

Wetland Delineation for Rivianna Beach Development in West Linn, Clackamas County, Oregon

Township	Range	Section	Tax Lots (Portions)
3 South	1 East	2	100, 401, 3 rd Avenue Right-of-Way (ROW), Volpp Street ROW
		2AA	200, 100, 800, 4 th Street ROW, 5 th Avenue ROW, 4 th Avenue ROW, 5 th Avenue ROW, 7 th Street ROW
		1BB	100, 4 th Street ROW, 5 th Avenue ROW
2 South	1 East	36CC	900, 1201, 4 th Street ROW

Prepared for
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PHS Project Number: 7298

April 10, 2024



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I. INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a wetland delineation on the following tax lots:

Township	Range	Section	Tax Lots (Portions)
3 South	1 East	2	100, 401, 3 rd Avenue Right-of-Way (ROW), Volpp Street ROW
		2AA	100, 200, 800, 4 th Street ROW, 5 th Avenue ROW, 4 th Avenue ROW, 5 th Avenue ROW, 7 th Street ROW
		1BB	100, 4 th Street ROW, 4 th Avenue ROW
2 South	1 East	36CC	900, 1201, 4 th Street ROW

The study area is located adjacent to the north bank of the Willamette River in West Linn, Clackamas County, Oregon. Figures, including a map depicting the location of the wetlands and other waters are in Appendix A. Data sheets documenting onsite conditions are provided in Appendix B. Photos of the onsite existing conditions are included in Appendix C.

II. RESULTS AND DISCUSSION

A. Landscape Setting and Land Use

The study area is surrounded by medium to dense residential development and public streets. Directly east of the site is undeveloped forested area with a Blue Heron Mill Settling Pond #1. The site is bordered to the north by 5th Avenue, to the west by 7th Street, to the south by Volpp Street and partially by the Willamette River, and to the east by open space. Fourth (4th) Street crosses through the central east side of the study area. The small portion of Willamette River within the study area resides within River Mile 28.00. There are undeveloped ROWs for 4th Avenue and 5th Street within the study area.

The study area includes a clay-lined excavated settling pond called the Blue Heron Mill Settling Pond #2, which occupies most of the study area's southern portion. North of the settling pond, and approximately 8-10 feet lower in elevation, resides a wetland complex impounded by beaver activity. Active beaver were seen during the delineation field work within the wetland complex, and several nutria were present within the upslope settling pond. Due to beaver dam impoundment causing fluctuations in water levels, there are several different hydroperiods present on site. East of the beaver dam, flow exhibits an Ordinary High Water (OHW), which continues through a culvert below 4th Street and continues east beyond the study area.

To the north, steep slopes contain wetlands where groundwater emerges toward the toe of slope. This is evident through several seeps south of 5th Avenue.

The study area east of 4th Street has an herbaceous layer consisting of reed canarygrass (*Phalaris arundinacea*, FACW) which inhabits most of the streambanks and wetlands on either side with occasional patches of soft rush (*Juncus effusus*, FAC). The understory and canopy on the north side of the stream is inhabited mostly by native willow (*Salix sp.*, FACW) intermixed with Oregon ash (*Fraxinus latifolia*, FACW), and to the south is dense Himalayan blackberry (*Rubus armeniacus*, FAC) with Oregon ash. The northeast corner of the site contains an open field of tall

fescue (*Schedonorus arundinaceus*, FAC) with dozens of emergent black cottonwood (*Populus balsamifera*, FAC) saplings with a dense patch of slough sedge (*Carex obnupta*, FACW) swamp rose (*Rosa pisocarpa*, FAC), English hawthorn (*Crataegus monogyna*, FAC), and Oregon ash.

The berm surrounding the Blue Heron Mill Settling Pond #2 is covered with a mix of grasses, moss, Himalayan blackberry, and ponderosa pine (*Pinus ponderosa*, FACU). North of the beaver pond within the impounded wetland complex is a multistory canopy of red alder (*Alnus rubra*, FAC) with an understory of English ivy (*Hedera helix*, FACU), sword fern (*Polystichum munitum*, FACU), Himalayan blackberry, beaked hazelnut (*Corylus cornuta*, FACU), English holly (*Ilex aquifolium*, FACU), and trailing blackberry (*Rubus ursinus*, FACU).

The study area is situated in the Tanner Creek-Willamette River watershed (6th level 12-digit HUC: 170900070405). Most of the study area is within the 100-year floodplain of the Willamette River except for upslope areas south of 5th Avenue.

Natural Resources Conservation Service (NRCS) mapped soils in the study area includes Woodburn silt loam, 8 to 15 percent slopes, Wapato silty clay loam, and Newberg fine sandy loam. The Wapato soils is considered hydric.

B. Site Alterations

From 1952 to 1970, onsite conditions were a mix of agricultural fields and forested slopes on the north end of the site. Fifth Avenue (5th) Avenue and 4th Street have been present since at least 1952, but not necessarily as asphalt roads. Between 1956 and 1960, 7th street was constructed, along with an existing residence on the west side of the site. An old remnant outbuilding structure exists west of 4th Street, near the intersection with 5th Avenue. Volpp Street became a more established road between 1960 and 1970. Between 1970 and 1981, the southern portion of the site had been developed into a lined settling pond for water treatment associated with the Blue Heron Mill. A drainageway can be seen at the location north of the existing pond since 1952, where Wetland A and Stream 1 are currently mapped (www.historicaerials.com). Imagery from 2005 shows the pond being dry and revealing the pond's bed liner. This could indicate that the pond experienced lesser flooding in the past and that the extent of ponding has grown over time.

Several snags are present along the periphery of Wetland A, indicating more intense flooding and a fluctuating water table, likely caused through impoundment. Construction of the northern berm and the steep topography of north of the settling pond has created conditions for upslope runoff from 5th Avenue to become impounded. Ponding is further intensified by onsite beaver activity. Current onsite conditions include a beaver dam west and near 4th Street. Peak flooding engulfs the settling pond's west, north and east sides at the bottom of the outer side of the berms.

No recent alterations or disturbances were observed onsite at the time of the site visit in January 2024, but as stated above, the presence of beaver was observed including a dam west of 4th Street. Water seasonally flows over 4th Street during the wet season, which was observed during the delineation.

C. Precipitation Data and Analysis

PHS conducted the wetland delineation fieldwork on January 26 and 29 of 2024. For climate analysis, PHS used the Direct Antecedent Rainfall Analysis Method (DAREM). DAREM categorizes observed precipitation for the three months preceding the site visit into three categories: drier than normal, normal, or wetter than normal, and weights the monthly categories relative to the date of the field work. The weighted average is then applied for the wetland hydrology assessment. Precipitation data for the prior three (3) months as well as the WETS table was obtained from OREGON CITY, OR station, approximately one kilometer south of the study area. As shown in Table 1, the weighted average precipitation for the three months preceding the late January 2024 fieldwork was normal.

Table 1: Comparison of recorded monthly precipitation at the OREGON CITY, OR Weather Station to the WETS Tables, prior to the January 2024 wetland delineation field work.

Prior Month Name	WETS ¹ Rainfall Percentile (inches)		Measured Rainfall ² (inches)	Condition*: Dry, Wet, Normal	Condition Value (1=dry, 2=normal, or 3=wet)	Month Weight ³	Multiply Previous two columns ⁴
	30 th	70 th					
October	2.47	4.83	3.40	Normal	2	1	2
November	4.22	6.95	4.07	Dry	1	2	2
December	4.95	8.11	8.26	Wet	3	3	9
Sum							13

¹ WETS Table for the OREGON CITY, OR Weather Station; Source: (<https://agacis.rcc-acis.org/?fips=41005>)

² Observed precipitation is the precipitation recorded at the OREGON CITY, OR, OR Weather Station. Source: (<https://agacis.rcc-acis.org/?fips=41005>)

³ Month Weight: most recent month = 3, 2nd most recent month = 2, third most recent month = 1

⁴ Sum Total: sum of eighth column: drier (sum 6-9), normal (sum 10-14), wetter (sum 15-18)

Recorded precipitation for the 14 days preceding the January 29 fieldwork was 5.34 inches, which is 188 percent of normal (2.84 inches). Precipitation on the day of January 26, 2024, was recorded at 0.48 inches. No precipitation was recorded on the day of the January 29, 2024, fieldwork. Precipitation accumulation for the water year to date was 19.79 inches (92% of normal).

D. Methods

Wetland Methodology

PHS identified jurisdictional wetlands in the study area based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y 87 1* (“The 1987 Manual”) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. The conclusions drawn by PHS were based on the methods outlined in the regional supplement, which requires a predominance of hydrophytic plant species, one indicator of hydric soil, and either one primary or two secondary indicators of hydrology to designate a sample point as a wetland. The delineation field work took place on January 26 and 29, 2024.

Wetland boundaries in the study area were closely associated with a break in topography and an obvious contrast in vegetation. Wetland A’s southern boundary is closely correlated with the flood limit of the beaver pond against the settling pond’s berm. The northern boundary is not defined by the surface water elevation of Wetland A, but rather seeps that emerge at the base of slope south of 5th Avenue. Soil indicators used to identify the boundary included redox dark surface and depleted below dark surface accompanied by hydrology indicators of a high water table, and/or other primary hydrology indicators like saturation, surface water, and inundation visible in aerial imagery.

Wetland B had a gradual slope, which limited the use of topography as an aid for delineating the wetland. Numerous excavations were required to determine the presence of hydric soils and hydrology since the area had a wide swath of Oregon ash saplings emerging in the field. Vegetation transitions from a scrub-shrub community to an herbaceous upland community with patchy Himalayan blackberry.

Other Waters Methodology

OHW of the Willamette River was determined using elevation contours derived from the Public Lands Maps (DSL, 1975). The OHW elevation of the Willamette River was determined to be 62.6 feet NAVD88. OHW elevation corresponding to the site’s river mile (28) was converted to NAVD88 datum from NGVD29, which roughly corresponded to sample point location 11 at 62.6 feet, which was taken above the field-indicators of OHW.

E. Description of all Wetlands and Other Waters

PHS identified the jurisdictional limits of two wetlands and two other waters within the study area. Descriptions of the delineated resources are provided below.

Wetland A

Wetland A (9.03 acres) has multiple Cowardin classes due to different hydroperiods and dominant vegetation. Wetland A is compartmentalized into the following Cowardin and HGM classes:

Cowardin (Class and Subclass)	Water Regime Modifiers	Special Modifiers	Hydrogeomorphic (HGM) Class
Palustrine, unconsolidated bottom, mud, (PUB3)	intermittently exposed (G)	Beaver (b)	Riverine
Palustrine, aquatic bed rooted vascular (PAB3F)	semipermanently flooded (F)	Beaver (b)	Riverine
Palustrine, forested broad-leaved deciduous (PFO1)	seasonally flooded (C)	N/A	Slope

Areas of the wetland adjacent to the bottom of the slope that runs along 5th Avenue are dominated by dense Himalayan blackberry. The blackberry thicket is mostly the vegetation on the upland side of the wetland boundary. The vegetation community between the blackberry and flooded areas corresponds to the PFO Cowardin class with an overstory of red alder and Oregon ash; a shrub understory of English holly, English hawthorn, beaked hazelnut, sword fern, and Douglas spirea (*Spiraea douglasii*, FACW); and a ground cover of English ivy, trailing blackberry, a species of

Geranium, and cleavers (*Galium aparine*, FACU). The vegetation community in the PAB Cowardin class is predominantly reed canarygrass. Wetland A continues west beyond the study area.

Wetland B

Wetland B (0.88 acres) is located east of Wetland A and is hydrologically connected to Stream 1 (discussed below). The wetland is composed of two Cowardin classes as listed below both with HGM classifications of Riverine and Slope.

Cowardin (Class and Subclass)	Water Regime Modifiers	Special Modifiers	Hydrogeomorphic (HGM) Class
Palustrine, scrub shrub persistent (PSS1)	seasonally flooded (C)	N/A	Riverine
palustrine emergent persistent (PEM1)	seasonally flooded/saturated (E)	N/A	Riverine/Slope

The emergent vegetation community consists mainly of slough sedge, tall fescue, and reed canarygrass. The scrub-shrub vegetation community is composed of native willow species with an understory closer to the stream of soft rush and reed canarygrass. Upslope of the stream, vegetation consists of Himalayan blackberry, English ivy, and bracken fern (*Pteridium aquilinum*, FACU). Wetland B continues east beyond the study area.

Stream 1

The onsite stream (363 linear feet; 57-foot width) is hydrologically connected to Wetlands A and B. Stream flow starts on the west side of 4th Street, and flows through Wetland A. The stream is culverted below 4th Street, and flows through Wetland B, it continues eastward off-site, eventually flowing into the Willamette River. The Cowardin classification for Stream 1 is riverine, aquatic bed rooted vascular (R2AB3) with a HGM of Riverine.

Willamette River

The Willamette River overlaps slightly with the study area at the southeast end; 307 linear feet of the river is present within the study area. The width of the river is approximately 1,012 feet. The river has a Cowardin classification of riverine lower perennial unconsolidated bottom (R2UB3) with an HGM classification of Riverine.

Blue Heron Lagoon/ Blue Heron Mill Settling Pond #2

The Blue Heron Lagoon (15.11 acres) was constructed sometime in the 1970’s as part of the Blue Heron Mills wastewater treatment system and was constructed in hydric soil (Wapato). The mill is no longer in operation. The pond was constructed using an engineered berm atop an alluvial terrace of the Willamette River and has a clay liner. The lagoon was supplied with water from the Blue Heron mill via a 3-mile pipeline that ran along the bottom of the Willamette River from the mill to the lagoon. Water was subsequently drained from the lagoon to the Willamette River via NPDES permit. The constructed berm caused impoundment of surface water and created a wetland upslope (west) of the lagoon. The lagoon’s Cowardin Class is PUB3 and the HGM class is Depressional.

F. Deviation from Local and/or National Wetland Inventories

The Local Wetland Inventory (LWI) for the City of West Linn (approved in 2005), identified wetland in general agreement with the boundaries delineated by PHS in January 2024.

G. Mapping Method

PHS flagged the limits of wetlands and other waters within the study area with blue pin flags; neon pink tape was used for sample point locations. The wetland boundaries, the OHW of Stream 1, and sample points were pinpointed using a sub-meter accuracy Trimble GPS unit. The OHW of the Willamette River was based on the Public Lands map under Jurisdiction of the Oregon State Land Board (1975). Other features on the map are professionally surveyed with sub-centimeter accuracy by 3J Consulting.

H. Additional Information

As stated above, the Blue Heron Lagoon/ Blue Heron Mill Settling Pond #2 was constructed within hydric soil; however, per an email on March 5, 2024, from Chris Stevenson, Department of State Lands, the pond will not be jurisdictional at the state level as it is assumed it was legally constructed and has a liner.

I. Results and Conclusions

PHS delineated two wetlands and two other waters within the study area, as summarized in Tables 2A and 2B.

Table 2A: Summary of Wetlands within the Study Area

Wetland Name	Area (acres)	Cowardin Class	HGM Class
Wetland A	9.03	PUB3, PAB3, PFO1	Slope, Riverine
Wetland B	0.88	PSS1, PEM1	Slope, Riverine
Wetland Total	9.91		

Table 2B: Summary of Other Waters within the Study Area

Water Name	Linear Feet	Width	Cowardin Class	HGM Class
Stream 1	363	57feet	R2AB	Riverine
Willamette River	307	1,010 feet	R2UB	Riverine
Waters Total	670			

J. Required Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

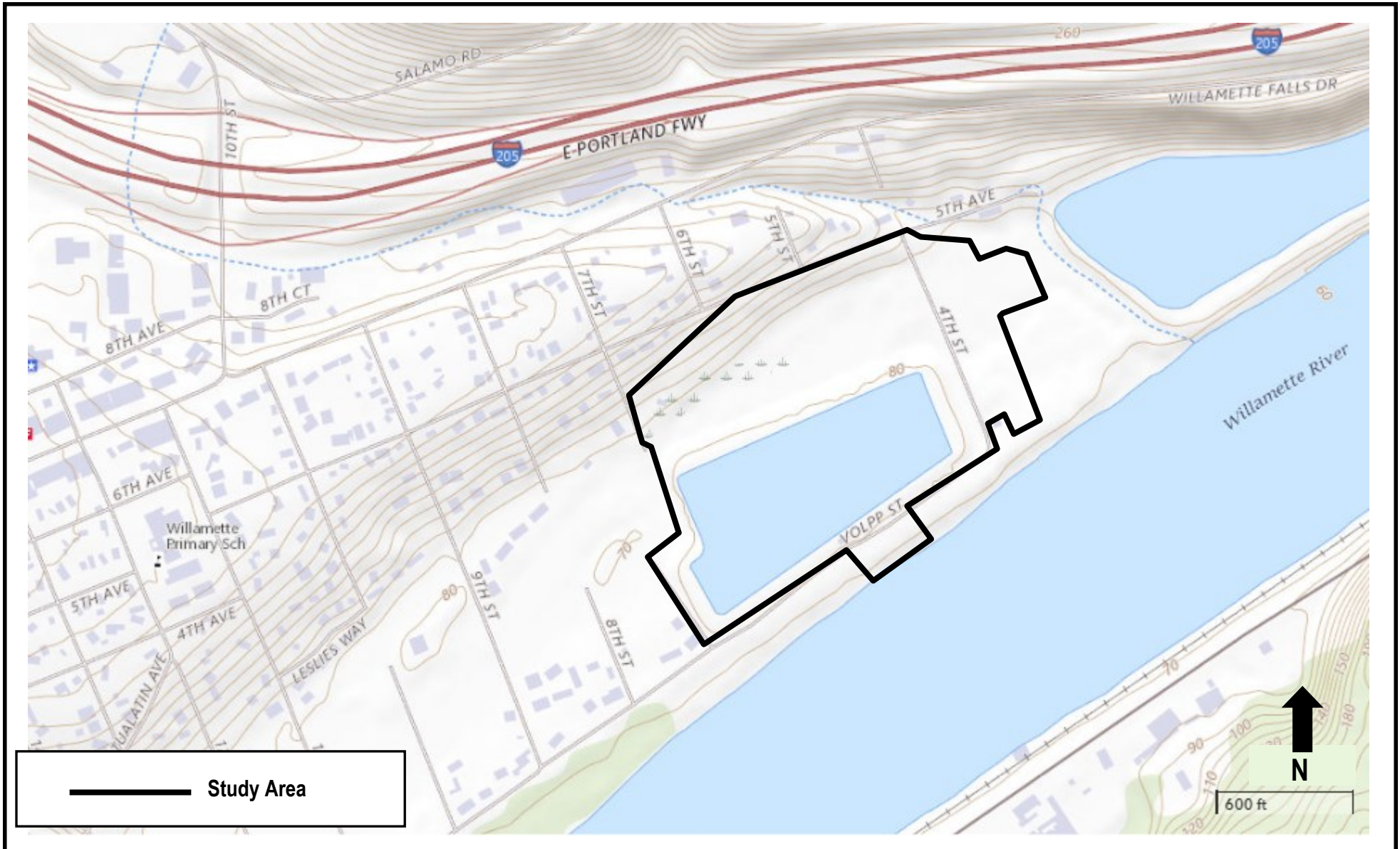
III. REFERENCES

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<https://www.fws.gov/wetlands/data/mapper.html>
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Appendix A

Figures





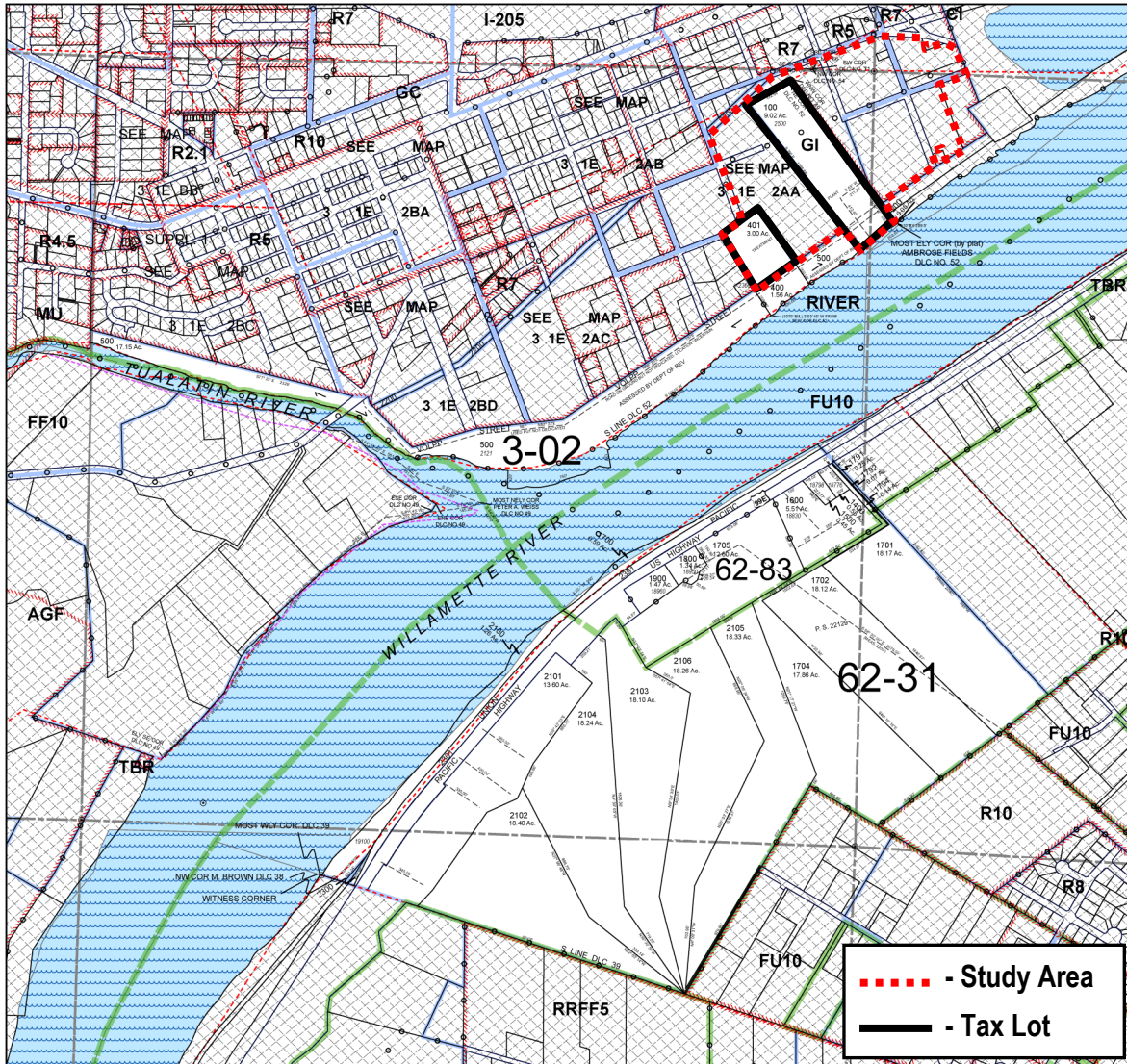
Project #7298
4/5/2024



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General Location and Topography
Rivianna Beach Development - West Linn, Oregon
United States Geological Survey (USGS) Canby, Oregon 7.5 quadrangle, 2020
(viewer.nationalmap.gov/basic)

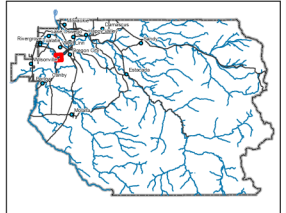
FIGURE
1



3 1 E 02
& INDEX
WEST LINN
SECTION 2 T.3S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 400'

D. L. C. SAMUEL D. POMEROY NO. 39
PETER A. WEISS NO. 49
JOSEPH A. FIELDS NO. 51
AMBROSE FIELDS NO. 52
MARSHALL K. PERRIN NO. 50

- Cancelled Taxlots
- 800
 - 2000
 - 300
 - 201
 - 300
 - 500
 - 500A1
 - 1102
 - 700
 - 701
 - 800
 - 1000
 - 1100
 - 1101
 - 1104
 - 1200
 - 1300
 - 1301
 - 1302
 - 1303
 - 1703
 - 1801
 - 2100A1
- Parcel Boundary
 - Private Road ROW
 - Historical Boundary
 - Railroad Centerline
 - Tax Code Lines
 - Map Index
 - Water Lines
 - Land Use Zoning
 - Plats
 - Water
 - Corner
 - Section Corner
 - 1/16th Line
 - Govt Lot Line
 - D.L.C Line
 - Meander Line
 - PLSS Section Line
 - Historic Corridor 40'
 - Historic Corridor 20'



915 ft

THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

3 1 E 02 & INDEX WEST LINN

..... - Study Area
——— - Tax Lot

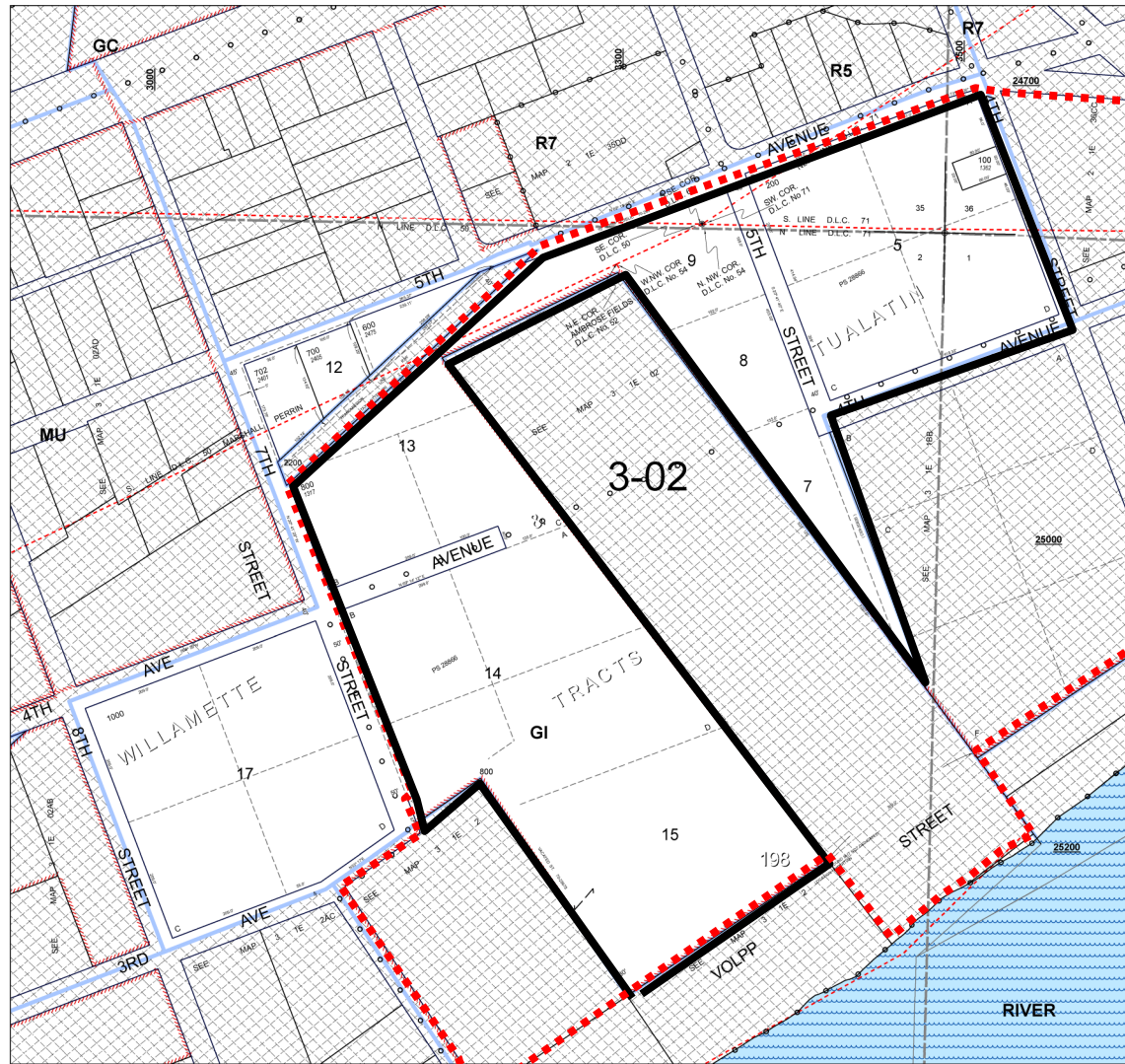
Project #7298
4/5/2024



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Tax Lot Map
Rivianna Beach Development - West Linn, Oregon
The Oregon Map (ormap.net)

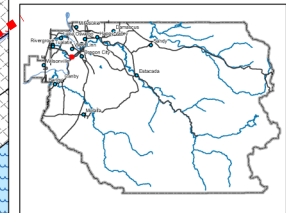
FIGURE
2A



3 1 E 02AA
WEST LINN
N.E. 1/4 N.E. 1/4 SEC. 2 T.3S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 100'

D. L. C.
MARSHALL PERIN NO. 50 & 60
AMBROSE FIELDS NO. 52
ROBERT MOORE NO. 54 & 71 ~~Cancelled Taxlots~~

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT
PURPOSES ONLY



3 1 E 02AA
WEST LINN
9/4/2021

450 ft

--- - Study Area

— - Tax Lot

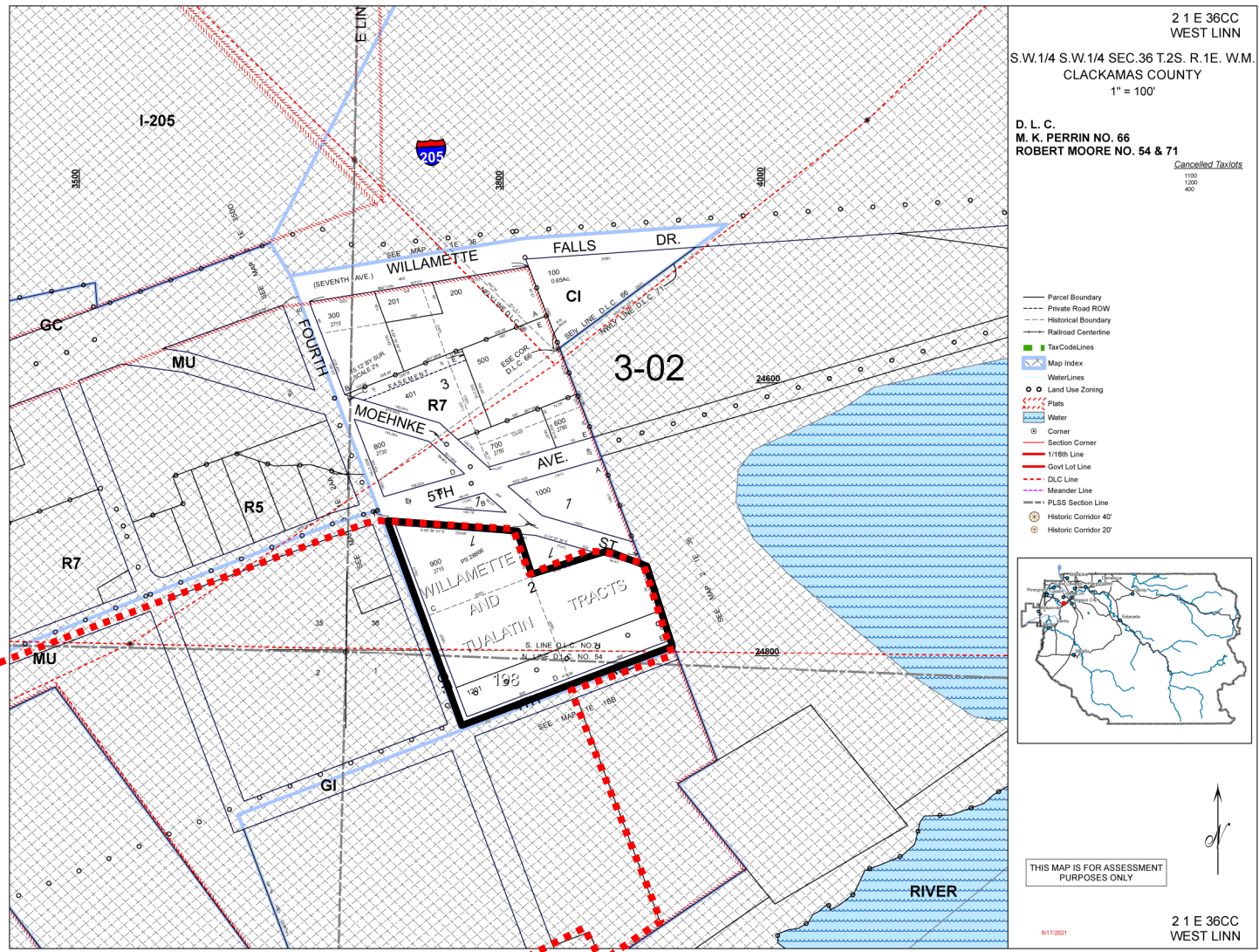
Project #7298
4/5/2024



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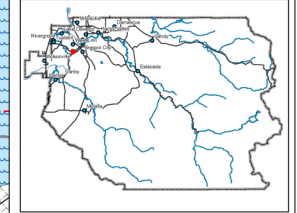
Tax Lot Map
Rivianna Beach Development - West Linn, Oregon
The Oregon Map (ormap.net)

FIGURE
2B



2 1 E 36CC
WEST LINN
S.W.1/4 S.W.1/4 SEC.36 T.2S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 100'
D. L. C.
M. K. PERRIN NO. 66
ROBERT MOORE NO. 54 & 71
Cancelled Taxlots
1100
1200
400

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 11/6th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT
PURPOSES ONLY

8/17/2021
2 1 E 36CC
WEST LINN

411 ft

----- - Study Area
————— - Tax Lot

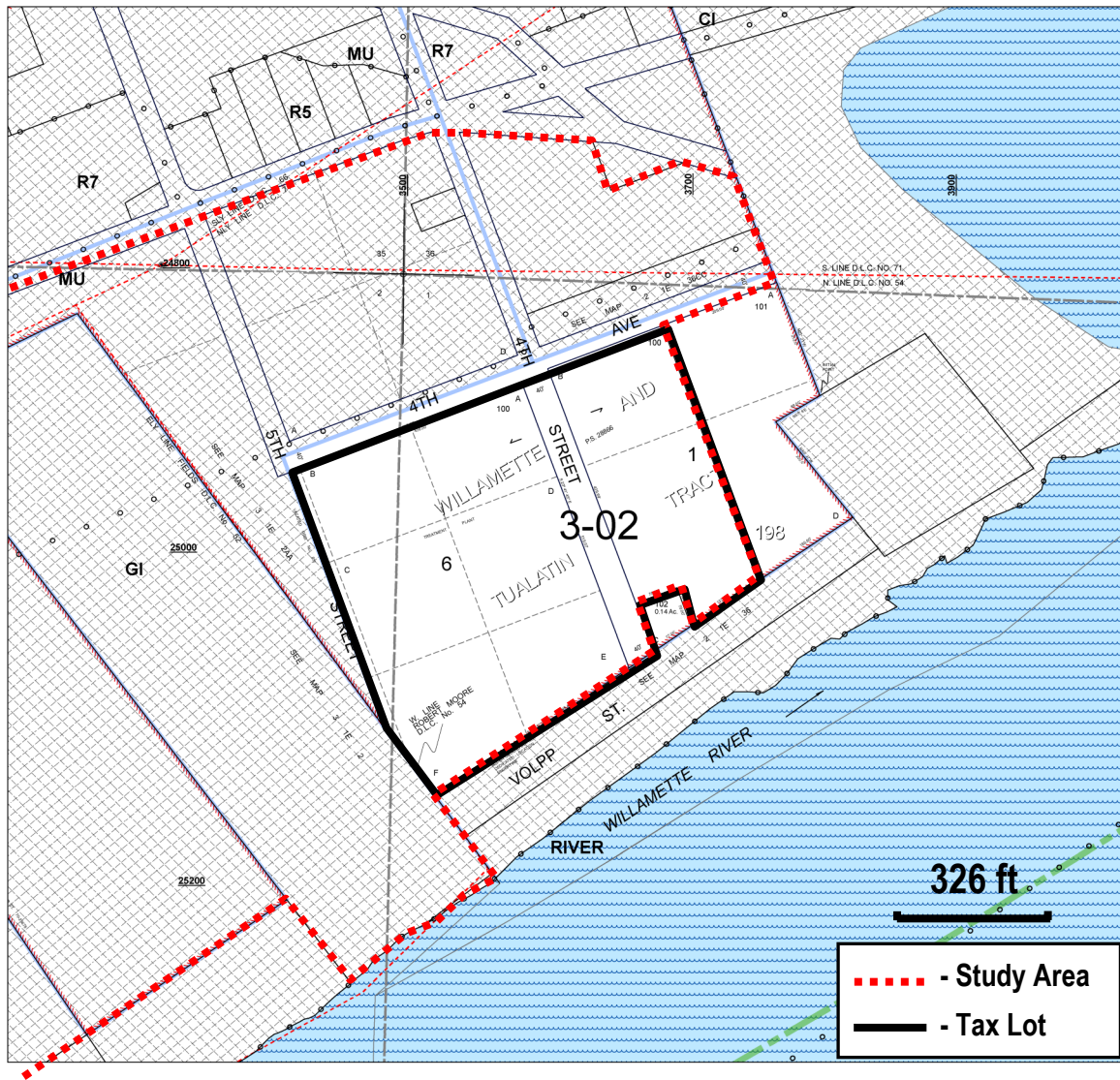
Project #7298
4/5/2024



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Tax Lot Map
Rivianna Beach Development - West Linn, Oregon
The Oregon Map (ormap.net)

FIGURE
2C

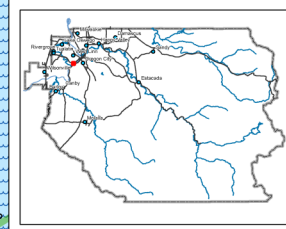


3 1 E 01BB
WEST LINN
N.W.1/4 N.W.1/4 SEC.1 T.3S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 100'

D. L. C.
ROBERT MOORE NO. 54

Cancelled Taxlots
200

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Piats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



326 ft

----- - Study Area
————— - Tax Lot

THIS MAP IS FOR ASSESSMENT
PURPOSES ONLY



3 1 E 01BB
WEST LINN

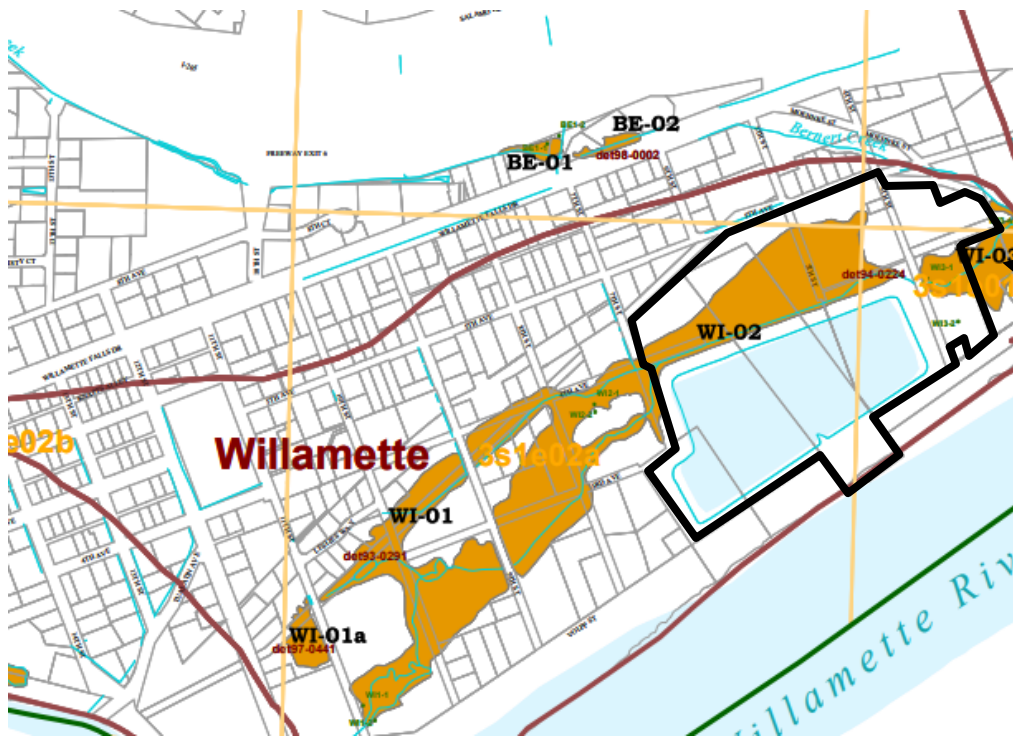
Project #7298
4/5/2024



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Tax Lot Map
Rivianna Beach Development - West Linn, Oregon
The Oregon Map (ormap.net)

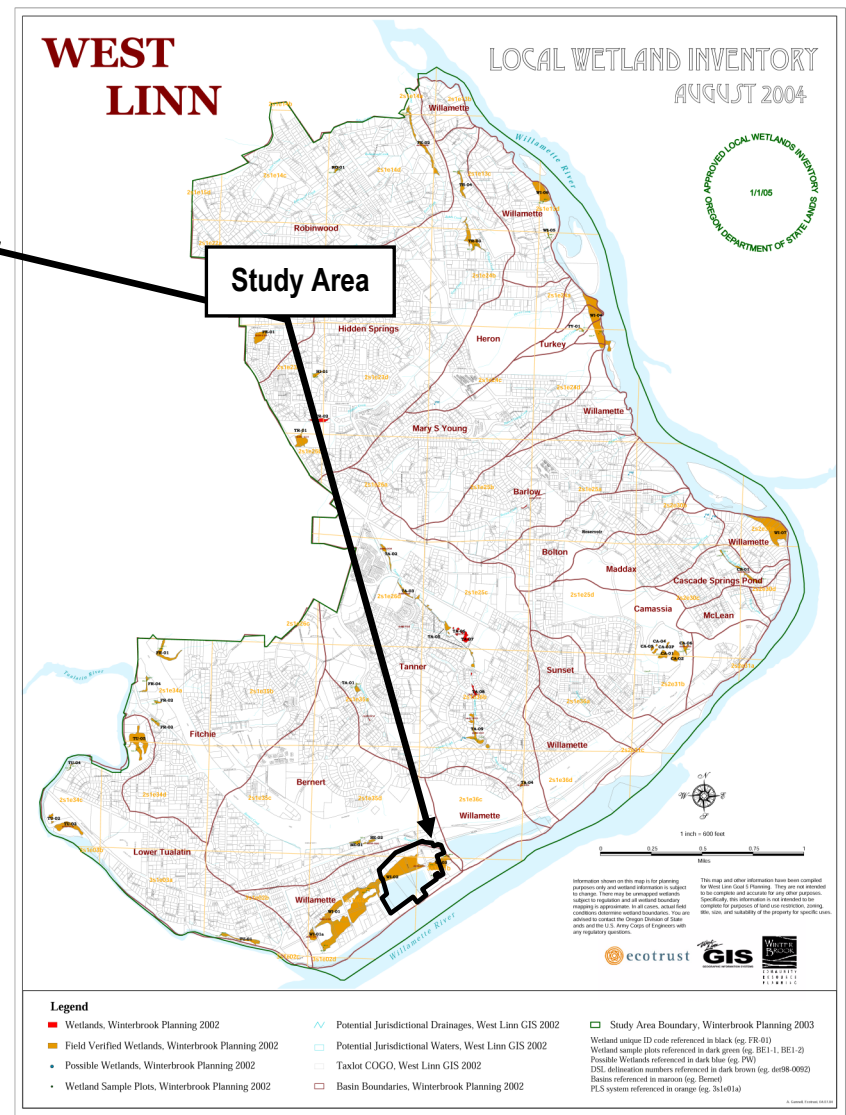
FIGURE
2D



Legend

- Wetlands, Winterbrook Planning 2002
- Field Verified Wetlands, Winterbrook Planning 2002
- Possible Wetlands, Winterbrook Planning 2002
- Wetland Sample Plots, Winterbrook Planning 2002
- ~ Potential Jurisdictional Drainages, West Linn GIS 2002
- Potential Jurisdictional Waters, West Linn GIS 2002
- Taxlot COGO, West Linn GIS 2002
- Basin Boundaries, Winterbrook Planning 2002

972 ft



Legend

- Wetlands, Winterbrook Planning 2002
- Field Verified Wetlands, Winterbrook Planning 2002
- Possible Wetlands, Winterbrook Planning 2002
- Wetland Sample Plots, Winterbrook Planning 2002
- ~ Potential Jurisdictional Drainages, West Linn GIS 2002
- Potential Jurisdictional Waters, West Linn GIS 2002
- Taxlot COGO, West Linn GIS 2002
- Basin Boundaries, Winterbrook Planning 2002
- Study Area Boundary, Winterbrook Planning 2003
- Wetland unique ID code referenced in black (eg. FR-01)
- Wetland sample plots referenced in dark blue (eg. BE1-1, BE1-2)
- Possible Wetlands referenced in dark blue (eg. PW)
- DSL, delineation numbers referenced in dark brown (eg. de#8-0082)
- Basin referenced in maroon (eg. Bernet)
- PLS system referenced in orange (eg. 341014)

Project #7298
4/5/2024



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Local Wetlands Inventory
Riviana Beach Development - West Linn, Oregon
Winterbrook Planning, 2005

FIGURE
3



Project #7298
4/5/2024



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Soils
Rivianna Beach Development - West Linn, Oregon
Natural Resources Conservation Services, Web Soil Survey, 2023
(websoilsurvey.sc.egov.usda.gov)

FIGURE

4



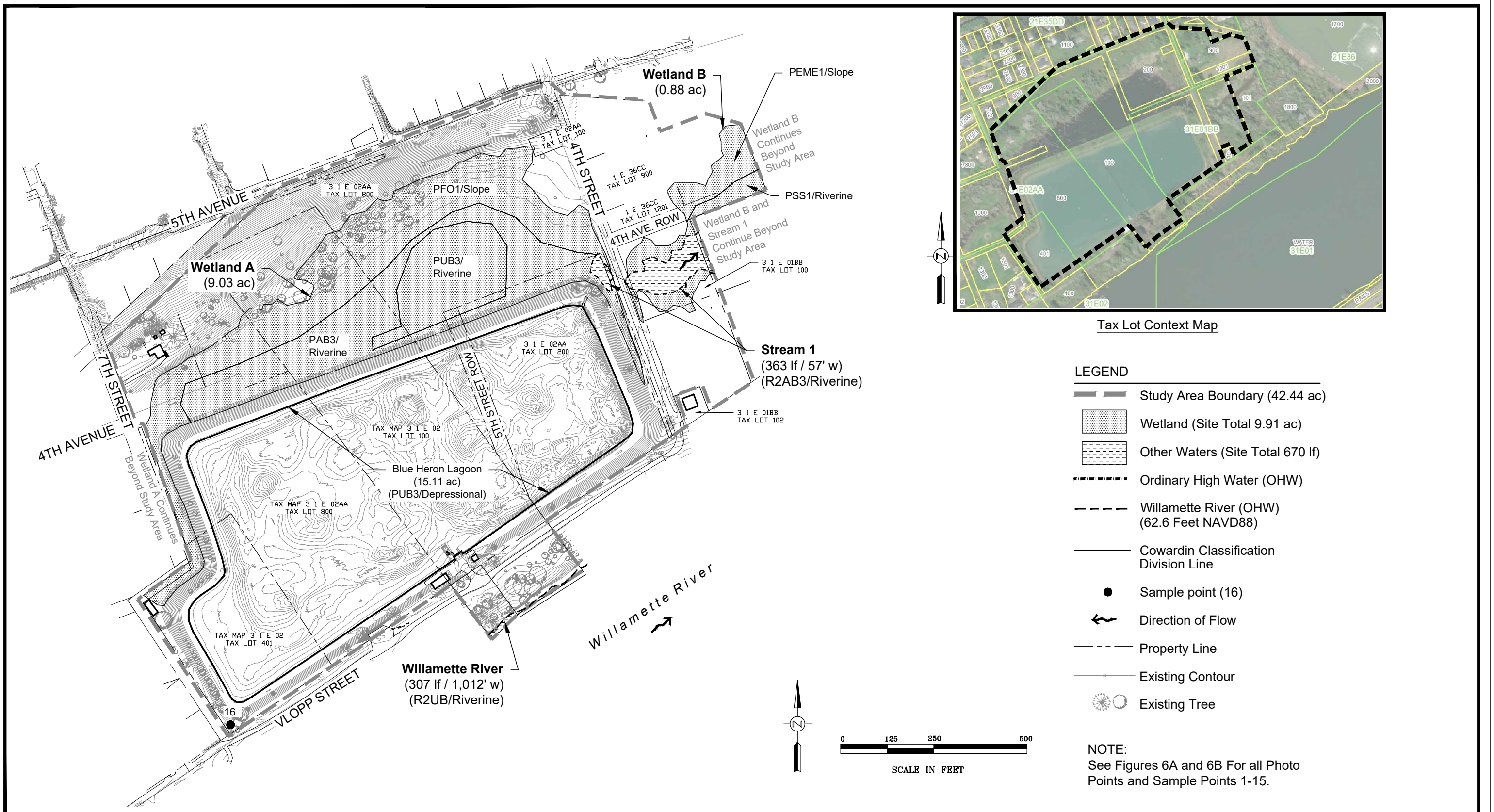
Project #7298
4/5/2024



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Aerial Photo (February, 2024)
Rivianna Beach Development - West Linn, Oregon
GoogleEarth, 2024

FIGURE
5



Tax Lot Context Map

LEGEND

- Study Area Boundary (42.44 ac)
- Wetland (Site Total 9.91 ac)
- Other Waters (Site Total 670 lf)
- Ordinary High Water (OHW)
- Willamette River (OHW) (62.6 Feet NAVD88)
- Cowardin Classification Division Line
- Sample point (16)
- Direction of Flow
- Property Line
- Existing Contour
- Existing Tree

NOTE:
See Figures 6A and 6B For all Photo Points and Sample Points 1-15.

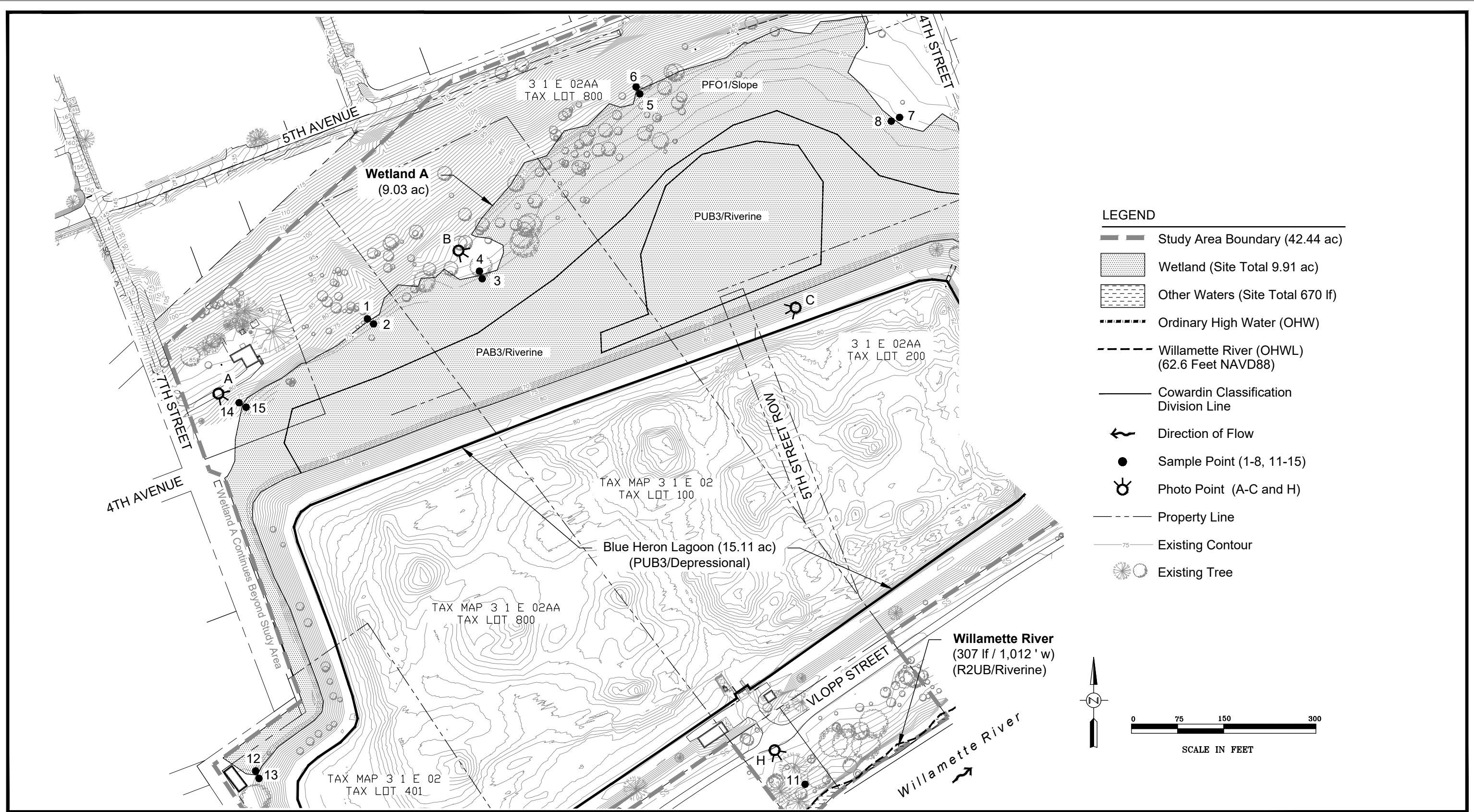


Survey provided by 3J Consulting
Survey accuracy is sub-centimeter.
Sample points, wetland flags collected by PHS with submeter accuracy using Trimble GPS (Geo7x)
Ordinary High Water of Willamette River determined by Public Lands Map, DSL 1975

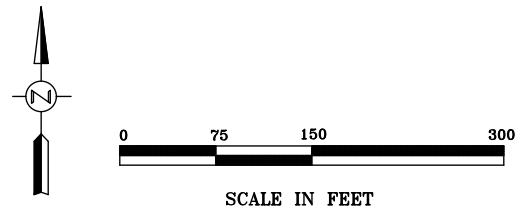
Wetland Delineation Overview
Rivianna Beach Development - West Linn, Oregon

FIGURE
6

4-10-2024



- LEGEND**
- Study Area Boundary (42.44 ac)
 - Wetland (Site Total 9.91 ac)
 - Other Waters (Site Total 670 lf)
 - Ordinary High Water (OHW)
 - Willamette River (OHWL) (62.6 Feet NAVD88)
 - Cowardin Classification Division Line
 - Direction of Flow
 - Sample Point (1-8, 11-15)
 - Photo Point (A-C and H)
 - Property Line
 - Existing Contour
 - Existing Tree

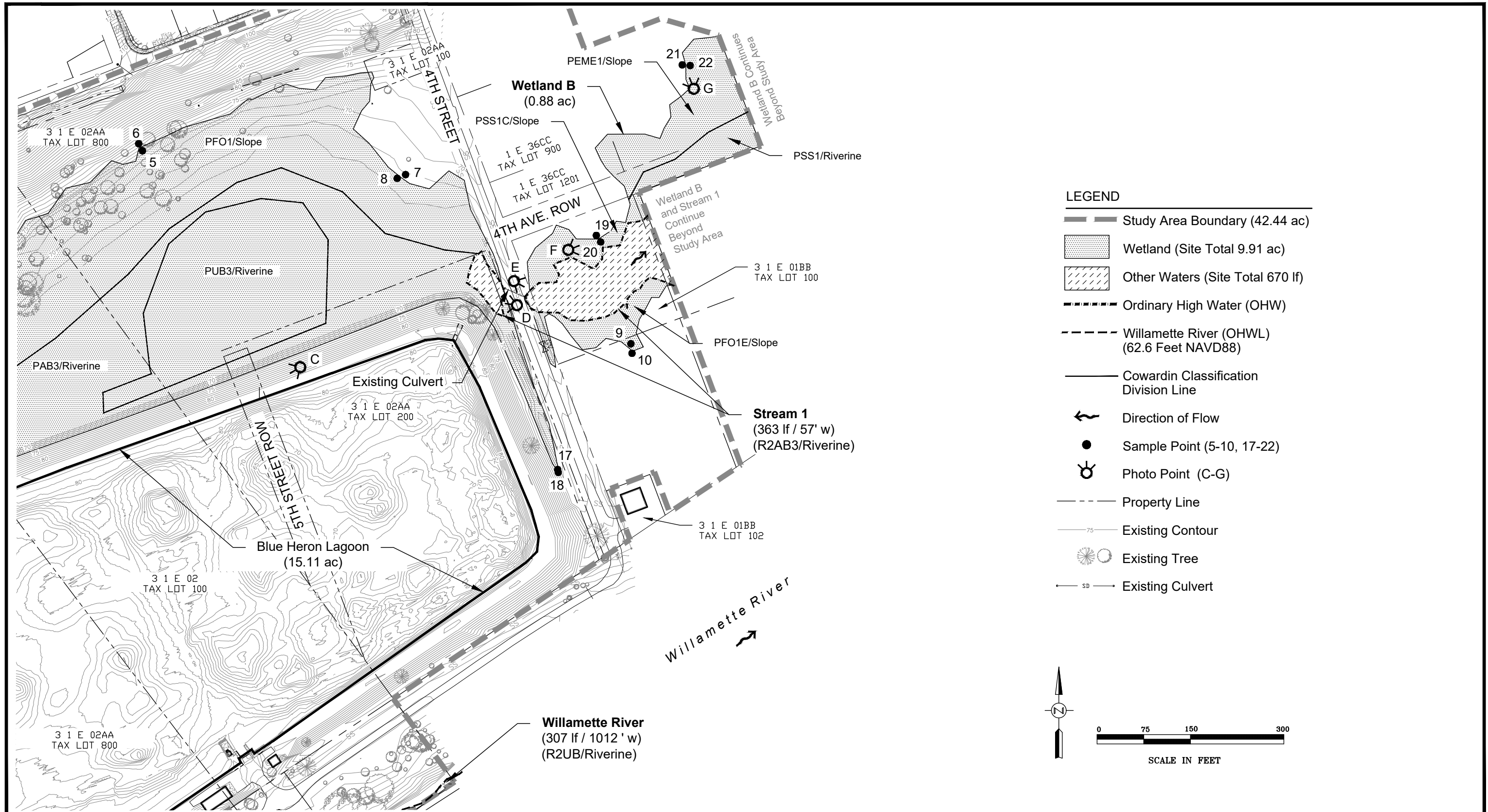


Survey provided by 3J Consulting
 Survey accuracy is sub-centimeter.
 Sample points, wetland flags collected by PHS with
 submeter accuracy using Trimble GPS (Geo7x)
 Ordinary High Water of Willamette River determined by
 Public Lands Map, DSL 1975

Wetland Delineation
 Rivianna Beach Development - West Linn, Oregon

FIGURE 6A

4-10-2024



Survey provided by 3J Consulting
 Survey accuracy is sub-centimeter.
 Sample points, wetland flags collected by PHS with
 submeter accuracy using Trimble GPS (Geo7x)
 Ordinary High Water of Willamette River determined by
 Public Lands Map, DSL 1975

Wetland Delineation
 Rivianna Beach Development - West Linn, Oregon

FIGURE
6B

4-10-2024

Appendix B

Wetland Determination Data Sheets



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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 1
 Investigator(s): AS/CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10
 Subregion (LRR): LRRA Lat: 45.3451 Long: -122.6437 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (plot size: <u>15</u>)			
1	<u>Rubus armeniacus</u>	<u>X</u>	<u>FAC</u>
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
	<u>98</u>	= Total Cover	
Herb Stratum (plot size: <u>5</u>)			
1	<u>Phalaris arundinacea</u>	_____	<u>FACW</u>
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
	<u>2</u>	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1	_____	_____	_____
2	_____	_____	_____
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>98</u>			

Dominance Test worksheet:

Number of Dominant Species
 That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species
 That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of	Multiply by:	
OBL Species	x 1 =	<u>0</u>
FACW species	x 2 =	<u>0</u>
FAC Species	x 3 =	<u>0</u>
FACU Species	x 4 =	<u>0</u>
UPL Species	x 5 =	<u>0</u>
Column Totals	<u>0</u> (A)	<u>0</u> (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation
X 2- Dominance Test is >50%
 _____ 3-Prevalence Index is ≤ 3.0¹
 _____ 4-Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
 _____ 5- Wetland Non-Vascular Plants¹
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2	100					Silt Loam	
9-12	10YR 3/2	80					Silt Loam	
9-12	10YR 3/1	20					Silt Loam	
12-18	10YR 3/1	100					Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
 Water Table Present? Yes _____ No X Depth (inches): >18
 Saturation Present? Yes _____ No X Depth (inches): >18
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 2
 Investigator(s): AS/CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10
 Subregion (LRR): LRRA Lat: 45.3451 Long: -122.6437 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: PFO1A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: _____)				Number of Dominant Species	
1	_____	_____	_____	That are OBL, FACW, or FAC: <u>3</u> (A)	
2	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3	_____	_____	_____	Percent of Dominant Species	
4	_____	_____	_____	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5	<u>0</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1	<u>30</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2	<u>10</u>	<u>X</u>	<u>(FAC)</u>	FACW species _____ x 2 = <u>0</u>	
3	_____	_____	_____	FAC Species _____ x 3 = <u>0</u>	
4	_____	_____	_____	FACU Species _____ x 4 = <u>0</u>	
5	_____	_____	_____	UPL Species _____ x 5 = <u>0</u>	
	<u>40</u>	= Total Cover		Column Totals <u>0</u> (A)	<u>0</u> (B)
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1	<u>70</u>	<u>X</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
2	_____	_____	_____	_____ 1- Rapid Test for Hydrophytic Vegetation	
3	_____	_____	_____	<u>X</u> 2- Dominance Test is >50%	
4	_____	_____	_____	_____ 3-Prevalence Index is ≤ 3.0 ¹	
5	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6	_____	_____	_____	_____ 5- Wetland Non-Vascular Plants ¹	
7	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8	<u>70</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1	_____	_____	_____		
2	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>30</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100					Silt Loam	
2-11	10YR 3/1	95	10YR 3/6	5	C	M	Sandy Clay Loam	Fine
11-16	10YR 4/1	90	10YR 3/6	10	C	M	Sandy Clay Loam	Fine

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 10

Saturation Present? Yes No Depth (inches): 8

(includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: _____

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 3
 Investigator(s): AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Hillslope/Streambank Local relief (concave, convex, none): None Slope (%): 5
 Subregion (LRR): LRRA Lat: 45.3453 Long: -122.6430 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: PFO1A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Alnus rubra</u>	<u>70</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>2</u> (A)	
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>67%</u> (A/B)	
	<u>70</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>80</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 _____				FACW species _____ x 2 = <u>0</u>	
3 _____				FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
	<u>80</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: _____)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 _____				Hydrophytic Vegetation Indicators:	
2 _____				1- Rapid Test for Hydrophytic Vegetation	
3 _____				<u>X</u> 2- Dominance Test is >50%	
4 _____				3-Prevalence Index is ≤ 3.0 ¹	
5 _____				4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				5- Wetland Non-Vascular Plants ¹	
7 _____				Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Woody Vine Stratum (plot size: <u>15</u>)					
1 <u>Hedera helix</u>	<u>15</u>	<u>X</u>	<u>FACU</u>		
2 _____					
	<u>15</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	100					Silt Loam	
4-10	10YR 3/1	95	7.5YR 3/4	5	C	M	Silt Loam	Fine

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Roots
 Depth (inches): 10

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No X Depth (inches):
 Water Table Present? Yes X No Depth (inches): 4
 Saturation Present? Yes X No Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 4
 Investigator(s): AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5
 Subregion (LRR): LRRA Lat: 45.3453 Long: -122.6430 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: PFO1A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: <u>30</u>)			
1 <u>Alnus rubra</u>	<u>40</u>	<u>X</u>	<u>FAC</u>
2 <u>Fraxinus latifolia</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
3 _____			
4 _____			
	<u>70</u>	= Total Cover	
Sapling/Shrub Stratum (plot size: <u>15</u>)			
1 <u>Rubus armeniacus</u>	<u>30</u>	<u>X</u>	<u>FAC</u>
2 <u>Ilex aquifolium</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
3 <u>Polystichum munitum</u>	<u>5</u>		<u>FACU</u>
4 _____			
5 _____			
	<u>55</u>	= Total Cover	
Herb Stratum (plot size: _____)			
1 _____			
2 _____			
3 _____			
4 _____			
5 _____			
6 _____			
7 _____			
8 _____			
	<u>0</u>	= Total Cover	
Woody Vine Stratum (plot size: <u>15</u>)			
1 <u>Hedera helix</u>	<u>35</u>	<u>X</u>	<u>FACU</u>
2 _____			
	<u>35</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>100</u>			

Dominance Test worksheet:

Number of Dominant Species
That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species
That are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

Total % Cover of	Multiply by:	
OBL Species _____	x 1 =	<u>0</u>
FACW species _____	x 2 =	<u>0</u>
FAC Species _____	x 3 =	<u>0</u>
FACU Species _____	x 4 =	<u>0</u>
UPL Species _____	x 5 =	<u>0</u>
Column Totals <u>0</u> (A)		<u>0</u> (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation
X 2- Dominance Test is >50%
 _____ 3-Prevalence Index is ≤ 3.0¹
 _____ 4-Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
 _____ 5- Wetland Non-Vascular Plants¹
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	100						
7-10	10YR 4/1	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present? Yes _____ No <u>X</u>
Type: _____	
Depth (inches): _____	

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No _____
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>6</u>	
Saturation Present? Yes <u>X</u> No _____	Depth (inches): <u>4</u>	

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

Remarks: _____

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 5
 Investigator(s): AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 20
 Subregion (LRR): LRRA Lat: 45.3461 Long: -122.6420 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: PAB/UBH
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: _____)				Number of Dominant Species	
1	_____	_____	_____	That are OBL, FACW, or FAC: <u>1</u> (A)	
2	_____	_____	_____	Total Number of Dominant	
3	_____	_____	_____	Species Across All Strata: <u>1</u> (B)	
4	_____	_____	_____	Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Prevalence Index Worksheet:	
1	<u>100</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	Multiply by:
2	_____	_____	_____	OBL Species	x 1 = <u>0</u>
3	_____	_____	_____	FACW species	x 2 = <u>0</u>
4	_____	_____	_____	FAC Species	x 3 = <u>0</u>
5	_____	_____	_____	FACU Species	x 4 = <u>0</u>
	<u>100</u>	= Total Cover		UPL Species	x 5 = <u>0</u>
Herb Stratum (plot size: _____)				Column Totals	<u>0</u> (A) <u>0</u> (B)
1	_____	_____	_____	Prevalence Index =B/A = <u>#DIV/0!</u>	
2	_____	_____	_____	Hydrophytic Vegetation Indicators:	
3	_____	_____	_____	_____ 1- Rapid Test for Hydrophytic Vegetation	
4	_____	_____	_____	<u>X</u> 2- Dominance Test is >50%	
5	_____	_____	_____	_____ 3-Prevalence Index is ≤ 3.0 ¹	
6	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
7	_____	_____	_____	_____ 5- Wetland Non-Vascular Plants ¹	
8	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
	<u>0</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present?	
1	_____	_____	_____	Yes <u>X</u>	No _____
2	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/2	100					Silt Loam	
6-8	10YR 4/1	100					Sandy Clay Loam	
8-16	10YR 4/1	90	10YR 4/6	10	C	M	Sandy Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 8
 Saturation Present? Yes No Depth (inches): 6
 (includes capillary fringe)

Wetland Hydrology Present?
 Yes No

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 6
 Investigator(s): AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 25
 Subregion (LRR): LRRA Lat: 45.3462 Long: -122.6421 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: PAB/UBH
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: _____)				Number of Dominant Species	
1	_____	_____	_____	That are OBL, FACW, or FAC: <u>1</u> (A)	
2	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3	_____	_____	_____	Percent of Dominant Species	
4	_____	_____	_____	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5	<u>0</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1	<u>100</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2	_____	_____	_____	FACW species _____ x 2 = <u>0</u>	
3	_____	_____	_____	FAC Species _____ x 3 = <u>0</u>	
4	_____	_____	_____	FACU Species _____ x 4 = <u>0</u>	
5	_____	_____	_____	UPL Species _____ x 5 = <u>0</u>	
	<u>100</u>	= Total Cover		Column Totals <u>0</u> (A)	<u>0</u> (B)
Herb Stratum (plot size: _____)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1	_____	_____	_____	Hydrophytic Vegetation Indicators:	
2	_____	_____	_____	_____ 1- Rapid Test for Hydrophytic Vegetation	
3	_____	_____	_____	<u>X</u> 2- Dominance Test is >50%	
4	_____	_____	_____	_____ 3-Prevalence Index is ≤ 3.0 ¹	
5	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6	_____	_____	_____	_____ 5- Wetland Non-Vascular Plants ¹	
7	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8	<u>0</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1	_____	_____	_____		
2	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/2	100					Silt Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) **Indicators for Problematic Hydric Soils³:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 2

Saturation Present? Yes X No _____ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks: _____

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 7
 Investigator(s): CM/AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3461 Long: -122.6404 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Crataegus monogyna</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>2</u> (A)	
2 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>67%</u> (A/B)	
	<u>10</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 <u>Corylus cornuta</u>	<u>20</u>		<u>FACU</u>	FACW species _____ x 2 = <u>0</u>	
3 _____				FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
	<u>120</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: _____)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 _____				Hydrophytic Vegetation Indicators:	
2 _____				_____ 1- Rapid Test for Hydrophytic Vegetation	
3 _____				_____ <u>X</u> 2- Dominance Test is >50%	
4 _____				_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Woody Vine Stratum (plot size: <u>30</u>)					
1 <u>Hedera helix</u>	<u>20</u>	<u>X</u>	<u>FACU</u>		
2 _____					
	<u>20</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/3	100					Silty Clay Loam	
10-14	10YR 3/2	98	2.5Y 5/1	2	D	M	Silty Clay Loam	Fine
14-17	10YR 3/2	95	2.5Y 5/1	5	D	M	Silty Clay Loam	Fine

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No **X** Depth (inches): _____
 Water Table Present? Yes **X** No _____ Depth (inches): **15**
 Saturation Present? Yes **X** No _____ Depth (inches): **0-2; 12**
 (includes capillary fringe)

Wetland Hydrology Present?
 Yes **X** No _____

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/26/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 8
 Investigator(s): CM/AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR): LRRA Lat: 45.3460 Long: -122.6405 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Fraxinus latifolia</u>	<u>5</u>	<u>X</u>	<u>FACW</u>	That are OBL, FACW, or FAC: <u>2</u> (A)	
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>5</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 <u>Spiraea douglasii</u>	<u>5</u>		<u>FACW</u>	FACW species _____ x 2 = <u>0</u>	
3 _____				FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
	<u>105</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: _____)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 _____				Hydrophytic Vegetation Indicators:	
2 _____				_____ 1- Rapid Test for Hydrophytic Vegetation	
3 _____				_____ <u>X</u> 2- Dominance Test is >50%	
4 _____				_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Woody Vine Stratum (plot size: _____)					
1 _____					
2 _____					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR3/2	93	2.5Y 5/1	5	D	M	Silty Clay Loam	Medium
			10YR 3/4	2	C	M	Silty Clay Loam	Medium
6-15	10YR 3/2	88	2.5Y 5/1	10	D	M	Silty Clay Loam	Medium
			10YR 3/4	2	C	M		Medium

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 12
 Saturation Present? Yes No Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present?

Yes No

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 9
 Investigator(s): CM Section, Township, Range: S 1, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR): LRRA Lat: 45.3453 Long: -122.6390 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Fraxinus latifolia</u>	<u>40</u>	<u>X</u>	<u>FACW</u>	That are OBL, FACW, or FAC: <u>4</u> (A)	
2 _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>80%</u> (A/B)	
40 = Total Cover				Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 _____				FACW species _____ x 2 = <u>0</u>	
3 _____				FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
100 = Total Cover				Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 <u>Phalaris arundinacea</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
2 <u>Galium aparine</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
3 <u>Geranium sp</u>	<u>5</u>	<u>X</u>	<u>(FAC)</u>	<u>X</u> 2- Dominance Test is >50%	
4 _____				_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				_____	
20 = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1 _____					
2 _____					
0 = Total Cover					
% Bare Ground in Herb Stratum <u>80</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100					Silty Clay Loam	
8-17	10YR 3/1	90	10YR 5/6	10	C	M	Silty Clay Loam	Coarse

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): >17
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0-1; >17

Wetland Hydrology Present?
 Yes No

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

Remarks:

Saturation not tied to high water table

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 10
 Investigator(s): CM Section, Township, Range: S 1, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR): LRRA Lat: 45.3453 Long: -122.6390 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Fraxinus latifolia</u>	<u>75</u>	<u>X</u>	<u>FACW</u>	That are OBL, FACW, or FAC: <u>2</u> (A)	
2 _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>75</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 <u>Fraxinus latifolia</u>	<u>5</u>		<u>FACW</u>	FACW species _____ x 2 = <u>0</u>	
3 _____				FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
	<u>105</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: _____)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 _____				Hydrophytic Vegetation Indicators:	
2 _____				_____ 1- Rapid Test for Hydrophytic Vegetation	
3 _____				_____ <u>X</u> 2- Dominance Test is >50%	
4 _____				_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Woody Vine Stratum (plot size: _____)					
1 _____					
2 _____					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/2	100					Silty Clay Loam	
8-12	10YR 3/2	99	10YR 3/4	1	C	M	Silty Clay Loam	Fine
12-17	10YR 3/1	99	10YR 3/3	1	C	M	Clay Loam	Fine

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No **X** Depth (inches): _____
 Water Table Present? Yes _____ No **X** Depth (inches): **>17**
 Saturation Present? Yes _____ No **X** Depth (inches): **>17**
 (includes capillary fringe)

Wetland Hydrology Present?

Yes _____ No **X**

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 11
 Investigator(s): CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Bank Local relief (concave, convex, none): Convex Slope (%): 25
 Subregion (LRR): LRRA Lat: 45.3431 Long: -122.6409 Datum: WGS84
 Soil Map Unit Name: Newberg fine sandy loam NWI Classification: R2UBH
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	
Tree Stratum (plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>43%</u> (A/B)
1	<u>70</u>	<u>X</u>	<u>FAC</u>	
2	<u>30</u>	<u>X</u>	<u>FACU</u>	
3	_____	_____	_____	
4	_____	_____	_____	
	<u>100</u>	= Total Cover		
Sapling/Shrub Stratum (plot size: <u>15</u>)				
1	<u>25</u>	<u>X</u>	<u>FACU</u>	Prevalence Index Worksheet: Total % Cover of _____ Multiply by: OBL Species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC Species _____ x 3 = <u>0</u> FACU Species _____ x 4 = <u>0</u> UPL Species _____ x 5 = <u>0</u> Column Totals <u>0</u> (A) <u>0</u> (B) Prevalence Index =B/A = <u>#DIV/0!</u>
2	<u>20</u>	<u>X</u>	<u>FAC</u>	
3	<u>20</u>	<u>X</u>	<u>FAC</u>	
4	<u>15</u>	_____	<u>FACW</u>	
5	<u>10</u>	_____	<u>FACU</u>	
	<u>100</u>	= Total Cover		
Herb Stratum (plot size: <u>5</u>)				
1	<u>40</u>	<u>X</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1- Rapid Test for Hydrophytic Vegetation _____ 2- Dominance Test is >50% _____ 3-Prevalence Index is ≤ 3.0 ¹ _____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet) _____ 5- Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2	_____	_____	_____	
3	_____	_____	_____	
4	_____	_____	_____	
5	_____	_____	_____	
6	_____	_____	_____	
7	_____	_____	_____	
8	_____	_____	_____	
	<u>40</u>	= Total Cover		
Woody Vine Stratum (plot size: <u>30</u>)				
1	<u>80</u>	<u>X</u>	<u>FACU</u>	
2	_____	_____	_____	
	<u>80</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>60</u>				

Remarks:
Shrubs continued: Alnus rubra (FACU) 10%.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					Silty Clay Loam	
2-6	10YR 3/2	100					Silty Clay Loam	
6-16	10YR 3/2	98	10YR 5/6	2	C	M	Silty Clay Loam	Coarse

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
 Water Table Present? Yes _____ No X Depth (inches): >16
 Saturation Present? Yes _____ No X Depth (inches): >16
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 12
 Investigator(s): CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3431 Long: -122.6444 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Fraxinus latifolia</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	That are OBL, FACW, or FAC: <u>6</u> (A)	
2 _____				Total Number of Dominant Species Across All Strata: <u>6</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>10</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 <u>Fraxinus latifolia</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	FACW species _____ x 2 = <u>0</u>	
3 <u>Populus balsamifera</u>	<u>10</u>		<u>FAC</u>	FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
	<u>60</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2 <u>Phalaris arundinacea</u>	<u>30</u>	<u>X</u>	<u>FACW</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
3 <u>Unidentified grass</u>	<u>20</u>	<u>X</u>	<u>(FAC)</u>	_____ <u>X</u> 2- Dominance Test is >50%	
4 <u>Cirsium arvense</u>	<u>10</u>		<u>FAC</u>	_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				_____	
	<u>100</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1 _____					
2 _____					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/2	99	10YR 3/4	1	C	M	Silty Clay Loam	Fine
5-15	10YR 3/2	95	10YR 3/4	5	C	M	Silty Clay Loam	Fine

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Soils are adjacent to a berm, which has disturbed soils, decades old. Conditions are considered normal.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 3
 Saturation Present? Yes No Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present?

Yes No

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 13
 Investigator(s): CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope/Berm Local relief (concave, convex, none): Convex Slope (%): 25
 Subregion (LRR): LRRA Lat: 45.3430 Long: -122.6443 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>40</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>3</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species	
4 _____	_____	_____	_____	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>40</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Rubus armeniacus</u>	<u>75</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 <u>Corylus cornuta</u>	<u>20</u>	_____	<u>FACU</u>	FACW species _____ x 2 = <u>0</u>	
3 <u>Populus balsamifera</u>	<u>20</u>	_____	<u>FAC</u>	FAC Species _____ x 3 = <u>0</u>	
4 <u>Crataegus monogyna</u>	<u>10</u>	_____	<u>FAC</u>	FACU Species _____ x 4 = <u>0</u>	
5 <u>Fraxinus latifolia</u>	<u>5</u>	_____	<u>FACW</u>	UPL Species _____ x 5 = <u>0</u>	
	<u>135</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 <u>Schedonorus arundinaceus</u>	<u>70</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2 <u>Phalaris arundinacea</u>	<u>10</u>	_____	<u>FACW</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
3 <u>Unidentified grass</u>	<u>10</u>	_____	<u>(FAC)</u>	_____ <u>X</u> 2- Dominance Test is >50%	
4 <u>Cirsium arvense</u>	<u>10</u>	_____	<u>FAC</u>	_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____	_____	_____	_____	_____ 5- Wetland Non-Vascular Plants ¹	
7 _____	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____	_____	_____	_____	_____	
	<u>100</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1 _____	_____	_____	_____		
2 _____	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:
Shrubs continued: Cornus alba (FACW) 5%.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/2	40					Sandy Clay Loam	Mixed Matrix
	10YR 3/3	60					Sandy Clay Loam	Mixed Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:
Soil has been disturbed decades ago. Conditions considered normal.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No **X** Depth (inches): _____
 Water Table Present? Yes _____ No **X** Depth (inches): **>16**
 Saturation Present? Yes **X** No _____ Depth (inches): **0-3; >16**
 (includes capillary fringe)

Wetland Hydrology Present?
 Yes _____ No **X**

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

Remarks:
Saturation not tied to high water table

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 14
 Investigator(s): CM/AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 10
 Subregion (LRR): LRRA Lat: 45.3447 Long: -122.6445 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: _____)				Number of Dominant Species	
1	_____	_____	_____	That are OBL, FACW, or FAC: <u>2</u> (A)	
2	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3	_____	_____	_____	Percent of Dominant Species	
4	_____	_____	_____	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5	<u>0</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1	<u>100</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2	_____	_____	_____	FACW species _____ x 2 = <u>0</u>	
3	_____	_____	_____	FAC Species _____ x 3 = <u>0</u>	
4	_____	_____	_____	FACU Species _____ x 4 = <u>0</u>	
5	_____	_____	_____	UPL Species _____ x 5 = <u>0</u>	
	<u>100</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1	<u>5</u>	<u>X</u>	<u>(FAC)</u>	Hydrophytic Vegetation Indicators:	
2	_____	_____	_____	_____ 1- Rapid Test for Hydrophytic Vegetation	
3	_____	_____	_____	<u>X</u> 2- Dominance Test is >50%	
4	_____	_____	_____	_____ 3-Prevalence Index is ≤ 3.0 ¹	
5	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6	_____	_____	_____	_____ 5- Wetland Non-Vascular Plants ¹	
7	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8	<u>5</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1	_____	_____	_____		
2	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>95</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>1-12</u>	<u>10YR 3/3</u>	<u>100</u>					<u>Silty Clay Loam</u>	
<u>12-17</u>	<u>10YR 3/4</u>	<u>100</u>					<u>Silty Clay Loam</u>	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) **Indicators for Problematic Hydric Soils³:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): >17

Saturation Present? Yes X No _____ Depth (inches): 0-3; >17

Wetland Hydrology Present? Yes _____ No X

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

Remarks: **Saturation not tied to high water table**

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 15
 Investigator(s): CM/AS Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): LRRA Lat: 45.3447 Long: -122.6445 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u><i>Alnus rubra</i></u>	<u>20</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>6</u> (A)	
2 <u><i>Fraxinus latifolia</i></u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)	
3 _____	_____	_____	_____	Percent of Dominant Species	
4 _____	_____	_____	_____	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>30</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u><i>Rubus armeniacus</i></u>	<u>20</u>	<u>X</u>	<u>FAC</u>	OBL Species _____ x 1 = <u>0</u>	
2 _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>	
3 _____	_____	_____	_____	FAC Species _____ x 3 = <u>0</u>	
4 _____	_____	_____	_____	FACU Species _____ x 4 = <u>0</u>	
5 _____	_____	_____	_____	UPL Species _____ x 5 = <u>0</u>	
	<u>20</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 <u><i>Ranunculus repens</i></u>	<u>30</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2 <u><i>Phalaris arundinacea</i></u>	<u>30</u>	<u>X</u>	<u>FACW</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
3 <u>Unidentified grass</u>	<u>30</u>	<u>X</u>	<u>(FAC)</u>	<u>X</u> 2- Dominance Test is >50%	
4 <u><i>Scirpus microcarpus</i></u>	<u>20</u>	_____	<u>OBL</u>	_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 <u><i>Juncus effusus</i></u>	<u>10</u>	_____	<u>FACW</u>	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 <u><i>Cirsium arvense</i></u>	<u>5</u>	_____	<u>FAC</u>	_____ 5- Wetland Non-Vascular Plants ¹	
7 _____	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____	_____	_____	_____	_____	
	<u>125</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1 _____	_____	_____	_____		
2 _____	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	95	10YR 3/4	2	C	M	Silty Clay Loam	Fine
			2.5Y 4/1	3	D	M	Silty Clay Loam	Medium

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) **Indicators for Problematic Hydric Soils³:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 7

Saturation Present? Yes No Depth (inches): Surface

Wetland Hydrology Present? Yes No

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

Remarks: _____

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 16
 Investigator(s): CM Section, Township, Range: S 401, T 3S, 1 E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3422 Long: -122.6436 Datum: WGS84
 Soil Map Unit Name: Newberg fine sandy loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status		
Tree Stratum (plot size: <u>30</u>)				Dominance Test worksheet:	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	Number of Dominant Species	
2 <u>Populus balsamifera</u>	<u>20</u>		<u>FAC</u>	That are OBL, FACW, or FAC: <u>2</u> (A)	
3 _____				Total Number of Dominant	
4 _____				Species Across All Strata: <u>3</u> (B)	
	<u>120</u>	= Total Cover		Percent of Dominant Species	
Sapling/Shrub Stratum (plot size: <u>15</u>)				That are OBL, FACW, or FAC: <u>67%</u> (A/B)	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	Prevalence Index Worksheet:	
2 <u>Populus balsamifera</u>	<u>10</u>		<u>FAC</u>		Total % Cover of _____ Multiply by: _____
3 _____					OBL Species _____ x 1 = <u>0</u>
4 _____					FACW species _____ x 2 = <u>0</u>
5 _____					FAC Species _____ x 3 = <u>0</u>
	<u>110</u>	= Total Cover		FACU Species _____ x 4 = <u>0</u>	
Herb Stratum (plot size: _____)				UPL Species _____ x 5 = <u>0</u>	
1 _____				Column Totals <u>0</u> (A) <u>0</u> (B)	
2 _____				Prevalence Index =B/A = <u>#DIV/0!</u>	
3 _____				Hydrophytic Vegetation Indicators:	
4 _____					_____ 1- Rapid Test for Hydrophytic Vegetation
5 _____					<u>X</u> 2- Dominance Test is >50%
6 _____					_____ 3-Prevalence Index is ≤ 3.0 ¹
7 _____					_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
8 _____				_____ 5- Wetland Non-Vascular Plants ¹	
	<u>0</u>	= Total Cover		_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
Woody Vine Stratum (plot size: <u>30</u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1 <u>Hedera helix</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	Hydrophytic Vegetation Present?	
2 _____				Yes <u>X</u> No _____	
	<u>30</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>100</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/3	99	10YR 3/4	1	C	M	Loam	Organic; Fine
10-17	10YR 3/3	97	10YR 3/4	3	C	M	Loam	Organic; Fine

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No **X** Depth (inches): _____
 Water Table Present? Yes _____ No **X** Depth (inches): **>17**
 Saturation Present? (includes capillary fringe) Yes **X** No _____ Depth (inches): **0-2; >17**

Wetland Hydrology Present?
 Yes _____ No **X**

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 17
 Investigator(s): CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3448 Long: -122.6394 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: _____)				Number of Dominant Species	
1	_____	_____	_____	That are OBL, FACW, or FAC: <u>3</u> (A)	
2	_____	_____	_____	Total Number of Dominant	
3	_____	_____	_____	Species Across All Strata: <u>4</u> (B)	
4	_____	_____	_____	Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>75%</u> (A/B)	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Prevalence Index Worksheet:	
1	<u>5</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	Multiply by:
2	_____	_____	_____	OBL Species	x 1 = <u>0</u>
3	_____	_____	_____	FACW species	x 2 = <u>0</u>
4	_____	_____	_____	FAC Species	x 3 = <u>0</u>
5	_____	_____	_____	FACU Species	x 4 = <u>0</u>
	<u>5</u>	= Total Cover		UPL Species	x 5 = <u>0</u>
Herb Stratum (plot size: <u>5</u>)				Column Totals	<u>0</u> (A) <u>0</u> (B)
1	<u>50</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2	<u>20</u>	<u>X</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
3	<u>20</u>	<u>X</u>	<u>(FAC)</u>	1- Rapid Test for Hydrophytic Vegetation	
4	<u>10</u>	_____	<u>FAC</u>	<u>X</u> 2- Dominance Test is >50%	
5	_____	_____	_____	3-Prevalence Index is ≤ 3.0 ¹	
6	_____	_____	_____	4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
7	_____	_____	_____	5- Wetland Non-Vascular Plants ¹	
8	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
	<u>100</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present?	
1	_____	_____	_____	Yes <u>X</u>	No _____
2	_____	_____	_____		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/3	100					Loam	
5-7	10YR 3/2	50					Loam	
5-7	10YR 3/3	50					Loam	
7-15	10YR 3/2	60	10YR5/6	3	C	M	Loam	Medium
7-15	10YR 3/3	35	10YR5/6	2	C	M	Loam	Medium

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Mixed matrix, old disturbed soils, normal conditions present.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 8
 Saturation Present? Yes No Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present?
 Yes No

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 18
 Investigator(s): CM Section, Township, Range: S 2, T 3S, R 1E
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3448 Long: -122.6394 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	
Tree Stratum (plot size: _____)				Dominance Test worksheet:
1 _____	_____	_____	_____	Number of Dominant Species
2 _____	_____	_____	_____	That are OBL, FACW, or FAC: <u>2</u> (A)
3 _____	_____	_____	_____	Total Number of Dominant
4 _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)
	<u>0</u>	= Total Cover		Percent of Dominant Species
Sapling/Shrub Stratum (plot size: <u>15</u>)				That are OBL, FACW, or FAC: <u>67%</u> (A/B)
1 <u>Rubus armeniacus</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	Prevalence Index Worksheet:
2 _____	_____	_____	_____	Total % Cover of _____ Multiply by: _____
3 _____	_____	_____	_____	OBL Species _____ x 1 = <u>0</u>
4 _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>
5 _____	_____	_____	_____	FAC Species _____ x 3 = <u>0</u>
	<u>5</u>	= Total Cover		FACU Species _____ x 4 = <u>0</u>
Herb Stratum (plot size: <u>5</u>)				UPL Species _____ x 5 = <u>0</u>
1 <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>X</u>	<u>FAC</u>	Column Totals <u>0</u> (A) <u>0</u> (B)
2 <u>Dactylis glomerata</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	Prevalence Index =B/A = <u>#DIV/0!</u>
3 <u>Daucus carota</u>	<u>10</u>	_____	<u>FACU</u>	Hydrophytic Vegetation Indicators:
4 <u>Unidentified grass</u>	<u>10</u>	_____	<u>(FAC)</u>	_____ 1- Rapid Test for Hydrophytic Vegetation
5 <u>Jacobaea vulgaris</u>	<u>10</u>	_____	<u>FACU</u>	<u>X</u> 2- Dominance Test is >50%
6 <u>Cirsium arvense</u>	<u>5</u>	_____	<u>FAC</u>	_____ 3-Prevalence Index is ≤ 3.0 ¹
7 _____	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting
8 _____	_____	_____	_____	data in Remarks or on a separate sheet)
	<u>105</u>	= Total Cover		_____ 5- Wetland Non-Vascular Plants ¹
Woody Vine Stratum (plot size: _____)				_____ Problematic Hydrophytic Vegetation ¹ (Explain)
1 _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless
2 _____	_____	_____	_____	disturbed or problematic.
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/3	100					Loam	
10-17	10YR 3/3	88	10YR 3/4	1	C	M	Loam	Fine
10-17	10YR 3/2	10	10YR 3/4	1	C	M	Loam	Fine

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:
Some minor 10YR 3/2, but mostly 10YR 3/3

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
X <input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	X <input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No **X** Depth (inches): _____
 Water Table Present? Yes **X** No _____ Depth (inches): **13**
 Saturation Present? Yes **X** No _____ Depth (inches): **0-2; 10**
 (includes capillary fringe)

Wetland Hydrology Present?
 Yes **X** No _____

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 19
 Investigator(s): CM Section, Township, Range: S 36, T 2S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3458 Long: -122.6392 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>5</u> (A)	
2 <u>Salix sp</u>	<u>10</u>	<u>X</u>	<u>(FAC)</u>	Total Number of Dominant Species Across All Strata: <u>8</u> (B)	
3 <u>Fraxinus latifolia</u>	<u>5</u>		<u>FACW</u>	Percent of Dominant Species That are OBL, FACW, or FAC: <u>63%</u> (A/B)	
4 _____					
	<u>35</u>	= Total Cover			
Sapling/Shrub Stratum (plot size: <u>15</u>)				Prevalence Index Worksheet:	
1 <u>Salix sp</u>	<u>20</u>	<u>X</u>	<u>(FAC)</u>	Total % Cover of	Multiply by:
2 <u>Corylus cornuta</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	OBL Species _____	x 1 = <u>0</u>
3 <u>Rosa sp</u>	<u>15</u>	<u>X</u>	<u>(FAC)</u>	FACW species _____	x 2 = <u>0</u>
4 <u>Rubus armeniacus</u>	<u>10</u>		<u>FAC</u>	FAC Species _____	x 3 = <u>0</u>
5 <u>Populus balsamifera</u>	<u>10</u>		<u>FAC</u>	FACU Species _____	x 4 = <u>0</u>
	<u>100</u>	= Total Cover		UPL Species _____	x 5 = <u>0</u>
Herb Stratum (plot size: <u>5</u>)				Column Totals	<u>0</u> (A) <u>0</u> (B)
1 <u>Unidentified grass</u>	<u>20</u>	<u>X</u>	<u>(FAC)</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Polystichum munitum</u>	<u>10</u>	<u>X</u>	<u>FACU</u>		
3 _____					
4 _____					
5 _____					
6 _____					
7 _____					
8 _____					
	<u>30</u>	= Total Cover			
Woody Vine Stratum (plot size: <u>30</u>)				Hydrophytic Vegetation Indicators:	
1 <u>Hedera helix</u>	<u>75</u>	<u>X</u>	<u>FACU</u>	1- Rapid Test for Hydrophytic Vegetation	
2 _____				<u>X</u> 2- Dominance Test is >50%	
	<u>75</u>	= Total Cover		3-Prevalence Index is ≤ 3.0 ¹	
% Bare Ground in Herb Stratum <u>70</u>				4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
Remarks:				5- Wetland Non-Vascular Plants ¹	
Shrubs continued: <u>Ilex americana (UPL), Crataegus monogyna (FAC) 10% each and Prunus laurocerasus (UPL) 5%</u>				Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/2	100					Silty Clay Loam	
8-16	10YR 2/2	98	10YR 2/3	2	C	M	Silty Clay Loam	Fine; minor sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No **X** Depth (inches): _____
 Water Table Present? Yes **X** No _____ Depth (inches): **12**
 Saturation Present? Yes **X** No _____ Depth (inches): **10**
 (includes capillary fringe)

Wetland Hydrology Present?

Yes **X** No _____

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 20
 Investigator(s): CM Section, Township, Range: S 36, T 2S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): LRRA Lat: 45.3458 Long: -122.6392 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Salix sp</u>	<u>25</u>	<u>X</u>	<u>(FAC)</u>	That are OBL, FACW, or FAC: <u>6</u> (A)	
2 <u>Fraxinus latifolia</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)	
3 _____				Percent of Dominant Species	
4 _____				That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>35</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: <u>15</u>)				Total % Cover of _____ Multiply by: _____	
1 <u>Salix sp</u>	<u>60</u>	<u>X</u>	<u>(FAC)</u>	OBL Species _____ x 1 = <u>0</u>	
2 <u>Fraxinus latifolia</u>	<u>40</u>	<u>X</u>	<u>FACW</u>	FACW species _____ x 2 = <u>0</u>	
3 <u>Rosa sp</u>	<u>20</u>		<u>(FAC)</u>	FAC Species _____ x 3 = <u>0</u>	
4 _____				FACU Species _____ x 4 = <u>0</u>	
5 _____				UPL Species _____ x 5 = <u>0</u>	
	<u>120</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 <u>Phalaris arundinacea</u>	<u>75</u>	<u>X</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
2 <u>Unidentified grass</u>	<u>20</u>	<u>X</u>	<u>(FAC)</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
3 _____				_____ <u>X</u> 2- Dominance Test is >50%	
4 _____				_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>95</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Woody Vine Stratum (plot size: _____)					
1 _____					
2 _____					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>5</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/2	100					Silty Clay Loam	
5-15	10YR 2/2	95	10YR 3/4	5	C	M	Silty Clay Loam	Medium

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 8
 Saturation Present? Yes No Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present?
 Yes No

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

Remarks:

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 21
 Investigator(s): CM Section, Township, Range: S 36, T 2S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR): LRRA Lat: 45.3466 Long: -122.6387 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: <u>30</u>)				Number of Dominant Species	
1 <u>Fraxinus latifolia</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	That are OBL, FACW, or FAC: <u>4</u> (A)	
2 <u>Rosa sp</u>	<u>5</u>	<u>X</u>	<u>(FAC)</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3 _____				Percent of Dominant Species That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4 _____				Prevalence Index Worksheet:	
5 _____	<u>25</u>	= Total Cover		Total % Cover of _____ Multiply by: _____	
Sapling/Shrub Stratum (plot size: _____)				OBL Species _____ x 1 = <u>0</u>	
1 _____				FACW species _____ x 2 = <u>0</u>	
2 _____				FAC Species _____ x 3 = <u>0</u>	
3 _____				FACU Species _____ x 4 = <u>0</u>	
4 _____				UPL Species _____ x 5 = <u>0</u>	
5 _____	<u>0</u>	= Total Cover		Column Totals <u>0</u> (A) <u>0</u> (B)	
Herb Stratum (plot size: <u>5</u>)				Prevalence Index =B/A = <u>#DIV/0!</u>	
1 <u>Schedonorus arundinaceus</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
2 <u>Unidentified grass</u>	<u>50</u>	<u>X</u>	<u>(FAC)</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
3 _____				_____ <u>X</u> 2- Dominance Test is >50%	
4 _____				_____ 3-Prevalence Index is ≤ 3.0 ¹	
5 _____				_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
6 _____				_____ 5- Wetland Non-Vascular Plants ¹	
7 _____				_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
8 _____	<u>100</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1 _____					
2 _____					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/2	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>>16</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>>16</u> (includes capillary fringe)	

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

Remarks: _____

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

Project/Site: Rivianna Beach Development City/County: West Linn/Clackamas Sampling Date: 1/29/2024
 Applicant/Owner: Forward Vision Development State: OR Sampling Point: 22
 Investigator(s): CM Section, Township, Range: S 36, T 2S, R 1E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR): LRRA Lat: 45.3466 Long: -122.6386 Datum: WGS84
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks)
 Are vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y
 Are vegetation _____ Soil _____ or Hydrology _____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (plot size: _____)				Number of Dominant Species	
1	_____	_____	_____	That are OBL, FACW, or FAC: <u>4</u> (A)	
2	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3	_____	_____	_____	Percent of Dominant Species	
4	_____	_____	_____	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
5	_____	_____	_____	Prevalence Index Worksheet:	
			<u>0</u>	Total % Cover of _____ Multiply by: _____	
			= Total Cover	OBL Species _____ x 1 = <u>0</u>	
Sapling/Shrub Stratum (plot size: <u>15</u>)				FACW species _____ x 2 = <u>0</u>	
1	<u>40</u>	<u>X</u>	<u>FACW</u>	FAC Species _____ x 3 = <u>0</u>	
2	<u>10</u>	<u>X</u>	<u>(FAC)</u>	FACU Species _____ x 4 = <u>0</u>	
3	_____	_____	_____	UPL Species _____ x 5 = <u>0</u>	
4	_____	_____	_____	Column Totals <u>0</u> (A) <u>0</u> (B)	
5	_____	_____	_____	Prevalence Index =B/A = <u>#DIV/0!</u>	
			<u>50</u>	Hydrophytic Vegetation Indicators:	
			= Total Cover	1- Rapid Test for Hydrophytic Vegetation	
Herb Stratum (plot size: <u>5</u>)				<u>X</u> 2- Dominance Test is >50%	
1	<u>50</u>	<u>X</u>	<u>FAC</u>	3-Prevalence Index is ≤ 3.0 ¹	
2	<u>50</u>	<u>X</u>	<u>(FAC)</u>	4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
3	_____	_____	_____	5- Wetland Non-Vascular Plants ¹	
4	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
5	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6	_____	_____	_____	Hydrophytic Vegetation Present?	
7	_____	_____	_____	Yes <u>X</u> No _____	
8	_____	_____	_____		
			<u>100</u>		
			= Total Cover		
Woody Vine Stratum (plot size: _____)					
1	_____	_____	_____		
2	_____	_____	_____		
			<u>0</u>		
			= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/2	95	10YR 4/4	5	C	M	Silty Clay Loam	Coarse

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input checked="" type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): >14
 Saturation Present? Yes No Depth (inches): >14
 (includes capillary fringe)

Wetland Hydrology Present?

Yes No

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

Remarks:

Appendix C

Study Area Photos (ground level)





Photo A:

Looking southeast towards Sample Points 14 & 15 along Wetland A's northwest boundary. The Blue Heron Lagoon is in the background.

Photo B:

Looking southeast towards Sample Points 3 and 4 along the Wetland A's boundary. The Blue Heron Lagoon is in the background.



Project # 7298
Date 3/19/2024



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation

Rivianna Beach Development - West Linn, Oregon

Photos taken January 29, 2024



Photo C:

Looking southwest along the northern berm of the onsite settling pond (Blue Heron Lagoon). Wetland A is on right side of photo.

Photo D:

Facing northwest towards the beaver dam west of 4th Street.



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Photo E:

Looking southeast in the downstream direction of Stream 1, east of 4th Street.

Photo F:

Looking east at Sample Points 19 & 20 on Wetland B's northern boundary.



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Photo documentation

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Photos taken January 29, 2024



Photo G:

Looking north at Sample Points 21 & 22 at northeast end of Wetland B.

Photo H:

Looking south towards the Willamette River and Sample Point 11.



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