problematic?		(If needed,	explain any answers ir	Remarks.	.)		
SUMMARY OF FINDINGS - Attach a site map	showing sar	mpling poi	nt locatio	ns, transects, im	portant	featur	es, et	c.
Hydrophytic Vegetation Present? Yes X No								
Hydric Soil Present? Yes X No		ampled Area						
Wetland Hydrology Present? Yes No X	( within a	Wetland?		Yes N	o X			
	Absolute	Dominant	Indicator					
<b>VEGETATION</b> Use scientific names of plants.	% Cover	Species	Status	Dominance Test W	orksheet:			
<u>Tree Stratum</u> (Plot size: <u>30 Ft</u> )  Fraxinus latifolia	75	Υ	FACW	Number of Dominar That Are OBL, FAC		:	2	(A)
	75	=Total Cover		Total Number of Do	minant			
Shrub Stratum				Species Across all S	Strata:		3	(B)
Herb Stratum (Plot size: 6 Ft )				Percent of Dominan	t Species		00 70/	(A /D)
Phalaris arundinacea	10	Y	FACW	That Are OBL, FAC			66.7%	(A/B
Equisetum arvense	13	=Total Cover		Prevalence Index V	Vorksheet	:		
Vine Stratum (District 20.5)		Total Cover		Total % Cover of	of:	Multij	ply by:	
(Plot size: 30 Ft )	80	Υ	FACU	OBL species	0	x 1 =	0	
Nubus aimeniacus	80	=Total Cover		FACW species	85	x 2 =	170	
		Total Cove		FAC species	3	x 3 =	9	
				FACU species	80	x 4 =	320	
				UPL species	0	x 5 =	0	
				Column Totals:	168	(A)	499	(B)
				Prevalence In	dex = B/A=	•	2,97	
				Hydrophytic Vegeta	tion Indica	ators:		
				Rapid Test for H	Hydrophytic	: Vegeta	ation	
				X Dominance Tes	t > 50%			
				X Prevalence Inde	ex ≤ 3.0			
				Morphological A				oorting
				Problematic Hyd	drophytic ∨	'egetatio	on (Ex	plain)
				Indicators of hydric must be present, u				

Yes X No

Hydrophytic Vegetation Present?

% Bare Ground in Herb Stratum

	otion: (Desci	ibe to the	depth ne	eaea to aocumer	it tile indi	cator or	confirm t	he absence of Indicators.)	
Depth		Matrix				Features			
(inches)	Color (	moist)	%	Color (moist)	- %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
to				5YR 4/8	30	С	_M	CLAY LOAM	
0 to 10	10YR	2/2	100					CLAY LOAM	Ai - Many roots
10 to 16	10YR	2/1	10	10YR 4/1	60	_D	M	CLAY LOAM	Bw - Compacted
<sup>1</sup> Type: C=Conc	entration, D=	Depletion,	RM=Redu	iced Martix, CS=C	Covered or	Coated	Sand Grai	ins. 2Location: PL=Pore Lini	ng, M=Matrix
Thick Dark S	) don (A2) (A3)	ce (A11)		Sandy Redox (S Stripped Matrix Loamy Mucky N Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi	(S6) Inneral (F1) Matrix (F2) (F3) face (F6) Gurface (F7)		_RA 1)	Indicators for Problematic  2 cm Muck (A10)  Red Parent Material (TF2)  Very Shallow Dark Surface  Other (Explain in Remarks  Indicators of hydrophytic veg hydrology must be present, unless disturbed or problema	(TF12) ) etation and wetland
Type: Depth (inche emarks:				nce of root systems,				Hydric Soil Present?	Yes X No
HYDROLOGY Wetland Hydr	rology Indica								
Surface Water High Water To Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposits Surface Soil Inundation V	er (A1) Table (A2) A3) (B1) eposits (B2) s (B3) Crust (B4) s (B5)	Imagery (B	7)	1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro	ined Leave nd 4B)	(B13) or (C1) es along Li I Iron (C4) n in Tilled S Plants (D1)	ving Roots Soils (C6)	Water-Stained Leav 4A, and 4B)  Drainage Patterns (I Dry-Season Water 1 Saturation Visible or	310) Table (C2) The Aerial Imag. (C9) The (D2) The (D2) The (D2) The (D6) (LRR A)
Field Observa Surface Water Water Table P	Present?	Yes Yes	N N	o X Depth	n (inches): n (inches): n (inches):			Wetland Hydrology Presen	t? Yes No X
Saturation Pre-		Yes							

Project/Site:	Boardman Creek			City/Coun	ty: Cl	ackamas Co	our. S	Sampling Date:	6/24/20	)16	
Applicant/Owne	er: OLSD					State	OR	Sampling Point:	SP10		
Investigators:	Irina Lapina		Jennifer Ma	aze		Section, Tov	vnship, Range	S 18 T 2S	R	2E	
dform (hills	ope, terrace, etc.):	Floodplain		L	ocal Relief (co	oncave, conv	/ex, none): Co	ncave	Slop	e(%) 1	% to w
oubregion (LRI	R): A		Lat: 45,	395042	Long	: -122.612	813	Datum: NA	D83		
Soil Map Unit N	lame: Cove silt	y clay loam					NWI Classificat	ion: PEM1C			
Are climatic / h	ydrologic conditions	•	al for this tim	e of year?	Yes X	No	(If No, expla	nin in Remarks)			
Are Vegetation	, Soil	, Hydrology	, significar	ntly disturbed?	,	Are "Normal	Circumstances"	present? Yes	Х	No	
Are Vegetation	, Soil	, Hydrology	, naturally	problematic?		(If needed	explain any ans	wers in Remarks	.)		
CHMMADV	OF FINDINGS	- Attach a c	ito man ek	owina ca	mnling noi					rae al	ic.
	egetation Present?		No No	lowing sai	iipiiiig poi	iit iocalio	nis, transect	o, important	Icatu	165, 61	
Hydric Soil Pr	-	Yes X	No	Is the S	ampled Area						
, Wetland Hydr	ology Present?	Yes X	No		Wetland?		Yes X	No			
	deg F, 0.3in precip			Absolute	Dominant	Indicator					
VEGETATI	ON_ Use scien	tific names of	f plants.	% Cover	Species	Status	Dominance -	Test Worksheet:			
Tree Stratu	<u>m</u> (Plot siz	ze: 30 Ft	)					ominant Species		2	(4)
Fraxinu	s latifolia			40	Y	FACW	That Are OB	_, FACW, or FAC	i:	2	(A)
Shrub Strat				40	=Total Cover		Total Number Species Acro			3	(B)
	s arundinacea	ze: 6 Ft	)	80	Y	FACW		ominant Species ., FACW, or FAC		66.7%	(A/B)
Equiser	um arvense			3 83	N	FAC	Prevalence I	ndex Workshee	::		
Vine Stratur	n				=Total Cover		Total % 0	Cover of:	Multi	ply by:	
	(PIOL SIZ	ze: 30 Ft	)	20	V	FACU	OBL species	0	x 1 =	0	
Rubus	armeniacus			20	Y	FACU	FACW specie	es 120	x 2 =	240	
				20	=Total Cover		FAC species	3	x 3 =	9	
							FACU specie	es 20	x 4 =	80	
							UPL species	0	x 5 =	0	
							Column Total	s: 143	(A)	329	(B)
							Prevale	ence Index = B/A		2.30	
							Hydrophytic '	egetation Indic	ators:		
							Rapid Te	st for Hydrophytic	c Veget	ation	
							X Dominan	ce Test > 50%			
							X Prevalen	ce Index ≤ 3.0			
								egical Adaptations emarks or on a s			oorting
								atic Hydrophytic \			plain)
					70			hydric soil and w sent, unless distu			
9/ Para Craun	d in Herb Stratum	0					Hydroph Vegetation P		х	No	

% Bare Ground in Herb Stratum

narks: (Include photo numbers here or on a separate sheet.)

Profile Descr	iption: (Des	cribe to the	depth r	eede	ed to document	the indi	cator or	confirm t	the absence of Indicators.)	
Depth		Matrix				Redox F				
(inches)	Colo	(moist)	%		Color (moist)	%	Туре	1 Loc 2	Texture	Remarks
0 to 7	10YR	2/1	100	_					CLAY LOAM	Very black matrix
7 to 16	10YR	2/1	93		7.5YR 3/3	7	С	M	CLAY LOAM	Very black matrix
¹Type: C=Con	centration, [	D=Depletion,	RM=Re	duce	d Martix, CS=Co	vered or	Coated	Sand Gra	ins. <sup>2</sup> Location: PL=Pore I	ining, M=Matrix.
Thick Dark Sandy Muc Sandy Gley	1) edon (A2) c (A3) Sulfide (A4) elow Dark Sul Surface (A12 ky Mineral (Silved Matrix (S4)	)  )	d):		Sandy Redox (S5 Stripped Matrix (S Loamy Mucky Mir Loamy Gleyed Matrix ( Redox Dark Surfa Depleted Dark Su Redox Depressio	66) neral (F1) ( atrix (F2) F3) ace (F6) urface (F7)		LRA 1)	Indicators for Problems  2 cm Muck (A10) Red Parent Material (TF Very Shallow Dark Surf Other (Explain in Rema  3 Indicators of hydrophytic hydrology must be preser unless disturbed or proble  Hydric Soil Present?	F2) ace (TF12) rks) vegetation and wetland nt,
Surface Waller High Water Saturation (Sediment Double Print Deposion Surface Solution Sparsely Water Table Saturation Print Surface Capture Surface Water Table (Saturation Print Saturation Print Surface Capture Surface Cap	Irology Ind ators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) Ir Crust (B4) its (B5) ill Cracks (B6) Visible on Aeregetated Concestions: er Present? Present? esent?	ial Imagery (B cave Surface ( Yes Yes Yes	7) B8) X X	No No No	Depth	ned Leaves 1 4B) B11) ertebrates ( ulfide Odor nizosphere f Reduced Reduction Stressed P ain in Rem (inches): (inches):	(B13) r (C1) s along L Iron (C4) in Tilled lants (D1 arks)	iving Roots Soils (C6) ) (LRR A) 16 10	Water-Stained Let 4A, and 4B)  □ Drainage Pattern  ☑ Dry-Season Watern Saturation Visible	er Table (C2) e on Aerial Imag (C9) iition (D2) I (D3) ot (D5) nds (D6) (LRR A) nmocks (D7)
Remarks: D2 - Within floor	dplain									

	WETLAND D	ETERMINA	TAD NC	A FORM -	Western M	ountains	, V <sup>-1</sup> leys, ar	nd Coas	t Reg	ion		
Project/Site:	Boardman Creek			City/Coun	ty: C	lackamas Co	oui.	Sampling	Date:	6/24/20	)16	
Applicant/Owner	r: OLSD					State	OR	Sampling	Point:	SP11		
Investigators:	Irina Lapina		Jennifer M	aze		Section, Tov	vnship, Range	S 18	T 2S	R	2E	
dform (hillslo	ope, terrace, etc.):	Terrace		L	ocal Relief (co	oncave, conv	vex, none): No	ne		Slope	e(%) 2	2% to w
oubregion (LRR	:): A		Lat: 45.	395042	Long	: -122,6128	313	Datu	um: NA	\D83		
Soil Map Unit Na	ame: Cove silty	clay loam					NWI Classifica	tion: PE	M1C			
Are climatic / hy	drologic conditions	on the site typic	al for this tim	e of year?	Yes X	No	(If No, expl	ain in Ren	narks)			
Are Vegetation	, Soil ,	Hydrology	, significar	ntly disturbed?	,	Are "Normal	 Circumstances	" present?	Yes	s X	No	
Are Vegetation		Hydrology	, naturally	problematic?		(If needed	explain any an	swers in F	emark	s )		
OLIBARA A DV	OF FINIDINGS	A 44 lo			امد مدالم							4.5
	OF FINDINGS			nowing sai	npiing poi	nt locatio	ns, transec	ts, impo	опапі	reatu	res, e	tc.
Hydric Soil Pre	egetation Present?	Yes X	No V	l. 4b. 0								
Wetland Hydro		Yes	No X		ampled Area Wetland?		Yes	No	х			
Remarks:	nogy Fresent?	Yes	No X				162	NO	^			
VEGETATIO	<b>DN</b> _ Use scienti	ific names of	plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance	Test Wor	ksheet			
<u>Tree Stratum</u> Salix X r	1 (Plot size	e: 30 Ft	)	40	Y	FAC	Number of E That Are OB	ominant 9	Species	3	3	(A)
				40	=Total Cover							
Shrub Stratu	===	e: 6 Ft	)				Total Number Species Acro				4	(B)
	arundinacea	C. <u>011</u>	,	65	Υ	FACW	Percent of D				75.0%	(A/B)
Impatien	ıs noli-tangere			7	Y	FACW	That Are OB	L, FACVV,	OF FAC	4		
Equisetu	ım arvense			3	N	FAC	Prevalence	Index Wo	rkshee	t:		
Galium a	aparine			3	N	FACU	Total %	Cover of:			ply by:	
	conglomeratus			3	N	FACW	OBL species		0	x 1 =	0	
Solanum	n dulcamara			3	N	FAC	FACW speci	es	75	x 2 =	150	
				84	=Total Cover		FAC species		46	x 3 =	138	
Vine Stratum	Plot size	e: <u>30 Ft</u>	)				FACU speci	es	53	x 4 =	212	
Rubus a	rmeniacus			50	Υ	FACU	UPL species		0	x 5 =	0	
				50	=Total Cover		Column Tota	ıls:	174	(A)	500	(B)
							Preval	ence Inde	x = B/A	=	2,87	
							Hydrophytic	Vegetatio	on Indio	ators:		
							Rapid To	est for Hyd	drophyti	c Veget	ation	
							X Domina	nce Test >	50%			
							X Prevaler	nce Index	≤ 3.0			
								ogical Ada Remarks o				porting
							Problem	atic Hydro	phytic '	∨egetati	on (Ex	plain)
							Indicators o					
							Hydroph	-				
% Bare Ground	I in Herb Stratum	0					Vegetation I	resent?	Yes	Х	No	
narks: (Includ	de photo numbers h	ere or on a sep	arate sheet.)	1								

Depth		atrix	0/	Calan (masist)		Features	1 1 2	Tarationa		Dama	ul. a	
(inches)	Color (mo	oist)	%	Color (moist)	%	Туре	1 Loc 2	Texture		Rema	rks	
0 to 13	10YR :	2 / 1	100					LOAM		Soils dark		
13 to 18	10YR :	2 / 1	90	5YR 4/6	10	_ C	M,PL	CLAY LOAM				
18 to 26	10YR :	2 / 1	65	10YR 3/6	15	<u> </u>	_M	CLAY LOAM				
Type: C=Conce	entration, D=De	epletion,	RM=Reduc	ced Martix, CS=Co	overed or	Coated	Sand Gra	ins. 2Location: PL	.=Pore Lining, N	/l=Matrix.		
Hydric Soil In	dicators:							Indicators for Pr	oblematic Hy	dric Soils:	3	
Histosol (A1)			L	Sandy Redox (S5	5)			2 cm Muck (A1	10)			
Histic Epiped	lon (A2)			Stripped Matrix (	S6)				•			
Black Histic (	(A3)			Loamy Mucky Mi	neral (F1)	(except M	LRA 1)	Red Parent Ma	ateriai (1F2) Dark Surface (TF1	2)		
Hydrogen Su	ılfide (A4)			Loamy Gleyed M	atrix (F2)			Other (Explain	,	2)		
Depleted Bel	ow Dark Surface	(A11)		Depleted Matrix (	F3)			Other (Explain	iii Remaiks)			
Thick Dark S	urface (A12)			Redox Dark Surfa	ace (F6)			3 Indicators of hyd	rophytic vegetatio	n and wetter	ad	
Sandy Mucky	y Mineral (S1)			Depleted Dark St	urface (F7)	)		hydrology must b	pe present,	iii ailu wellai	Iu	
Sandy Gleye	d Matrix (S4)			Redox Depressio	ns (F8)			unless disturbed	or problematic			
Restrictiv	e Layer (if ol	bserved	d):									
Type:												
Depth (inches	s):							Hydric Soil Presen	t? Ye	S	No	X
		lipyridyl re	eagent Feat	ures may be masked	I by organi	ic material	Pockets o	of moisture at 10" but not co	onsistently satura	ted.		
IYDROLOGY Wetland Hydr	ology Indicato	ors:		·		ic material	, Pockets o					- 4
YDROLOGY Wetland Hydr	rology Indicato	ors:		heck all that apply	/)			Secondary In	ndicators (minim	num of two		ed)
YDROLOGY Wetland Hydr	rology Indicato tors (minimum o	ors:		heck all that apply Water-Stair 1, 2, 4A and	/) ned Leave d 4B)			Secondary In	ndicators (minim	num of two		ed)
YDROLOGY Wetland Hydr Primary Indicat Surface Wate	rology Indicato tors (minimum o er (A1) Table (A2)	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust (	/) ned Leave d 4B) B11)	s (B9) (ex		Secondary In  Water-S  4A, and	ndicators (minim Stained Leaves (B 4B)	num of two		ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate	rology Indicato tors (minimum o er (A1) Table (A2)	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	/) ned Leave d 4B) B11) ertebrates	s (B9) (exc		Secondary Ir  Water-S 4A, and	ndicators (minim stained Leaves (B 4B) e Patterns (B10)	num of two 9) (MLRA 1,		ed)
YDROLOGY  Vetland Hydr  Primary Indicat  Surface Wate  High Water T  Saturation (A	rology Indicators (minimum of care (A1) Fable (A2) (B1)	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	r) ned Leave d 48) B11) ertebrates ulfide Odo	s (B9) (exc (B13) or (C1)	cept MLRA	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea	ndicators (minim stained Leaves (B 4B) e Patterns (B10) ason Water Table	num of two 9) (MLRA 1, (C2)	2,	ed)
YDROLOGY  Vetland Hydr  Primary Indicat  Surface Wate  High Water T  Saturation (A  Water Marks	rology Indicators (minimum of er (A1) Fable (A2) (B1) (posits (B2)	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo	ned Leave d 4B) B11) ertebrates sulfide Odc	s (B9) (exc (B13) or (C1) es along L	cept MLRA	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea	ndicators (minim stained Leaves (B 4B) e Patterns (B10) son Water Table on Visible on Aeri	num of two 9) (MLRA 1, (C2) (al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De	rology Indicators (minimum of the control of the co	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	ned Leave d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced	s (B9) (exc (B13) or (C1) es along L I Iron (C4)	cept MLRA	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor	ndicators (minim stained Leaves (B 4B) e Patterns (B10) ison Water Table on Visible on Aeri phic Position (D2	num of two 9) (MLRA 1, (C2) (al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposite	cology Indicate tors (minimum of the color)  Fable (A2)  (B1)  (B2)  (B3)  (B3)  Crust (B4)	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo	ned Leave d 4B) B11) ertebrates dulfide Odd hizosphere f Reduced Reduction	s (B9) (exc (B13) or (C1) es along L Il Iron (C4) n in Tilled	cept MLRA iving Roots Soils (C6)	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow	ndicators (minim stained Leaves (B 4B) e Patterns (B10) son Water Table on Visible on Aeri	num of two 9) (MLRA 1, (C2) (al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (	rology Indicators (minimum of the control of the co	ors:		heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	ned Leave d 4B) B11) ertebrates dulfide Odd hizosphere f Reduced Reduction	s (B9) (exc (B13) or (C1) es along L Il Iron (C4) n in Tilled	cept MLRA iving Roots Soils (C6)	Secondary In  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne	ndicators (minimistained Leaves (B 4B) e Patterns (B10) ason Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) autral Test (D5)	num of two 9) (MLRA 1, (C2) al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (I Iron Deposits Surface Soil	rology Indicators (minimum of the control of the co	ors: of one is	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo	ned Leave d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Secondary In  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised A	ndicators (minimatained Leaves (B 4B) e Patterns (B10) ason Water Table on Visible on Aeri phic Position (D2) Aquitard (D3)	(C2) al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or ( Iron Deposits Surface Soil ( Inundation Vi	rology Indicator tors (minimum of the control of th	ors: of one is	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo	ned Leave d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Secondary In  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised A	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6)	(C2) al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or ( Iron Deposits Surface Soil ( Inundation Vi	rology Indicator tors (minimum of the control of th	ors: of one is	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo	ned Leave d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Secondary In  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised A	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6)	(C2) al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or ( Iron Deposits Surface Soil ( Inundation Vi	rology Indicators (minimum of the control of the co	ors: of one is	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	ned Leave d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Secondary In  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised A	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6)	(C2) al Imag.(C9)	2,	ed)
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (I) Iron Deposits Surface Soil (I) Inundation Vi Sparsely Veg	rology Indicators (minimum of the control of the co	ors: of one is nagery (B) Surface (B)	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leave d 4B) B11) ertebrates iulfide Odd hizosphere f Reduced Reduction Stressed F ain in Ren	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised /  Frost-He	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6) eave Hummocks (B1)	num of two 9) (MLRA 1, (C2) al Imag.(C9) ) (LRR A) (D7)	2,	
YDROLOGY Vetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (I Iron Deposits Surface Soil (I Inundation Vi Sparsely Veg Surface Water	rology Indicators (minimum of core (A1) Table (A2) (B1) Posits (B2) (B3) Crust (B4) (B5) Cracks (B6) Isible on Aerial Impetated Concave Stions: Present?	ors: of one is magery (B: Surface (I	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o Recent Iron Stunted or : Other (Expl	ned Leave d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F ain in Ren	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1	cept MLRA iving Roots Soils (C6)	Secondary In  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised A	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6) eave Hummocks (B1)	(C2) al Imag.(C9)	2,	
Wetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (Iron Deposits) Surface Soil (Inundation Viiis) Sparsely Veg Surface Water Water Table Pr Saturation Pres (includes capille	rology Indicators (minimum of the content of the co	ors: of one is nagery (B: Surface (I Yes Yes Yes	required; c	wheck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o Recent Iron Stunted or s Other (Expl	ned Leave d 4B) B11) ertebrates iulfide Odd hizosphere f Reduced Reduction Stressed F ain in Ren (inches): (inches):	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1 narks)	iving Roots Soils (C6) ) (LRR A)	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised /  Frost-He	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6) eave Hummocks (B1)	num of two 9) (MLRA 1, (C2) al Imag.(C9) ) (LRR A) (D7)	2,	
Wetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (Iron Deposits Surface Soil (Inundation Viis Sparsely Veg Field Observat Surface Water Water Table Pr Saturation Pres (includes capille	rology Indicators (minimum of the content of the co	ors: of one is nagery (B: Surface (I Yes Yes Yes	required; c	heck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o Recent Iron Stunted or : Other (Expl	ned Leave d 4B) B11) ertebrates iulfide Odd hizosphere f Reduced Reduction Stressed F ain in Ren (inches): (inches):	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1 narks)	iving Roots Soils (C6) ) (LRR A)	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised /  Frost-He	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6) eave Hummocks (B1)	num of two 9) (MLRA 1, (C2) al Imag.(C9) ) (LRR A) (D7)	2,	
Wetland Hydr Primary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Algal Mat or (Iron Deposits Surface Soil (Inundation Viis Sparsely Veg Field Observat Surface Water Water Table Pr Saturation Pres (includes capille	rology Indicators (minimum of the content of the co	ors: of one is nagery (B: Surface (I Yes Yes Yes	required; c	wheck all that apply Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o Recent Iron Stunted or s Other (Expl	ned Leave d 4B) B11) ertebrates iulfide Odd hizosphere f Reduced Reduction Stressed F ain in Ren (inches): (inches):	s (B9) (exe (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1 narks)	iving Roots Soils (C6) ) (LRR A)	Secondary Ir  Water-S 4A, and  Drainag  Dry-Sea  Saturati  Geomor  Shallow  FAC-Ne  Paised /  Frost-He	ndicators (minimistained Leaves (B 4B) e Patterns (B10) eson Water Table on Visible on Aeri rphic Position (D2 Aquitard (D3) eutral Test (D5) Ant Mounds (D6) eave Hummocks (B1)	num of two 9) (MLRA 1, (C2) al Imag.(C9) ) (LRR A) (D7)	2,	

WETLAND DETERMINA **・ つい DATA	FORM - V	Western M	ountains.	. V∽Чevs. and Coa	st Reai	on		
Project/Site: Boardman Creek	City/Count		ackamas Co	1 -	g Date:		16	
Applicant/Owner: OLSD	•		State	: OR Samplin	g Point:	SP12		
Investigators: Irina Lapina Jennifer Ma:	7e			vnship, Range S 18	T 2S	R 2	E	
				vex, none): Concave	1 20		e(%) 2.	5% to
dform (hillslope, terrace, etc.): Terrace		,			tuma. NAT		(70) 2.	.5 70 10
Subregion (LRR): A Lat: 45.3	95324	Long	-122.6131		tum: NAD	703		
Soil Map Unit Name: Cove silty clay loam					one			
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes X	No	(If No, explain in Re	•			
Are Vegetation , Soil , Hydrology , significant	tly disturbed?	Α	Are "Normal	Circumstances" present	t? Yes	Х	No	
Are Vegetation, Soil, Hydrology, naturally p	problematic?		(If needed,	explain any answers in	Remarks.	)		
SUMMARY OF FINDINGS - Attach a site map sh	owing sar	npling poi	nt locatio	ns, transects, imp	ortant	featur	es, et	c.
Hydrophytic Vegetation Present? Yes X No								
Hydric Soil Present? Yes No X	Is the Sa	ampled Area						
Wetland Hydrology Present? Yes No X	within a	Wetland?		Yes No	X			
Cloudy, 56-67 deg F, 0,3in precip.								
<b>VEGETATION</b> — Use scientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Wo	rksheet:			
Tree Stratum (Plot size: 30 Ft )				Number of Dominant			3	(A)
Fraxinus latifolia	45	Y	FACW	That Are OBL, FACV	V, or FAC:		3	(^)
Populus balsamifera	10	N	FAC	Total Number of Dom	ninant			
	55	=Total Cover		Species Across all St	rata:		5	(B)
Shrub Stratum (Plot size: 30 Ft )				Davaget of Davainant	Cassina			
Corylus cornuta	3	Y Y	FACU	Percent of Dominant That Are OBL, FACW			60.0%	(A/B)
Rosa woodsii  Crataegus monogyna	2	N	FAC	Prevalence Index W	orkehoot			
Salix scouleriana	2	N	FAC	Total % Cover of			alv by:	
Spiraea douglasii	2	N	FACW		. 0	x 1 =	oly by: 0	
	12	=Total Cover		OBL species	125	x 2 =	250	
Herb Stratum (Plot size: 6 Ft )		-1010/00101		FACW species		x3=	165	
Herb Stratum (Plot size: 6 Ft )  Phalaris arundinacea	75	Υ	FACW	FAC species	55			
Equisetum arvense	40	Y	FAC	FACU species	22	x 4 =	88	
Lapsana communis	15	N	FACU	UPL species	0	x 5 =	0	
Equisetum hyemale	3	N	FACW	Column Totals:	202	(A)	503	(B)
Galium aparine	1	N	FACU					
Ranunculus spp.	1	N		Prevalence Ind	ex = B/A=		2.49	
Vicia americana	1	N	FAC	Hydrophytic Vegetat	ion Indica	ators:		
	136	=Total Cover		Rapid Test for H	ydrophytic	Vegeta	tion	
Vine Stratum				X Dominance Test	> 50%			
				X Prevalence Index	< 3 N			
				Morphological Addata in Remarks				orting
				Problematic Hyd	rophytic V	egetatio	on (Exp	plain)
				Indicators of hydric s must be present, un				
% Bare Ground in Herb Stratum 0				Hydrophytic Vegetation Present?	Yes	х	No	
harks: (Include photo numbers here or on a separate sheet.)								

Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc <sup>2</sup>	Texture	Remarks
0 to 16 10)	/R 3/3	100					SILT LOAM	Uniform, dry fill materia
<sup>1</sup> Type: C=Concentra	tion, D=Depletion	, RM=Reduce	ed Martix, CS=Co	overed or	Coated	Sand Grain	ns. 2Location: PL=Pore Linin	g, M=Matrix.
Hydric Soil Indicat	tors:						Indicators for Problematic	Hydric Soils: 3
Histosol (A1)			Sandy Redox (S	5)			2 cm Muck (A10)	-
Histic Epipedon (A	2)		Stripped Matrix (	S6)				
Black Histic (A3)			Loamy Mucky Mi	neral (F1)	(except MI	-RA 1)	Red Parent Material (TF2)	(TE40)
Hydrogen Sulfide (	A4)		Loamy Gleyed M	atrix (F2)			Very Shallow Dark Surface Other (Explain in Remarks)	(1112)
Depleted Below Da	ark Surface (A11)		Depleted Matrix (	F3)			Unier (Explain in Remaiks)	
Thick Dark Surface	∋ (A12)		Redox Dark Surfa	ace (F6)			<sup>3</sup> Indicators of hydrophytic vege	tation and wetland
Sandy Mucky Mine	eral (S1)		Depleted Dark St	urface (F7)	)		hydrology must be present,	tation and wetland
Sandy Gleyed Mat	rix (S4)		Redox Depression	ns (F8)			unless disturbed or problemat	ic.
Restrictive La	yer (if observe	ed):						
Туре:								
Depth (inches):							Hydric Soil Present?	Yes No X
		s required; ch	neck all that apply	<i>(</i> )			Secondary Indicators (m	inimum of two required)
Wetland Hydrolog Primary Indicators (	minimum of one is	s required; ch	neck all that apply  Water-Stair 1, 2, 4A and	ned Leave	s (B9) (exc	ept MLRA	Secondary Indicators (m  Water-Stained Leave 4A, and 4B)	
Surface Water (A1 High Water Table	minimum of one is	s required; ch	Water-Stair	ned Leaves d 4B)	s (B9) (exc	ept MLRA	Water-Stained Leave 4A, and 4B)	s (B9) (MLRA 1, 2,
Wetland Hydrolog Primary Indicators (	minimum of one is	s required; ch	Water-Stair 1, 2, 4A and	ned Leave: d 4B) B11)		ept MLRA	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B	s (B9) (MLRA 1, 2,
Wetland Hydrolog, Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)	minimum of one is ) (A2)	s required; ch	Water-Stair 1, 2, 4A and Salt Crust (	ned Leaves d 4B) B11) ertebrates	(B13)	ept MLRA	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta	s (B9) (MLRA 1, 2,
Wetland Hydrolog, Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)	minimum of one is (A2) (6 (B2)	s required; ch	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	ned Leaver d 4B) B11) ertebrates	(B13) or (C1)		Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on	s (B9) (MLRA 1, 2,  10)  able (C2)  Aerial Imag.(C9)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)  Sediment Deposits	minimum of one is ) (A2) s (B2)	s required; ch	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o	ned Leaverd 4B) B11) ertebrates rulfide Odo hizosphere	(B13) or (C1) es along Li	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)  Sediment Deposits  Drift Deposits (B3)	minimum of one is ) (A2) s (B2)	s required; ch	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve	ned Leaverd 4B) B11) ertebrates rulfide Odo hizosphere	(B13) or (C1) es along Li	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)  Sediment Deposits  Drift Deposits (B3)  Algal Mat or Crust	minimum of one is ) (A2) 6 (B2) (B4)	s required; ch	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o	ned Leaver d 4B) B11) ertebrates dulfide Odd hizosphere f Reduced Reduction	(B13) or (C1) es along Li I Iron (C4) n in Tilled S	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) )
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack	minimum of one is ) (A2) 6 (B2) (B4)		Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized R Presence o	hed Leaves d 4B) B11) ertebrates sulfide Odd hizosphere f Reduced Reduction Stressed F	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Paised Ant Mounds (	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table ( Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack  Inundation Visible	minimum of one is ) (A2) (B2) (B4) (B6)	37)	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	hed Leaves d 4B) B11) ertebrates sulfide Odd hizosphere f Reduced Reduction Stressed F	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table ( Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Drift Deposits (B3)  Algal Mat or Crust Iron Deposits (B5)  Surface Soil Crack Inundation Visible  Sparsely Vegetate	minimum of one is ) (A2) (B2) (B4) s (B6) on Aerial Imagery (Ed Concave Surface	37)	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	hed Leaves d 4B) B11) ertebrates sulfide Odd hizosphere f Reduced Reduction Stressed F	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Paised Ant Mounds (	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Drift Deposits (B3)  Algal Mat or Crust Iron Deposits (B5)  Surface Soil Crack Inundation Visible  Sparsely Vegetate	minimum of one is (A2) (B2) (B4) (B6) on Aerial Imagery (Ed Concave Surface	37) (B8)	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	hed Leaves d 4B) B11) ertebrates sulfide Odd hizosphere f Reduced Reduction Stressed F	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Paised Ant Mounds (	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack  Inundation Visible  Sparsely Vegetate  Field Observations	minimum of one is  (A2)  (B2)  (B4)  s (B6) on Aerial Imagery (Ed Concave Surface  ent? Yes	37) (B8)	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or Other (Expl	ned Leaver d 4B) B11) ertebrates duffide Odd hizosphere f Reduced Reduction Stressed F ain in Rem	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Paised Ant Mounds (	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table ( Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack Inundation Visible  Sparsely Vegetate  Field Observations	minimum of one is  (A2)  (B2)  (B4)  s (B6) on Aerial Imagery (Ed Concave Surface  ent? Yes	37) (B8) s No	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o Recent Iron Stunted or Other (Expl	ned Leaver d 4B) B11) ertebrates duffide Odd hizosphere f Reduced Reduction Stressed F ain in Rem	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Paised Ant Mounds (	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A) cks (D7)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table ( Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack  Inundation Visible  Sparsely Vegetate  Field Observations  Surface Water Presert	minimum of one is ) (A2) (B2) (B4) s (B6) on Aerial Imagery (Ed Concave Surface : ent? Yes Yes	37) (B8) s No	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Inve Hydrogen S Oxidized RI Presence o Recent Iron Stunted or Other (Expl	ned Leaver d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F ain in Rem (inches): (inches):	(B13) or (C1) es along Li Iron (C4) on in Tilled S Plants (D1)	ving Roots (	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D6)  Paised Ant Mounds (  Frost-Heave Hummo	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A) cks (D7)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table ( Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack  Inundation Visible  Sparsely Vegetate  Field Observations  Surface Water Preserv  Saturation Present?	minimum of one is ) (A2) (B2) (B4) s (B6) on Aerial Imagery (Ed Concave Surface ent? Yes Yes nge)	37) (B8) 5 No 6 No	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invelor   Hydrogen S Oxidized R  Presence o Recent Iron Stunted or Other (Expl	med Leaver d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F ain in Rem (inches): (inches):	(B13) or (C1) es along Li I Iron (C4) in in Tilled \$ Plants (D1) narks)	ving Roots ( Soils (C6) (LRR A)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D6)  Paised Ant Mounds (  Frost-Heave Hummo	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A) cks (D7)
Wetland Hydrolog Primary Indicators (  Surface Water (A1  High Water Table ( Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust  Iron Deposits (B5)  Surface Soil Crack Inundation Visible  Sparsely Vegetate  Field Observations  Surface Water Presert  Saturation Present?  (includes capillary fri	minimum of one is ) (A2) (B2) (B4) s (B6) on Aerial Imagery (Ed Concave Surface ent? Yes Yes nge)	37) (B8) 5 No 6 No	Water-Stair 1, 2, 4A and Salt Crust ( Aquatic Invelor   Hydrogen S Oxidized R  Presence o Recent Iron Stunted or Other (Expl	med Leaver d 4B) B11) ertebrates iulfide Odo hizosphere f Reduced Reduction Stressed F ain in Rem (inches): (inches):	(B13) or (C1) es along Li I Iron (C4) in in Tilled \$ Plants (D1) narks)	ving Roots ( Soils (C6) (LRR A)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B  Dry-Season Water Ta  Saturation Visible on  Geomorphic Position  Shallow Aquitard (D3)  FAC-Neutral Test (D6)  Paised Ant Mounds (  Frost-Heave Hummo	s (B9) (MLRA 1, 2, 10) able (C2) Aerial Imag.(C9) (D2) ) 5) D6) (LRR A) cks (D7)

Project/Site:	WETLAND DE Boardman Creek			City/Coun		lackamas Co			te: 6/24/2	2016	
Applicant/Owr				<b>,</b>		State		mpling Po			
Investigators:			Jennifer Ma	7A			vnship, Range S			2E	
_	slope, terrace, etc.):	Terrace	JCIIIIICI WA			,	ex, none): Conc			pe(%) 1	5% to
		remace	Late 45.2		•				NAD83	pe(70) 1	.07010
Subregion (LF			Lat: 45.3		Long	: -122.612					
Soil Map Unit		silt loam, 3 to 8	· · · · ·				NWI Classification				
Are climatic /	hydrologic conditions of		I for this time	e of year?	Yes X	No	(If No, explain		,		
Are Vegetatio	n, Soil,	Hydrology	, significan	tly disturbed?	,	Are "Normal	Circumstances" pr	esent?	Yes X	No	
Are Vegetatio	n, Soil,	Hydrology	_, naturally p	oroblematic?		(If needed,	explain any answe	ers in Rem	arks.)		
	Y OF FINDINGS - Vegetation Present?	- <b>Attach a sit</b> Yes X	t <b>e map sh</b> No	owing sa	mpling poi	nt locatio	ns, transects,	import	ant feati	ures, et	tc.
Hydric Soil F	Present?	Yes	No X	Is the S	ampled Area						
Wetland Hyd	drology Present?	Yes	No X	within a	a Wetland?		Yes	No	X		
	7 deg F, 0.3in precip.			Absolute	Dominant	Indicator		_			
VEGETAT	<b>TON</b> Use scientif	fic names of	plants.	% Cover	Species	Status	Dominance Tes	st Worksh	eet:		
Tree Stratu	<u>um</u>						Number of Dom	ninant Spe	cies		
Shrub Stra	atum (Plot size	e: 30 Ft _ )					That Are OBL, I	FACW, or	FAC:	2	(A)
Salix	scouleriana			25	Υ	FAC	Total Number of	f Dominan	t		
				25	=Total Cover		Species Across			3	(B)
Herb Strat	um (Plot size	e: 6 Ft )									
Holcu	s lanatus			40	Y	FAC	Percent of Dom That Are OBL, F			66.7%	(A/B
Poa p	ratensis			10	N	FAC	Prevalence Ind				
Ranur	nculus repens			7	N	FAC				lation le collection	
	onatum lapathifolium			5	N	FACU	Total % Co	ver ot: 0		Itiply by:	
	n perenne corniculatus			3	N	FAC	OBL species	0			
	ex crispus			3	N	FAC	FACW species	90			
	americana				N	FAC	FAC species				
				70	=Total Cover		FACU species	70			
Vine Stratu	um (SL )	20.51					UPL species	0	x 5 :	= 0	
	(Plot size	e: <u>30 Ft</u> )		65	Υ	FACU	Column Totals:	16	60 (A)	550	(B)
Nubus	s aimemacus			65	=Total Cover		Prevalenc	e Index =	B/A=	3.44	
							Hydrophytic Ve	getation I	ndicators:		
							Rapid Test	for Hydrop	hytic Vege	etation	
							X Dominance	Test > 50	%		
							Prevalence	Index ≤ 3.	0		
							Morphologic data in Ren				porting
							Problemation	Hydrophy	∕tic Vegeta	ition (Ex	plain)
							Indicators of hy must be preser				
% Bare Grou	nd in Herb Stratum	0					Hydrophyti Vegetation Pre	10	Yes X	No	

Yes

X No

% Bare Ground in Herb Stratum

narks: (Include photo numbers here or on a separate sheet.)

Depth (inches)					Redox						
()	Color	(moist)	%	Color (moist)	%	Туре	1 Loc <sup>2</sup>	Texture	Re	marks	
0 to 6	10YR	2/2	100					SILTY CLAY LOAM			
6 to 9	10YR	2/2	99	5YR 5/6	1		M	SILTY CLAY LOAM			
9 to 18	10YR	2/2	100					SILTY CLAY LOAM			
Type: C=Con	centration, D	=Depletion	, RM=Reduce	d Martix, CS=0	Covered or	r Coated	Sand Gra	ins. 2Location: PL=Pore Lini	ing, M=Matri	X.	
Hydric Soil I	ndicators:							Indicators for Problematic	c Hydric So	ils: 3	
Histosol (A	1)			Sandy Redox (	35)			2 cm Muck (A10)			
Histic Epipe	edon (A2)			Stripped Matrix	(S6)			Red Parent Material (TF2)			
Black Histic				Loamy Mucky N	/lineral (F1)	(except M	LRA 1)	Very Shallow Dark Surface			
Hydrogen S	, ,			Loamy Gleyed				Other (Explain in Remarks)			
	elow Dark Sur			Depleted Matrix	, ,						
	Surface (A12)			Redox Dark Su				<sup>3</sup> Indicators of hydrophytic veg	etation and we	etland	
	ky Mineral (S1 ved Matrix (S4)			Depleted Dark	,	)		hydrology must be present, unless disturbed or problema			
Doctricti	ina Lauran (i	if abaamia									
Type:	ive Layer (i	ii observe	u).								
Depth (inch	ies):							Hydric Soil Present?	Yes	No	Х
YDROLOG	Y										
IYDROLOG Wetland Hyd Primary Indica	lrology Indi		s required; ch	eck all that app	oly)			Secondary Indicators (n	minimum of t	wo requi	ired)
Wetland Hyd	Irology Indi ators (minim		s required; ch	eck all that app	oly) ained Leave	es (B9) (ex	cept MLRA	Secondary Indicators (n			ired)
Wetland Hyd Primary Indica	Irology Indi ators (minim ater (A1)		s required; ch	Water-Sta	nined Leave	es (B9) (ex	cept MLRA	·			ired)
Wetland Hyd Primary Indica	Irology Indi ators (minim ater (A1) Table (A2)		s required; ch	Water-Sta 1, 2, 4A a Salt Crust	nined Leave nd 4B) : (B11)		cept MLRA	Water-Stained Leave	ves (B9) (MLR		ired)
Wetland Hyd Primary Indica Surface Wa	Irology Indi ators (minim ater (A1) Table (A2)		s required; ch	Water-Sta 1, 2, 4A a Salt Crust	ained Leave nd 4B) (B11) vertebrates	(B13)	cept MLRA	Water-Stained Leave	ves (B9) (MLR/ B10)		ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D	Irology Indiators (minimater (A1) Table (A2) (A3) (x (B1) Deposits (B2)		s required; ch	Water-Sta 1, 2, 4A a Salt Crust Aquatic In	ained Leave nd 4B) : (B11) vertebrates Sulfide Odd	(B13) or (C1)		Water-Stained Leave 4A, and 4B)  Drainage Patterns (B Dry-Season Water T	ves (B9) (MLR/ B10) Table (C2)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi	Irology Indiators (minimater (A1) Table (A2) (A3) as (B1) Deposits (B2) its (B3)		s required; ch	Water-Sta 1, 2, 4A a Salt Crusi Aquatic In Hydrogen	ained Leave nd 4B) : (B11) vertebrates Sulfide Odd	(B13) or (C1) es along L	iving Roots	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B Dry-Season Water T	res (B9) (MLR/ B10) Table (C2) n Aerial Imag (	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat o	Irology Indiators (minimater (A1) Table (A2) (A3) (x (B1) Deposits (B2) its (B3) r Crust (B4)		s required; ch	Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized	ained Leave nd 4B) (B11) vertebrates Sulfide Odd Rhizospher of Reduced	(B13) or (C1) es along L d Iron (C4)	iving Roots	Water-Stained Leave 4A, and 4B)  Drainage Patterns (Fig. 2)  Dry-Season Water T  Saturation Visible or	ves (B9) (MLR/ B10) Table (C2) n Aerial Imag ( n (D2)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5)		s required; ch	Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized Presence Recent Iro	ained Leave nd 4B) (B11) vertebrates Sulfide Odo Rhizosphere of Reduced	(B13) or (C1) es along L d Iron (C4) n in Tilled	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (ED)  Dry-Season Water TD  Saturation Visible or Geomorphic Position  Shallow Aquitard (D)  FAC-Neutral Test (ED)	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag ( In (D2) V3) D5)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) il Cracks (B6)	um of one is		Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized Presence Recent Iro	ained Leave nd 4B) (B11) vertebrates Sulfide Odd Rhizospheri of Reduced on Reduction	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (I Dry-Season Water T Saturation Visible or Seamorphic Position Shallow Aquitard (Dry-Season Water T Shallow	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag (In (D2) (D3) (D5) (D6) (LRR A)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Surface Soi	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) il Cracks (B6) Visible on Aeri	um of one is	37)	Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized Presence Recent Iro	ained Leave nd 4B) (B11) vertebrates Sulfide Odo Rhizosphere of Reduced	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (ED)  Dry-Season Water TD  Saturation Visible or Geomorphic Position  Shallow Aquitard (D)  FAC-Neutral Test (ED)	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag (In (D2) (D3) (D5) (D6) (LRR A)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Surface Soi Inundation V Sparsely Ve	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) or Crust (B4) its (B5) il Cracks (B6) Visible on Aeriegetated Conce	um of one is	37)	Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized Presence Recent Iro	ained Leave nd 4B) (B11) vertebrates Sulfide Odd Rhizospheri of Reduced on Reduction	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (I Dry-Season Water T Saturation Visible or Seamorphic Position Shallow Aquitard (Dry-Season Water T Shallow	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag (In (D2) (D3) (D5) (D6) (LRR A)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Surface Soi Inundation V Sparsely Ve	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) il Cracks (B6) Visible on Aeriegetated Concations:	um of one is ial Imagery (E ave Surface (	37) (B8)	Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized Presence Recent Iro	ained Leave nd 4B) (B11) vertebrates Sulfide Odd Rhizospher of Reduced on Reductio r Stressed I	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (I Dry-Season Water T Saturation Visible or Seamorphic Position Shallow Aquitard (Dry-Season Water T Shallow	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag (In (D2) (D3) (D5) (D6) (LRR A)	A 1, 2,	ired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Surface Soi Inundation V Sparsely Ve	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) ill Cracks (B6) Visible on Aeriegetated Concentrations: er Present?	um of one is ial Imagery (E ave Surface	37) (B8)	Water-Sta 1, 2, 4A a Salt Crust Aquatic In Hydrogen Oxidized Presence Recent Iro Stunted o Other (Ex	ained Leave nd 4B)  (B11) vertebrates Sulfide Odd Rhizospheri of Reduced on Reduction r Stressed I plain in Rer	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (I Dry-Season Water T Saturation Visible or Seamorphic Position Shallow Aquitard (Dry-Season Water T Shallow	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag (In (D2) (D3) (D5) (D6) (LRR A)	A 1, 2,	iired)
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Surface Soi Inundation Sparsely Ve Field Observat Water Table 6	Irology Indiators (minimater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) il Cracks (B6) Visible on Aeriegetated Concentrations: er Present?	um of one is ial Imagery (E ave Surface of Yes Yes	37) (B8) S No	Water-State 1, 2, 4A at 1, 2,	ained Leave nd 4B)  (B11) vertebrates Sulfide Odd Rhizospheri of Reduced on Reductio r Stressed I plain in Rer	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (I Dry-Season Water T Saturation Visible or Seamorphic Position Shallow Aquitard (Dry-Season Water T Shallow	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag. (In (D2) (D3) (D5) (D6) (LRR A) ocks (D7)	(C9)	o X
Wetland Hyd Primary Indica Surface Wa High Water Saturation ( Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Surface Soi Inundation V Sparsely Ve	Irology Indiators (minimater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	um of one is ial Imagery (E ave Surface	37) (B8) S No	Water-State 1, 2, 4A a Salt Crusi Aquatic In Hydrogen Oxidized Presence Recent Irc Stunted o Other (Ex	ained Leave nd 4B)  (B11) vertebrates Sulfide Odd Rhizospheri of Reduced on Reduction r Stressed I plain in Rer	or (B13) or (C1) es along L d Iron (C4) n in Tilled Plants (D1	iving Roots Soils (C6)	Water-Stained Leave 4A, and 4B)  Drainage Patterns (B Dry-Season Water T Saturation Visible or Geomorphic Position Shallow Aquitard (D) FAC-Neutral Test (D Paised Ant Mounds Frost-Heave Hummo	ves (B9) (MLR/ B10) Table (C2) In Aerial Imag. (In (D2) (D3) (D5) (D6) (LRR A) ocks (D7)	(C9)	

	D DETERMINATION DATA				2	_	•		
Project/Site: Boardman Cr	eek	City/Count	ty: Cl	ackamas Co	oui. Sa	impling Date:	6/24/20	)16	
Applicant/Owner: OLSD				State	OR S	ampling Point:	SP14		
Investigators: Irina Lapina	Jennifer Ma	ze		Section, Tov	vnship, Range S	S 18 T 2S	R	2E	
dform (hillslope, terrace, et	c.): Floodplain	Lo	ocal Relief (co	ncave, conv	ex, none): Cond	cave	Slop	e(%) 2	:% to N
oubregion (LRR): A	Lat: 45.3	393830	Long	-122,612	522	Datum: NA	√D83		
Soil Map Unit Name: Wood	dburn silt loam, 3 to 8 percent slop	es			NWI Classificatio	n: None			
Are climatic / hydrologic condit	ions on the site typical for this time	e of year?	Yes X	No	(If No, explain	n in Remarks)			
Are Vegetation , Soil	, Hydrology, significan	tly disturbed?	A	\re "Normal	Circumstances" p	resent? Yes	s X	No	
Are Vegetation, Soil _	, Hydrology, naturally	problematic?		(If needed,	explain any answ	ers in Remark	s.)		
SUMMARY OF FINDIN	GS - Attach a site map sh	owing san	npling poi	nt locatio	ns, transects	, important	t featu	res, et	tc.
Hydrophytic Vegetation Prese					-				
Hydric Soil Present?	Yes No X	Is the Sa	ampled Area						
Wetland Hydrology Present?	Yes No X	within a	Wetland?		Yes	No X			
Remarks: Cloudy, 56-67 deg F, 0.3in pre	acin								
Cloudy, oo or dog i , c.om pro	50ip.								
VEGETATION_ Use sc	ientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	<b>D.</b>	-4.147			
Tree Stratum		70 00101	Opcoico	<u>Otatao</u>	Dominance Te				
Shrub Stratum (Plo	t size. 20 Ft				Number of Dor That Are OBL,			3	(A)
Fraxinus latifolia	t size: 30 Ft	3	Υ	FACW					
		3	=Total Cover		Total Number of Species Across			4	(B)
Herb Stratum (Plo	t size: 6 Ft )				•				= ` ′
Holcus lanatus	( SIZE. <u> </u>	75	Υ	FAC	Percent of Dom			75:0%	(A/B)
Lotus corniculatus		70	Y	FAC	That Are OBL,	FACW, OF FAC	1		
Vicia americana		10	N	FAC	Prevalence Inc				
Juncus effusus		5	N	FACW	Total % Co			iply by:	
		160	=Total Cover		OBL species	0	x 1 =	0	
Vine Stratum (Plo	t size: 30 Ft )				FACW species		x 2 =	16	
Rubus armeniacus		5	Υ	FACU	FAC species	155	x 3 =		
		5	=Total Cover		FACU species		x 4 =	20	
					UPL species	0	x 5 =	0	
					Column Totals:	168	(A)	501	(B)
					Dravalan	ce Index = B/A		2.00	
								2.98	
					Hydrophytic Ve	_		-41	
					Rapid Test	for Hydrophyt	ic veget	ation	
					X Dominance	e Test > 50%			
					X Prevalence	e Index ≤ 3.0			
						ical Adaptatior marks or on a			oorting
					Problemati	c Hydrophytic	Vegetati	on (Ex	plain)
					Indicators of h must be prese				
% Bare Ground in Herb Stratu	m 0				Hydrophyt Vegetation Pre		X	No	
narks: (Include photo numb	ers here or on a separate sheet.)								

•		aeptn nee	dea to dot	cument			confirm tr	ne absence of Indicators.)			
Debui	/latrix	0/	Color (n	noint)	Redox F		1 1002	Texture	Domork	<b>70</b>	
(inches) Color (m		%	Color (n	noist)	%	Туре	Loc <sup>2</sup>		Remark	15	₹
0 to 12 10YR	2/2	100						CLAY LOAM	5 11 181		_
12 to 16 10YR	4/1	95	5YR 4		5	D	M,PL	CLAY LOAM	Depleted, ligh	nt grey	
<sup>1</sup> Type: C=Concentration, D=D	epletion,	RM=Redu	ced Martix,	CS=Co	vered or	Coated	Sand Grair	ns. <sup>2</sup> Location: PL=Pore Lining	g, M≖Matrix.		
Hydric Soil Indicators:  Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if Carrype:		() () () () ()	Stripped Loamy M Loamy G Depleted Redox D Depleted	edox (S5) Matrix (S lucky Min Sleyed Ma I Matrix (F ark Surfa I Dark Sur epression	6) eral (F1) ( trix (F2) (3) ce (F6) face (F7)	,	LRA 1)	Indicators for Problematic  2 cm Muck (A10)  Red Parent Material (TF2)  Very Shallow Dark Surface ( Other (Explain in Remarks)  Indicators of hydrophytic veget hydrology must be present, unless disturbed or problemati	TF12) tation and wetland c.	l	X
Depth (inches):								Hydric Soil Present?	res r	NO	^
HYDROLOGY  Wetland Hydrology Indicat  Primary Indicators (minimum		required; o	check all th	at apply)				Secondary Indicators (mi	nimum of two re	equire	∍d)
Surface Water (A1)				ater-Staine 2, 4A and		(B9) (ex	cept MLRA	Water-Stained Leaves	s (B9) (MLRA 1, 2		
High Water Table (A2)			(*******	lt Crust (E				4A, and 4B)			
Saturation (A3)			e	uatic Inve		(B13)		Drainage Patterns (B	10)		
Water Marks (B1)				drogen Su				Dry-Season Water Ta			
Sediment Deposits (B2)						, ,	iving Roots	(C3) Saturation Visible on A	- , ,		
Drift Deposits (B3)				esence of		_	-	Geomorphic Position			
Algal Mat or Crust (B4)							Soils (C6)	Shallow Aquitard (D3)			
Iron Deposits (B5)							) (LRR A)	FAC-Neutral Test (D5	,		
Surface Soil Cracks (B6)			_				(LRRA)	Paised Ant Mounds (I			
Inundation Visible on Aerial I			□ Oth	ner (Expla	ın ın Rem	arks)		Frost-Heave Hummod	cks (D7)		
Sparsely Vegetated Concave	в Биггасе (Е	50)									
Field Observations:											
Surface Water Present?	Yes	No	X	Depth (	inches):						
Water Table Present?	Yes	No	X	Depth (	inches):				. V	M-	
Saturation Present?	Yes	No	X	Depth (	inches):			Wetland Hydrology Present	? Yes	No	Χ
(includes capillary fringe) Describe Recorded Data (stream	dalide moi	nitorina well	. aerial photo	os, previo	us inspec	tions), if a	vailable:				-
Describe Recorded Data (stream	gauge, mo	moning man	, ,			,,					
	gauge, mo	, morning mon				,,					
Remarks: D2 - adjacent to floodplain	gauge, mo										

Project/Site: Boardman Creek  Applicant/Owner: OLSD  Investigators: Irina Lapina  dform (hillslope, terrace, etc.): Slope  Local Subregion (LRR): A  Lat: 45.393875  Soil Map Unit Name: Woodburn silt loam, 3 to 8 percent slopes  Are climatic / hydrologic conditions on the site typical for this time of year? Yes  Are Vegetation  Are Vegetation  Soil  Hydrology  naturally problematic?	Relief (co Long: S X	No Incave, conv	OR Sampling rnship, Range S 18 ex, none): Concave	y Point: T 2S  um: NAD  one  marks)  ? Yes	SP15 R Slop 83	016 2E :e(%) 3	3 to E
Irina Lapina Jennifer Maze  dform (hillslope, terrace, etc.): Slope Local subregion (LRR): A Lat: 45.393875  Soil Map Unit Name: Woodburn silt loam, 3 to 8 percent slopes  Are climatic / hydrologic conditions on the site typical for this time of year? Yes  Are Vegetation , Soil , Hydrology , significantly disturbed?	Relief (co Long: S X	No wre "Normal (	ex, none): Concave  40 Date  NWI Classification: No  (If No, explain in Rer  Circumstances" present?	T 2S  um: NAD  one  marks)  ? Yes	R Slop 83	e(%) 3	3 to E
dform (hillslope, terrace, etc.): Slope Local Subregion (LRR): A Lat: 45.393875  Soil Map Unit Name: Woodburn silt loam, 3 to 8 percent slopes  Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation , Soil , Hydrology , significantly disturbed?	Relief (co Long: S X	No Incave, conv	ex, none): Concave  40 Date  NWI Classification: No  (If No, explain in Rer  Dircumstances" present?	um: NAD one marks) ? Yes	Slop 83 X	e(%) 3	3 to E
Subregion (LRR): A Lat: 45.393875  Soil Map Unit Name: Woodburn silt loam, 3 to 8 percent slopes  Are climatic / hydrologic conditions on the site typical for this time of year? Yes  Are Vegetation , Soil , Hydrology , significantly disturbed?	Long:	No No "Normal (	NWI Classification: No (If No, explain in Rer Circumstances" present?	one marks) ? Yes	83 X	, ,	3 to E
Soil Map Unit Name: Woodburn silt loam, 3 to 8 percent slopes  Are climatic / hydrologic conditions on the site typical for this time of year? Yes  Are Vegetation , Soil , Hydrology , significantly disturbed?	s X	No are "Normal (	NWI Classification: No (If No, explain in Rer Dircumstances" present?	one marks) ? Yes	X	No	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes  Are Vegetation , Soil , Hydrology , significantly disturbed?	А	No are "Normal ( (If needed, o	(If No, explain in Rer Circumstances" present?	marks) ? Yes		No	
Are Vegetation , Soil , Hydrology , significantly disturbed?	А	re "Normal (	Circumstances" present?	? Yes		No	
		(If needed,				No	
Are Vegetation Soil Hydrology paturally problematic?		The state of	explain any answers in F	Remarks.			
Are vegetation, our, rividiogy, flaturally problematic:	ing poir	at location			)		
SUMMARY OF FINDINGS - Attach a site map showing sampli	3.	IL IOCALIO	ns, transects, imp	ortant i	eatu	res. e	tc.
Hydrophytic Vegetation Present? Yes X No			•				
Hydric Soil Present? Yes X No Is the Sample	led Area						
Wetland Hydrology Present? Yes X No within a Wet	tland?		Yes No				
Remarks: Cloudy, 56-67 deg F, 0.3in precip.							
VEGETATION Use scientific fiames of plants.	minant oecies	Indicator Status	Dominance Test Wor	rkehoot:			
Tree Stratum (Plot size: 30 Ft )		S	Number of Dominant				
Fraxinus latifolia 5	Υ	FACW	That Are OBL, FACW			2	(A)
5 =TG	otal Cover		Total Number of Domi	nant			
Shrub Stratum			Species Across all Str			2	(B)
Herb Stratum (Plot size: 10 Ft )							
Scirpus microcarpus 85	Υ	OBL	Percent of Dominant S That Are OBL, FACW,			100.0%	(A/B
Phalaris arundinacea 5	N	FACW					
Juncus effusus 2	N	FACW	Prevalence Index Wo	rksheet:			
Lotus corniculatus 2	N	FAC	Total % Cover of:	0.5		iply by:	
	otal Cover		OBL species	85	x 1 =	85	
Vine Stratum			FACW species	12	x 2 =	24	
			FAC species	2	x 3 =	6	
			FACU species	0	x 4 =		
			UPL species	0	x 5 =	0	
			Column Totals:	99	(A)	115	(B)
			Prevalence Inde	x = B/A=		1.16	
			Hydrophytic Vegetation	on Indica	tors:		
			X Rapid Test for Hyd			ation	
			X Dominance Test >	50%			
			X Prevalence Index				
			Morphological Ada				
			data in Remarks of Problematic Hydro			,	
					•		. ,
			Indicators of hydric so must be present, unle				
% Bare Ground in Herb Stratum 0			Hydrophytic Vegetation Present?	Yes	Х	No	
narks: (Include photo numbers here or on a separate sheet.)							

Depth	Matrix			Redox F	eatures			
	olor (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 to 12 10YR	2/2	100		.,			CLAY LOAM	
12 to 16 10YR	4/1	95	5YR 4/6	5	D	M	CLAY LOAM	
Type: C=Concentratio	n, D=Depletion	, RM=Redu	uced Martix, CS=C	overed or	Coated	Sand Gra	ins. 2Location: PL=Pore Li	ning, M=Matrix.
Hydric Soil Indicator	s:						Indicators for Problemat	tic Hydric Soils: 3
Histosol (A1)			Sandy Redox (S	5)			2 cm Muck (A10)	
Histic Epipedon (A2)			Stripped Matrix (	S6)			Red Parent Material (TF2	2)
Black Histic (A3)			Loamy Mucky M	ineral (F1) (	except M	LRA 1)	Very Shallow Dark Surfa	
✓ Hydrogen Sulfide (A4	)		Loamy Gleyed M	latrix (F2)			Other (Explain in Remark	
Depleted Below Dark	Surface (A11)		Depleted Matrix	` '				,
Thick Dark Surface (A	,		Redox Dark Surl				<sup>3</sup> Indicators of hydrophytic ve	egetation and wetland
Sandy Mucky Mineral			Depleted Dark S				hydrology must be present	-1
Sandy Gleyed Matrix	(S4)		Redox Depression	ons (F8)			unless disturbed or probler	matic
Restrictive Laye	r (if observe	d):						
Type:							Undria Sail Brasant?	Voc. V. No.
Depth (inches):							Hydric Soil Present?	Yes X No
YDROLOGY								
IYDROLOGY Wetland Hydrology I		s required.	check all that appl	w)				
Wetland Hydrology I Primary Indicators (mi		s required;			s (B9) (exc	cept MLRA	·	(minimum of two required
Wetland Hydrology l	nimum of one is	s required;		ned Leaves	s (B9) (exc	cept MLRA	·	(minimum of two required aves (B9) (MLRA 1, 2,
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2	nimum of one is	s required;	Water-Stai	ned Leaves id 4B)	s (B9) (exc	cept MLRA	Water-Stained Lea	aves (B9) (MLRA 1, 2,
Vetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2	nimum of one is	s required;	Water-Stai 1, 2, 4A ar Salt Crust	ned Leaves id 4B)		cept MLRA	Water-Stained Lead 4A, and 4B)  Drainage Patterns	aves (B9) (MLRA 1, 2,
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 Saturation (A3)	nimum of one is	s required;	Water-Stai 1, 2, 4A ar Salt Crust Aquatic Inv	ned Leaves id 4B) (B11) rertebrates (	(B13) r (C1)		Water-Stained LeadA, and 4B)  Drainage Patterns  Dry-Season Wate	aves (B9) (MLRA 1, 2, s (B10)
Vetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	nimum of one is	s required;	Water-Stai 1, 2, 4A ar Salt Crust Aquatic Inv	ned Leaves ad 4B) (B11) rertebrates	(B13) r (C1)		Water-Stained Let 4A, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible	aves (B9) (MLRA 1, 2, s (B10) r Table (C2) on Aerial Imag.(C9)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2  ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B	nimum of one is	s required;	Water-Stai 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F	ned Leaves id 4B) (B11) rertebrates (	(B13) r (C1) s along Li	iving Roots	Water-Stained Leady, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag,(C9) tion (D2)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2  ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	nimum of one is	s required;	Water-Stai 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized R	ned Leaves ld 4B) (B11) rertebrates ( Sulfide Odor	(B13) r (C1) s along Li Iron (C4)	iving Roots	Water-Stained Leada, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B	nimum of one is	s required;	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron	ned Leaves ad 4B) (B11) vertebrates of Chizosphere of Reduced	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6)	Water-Stained LeadA, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard  FAC-Neutral Test	aves (B9) (MLRA 1, 2, s (B10) r Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5)	nimum of one is ) 2) 1)		Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F Presence C Recent Irol Stunted or	ned Leaves ad 4B) (B11) rertebrates of Sulfide Odo Rhizosphere of Reduced in Reduction	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6)	Water-Stained Leada, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard  FAC-Neutral Test  Paised Ant Mound	aves (B9) (MLRA 1, 2, s (B10) r Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
Vetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (	nimum of one is  )  2)  4)  36)  Aerial Imagery (E	37)	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F Presence C Recent Irol Stunted or	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6)	Water-Stained LeadA, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard  FAC-Neutral Test	aves (B9) (MLRA 1, 2, s (B10) r Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated (C)	nimum of one is  )  2)  4)  36)  Aerial Imagery (E	37)	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F Presence C Recent Irol Stunted or	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6)	Water-Stained Leada, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard  FAC-Neutral Test  Paised Ant Mound	aves (B9) (MLRA 1, 2, s (B10) r Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated (C)	nimum of one is  )  2)  4)  Aerial Imagery (Econcave Surface	37) (B8)	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F Presence G Recent Iron Stunted or Other (Exp	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6)	Water-Stained Leada, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard  FAC-Neutral Test  Paised Ant Mound	aves (B9) (MLRA 1, 2, s (B10) r Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks ( Inundation Visible on Sparsely Vegetated C Field Observations:	nimum of one is  )  2)  4)  Aerial Imagery (Econcave Surface	37) (B8)	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized F Presence o Recent Irol Stunted or Other (Exp	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6)	Water-Stained Leada, and 4B)  Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Paised Ant Mound Frost-Heave Hum	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D7)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Co- Sield Observations: Surface Water Present	nimum of one is  )  2)  4)  Aerial Imagery (Econcave Surface	37) (B8) ; N	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Irol Stunted or Other (Exp	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P Idain in Rem	(B13) r (C1) s along Li Iron (C4) in Tilled	iving Roots Soils (C6) ) (LRR A)	Water-Stained Leada, and 4B)  Drainage Patterns  Dry-Season Wate  Saturation Visible  Geomorphic Posit  Shallow Aquitard  FAC-Neutral Test  Paised Ant Mound	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D7)
Wetland Hydrology I Primary Indicators (mi  Surface Water (A1)  High Water Table (A2  ✓ Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B- Iron Deposits (B5)  Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Constructions:  Surface Water Present Water Table Present?  Saturation Present?  (includes capillary fring	nimum of one is  )  2)  4)  Aerial Imagery (Econcave Surface  Yes Yes Yes	37) (B8) 5 N 6 X N	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Irol Stunted or Other (Exp	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P clain in Rem in (inches): (inches):	(B13) r (C1) s along Li Iron (C4) in Tilled clants (D1) arks)	iving Roots Soils (C6) ) (LRR A)  16 0	Water-Stained Leada, and 4B)  Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Paised Ant Mound Frost-Heave Hum	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D7)
Wetland Hydrology I Primary Indicators (mi Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated CField Observations: Surface Water Present? Saturation Present?	nimum of one is  )  2)  4)  Aerial Imagery (Econcave Surface  Yes Yes Yes	37) (B8) 5 N 6 X N	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Irol Stunted or Other (Exp	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P clain in Rem in (inches): (inches):	(B13) r (C1) s along Li Iron (C4) in Tilled clants (D1) arks)	iving Roots Soils (C6) ) (LRR A)  16 0	Water-Stained Leada, and 4B)  Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Paised Ant Mound Frost-Heave Hum	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D7)
Wetland Hydrology I Primary Indicators (mi  Surface Water (A1)  High Water Table (A2  ✓ Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B- Iron Deposits (B5)  Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Constructions:  Surface Water Present Water Table Present?  Saturation Present?  (includes capillary fring	nimum of one is  )  2)  4)  Aerial Imagery (Econcave Surface  Yes Yes Yes	37) (B8) 5 N 6 X N	Water-Stai 1, 2, 4A ar 1, 2, 4A ar Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Irol Stunted or Other (Exp	ned Leaves id 4B) (B11) rertebrates ( Sulfide Odor Rhizosphere of Reduced in Reduction Stressed P clain in Rem in (inches): (inches):	(B13) r (C1) s along Li Iron (C4) in Tilled clants (D1) arks)	iving Roots Soils (C6) ) (LRR A)  16 0	Water-Stained Leada, and 4B)  Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Paised Ant Mound Frost-Heave Hum	aves (B9) (MLRA 1, 2, s (B10) or Table (C2) on Aerial Imag.(C9) tion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D7)

## Appendix C. Ground Level Photographs



Photo 1. Looking north from Sample Plot 1 (PP1, Figure 5B)



Photo 2. Soil profile for Sample Plot 1 (SP1, Figure 5B)



Photo 3. Looking southeast towards SE Jennings Avenue (upstream) at Boardman Creek (PP2, Figure 5B)



Photo 4. Looking northwest (downstream) at Boardman Creek (PP3, Figure 5B)

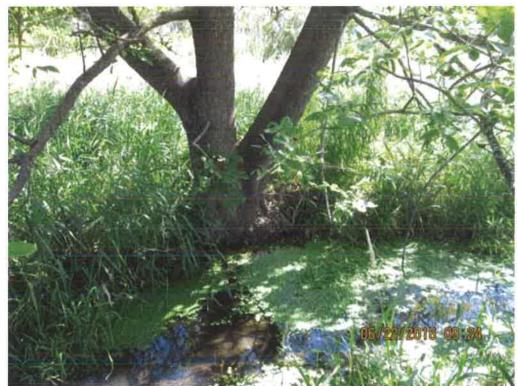


Photo 5. Looking east from Sample Plot 2 (PP4, Figure 5B)



Photo 6. Iron deposits on surface water at Sample Plot 2 (SP2, Figure 5B)



Photo 7. Water table at surface of soil pit, Sample Plot 2 (SP2, Figure 5B)



Photo 8. Looking southeast from Sample Plot 3 (SP3, Figure 5E)



Photo 9. Looking northwest from Sample Plot 3 (SP3, Figure 5E)



Photo 10. Water table at surface of soil pit Sample Plot 3 (SP3, Figure 5C)



Photo 11. Looking northwest at stormwater drainage ditch east of SE Lucas Court (PP7, Figure 5C)



Photo 12. Looking south from Sample Plot 4 (SP4, Figure 5C)





Photo 13. Water table in soil pit at Sample Plot 4 (SP4, Figure 5C)



Photo 14. Looking southwest from Sample Plot 5 (PP9, Figure 5D)



Photo 15. Soil profile for Sample Plot 5 (SP5, Figure 5D)



Photo 16. Look east from Sample Plot 6 (PP10, Figure 5D)



Photo 17. Soil profile for Sample Plot 6 (SP6, Figure 5D)



Photo 18. Excavated soil profile for Sample Plot 7 (SP7, Figure 4D)



Photo 19. Looking north toward SE Cook Street at ponded area (PP11, Figure 5B)



Photo 20. Looking northwest from Sample Plot 8 (PP12, Figure 5C)



**F)**3

Photo 21. Looking west from Sample plot 9 (PP13, Figure 5C)



Photo 22. Looking northeast from Sample Plot 9 (PP14, Figure 5C)



Photo 23. Soil profile for Sample Plot 9 (SP9, Figure 5C)



Photo 24. Looking southwest from Sample Plot 10 (PP15, Figure 5C)





Photo 25. Soil profile for Sample Plot 10 (SP10, Figure 5C)



Photo 26. Looking upstream of stormwater drainage occurring along southern boundary of SE Briar Court development (PP16. Figure 5C)



Photo 27. Looking southwest from Sample Plot 11 (PP17, Figure 5C)



Photo 28. Soil profile for Sample Plot 11 (SP11, Figure 5C)







Photo 30. Looking southwest from Sample Plot 12 (PP19, Figure 5C)



Photo 31. Soil profile for Sample Plot 12 (SP12, Figure 5C)



Photo 32. Looking west from Sample Plot 12 (PP20, Figure 5C)





Photo 33. Looking north at wetland boundary (PP21, Figure 5C)



Photo 34. Test pit at PP21 to confirm wetland boundary (PP21, Figure 5C)



Photo 35. Test pit soil profile (P21, Figure 5C)



Photo 36. Looking north at Boardman Creek wetland area (P22, Figure 5B)



Photo 37. Looking north from Sample Plot 13 (PP25, Figure 5E)



Photo 38. Looking west from Sample Plot 13 (PP26, Figure 5E)



Photo 39. Soil profile for Sample Plot 13 (SP13, Figure 5E)



Photo 40. Looking north near Sample Plot 14 (PP27, Figure 5E)







Photo 42. Soil profile for Sample Plot 14 (SP14, Figure 5E)



Photo 43. Looking north from Sample Plot 15 (PP23, Figure 5E)



Photo 44. Looking southwest from Sample Plot 15 (PP24, Figure 5E)









# Appendix D. WETS Table

WETS Table

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#### **USDA Field Office Climate Data**

	1		Cemperatu (Degrees			Frecipitation (Inches)						
					6.59 5.51 4.70 3.46 2.70 1.83 0.83 1.00 1.93 3.48 6.79 7.23	30% el   will	have	avg      of   daye	flagger total lianow iffail e/			
Month	1	avg daily max	avg daily min	avq		less than	more than	187-11				
January February March April May June July Auquat September December December		47.9 52.8 58.0 53.4 70.0 75.8 82.6 83.0 77.7 65.9 53.4	35.7 17.5 19.7 42.6 47.8 52.1 56.0 56.1 52.1 45.6 40.2 35.9	41.8 45.1 48.9 58.0 58.8 64.0 69.3 69.6 64.9 55.8 45.8		4.23 3.83 3.54 2.44 1.72 1.11 0.29 0.21 0.86 1.85 4.45	7,94 6.56 5.49 4.30 3.26 2.22 1.00 1.16 2.41 4.75 8.16 8.65	9 1 7 1 5 1 2 1 3 1 4 1 8 1				
Aunual	-	64.8	45:1	55.0	******	40.45	50.63					
yverage Vvetage		D4+0	42.7	22.0	46.05			90	1,7			

#### GROWING SEASON DATES

		Temperature	
Probability	24 F or higher	78 F or higher	32 F or higher
		naing and Ending fa Meing Section Length	
P3 (7 P21-124) + 174	1/26 to 1/ 7   346 days	2/15 to 12/ 4   292 days	3/26 to 11/11 232 days
70 persant	2 365 days 2 365 days	3/ 7 to 12/12   307 days   1	3/15 to 11/15 248 days

http://agacis.rco-acis.org/41005/wets/results

9/13/2016

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\* Forcent chance of the growing season occurring between the Beginning and Ending dates.

total 1911+2016 prop-

Station : OR6334, OREGON CITY

yr jan	feb	mac	apr	may	jun	jul	9710	sep	oct	now	dec	ann1
					00000							
11										3.49	4.82	5.31
12 9,10	5.27	2,15	2,89	2.17	4.12	0.61	5.16	1,26	4.19	6.71	7.11	50.74
13 8.16			4.11	2.36	4.23	0.67	0.74	3.01	4.50	7.50	3.79	46.16
1412.79		4.07	4.26	2.11	2.55	0.17	0.00	3.85		5.07		47.60
Th 6, 14		2.83	gall	Z. 78	1.64	11.34	D. DD	0.67				47,30
16 6.44			4.21	3.09	1.86	2790	0.128	1,95	1.64	8.18		58.41
17 4.21		8.22	6,97	3.67	1.49	0.01	0.00	2.24	0.03		18.71	
18 6.40			1.27	1.16	0.01	0.67	0.74	0.38		5-06		39,26
1910.91		6.01	4.42	2,56	1.04	0.06	0.05	3.91		9.73		46.17
20 5.84		4.36	5.61	1.25	3.03	1.18	1.39	5.76	5.01	7.18		50.80
												49.50
21.8.92		5.34	2-17	2.06	1-50		0.16	2,89		12-12		
22 4.04		7.83	2.94	1.24	0.23	0.00	2,26	1.06		2.66		42.20
5319:00		1,14	E: 10	1.68							7,00	
24 3.17		1.93	1.24								5.10	
25 8.80		2.94	3,51							5.71		35,73
26 3.46		1 × 0.1	1.50						$5 \sim 0.1$	9,93		
27 8.87		3,65	1,50							10.19		39465
28 5.63		8.96	5.00						1.92			39.25
29 3.50	1.24	3,27	4.37						1.29	0.70	11.34	25.71
30 9.40	6.81	5.00	3.12						2.49	3.05	3.13	25.07
31M3.29	3.07	6,00	4.50						5,42	8.22	9,15	40,45
32 6.41	M3.63	9.25	3.81						4.83	9.41	8.82	43.16
33 8.48	4.49	6.23	1.01									20.21
3.4												
35												
36												
37												
36												
39												
40												
41												
42												
43												
4.4												
45												
46												
47										Lance Concession		
48140.17												
49 1.40		3.34		2.69	1.25		0.22	2.60	5.17	6,92		43.26
50T1:44	M6 - 97	M6.139	3-13	1.09	2.05	135	05:45	2+26	10-34			
5210.50	5.03	5,63	1.05	2,58	0.09	0.16	0.34	3.71		6,25		49,00
52 6,20	4.72	4.51	1, 25	0.89	3.30	0.00	0.09	0.42	0.87	1.32	1.70	31.77
5316.77	4.76	4.96	2.52	M4:15	1.50	0.04	2.53	1.40		7.46		58,52
5411.25	5,06	3.46	3.68	2.17	3.76	069	2.18	1.01	3.91	5.61	6.49	49.47
55 3.02		5.32	6,30		1.37	1.39	0.00	3.46		9.71	11.20	54.52
5614.25		7.61	0.38	2,30	1.00	0.02	3.57	1.67	7.69			50.56
57 3.26		9.43	1.00			101.43	11.37	17.68	5.97			1 44.20
58 9.43			5.38	0.63	3.26		0.04	1:40	1.73		7.12	
5910.41			1.65			0.63		3.81			3.86	
50 4.91		5.64	4.09				1.33	1.20			4,18	
200 TO 100	7.40	307	3 800	W. W. W.	100 1000	27.40000	1000	4.00	- 17.7	0.000	7.4 7.7	2000

http://agacis.rec-acis.org/41005/weis/results

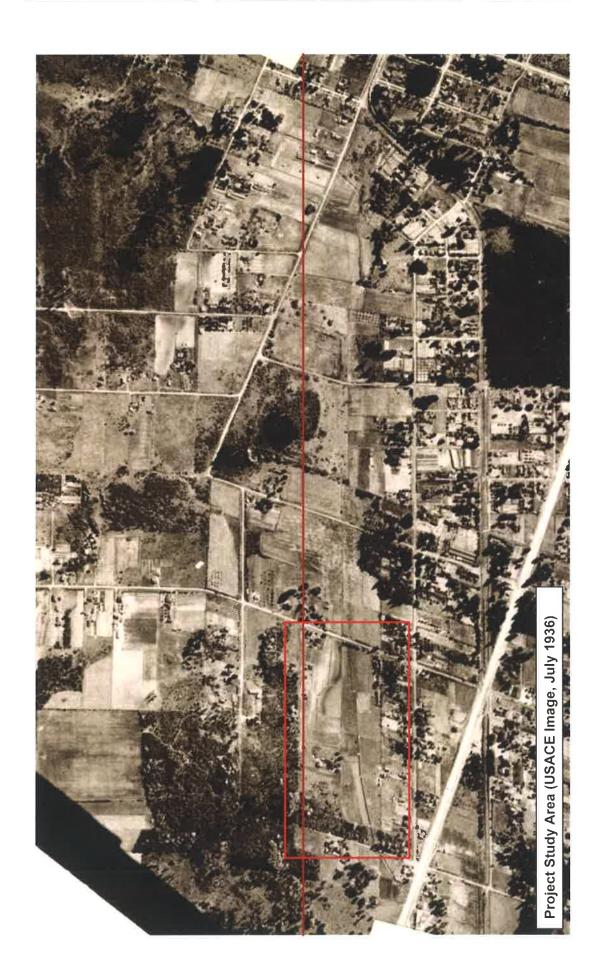
9/13/2016

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51 5.22	11.74	1.01	3.47	4.14	U,60	0.57	U.85	0.84	4 - 04	5.01	6.65 51.14
62 2.13	4.33	5.88	4.05	3.62	1.15	0.06	1.37	2.43	4.36	11.70	3.00 44.16
63 1.96	4.99	6,33	5.06	4.36	1.74	1,30	0.54	1.46	3.68	7.73	4,22 43,37
6413.64	1.22	4,43	1.85	1.07	2.90	0.76	0.95	1.72	1.22	9.65	14.78 54.19
6510.67	1.99	1.47	3.42	1.91	0.75	0.24	1.50	0.03	2.54	7.28	8.87 40.67
66 3.75	2.19	5.43	1.29	1.31	1,67	1.26	0.31	1,72	3.32	6.60	8,29 44.14
67 6.65	2.76	6.08	3.54	2.52	1.17	0.00	0.00	0.81	6.35		M6.24 40.87
68 5.53	8.67	3.60	1.95	3.23	3.44	0.50	4,95	3.83	7.09		14.56 65.44
69ML0.4											
7014.05	6.03	3.01	3.76	1.81	0,69	0.09	0.00	2.15	3.59	8.69	9,36 53.23
7110.08	4.50	6.27	4.33	2.41	3.16			3.79	4.37		10.25 56.69
						0.37	1.50				
72 9.17	5.71	6.53	4.81	2.87	0.73	0.50	0.71	4.41	1.04	6.47	9.79 53.74
73 5.90	2.34	4.00	1.79	1.62	2.23	0.08	1.40				11.93 52,68
74 9.57	6.70	8.04	2.81	2.63	1.16	2.82	0.06	0.40	2.44	7.21	6.67 50.73
75 M.ZR	5.51	5.57	2.44	1.93	F - 12	0.23	3.31	13.001	6.25	5.53	7.19 49.56
76 6, 33	8,11	3 . 64	H3.55	2,12	0. 67	0.87	2.30	1,25	1,20	0.93	1,69 32,86
17 1.65	3.52	4.20	0.77	4.31	1.41	0.69	3.01	3 - 41			11.49 44.54
78 5,96	4.53	1.88	5.84	4.45	1.71	1.53	2.36	2.88	0.61	4,73	3,27 39,75
79 2.90	8.99	3.30	3.94	2.49	0.70	0.52		M3.14	5.70	3.75	7.73 44.14
8011.38	4.38	3.71	3.91	1,30	3,79	0.18	0.22	1.65	1.56		12.61 52.29
91 1.84	4.51	3,13	2.55	1.83	4.52	0.28	0.00	2-84	4.79		11,42 43,20
82 7.76		5.18	4.37	1.66	1.05	0.22	1.27	3.76	4.25		10,39 53,55
83 8.70	8.93	7,97	Z = 50	2.11		4.24		MQ (53	2.16	a*85	6.78 56.21
84 3,29	5.53		3.82	5,19	4 . 60	0.00	0.03			12.34	4.27 45.31
85 0.46		4.39	1.38		M2.51	0.43	0.52	2.55	3,59		M3,05 30,02
8686,56	7,44	3,19		M2.89	11.57		MO, no				35,46
67 7.92	4 , 44	6,00			MO.49		0.23	0.84	0.29		M10.77 39.67
88 9.17	2.04	4.91		M3 , 58	1,94	0.59		M1.51		11.24	3,43 44,52
89 5,18	3.10	H7.08		M2.23	1.05	0.58	1,45		M2.25	3.69	3,50 33,79
90M9.65	M4 : 58	2.78	2.59	M1 - 92	M2.46	0.48	1.00	0.47	M5.04	4.94	3,31 40,12
91 3.50	4.26	3.71	4.63	4.40	2.32	0.06	1.61	0.15	2.98	7.65	5,99 41,26
92 5.24	4.48	1.12	5.10	0.16	0.41	0.26	0.75	1.86	4.19	4.45	M6.51 34.55
93 3,74	1.11	165,24	6.15	4.24	M1.73	MQ.23	M0.23	0.00	M1.43	1.91	M6.48 34.49
94M5.38	M6.33	4.12	2.14	1.71	1.53	0.08	0.00	1.10	M7.22	M8.74	6.62 44.97
95 7.61	5.44	4.23	3.08	1,54	M1.97	0.76	1.62	MZ.93	4,02	H11.0	0 M8.36 54.16
96 9.17	12.05	3,86	5.63	M5.00	0.91	0.63	0.11	M2.25	M5.33	M9.96	M16.13 71.03
97M8.45	M2.20	6.63	4.91	M2.37	M2.38	1.01	1.54	4,02	M5.70	H3.97	3.47 48.65
DBM8.DI	M4.86	4.68	MI.19	4.99	M1.03	0.43	0.02	1.13	M4.21	11.32	9.74 52.51
99 9.14	10.01	5.60	3.43	3,41	1.78	0.20	0,84	0,19	M2.70		M5.01 42.31
0M4.86	M6.29	M3.00						MO.48	M3.80	M2.50	M2.90 31.47
1M1.25					M1.61						M9.54 34.92
2M0.03	3.96	M5.55	M3.58	M1.50	M2.09	6.37	0.29	MO.49	0.47	M2.81	M10.18 40.12
3M7.60						0,00			MB. OF		9.30 45.74
4NS . 98	3.33		141.74		2.15	0.15	3.20	M2.27		1.89	4.35 33.06
5M2.26	0.78	M5.43	M3.13			0.57	M0.50	M1.58	M3.19	MG. 91	2.21 40.89
@413.20						1 NO.01	9 MO.01	6 ML.75	M1.5	9 M12.	11 M2.34 45.00
7MI.01	M2.13	ML . 69	M1.59	0.61			0.00				M9.50 29.70
BM7.92					M1.44		M1.53				M3.43 35.15
9 6.86		4.08	1.30	0.98		165.17			M2.01		M5.23 35.57
10M5.39			MI.16			01.22					11.43 54.88
11M5.35		M8.25			M1.48		MD.00				M4.30 44.73
12M9.24	-								M7 . 02		H9.74 60.86
13M3.56		M1. 95	4144		MO.12		110100				M2.08 23.43
14M3.21			3, 93	M2.59							M5.08 42.48
15M3.28		5.52		M1.00	0.32	0.26	0,80				M14.15 44.44
1647.35						MO.43		4. 4. 4. 14		1 4 4 17	22.91

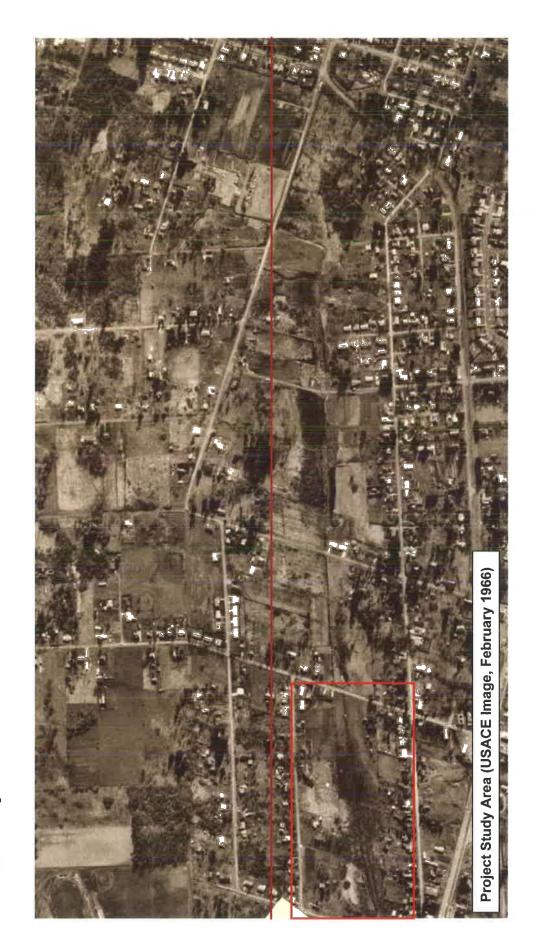
Product generated by ACIS - SOAA Regional Climate Centers

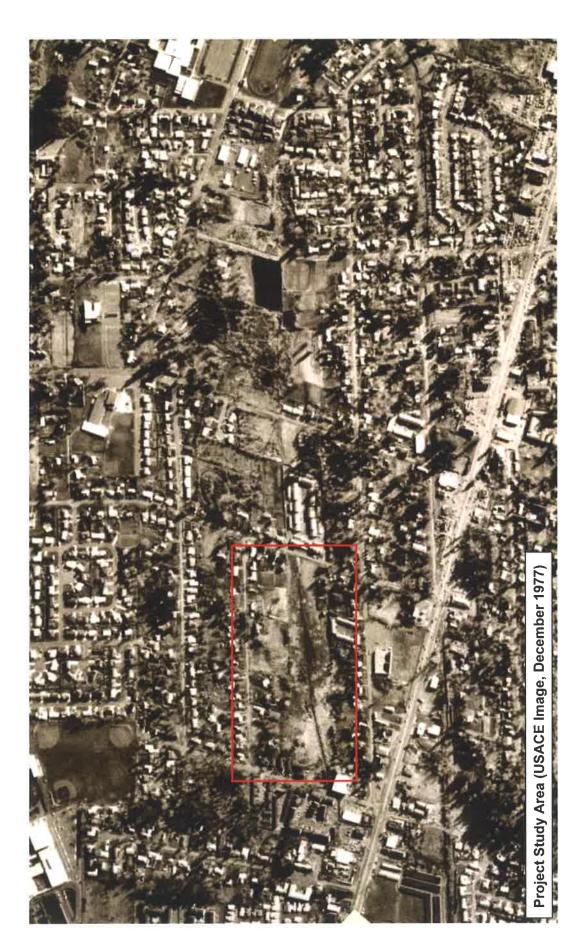
## Appendix E. Historic Aerial Imagery

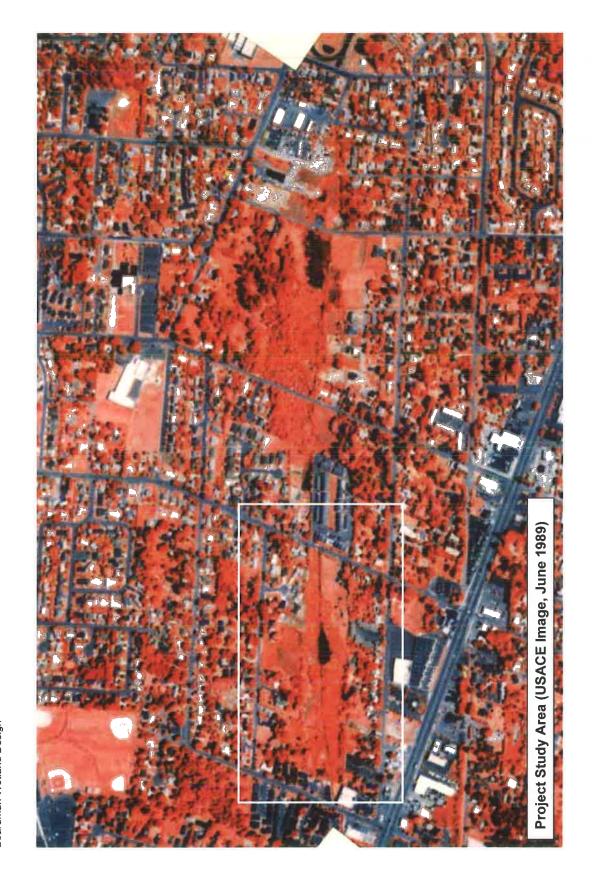






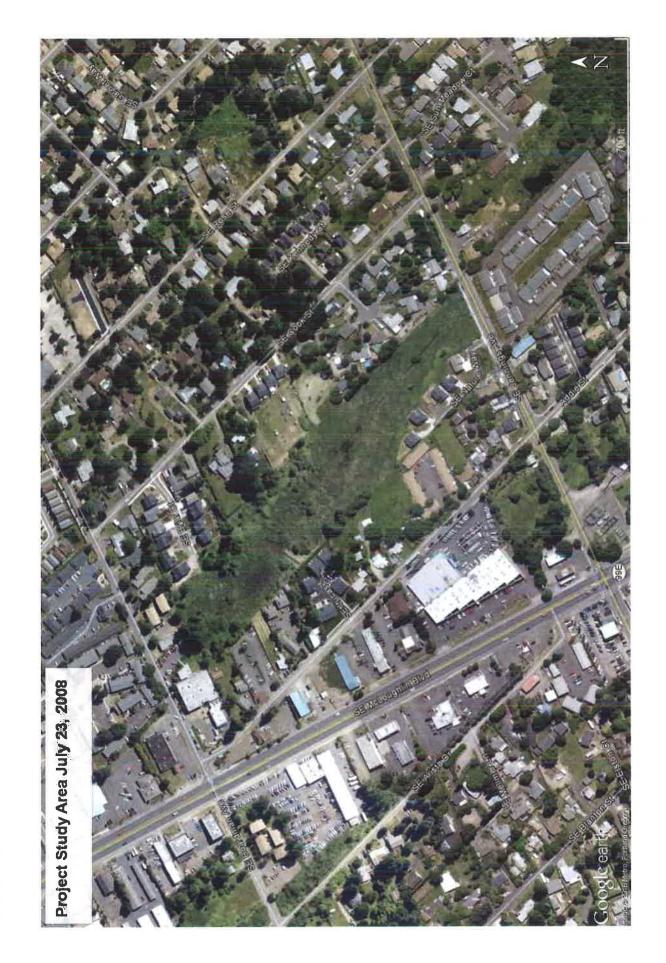


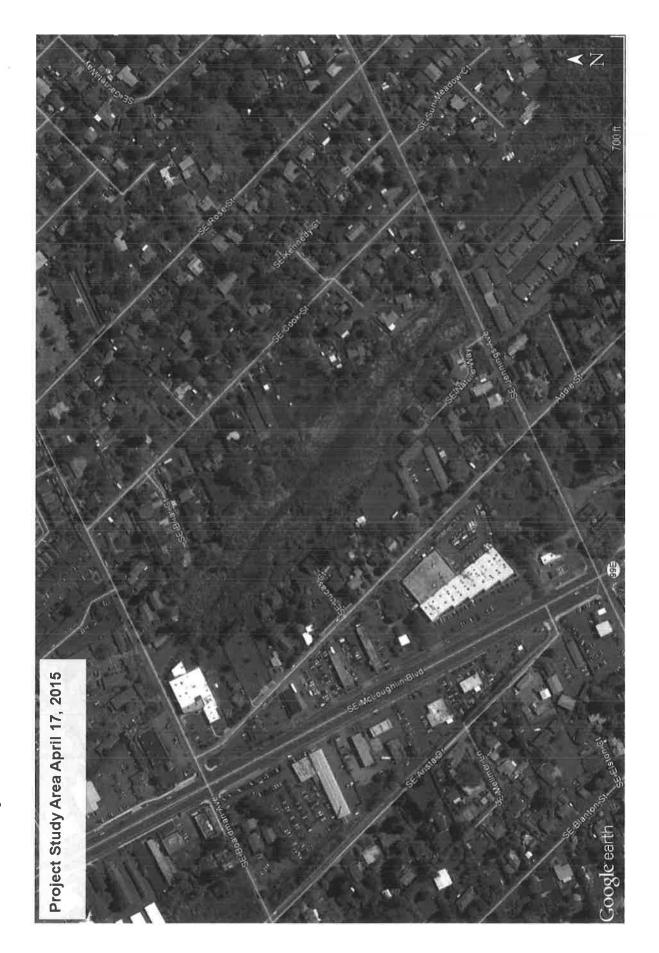












# Appendix F. Site Plans

## Appendix G. Statements of Feasibility



Oak ledge Santay.

### PRELIMINARY STATEMENT OF FEASIBILITY

To be completed by the applicant:	
Applicant's Name: OAK LODGE WATER S	ERVICES DISTRICT
Property Legal Description: T 2 S, R 2 E, Section 18, 7	
Site Address: 17908 SE Addie St. Project	•
Project Title/Description of Proposed Development: BOANZI	DMAN WETLAND
COMPLEX - PHASE I (PARKIN	26, PATHS AND EDUCATIONAL
To be completed by the service provider or surface water ma	
Check all that apply:	
Sanitary sewer capacity in the wastewater treatment system is available to serve the development or can be made available the developer or the system owner.	and the sanitary sewage collection system le through improvements completed by
Adequate surface water treatment and conveyance is availab made available through improvements completed by the dev	
Water service is available in levels appropriate for the develor capacity is available in source, supply, treatment, transmission and capacity can be made available through improvements cowner. This statement Applies   does not apply to fire flow	on, storage and distribution or such levels ompleted by the developer or the system
*If water service is adequate with the exception of fire flows, the a fire district serving the subject property that states that an alternate water source or a sprinkler system, is acceptable.	applicant shall submit a statement from the method of fire protection, such as an on-site
☐ This statement is issued subject to conditions of approval set	forth in the attached.
☐ Adequate ☐ sanitary sewer service, ☐ surface water manager.	nent, 🗆 water service cannot be provided.
Signature of Authorized Representative	Z/7/17 Date
DEPUTY GENERAL MANAGER	SERVICES DISTRICT  Name of Service Provider or Surface

Completion of this statement does not reserve capacity for the development and does not alter an applicant's obligation to comply with the service provider's or surface water management authority's regulations. Completion of this statement does not obligate the service provider or surface water management authority to finance or construct improvements necessary to provide adequate service for the proposed development. Completion of this statement does not guarantee that land use approval for the proposed development will be granted.

Water Management Authority

150 Beavercreek Road, Oregon City, Oregon, 97045 - Phone: 503-742-4500; Fax 503-742-4550



### PRELIMINARY STATEMENT OF FEASIBILITY

### To be completed by the applicant:

Applicant's Name: Oak Lodge Water Services
Property Legal Description: T 2 S, R 02E, Section 18, Tax Lot(s) 4101, 4200,
Site Address: 17908&17900 SE Addie St Project Engineer: Paul Woerrlein
Project Title/Description of Proposed Development: Boardman Wetland Complex: Wetland
Enhancement: Estimated future effluent need for 2 single stall bathrooms
with 1 sink in each bathroom  To be completed by the service provider or surface water management authority:
Check all that apply:
Sanitary sewer capacity in the wastewater treatment system and the sanitary sewage collection system is available to serve the development or can be made available through improvements completed by the developer or the system owner.
Adequate surface water treatment and conveyance is available to serve the development or can be made available through improvements completed by the developer or the system owner.
Water service is available in levels appropriate for the development, and adequate water system capacity is available in source, supply, treatment, transmission, storage and distribution or such levels and capacity can be made available through improvements completed by the developer or the system owner. This statement $\square$ applies $\square$ does not apply to fire flows.*
*If water service is adequate with the exception of fire flows, the applicant shall submit a statement from the fire district serving the subject property that states that an alternate method of fire protection, such as an on-site water source or a sprinkler system, is acceptable.
☐ This statement is issued subject to conditions of approval set forth in the attached.
☐ Adequate ☐ sanitary sewer service, ☐ surface water management, ☐ water service cannot be provided.
A A See Lange Digitally signed by Markus Mead
Signature of Coursian Position
Title  C=US  Date: 2017.02.14 12:24:12 -08'00'  Name of Service Provider or Surface  Water Management Authority

Completion of this statement does not reserve capacity for the development and does not alter an applicant's obligation to comply with the service provider's or surface water management authority's regulations. Completion of this statement does not obligate the service provider or surface water management authority to finance or construct improvements necessary to provide adequate service for the proposed development. Completion of this statement does not guarantee that land use approval for the proposed development will be granted.

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