

CITY OF WEST LINN
PRE-APPLICATION CONFERENCE MEETING
SUMMARY NOTES
May 2, 2024

SUBJECT: Proposed Planned Unit development to create 26 lots.

FILE: PA-24-07

APPLICANTS PRESENT: Bob Schulz; Aaron Murphy; Mercedes Serra; Diego Arguea; David Hewett; Casey Colton; Jakob Shockey

STAFF PRESENT: John Floyd, Senior Planner; Clark Ide, Assistant City Engineer; and Lynn Schroder, Community Development Management Analyst; and Darren Wyss, Planning Manager

PUBLIC PRESENT: Several dozen members of the public attended and filled two conference rooms. Sign-in sheets on record.

These pre-application summary notes have been prepared for the applicant to identify applicable code sections and critical issues for the proposed application and summarize the application process and fees. Pre-Application summary notes are based on preliminary information and may not include all considerations. Contact the assigned planner for additional information regarding the process, approval criteria, submittal requirements, questions, and clarifications. Pre-Application Conference summary notes are valid for eighteen months from the meeting date. Once a complete application is submitted, the final decision can take 6-10 months.*

SITE INFORMATION:

Site Address: 1317 7th Street and adjacent unaddressed lands
Tax Lot No.: 31E02AA00100, 31E02AA00200 and portions of 31E02AA00800 and 31E0200100
Site Area: 11.87 Acres (+/-)
Neighborhood: Willamette
Comp. Plan: Medium Density Residential
Zoning: R-10
Zoning Overlays: Willamette River Greenway; Significant Riparian Corridor / Wetlands; Flood Management Area (100-Year Special Flood Hazard Area); and Habitat Conservation Area(Low, Medium, and High).

PROJECT DESCRIPTION:

The applicant proposes a Planned Unit Development to divide residentially zoned land into 26 lots, each lot to contain two dwelling units. Concurrent with the land division would be three environmental permits (Flood hazard, water resource area, and Willamette Greenway), and a Class II Variance to allow 12 lot to share a private accessway.

APPLICABLE COMMUNITY DEVELOPMENT CODE SECTIONS:

Approval standards and criteria in effect when an application is *received* will be applied to the proposed development. The following Community Development Code (CDC) Chapters apply to this proposal and must be addressed in the project narrative and other materials:

- [Chapter 11: Residential, R-10](#)
- [Chapter 24: Planned Unit Development](#)
- [Chapter 27: Flood Management Areas](#)
- [Chapter 28: Willamette and Tualatin River Protection](#)
- [Chapter 32: Water Resource Area Protection](#)
- [Chapter 48: Access, Egress, and Circulation](#)
- [Chapter 75: Variances and Special Waivers](#)
- [Chapter 85: Land Divisions – General Provisions](#)

- [Chapter 92: Required Improvements](#)
- [Chapter 99: Procedures for Decision Making: Quasi-Judicial](#)

KEY ISSUES & CONSIDERATIONS

Staff has identified the following development issues, design considerations, or procedural issues that you should be aware of as you prepare your formal application for submittal. This list is not exhaustive, and identification of these issues or considerations here does not preclude the future identification of additional issues or considerations:

- **Required Approvals:** The following permits and approvals will be required based on information provided. With one exception, they can be bundled as part of a consolidated action by the Planning Commission
 - Planned Unit Development
 - Water Resource Area Permit
 - Flood Hazard Area Permit
 - Willamette Greenway Permit
 - Class II Variance
 - Right of Way Vacation (Must be considered under separate application)
- **Base Zone.** The zoning does not match the Comprehensive Plan Designation. While a zone change is neither proposed nor required with this application, the Medium Density Residential Plan Designation on the Comprehensive Plan Map is typically implemented through the R-7, R-5, and R-4.5 Zoning Districts and not the R-10 District which is currently applicable to the site. [Amendment to the Zoning Map are governed by CDC Chapter 105 \(Amendments to Code and Map\).](#)
- **Flood Hazard.** The project site is substantially covered by land designated as a flood hazard area with a 1% annual chance flood (100-year) base elevation of 75 feet. While the proposed building sites appear to be above the base flood elevation, the requirements of CDC Chapter 27 will apply, including the need for a Flood Management Area Permit.
- **Willamette Greenway.** The property is located within the Willamette Greenway, therefore the provisions of Chapter 28 apply, including the need for a Willamette Greenway Permit.
 - The project site contains all three levels of Habitat Conservation Areas (Low, Moderate, High), as well as areas not designated as Habitat Conservation Areas (HCA). Lots and building envelopes appear to be proposed in areas designated as Low, Moderate, and Undesignated.
 - Per CDC 28.110.H.2, all lots must have a building envelope located on non-HCA designated land. Proposals that include building envelopes on HCA designated lands may only be approved through a Planned Unit Development (CDC 28.100.H.3).
 - Per CDC 28.110.L, all roads, driveways, utilities, public paths, or passive use recreation facilities may be built in those portions of when no other practical alternative exists, but shall use water-permeable materials unless City engineering standards prohibit their use. Construction to the minimum dimensional standards for roads is required. Full mitigation and revegetation is required per the standards of CDC Chapter 32 (Water Resource Areas).
- **Wetlands.** As inventoried on the West Linn Water Resource Map and Local Wetland Inventory (LWI), the project site contains a Significant Riparian Corridor and a portion of the city's largest wetland complex. Staff notes a Wetland Delineation prepared by Pacific Habitat Services and dated April 10, 2024 was provided as supplemental material prior to the meeting.
 - Per CDC 32.060.D and Table 32-2, all new development must be located outside of a 100-foot water resource area (buffer) as measured from the delineated edge of the Wetland, unless the improvement or activity is specifically exempted in CDC 32.040. This buffer area may be reduced through the Alternative Review Process set forth in CDC 32.070-100, and will be required given

the preliminary site plan provided in this application. The hardship provisions in 32.110 are not applicable to this land division.

- The application must demonstrate that the reduced water resource area (buffer) is functionally equal or improved in comparison to existing ecological functions within the standard 100-foot water resource area (CDC 32.080). This will be particularly important where building sites are located very close to the edge of the delineated wetland.
- Vehicular and Pedestrian Access. Per CDC 48.030, city standards limit private accessways to no more than four lots. Access to five or more single-family homes shall be provided by a public street constructed to City standards, consistent with the TSP and Public Works Design standards. This full street provision may only be waived by a Class II Variance.
- Planned Unit Development: Planning Staff have the following comments on the conceptual site plan and required application materials:
 - Most dimensional standards may be reduced or waived through the PUD process, with the exception of Floor Area Ratio which remains fully applicable.
 - Major Utilities may be approved in the R-10 zone as part of a PUD approval. That said, it is not clear that the proposed special utility district and micro-energy district qualify as a “major utility” as defined CDC Chapter 2. Additional information is needed regarding this part of the proposal.
 - Density transfer from one portion of the site is permitted and encouraged when it results in natural resource protection, however, it is not a 1-for-1 transfer and varies depending upon Land Type per CDC 24.120 (i.e. slopes, floodplain, water quality resource area, etc.). Planning staff is unable to confirm whether the proposed number of lots is permissible due as the amount of land falling within each category has not been provided.
 - Usable Open Space is required at a minimum of 300 square feet per dwelling unit, to be held in common or dedicated to the City.
- Subdivision Standards: Planning staff have the following comments on compliance with Subdivision standards:
 - Street improvements to local standards are required along all street frontages (5th Avenue 4th street, and 9th Street).
 - If a request is made for a private accessway to service lots 15-26, public access in the form of pedestrian and bicycle access may be required to comply with block size requirements per CDC 85.200.2.d.
 - Significant trees are now defined in CDC Chapter 2 (Definitions). No heritage trees are within the project site.
- Street Vacation: The project site contains public right of ways where lots are currently proposed. The project boundaries must either be revised, or vacation of these areas performed through a separate application. The City would likely support a request for vacation. Please note this applicant cannot be processed concurrent with a PUD, and must proceed separately and preferably prior to application for the PUD or recordation of a final plat.
- Required Reports: The following technical reports will be required with the application:
 - Wetland Delineation with concurrence from Oregon Department of State Lands per CDC 32.050.
 - Report and analysis prepared and signed by a qualified natural resource professional addressing the requirements of the Alternative Review Process of CDC Chapter 32, including mitigation and re-vegetation plans.
 - Traffic Impact Analysis per CDC 85.170.B.2
 - A Geotechnical Report per CDC 32.050 and 85.170.C.3.
 - Preliminary Stormwater plan and narrative per CDC 32.050 and 85.170.C.F.

- Significant Tree Inventory, evaluation, and recommended protection measures prepared by a certified arborist.
- Construction Management Plan per CDC 32.050.
- TVF&R Service Provider Permit

RESPONSE TO APPLICANT QUESTIONS:

1. *Please confirm the required land use applications, approval process, and timeframe for the review of the proposed development.*

See information provided above. Estimated timeframes are addressed on the last page of this meeting summary.

2. *Please confirm any specialist reports, plans, and supporting materials that will be required to process the application.*

Required application materials are set forth in each of the applicable chapters and the [Development Review Checklist](#). A summary of required reports is provided on Page 3 of these summary notes.

3. *Please confirm whether a geotechnical report will be required for land use.*

Yes, a Geotechnical Report is required per CDC 32.050 and 85.170.C.3.

4. *Please confirm whether a traffic impact analysis will be required for the proposed planned unit development.*

Yes, the Planning and Engineering departments determined that a Traffic Impact Analysis is required per CDC 85.170.B.2.

5. *Please confirm the applicable approval criteria for the uses proposed.*

Applicable Community Development Code chapters are identified on page 1 of these summary notes.

6. *Please confirm that the City would be willing to accept a special utility district utilizing renewable energy such as photovoltaic or wind power, geo-thermal, while working with PGE.*
7. *Please confirm that the City will allow a community-owned micro-energy district, as a pilot-project, to include a privately funded feasibility study, and provided the feasibility study is positive, then allow construction of the proof-of-concept model(s) at 5th Ave and 4th Street, so the micro-energy district can be proofed-up in 2024, including guidance on when installation could take place.*

While renewable energy is consistent with City goals and policies, City Staff have insufficient information regarding the physical and operational details of these districts to make a definitive statement of support or rejection. We encourage to provide more information for further analysis. IF such a district is deemed to meet the definition of a “major utility” and subject to land use approval, such a district may be approved through the Planned Unit Development Process per CDC 24.090.A.6. Major utilities are defined in the CDC as follows: “A major utility facility or service includes, but is not limited to: a substation; pump station; water storage tank; sewerage treatment plant; water treatment plant; and transmission lines for water, drainage or sewerage collection systems, gas or electric, or other similar use.”

8. *Please confirm city is willing to accept creative residential building design alternatives, as a pilot project, that maximize available roof areas for the roof mounted solar system that are integral to the feasibility for the proposed community-owned micro-energy district that encourages the developer to maximize the creation of clean energy generation.*

As noted above, City Staff have insufficient information to make a definitive call, but generally yes the city is willing in principal as rooftop solar is permitted on residential structures.

- 9. Please confirm that the City would be willing to accept a beaver management as a pilot project for the conservation outlot and overlay conservation areas outside the defined conservation outlot, that will protect the beaver's habitat, and maintain the water levels that benefits the beavers at the same time fixes the problems the beavers are creating thereby benefitting the humans, as well.*

City Staff have not identified anything that would prohibit a beaver management plan, provided it is consistent with state and federal permitting requirements, and the management plan is consistent with the City's water resource area and floodplain management standards. Additional detail regarding the scope and details of this plan would allow for a more measured answer.

- 10. Please confirm that the city is receptive to for flexible housing arrangements, as a pilot project, that may include options for a variety of flexible housing arrangements that may include options for lower level ADU units, or Live-Work above the garages, whereas the ADU can be used for multi-generational households, rented long term, or for use by live-in caretakers, in-laws, extended family, or guests.*

Yes. The City currently allows ADUs (CDC Chapter 34) and all middle-housing types consistent with HB2001 (CDC Chapter 11). Live-Work is permitted consistent with home occupation standards (CDC Chapter 37).

- 11. Please confirm the public improvements required to facilitate the development of the site.*

Please see the attached notes from Clark Ide, Assistant City Engineer.

- 12. Please confirm the setback requirements from the delineated wetland, for the residential buildings as part of the proposed community owned micro-energy district, a pilot project.*

As described above on pages 2-3 of these summary notes, the standard setback from this wetland complex is 100 feet from the delineated edge for all activities and development not exempted from CDC 32 (Water Resource Area Protection). Modification and reduction of this setback is possible through the Alternative Review Process set forth in CDC 32.070-100.

- 13. Permitting for Show House – Concept House*

Near the end of the meeting questions arose regarding the potential construction of a one residential structure as a showcase or proof-of-concept using new technologies.

If the proposal was to construct the home ahead of the land division, the environmental permitting requirements remain largely the same (floodplain, water resource area, Willamette Greenway), but the PUD and Variance procedures would not apply.

If the proposal was to construct the home after the approval of the PUD but before recordation of the plat to establish the residential lots, the first home could be constructed consistent with our model home requirements set forth in CDC Chapter 35 (Temporary uses) and any applicable conditions of approval applied during the land use approval process.

PUBLIC COMMENT:

Public comments focused on a variety of topics, including potential impacts to the transportation network, opportunities for public comment, whether impacts from Tolling would be accounted for in the Transportation

Impact Analysis, expected timelines, and whether and how this project would impact private property not owned by the applicant.

ENGINEERING:

The Engineering department comments are attached. For further details, contact Clark Ide at 503-722-3437 or CIde@westlinnoregon.gov.

BUILDING:

For building code and ADA questions, contact Adam Bernert at abernert@westlinnoregon.gov or 503-742-6054 or Alisha Bloomfield at abloomfield@westlinnoregon.gov or 503-742-6053.

TUALATIN VALLEY FIRE & RESCUE:

A Service Provider Permit must be provided with this application - <https://www.tvfr.com/399/Service-Provider-Permit>. Contact Jason Arn at jason.arn@tvfr.com or 503-259-1510 with any questions.

TREES:

For information on the tree requirements for this proposal, contact the Mike Perkins, City Arborist at mperkins@westlinnoregon.gov or 503-722-4728.

PROCESS:

A Planned Unit Development is a quasi-judicial decision by the Planning Commission. A public hearing is required. The applicant must present their proposal to the Planning Commission at the hearing. Once the application is complete, staff will review the application, schedule a public hearing date, send a 20-day public comment notice, and post a notice sign on the property. Staff will prepare a report with a recommendation available 10 days before the public hearing. A final decision can take 6-10 months.

After the Planning Commission decides, there is a 14-day appeal period. If the decision is not appealed, the applicant may proceed with the development.

NEIGHBORHOOD MEETING:

Before applying for a Planned Unit Development, the applicant must contact and discuss the proposed development with the Willamette Neighborhood Association at a neighborhood meeting. The purpose of the neighborhood meeting is to identify potential issues or conflicts regarding a proposed application to address them before the application is submitted.

The applicant should initiate the neighborhood meeting by mailing a request letter with a return receipt requested to the neighborhood association president and designee formally requesting, within 60 days, a date and location for the neighborhood meeting. The meeting should be scheduled at the association's regularly scheduled monthly meeting or at another time at the association's discretion. The complete requirements for the neighborhood meeting can be found in [Section 99.038 of the CDC](#). Email Senior Planner John Floyd to request the Willamette Neighborhood Association contact information.

HOW TO SUBMIT AN APPLICATION:

Submit a complete application in a single PDF document through the [Submit a Land Use Application](#) web portal. A complete application should include:

1. A [development application](#);
2. Application materials identified in the [Development Review Checklist](#);
3. All reports identified on pages 3 and 4 of these notes.

COMPLIANCE NARRATIVE:

Written responses supported by substantial evidence must address all applicable approval standards and criteria. Written materials must explain how and why the proposed application will meet each applicable approval criteria. "Not Applicable" is not an acceptable response to the approval criteria.

Submittal requirements may be waived, but the applicant must first identify the specific submittal requirement and request, in writing, that the Planning Manager waive the requirement. The applicant must identify the specific grounds for the waiver. The Planning Manager will respond with a written determination about the waiver request before applying.

APPLICATION FEES & DEPOSITS:

The Planning Division Fee Schedule can be found on our website: <https://westlinnoregon.gov/finance/current-fee-schedule>

- Deposit for a Planned Unit Development or Subdivision = \$4,500
- Fee for Combination of 3 Environmental Permits (Flood Management Area Permit, Water Resource Area Permit, and Willamette Greenway Permit) = \$5,700
- Fee for a Class 2 Variance = \$3,450
- Fee for a Street Vacation = \$6,000
- Total due at submittal = \$19,650

Applications with deposits will be billed monthly for time and materials. Please provide the name and address of the party responsible for the final invoice in your application.

Timelines:

Once the application and payment are received, the City has 30 days to determine if the application is complete. If the application is incomplete, the applicant has 180 days to complete it or provide written notice to staff that no other information will be provided. Once complete, the City has 120 days from the completeness determination to make a final decision on the application. Typical land use applications can take 6-10 months from beginning to end.

** **DISCLAIMER:** These pre-application notes have been prepared per [CDC Section 99.030.B.7](#). The information provided is an overview of the proposal considerations and requirements. Staff responses are based on limited material presented at the pre-application conference. New issues and requirements can emerge as the application is developed. Failure to provide information does not constitute a waiver of the applicable standards or requirements. The applicant has the burden of proof to demonstrate that all approval criteria have been satisfied. These notes do not constitute an endorsement of the proposed application or assure project approval.*



CITY OF
**West
Linn**

Pre-app Comments

Project Number: PA-24-037
**1317 7th Street: Proposed
Planned Unit Development**

Engineering Contact:

Clark Ide, PE
cide@westlinnoregon.gov
Telephone: (503) 722-3437

Project Description: Proposed Planned Unit Development

Pre-application meeting date: May 2, 2024

The comments provided below are based upon material provided as part of the pre-application packet and are intended to identify potential design challenges associated with the development. Comments are not intended to be exhaustive and do not preclude the engineering department from making additional comments as part of the formal land use application process.

TRANSPORTATION

Minimum Required Improvement:

- A Traffic Impact Analysis (TIA) will be required. Please refer to Chapter 85 of the CDC for the required parameters of the study.
- 5th Avenue
 - 5th Avenue is classified as a local street.
 - 5th Avenue has varying ROW along the frontage of the proposed development. The City would request the applicant dedicate applicable land along the frontage to achieve a minimum of 44 feet of ROW.
- 4th Street
 - 4th Street is classified as a local street.
 - 4th Street has 40 feet of ROW adjacent to the property. The City would request the applicant dedicate a minimum 8 feet of ROW on 4th Street to meet the City standard for a 24-foot Local (48' ROW) street cross section.
- 7th Street
 - 7th Street is classified as a local street
 - 7th Street has 45 feet of ROW adjacent to the property. The City has no current request for additional ROW. This area will be reassessed following final plans for the proposed private street associated with the development.
- Frontage Improvements would be required including curb/gutter, sidewalk, planter strip, full depth asphalt and aggregate base.
- All new distribution and communication franchise utilities and their services must be placed underground.

SANITARY SEWER

Minimum Required Improvement:

- Existing 15" main on 5th Avenue, from 5th Street to 4th Street, has the capacity to serve proposed units with street frontage in this area.



CITY OF
**West
Linn**

Pre-app Comments

Project Number: PA-24-037
**1317 7th Street: Proposed
Planned Unit Development**

Engineering Contact:

Clark Ide, PE
cide@westlinnoregon.gov
Telephone: (503) 722-3437

- An existing 8" main on 5th Avenue, from 7th Street to 5th Street, may have the capacity to serve the proposed units with street frontage in this area. Additional capacity calculations will be required to determine whether the existing line is adequate. If deemed inadequate, the development will be required to upgrade the existing main in this area.
- Each unit will require a 4" lateral off of the main.

DOMESTIC WATER

Minimum Required Improvement:

- There is an existing 6" CI water main in 5th Avenue. This main does not have adequate capacity for serving the proposed development. The development will be required to upgrade the existing water main in this area to a minimum 8" ductile iron line.
- Each unit will require a minimum ¾" meter.

SURFACE WATER (STORM SEWER)

Minimum Required Improvement:

- Onsite run-off generated from new impervious areas of greater than 1000 square feet must be captured, treated, detained and conveyed to the nearest public stormwater system in accordance with the *Portland Stormwater Management Manual*, the Uniform Plumbing Code, and *City of West Linn Public Works Standards*.
- Preferred stormwater management would be to capture, treat, and infiltrate on site. If infiltration is not feasible, conveyance to the City system would be required.
- All Stormwater facilities must be designed and accepted by a licensed engineer.
- City system on 5th Avenue has minimal capacity to serve this development. Conveyance to the adjacent wetland, following treatment, can be utilized.
- Each unit will require an individual lateral for conveyance if infiltration on site is not feasible.

OTHER

- Any laterals crossing property lines shall be located in an easement.
- Any required public improvements shall be constructed, inspected and accepted by the City.
- Development shall pay all applicable System Development Charges (SDC) fees at the time of home construction for newly created lots.
- The proposed development will disturb less than 5 acre, therefore a West Linn Erosion Control Permit Application, as outlined in Section 2.0065 of the *City of West Linn Public Works Standards*, will be required prior to the commencement of construction.
- City requests the vacation of 5th Street ROW and 4th Ave ROW on the subject property to be completed with development.



CITY OF
**West
Linn**

PRE-APPLICATION CONFERENCE

Thursday, May 2, 2024

Willamette Room
City Hall
22500 Salamo Rd
West Linn

10:00 am: Proposed Planned Unit Development
Applicant: Bob Schultz, applicant
Property Address: 1317 – 7th Street
Neighborhood Assn: Willamette Neighborhood Association
Planner: John Floyd

Project #: PA-24-07





Pre-Application Conference Request

For Staff to Complete:		
PA 24-07	Conference Date: 5/2/24	Time: 10:00
Staff Contact: John Floyd		Fee: 1200

Pre-application conferences are held on the first and third Thursdays of the month between 9:00 am and 1:00 pm. Appointments must be made by 5:00 pm, 15 days before the meeting date. The applicant has a choice of an in-person or virtual meeting. To schedule a conference, submit this form, a site plan, and accompanying materials through the Submit a Land Use Application web page. The City will contact you to collect payment. Pre-application notes are valid for 18 months.

Property Owner Information

Name: Robert Schultz, SDG-2, LLC
 Email: duke.pdx@gmail.com
 Phone #: 971-732-0347
 Address: 3242 Wild Roase Loop

Applicant Information

Name: Mercedes Serra, 3J Consulting
 Email: mercedes.serra@3j-consulting.com
 Phone #: 503-946-9365 x211
 Address: 9600 SW Nimbus Ave, Ste 100

Address of Subject Property (or tax lot): 1317 7th Street (31E02AA00800, 31E02AA00200, 31E02AA00100,

REQUIRED ATTACHMENTS:

- A project narrative with a detailed description of the proposed project. Briefly describe the physical context of the site.
- A list of questions or issues the applicant would like the City to address.
- A dimensional site plan that shows:
 - North arrow and scale
 - Location of existing trees (a tree survey is highly recommended)
 - Streets Abutting the property and width of right of way
 - Location of creeks and/or wetlands (a wetland delineation is highly recommended)
 - Property Dimensions, existing buildings, and building setbacks
 - Slope map (if slope is 25% or more)
 - Location of existing utilities (water, sewer, etc.)
 - Conceptual layout, design, proposed buildings, building elevations, and setbacks
- Location of all easements (access, utility, etc.)
- Vehicle and bicycle parking layout (including calculation of required number of spaces, based on use and square footage of building), if applicable
- Location of existing and proposed access and driveways. Include the proposed circulation system for vehicles, pedestrians, and bicycles, if applicable.
- Proposed stormwater detention system with topographic contours

I certify that I am the owner or authorized agent of the owner:

APPLICANT:

DATE:

The undersigned property owner authorizes the requested conference and grants city staff the **right of entry** onto the property to review the application.

PROPERTY OWNER:

DATE:

3.14.24

March 14, 2024

John Floyd
Senior Planner
City of West Linn
22500 Salamo Road
West Linn, Oregon 97068

Rivianna Beach - Phase 1

Dear John,

3J Consulting, Inc acts on behalf of Forward Vision Development, LLC & e3 Design Concepts, LLC & SDG-2, LLC regarding the proposed development of the area known as Rivianna Beach, located at 1317 7th Street (tax lots 31E02AA00800, 31E02AA00800, 31E02AA00200, 31E02AA00100, 31E0200401, 31E0200100 and 31E01BB00100). This letter and the attachments hereto have been submitted in order to request a Pre-Application Conference to discuss the submittal requirements for a Planned Unit Development within the City of West Linn.

The Applicant has submitted a partition application preceding this pre-application request that would consolidate the proposed development into three parcels to allow for phased development of the site. This pre-app request is for Phase 1 of the proposed development, which includes Outlot A (Parcel 1) and Outlot B (Parcel 2), which are both zoned Residential R-10. The applicant is proposing a planned unit development that would include 26 residential lots, to be developed with duplex homes for a total of 52 residential units. The development would also include a habitat conservation area on Parcel 2. The applicant intends to utilize the Planned Unit Development process to allow for flexibility in site development due to the unique characteristics of the site.

The following list of questions has been provided for staff's consideration:

1. Please confirm the required land use applications, approval process, and timeframe for the review of the proposed development.
2. Please confirm any specialist reports, plans, and supporting materials that will be required to process the application.
3. Please confirm whether a geotechnical report will be required for land use.
4. Please confirm whether a traffic impact analysis will be required for the proposed planned unit development.
5. Please confirm the applicable approval criteria for the uses proposed.
6. Please confirm that the City would be willing to accept a special utility district utilizing renewable energy such as photovoltaic or wind power, geo-thermal, while working with PGE.
7. Please confirm that the City will allow a community-owned micro-energy district, as a pilot-project, to include a privately funded feasibility study, and provided the feasibility study is positive, then allow construction of the proof-of-concept model(s) at 5th Ave and 4th Street, so the micro-energy district can be proofed-up in 2024, including guidance on when installation could take place.
8. Please confirm city is willing to accept creative residential building design alternatives, as a pilot project, that maximize available roof areas for the roof mounted solar system that are



integral to the feasibility for the proposed community-owned micro-energy district that encourages the developer to maximize the creation of clean energy generation.

9. Please confirm that the City would be willing to accept a beaver management as a pilot project for the conservation outlot and overlay conservation areas outside the defined conservation outlot, that will protect the beaver's habitat, and maintain the water levels that benefits the beavers at the same time fixes the problems the beavers are creating thereby benefitting the humans, as well.
10. Please confirm that the city is receptive to for flexible housing arrangements, as a pilot project, that may include options for a variety of flexible housing arrangements that may include options for lower level ADU units, or Live-Work above the garages, whereas the ADU can be used for multi-generational households, rented long term, or for use by live-in caretakers, in-laws, extended family, or guests.
11. Please confirm the public improvements required to facilitate the development of the site.
12. Please confirm the setback requirements from the delineated wetland, for the residential buildings as part of the proposed community owned micro-energy district, a pilot project.

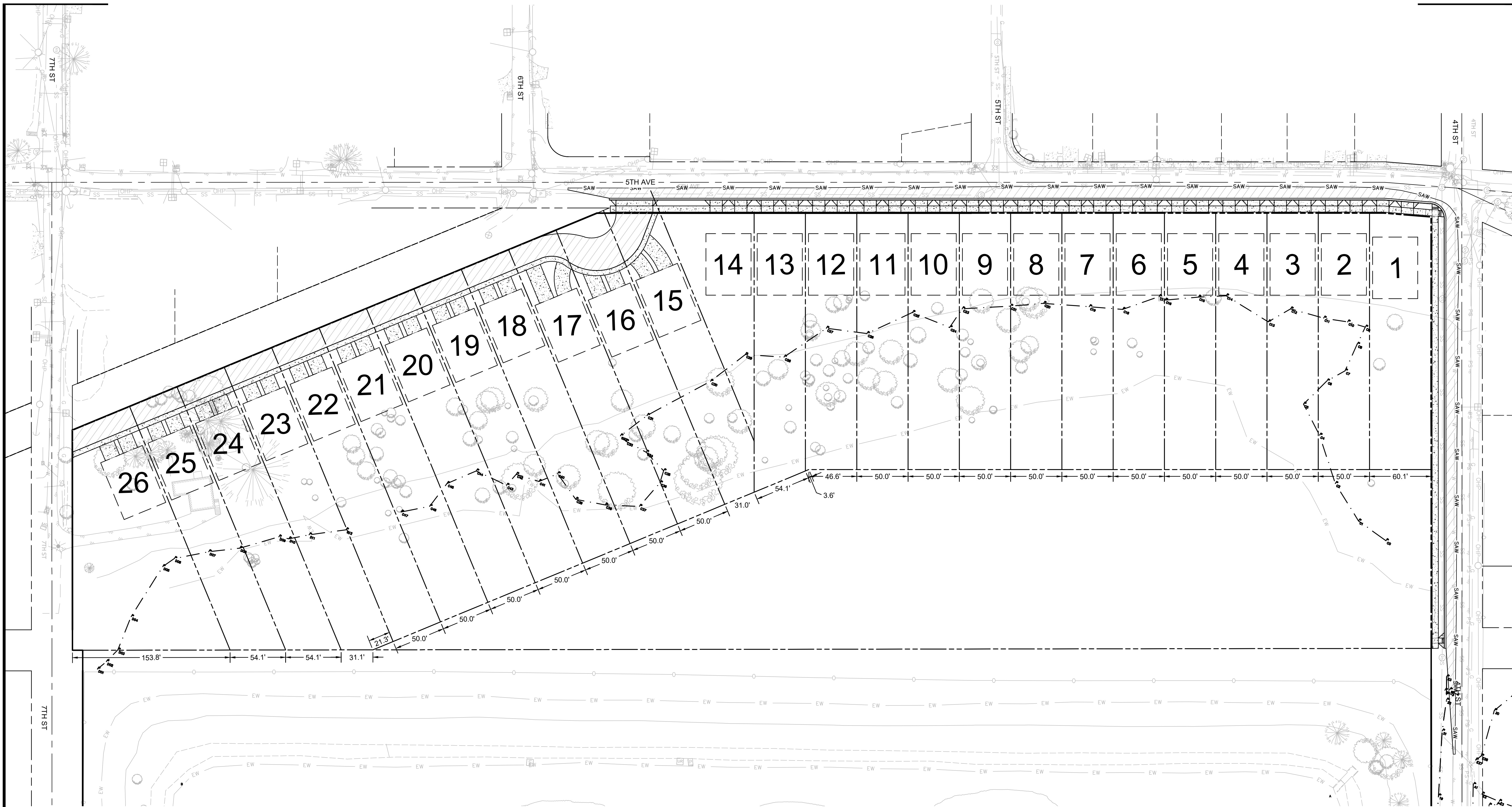
Please feel free to give me a call if you have any questions or need any additional clarification.

Sincerely,



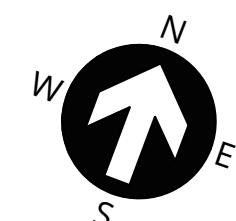
Mercedes Serra
Planning Project Manager
3J Consulting, Inc.

P:\23909-RIVANNA BEACH\CAD\EXHIBITS-ANALYSIS\COORDINATION\2024-03-11 SITE OPTION\23909-SITE-PLAN-ALTERNATE.DWG



LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED SETBACK LINE
- PROPOSED CURB FACE
- PROPOSED CURB BACK
- PROPOSED LIP OF GUTTER
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED CONCRETE SCORING
- SURVEY EXISTING EDGE OF WETLAND
- SURVEY EXISTING WETLAND BOUNDARY FLAGS



SCALE: 1" = 50'
0 50 100 FT



PUBLISH DATE
03-11-2024
ISSUED FOR
SCHEMATIC DESIGN
REVISIONS

SITE PLAN - 50' LOT ALTERNATE
RIVANNA BEACH
WEST LINN WATERFRONT DEVELOPMENT
FORWARD VISION DEVELOPMENT
WEST LINN, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING

9600 SW NIMBUS AVE., SUITE 100, BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23909
TAX LOT(S) | ###
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
EXH. 05

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



TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. RESULTS AND DISCUSSION	1
A. Landscape Setting and Land Use	1
B. Site Alterations.....	2
C. Precipitation Data and Analysis.....	2
D. Methods.....	3
E. Description of all Wetlands and Other Non-Wetland Waters	3
F. Deviation from Local Wetland Inventory or National Wetland Inventory.....	4
G. Mapping Method.....	5
H. Additional Information	5
I. Results and Conclusions	5
J. Required Disclaimer.....	6
III. REFERENCES.....	6
 APPENDIX A: Figures	
Figure 1: Vicinity Map (USGS)	
Figure 2: Tax Lot Map	
Figure 3: Wetlands Inventory Map (Local)	
Figure 4: Soil Survey Map	
Figure 5: Recent Aerial Photograph	
Figure 6: Wetland Delineation Map	
 APPENDIX B: Wetland Delineation Data Sheets	
APPENDIX C: Study Area Photos (ground level)	

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.

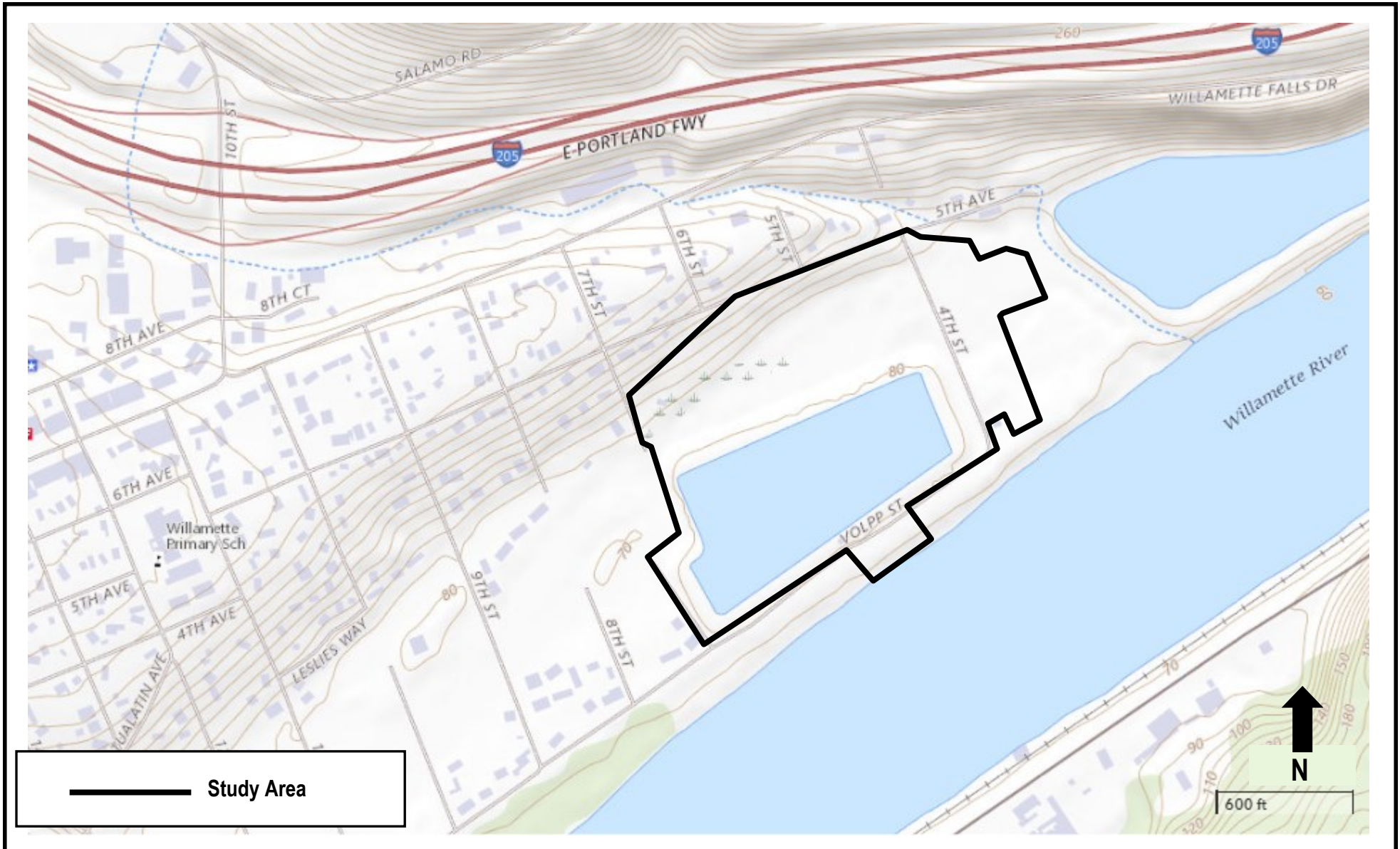
III. REFERENCES

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

Figures





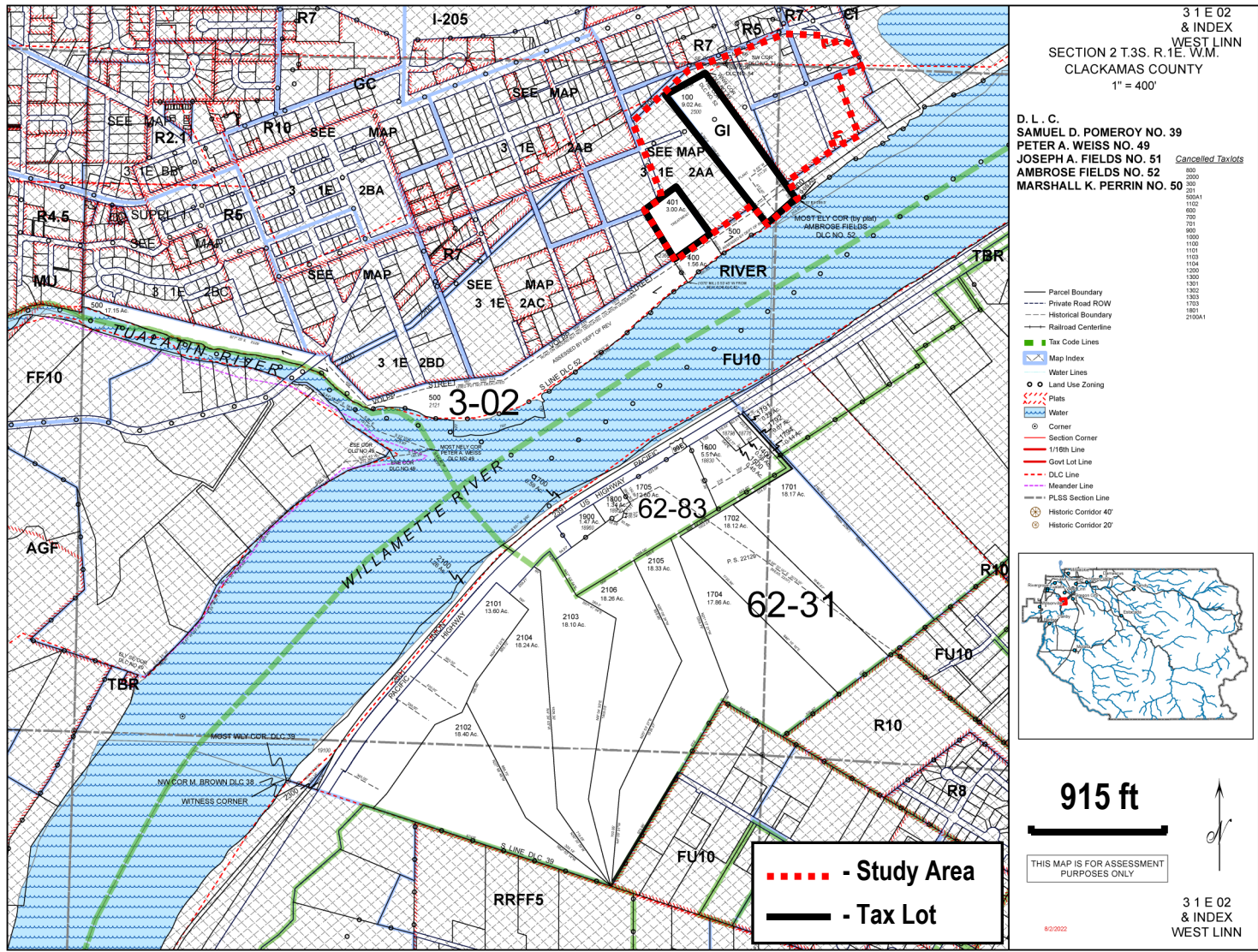
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4/5/2024



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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



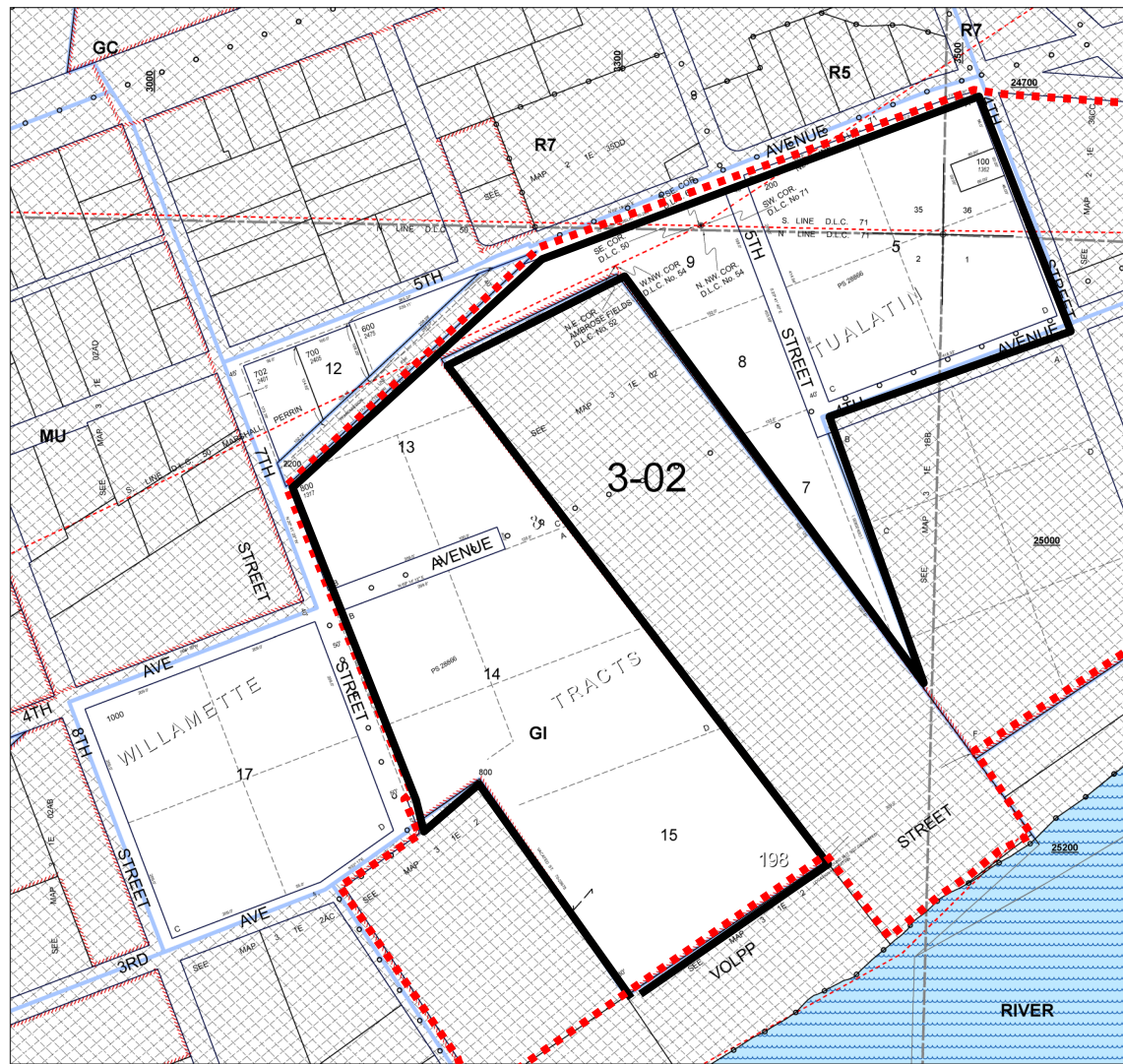
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Tax Lot Map
Rivianna Beach Development - West Linn, Oregon
The Oregon Map (ormap.net)

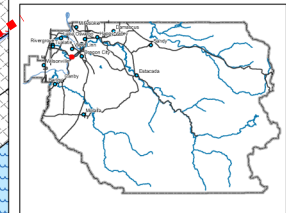
FIGURE
2A



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

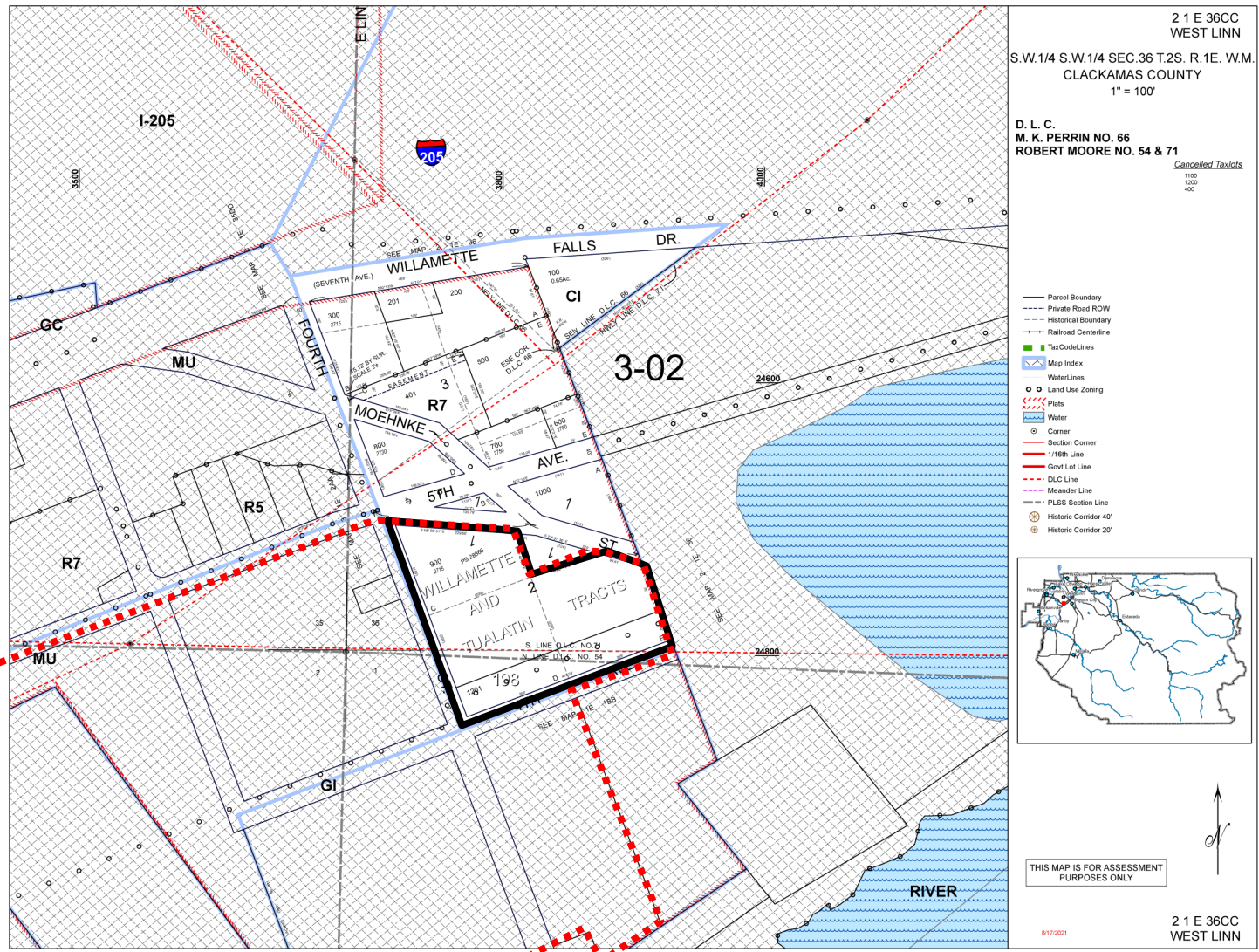
Project #7298
4/5/2024



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

FIGURE
2B



411 ft

----- - Study Area
 _____ - Tax Lot

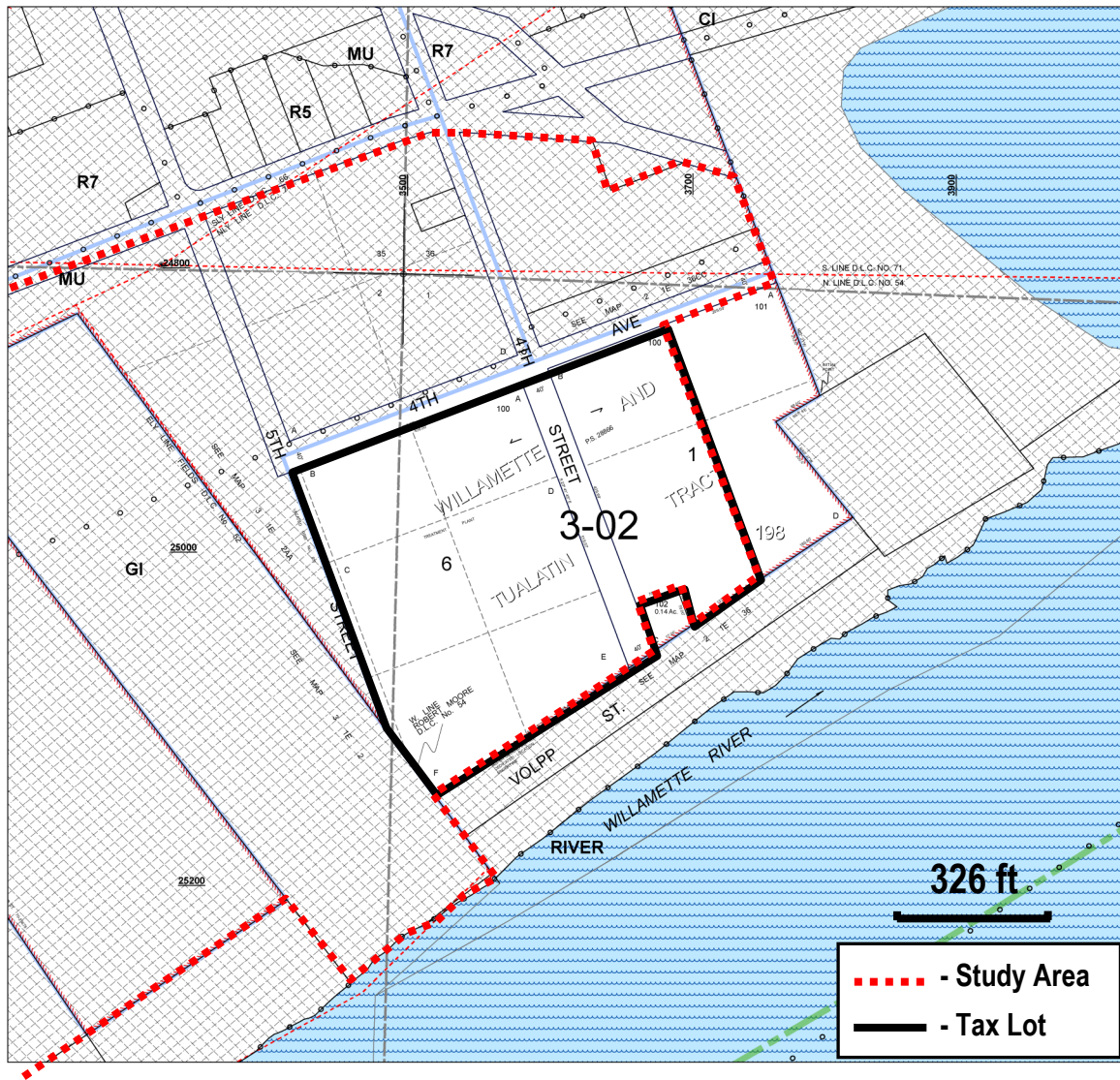
Project #7298
 4/5/2024



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 Wilsonville, OR 97070

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

FIGURE
 2C

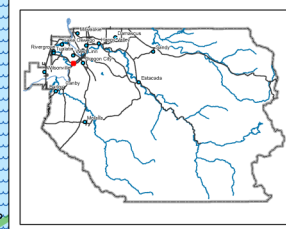


3 1 E 01BB
WEST LINN
N.W.1/4 N.W.1/4 SEC.1 T.3S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 100'

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

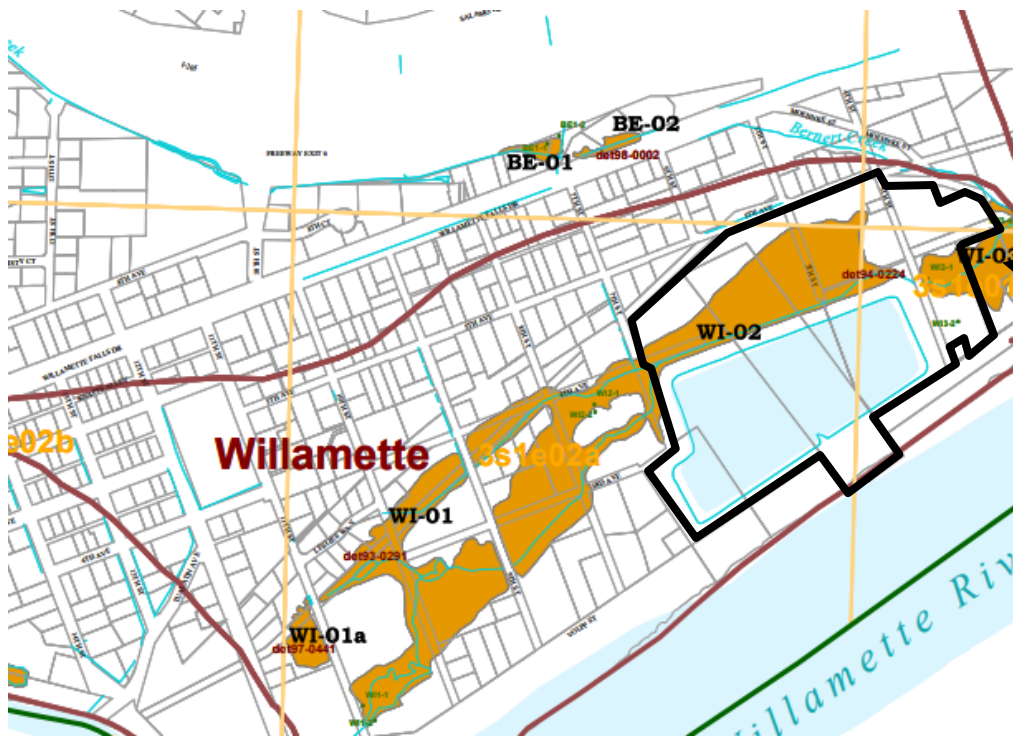
Project #7298
4/5/2024



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

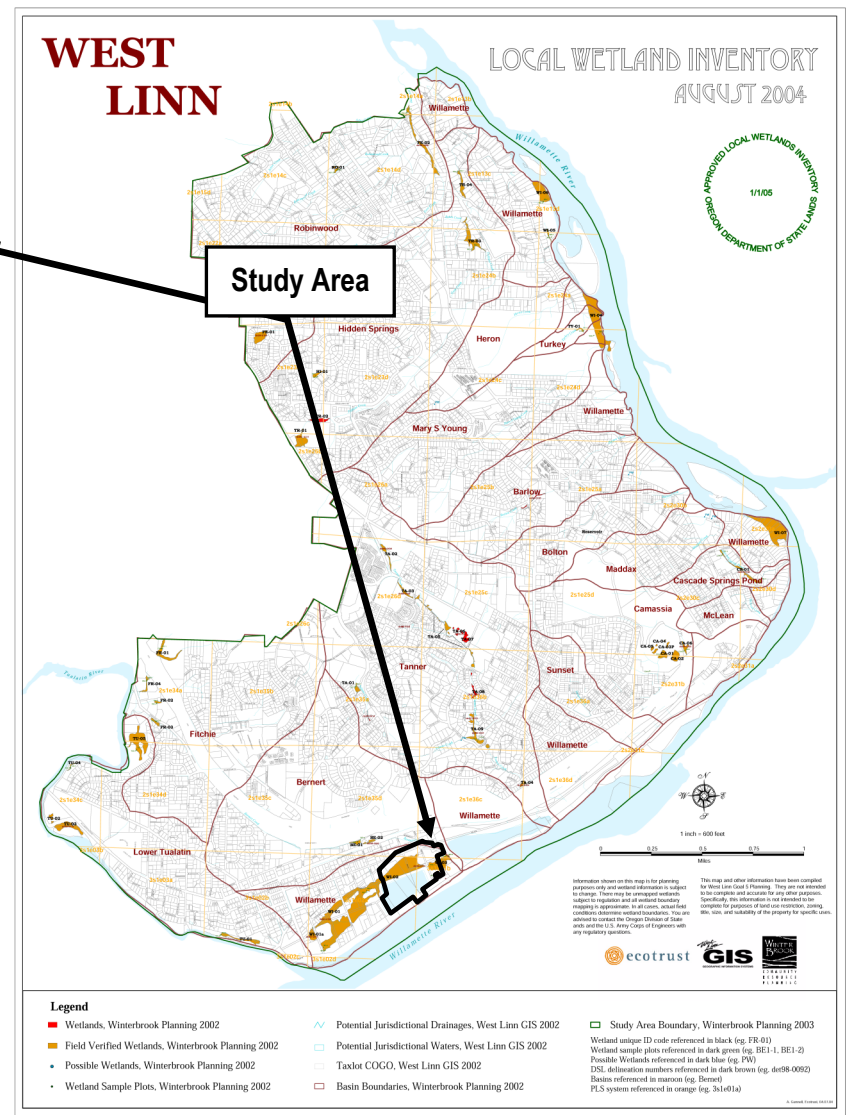
FIGURE
2D



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)

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4/5/2024



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

FIGURE
3



Soils Legend

67 - Newberg fine sandy loam

84 - Wapato silty clay loam, Hydric

91C - Woodburn silt loam, 8-15% slopes

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4/5/2024



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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

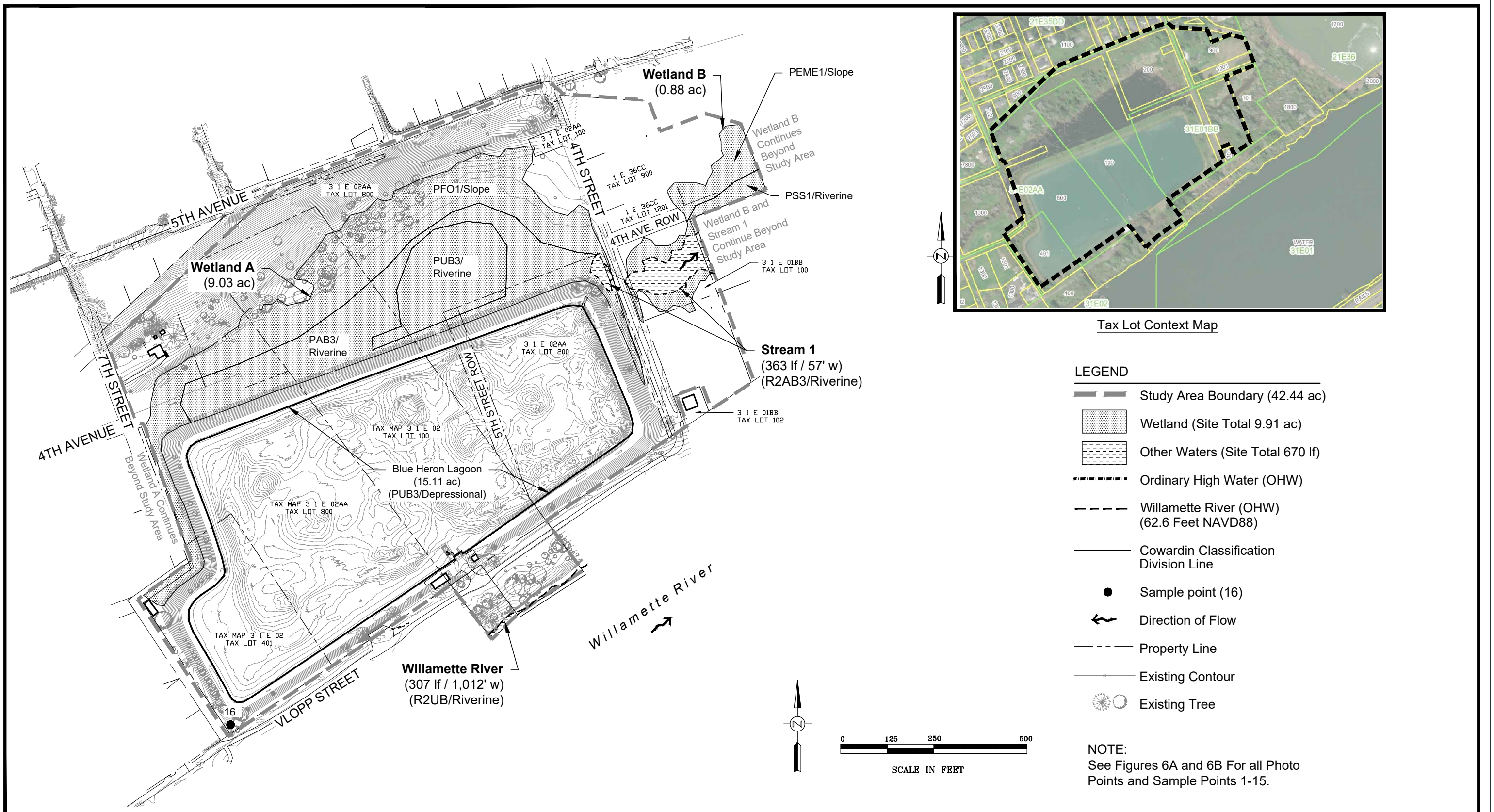


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Wilsonville, OR 97070

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.

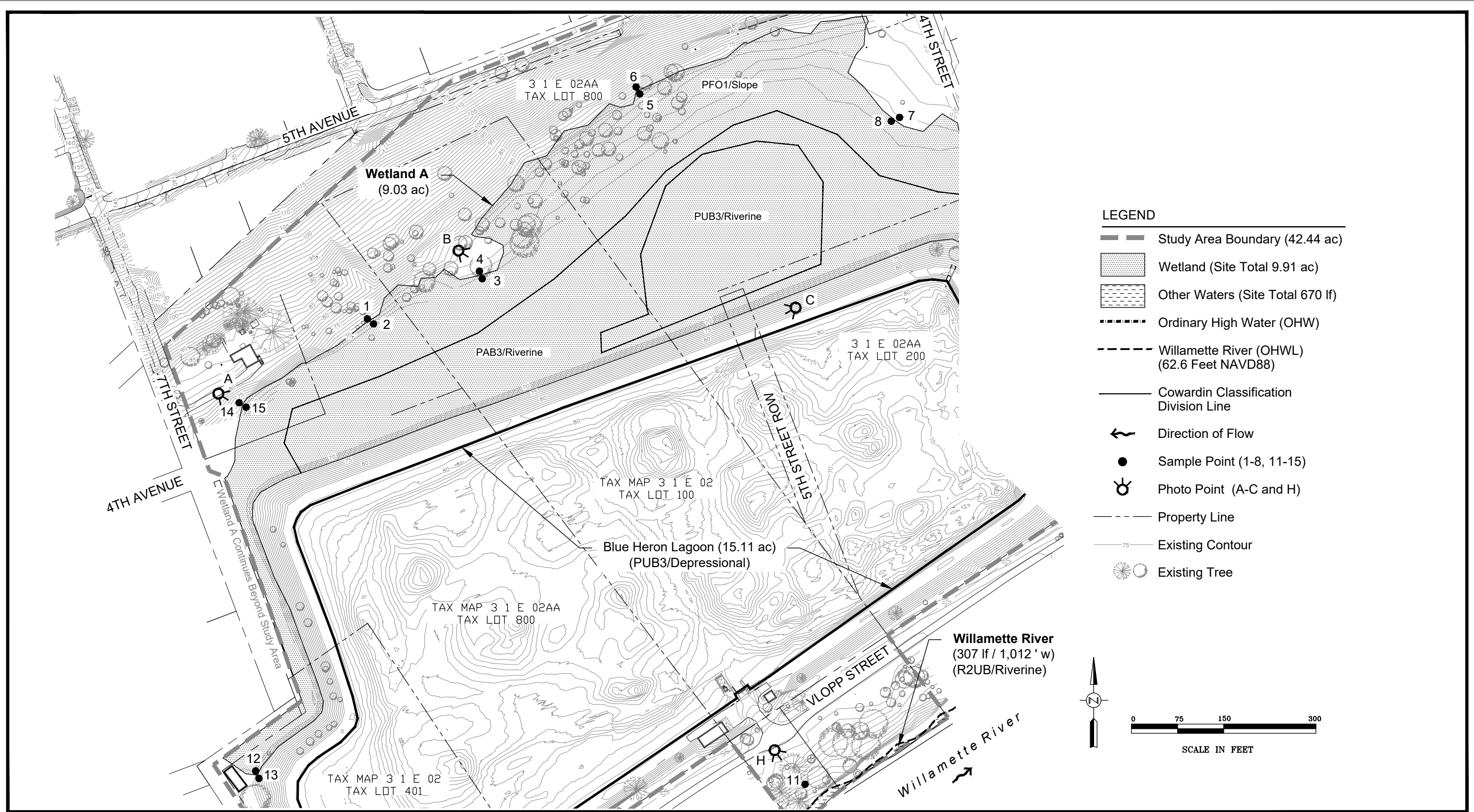


Survey provided by 3J Consulting
 Survey accuracy is sub-centimeter.
 Sample points, wetland flags collected by PHS with
 submeter accuracy using Trimble GPS (Geo7x)
 Ordinary High Water of Willamette River determined by
 Public Lands Map, DSL 1975

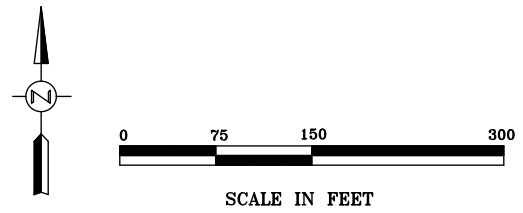
Wetland Delineation Overview
 Rivianna Beach Development - West Linn, Oregon

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

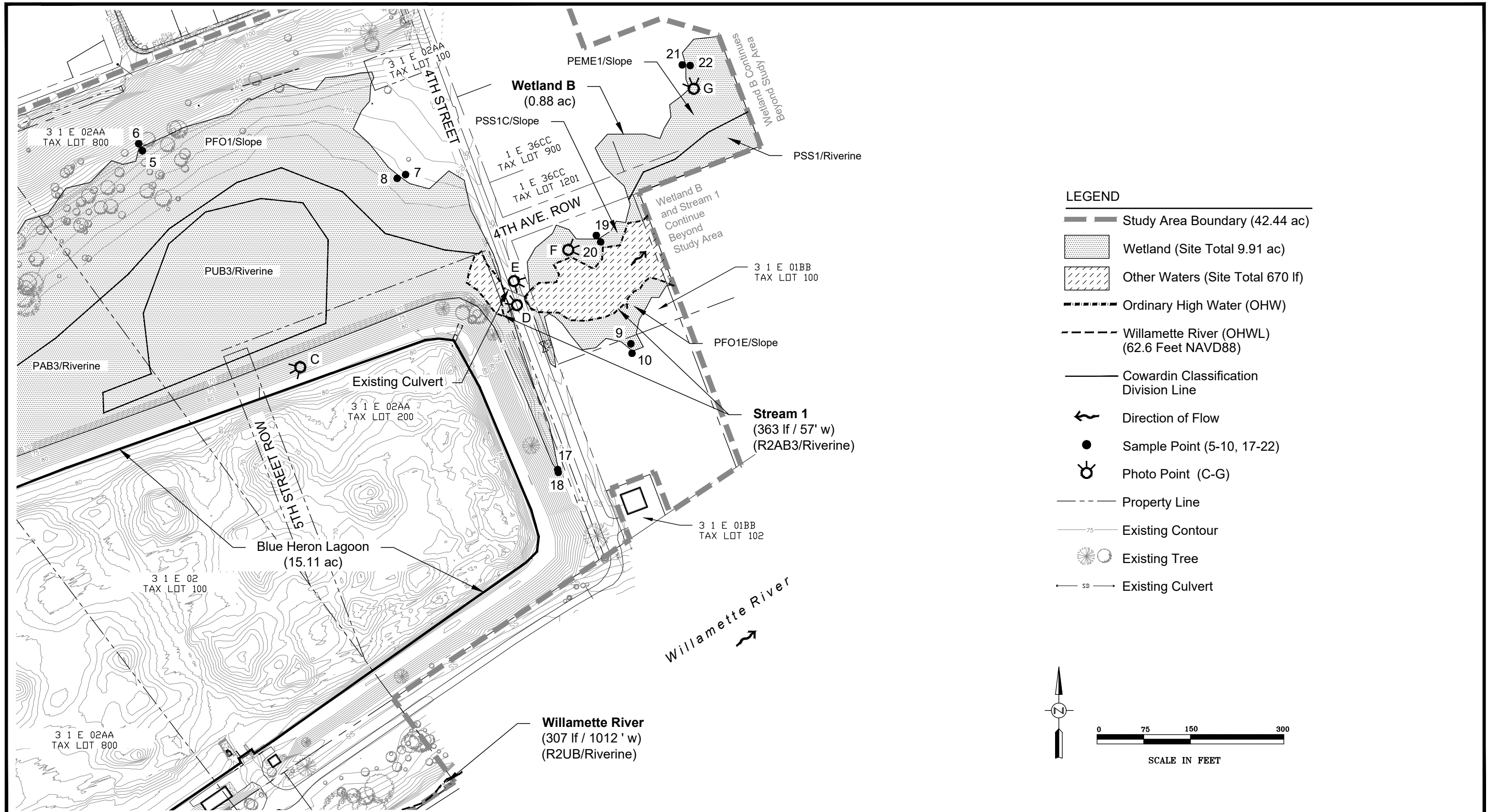


Survey provided by 3J Consulting
 Survey accuracy is sub-centimeter.
 Sample points, wetland flags collected by PHS with
 submeter accuracy using Trimble GPS (Geo7x)
 Ordinary High Water of Willamette River determined by
 Public Lands Map, DSL 1975

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 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):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input 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 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"/> 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 type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Fac-Neutral Test (D5)
	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>10</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)	Depth (inches): <u>8</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: 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 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): 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 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): **6**
 Saturation Present? Yes **X** No _____ Depth (inches): **4**
 (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: 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	
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? 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	
3 _____				Species Across All Strata:	<u>3</u> (B)
4 _____				Percent of Dominant Species	
	<u>10</u>	= Total Cover		That are OBL, FACW, or FAC:	<u>67%</u> (A/B)
Sapling/Shrub Stratum (plot size: <u>15</u>)				Prevalence Index Worksheet:	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	Multiply by:
2 <u>Corylus cornuta</u>	<u>20</u>		<u>FACU</u>	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>120</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: <u>30</u>)				Hydrophytic Vegetation Present?	
1 <u>Hedera helix</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	Yes <u>X</u>	No _____
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? Yes No Depth (inches): 0-1; >17
 (includes capillary fringe)

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
Tree Stratum (plot size: <u>30</u>)			
1 <u>Fraxinus latifolia</u>	<u>75</u>	<u>X</u>	<u>FACW</u>
2 _____			
3 _____			
4 _____			
	<u>75</u>	= Total Cover	
Sapling/Shrub Stratum (plot size: <u>15</u>)			
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>
2 <u>Fraxinus latifolia</u>	<u>5</u>		<u>FACW</u>
3 _____			
4 _____			
5 _____			
	<u>105</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: _____)			
1 _____			
2 _____			
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>100</u>			

Dominance Test worksheet:

Number of Dominant Species
 That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (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		
0-8	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>)			
1 <u>Populus balsamifera</u>	<u>70</u>	<u>X</u>	<u>FAC</u>
2 <u>Pseudotsuga menziesii</u>	<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>Symphoricarpos albus</u>	<u>25</u>	<u>X</u>	<u>FACU</u>
2 <u>Rubus armeniacus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
3 <u>Populus balsamifera</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
4 <u>Cornus alba</u>	<u>15</u>	_____	<u>FACW</u>
5 <u>Prunus avium</u>	<u>10</u>	_____	<u>FACU</u>
	<u>100</u>	= Total Cover	
Herb Stratum (plot size: <u>5</u>)			
1 <u>Pteridium aquilinum</u>	<u>40</u>	<u>X</u>	<u>FACU</u>
2 _____	_____	_____	_____
3 _____	_____	_____	_____
4 _____	_____	_____	_____
5 _____	_____	_____	_____
6 _____	_____	_____	_____
7 _____	_____	_____	_____
8 _____	_____	_____	_____
	<u>40</u>	= Total Cover	
Woody Vine Stratum (plot size: <u>30</u>)			
1 <u>Hedera helix</u>	<u>80</u>	<u>X</u>	<u>FACU</u>
2 _____	_____	_____	_____
	<u>80</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>60</u>			

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species
 That are OBL, FACW, or FAC: 43% (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
 _____ 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 _____ No X

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 _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>100</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>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 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 _____					
3 _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
4 _____				Percent of Dominant Species	
	<u>40</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>Rubus armeniacus</u>	<u>75</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	Multiply by:
2 <u>Corylus cornuta</u>	<u>20</u>		<u>FACU</u>	OBL Species _____	x 1 = <u>0</u>
3 <u>Populus balsamifera</u>	<u>20</u>		<u>FAC</u>	FACW species _____	x 2 = <u>0</u>
4 <u>Crataegus monogyna</u>	<u>10</u>		<u>FAC</u>	FAC Species _____	x 3 = <u>0</u>
5 <u>Fraxinus latifolia</u>	<u>5</u>		<u>FACW</u>	FACU Species _____	x 4 = <u>0</u>
	<u>135</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>Schedonorus arundinaceus</u>	<u>70</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Phalaris arundinacea</u>	<u>10</u>		<u>FACW</u>	Hydrophytic Vegetation Indicators:	
3 <u>Unidentified grass</u>	<u>10</u>		<u>(FAC)</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
4 <u>Cirsium arvense</u>	<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:
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
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>100</u>	= Total Cover	
Herb Stratum (plot size: <u>5</u>)			
1	<u>Unidentified grass</u>	<u>X</u>	<u>(FAC)</u>
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
	<u>5</u>	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1	_____	_____	_____
2	_____	_____	_____
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>95</u>			

Dominance Test worksheet:

Number of Dominant Species
 That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (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		
<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
 (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: 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 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 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
 (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: 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>)			
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>
2 <u>Populus balsamifera</u>	<u>20</u>		<u>FAC</u>
3 _____			
4 _____			
	<u>120</u>	= Total Cover	
Sapling/Shrub Stratum (plot size: <u>15</u>)			
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>
2 <u>Populus balsamifera</u>	<u>10</u>		<u>FAC</u>
3 _____			
4 _____			
5 _____			
	<u>110</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>30</u>)			
1 <u>Hedera helix</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
2 _____			
	<u>30</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>100</u>			

Dominance Test worksheet:

Number of Dominant Species
 That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species
 That are OBL, FACW, or FAC: 67% (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:

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

Remarks:
Shrubs continued: Ilex americana (UPL), Crataegus monogyna (FAC) 10% each and Prunus laurocerasus (UPL) 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		
0-8	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	
4 _____				That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
	<u>25</u>	= Total Cover		Prevalence Index Worksheet:	
Sapling/Shrub Stratum (plot size: _____)				Total % Cover of _____ Multiply by: _____	
1 _____				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>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 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): >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: 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:	
_____ = Total Cover				Total % Cover of _____ Multiply by: _____	
Sapling/Shrub Stratum (plot size: <u>15</u>)				OBL Species _____ x 1 = <u>0</u>	
1	<u>40</u>	<u>X</u>	<u>FACW</u>	FACW species _____ x 2 = <u>0</u>	
2	<u>10</u>	<u>X</u>	<u>(FAC)</u>	FAC Species _____ x 3 = <u>0</u>	
3	_____	_____	_____	FACU Species _____ x 4 = <u>0</u>	
4	_____	_____	_____	UPL Species _____ x 5 = <u>0</u>	
5	_____	_____	_____	Column Totals <u>0</u> (A) <u>0</u> (B)	
_____ = Total Cover				Prevalence Index =B/A = <u>#DIV/0!</u>	
Herb Stratum (plot size: <u>5</u>)				Hydrophytic Vegetation Indicators:	
1	<u>50</u>	<u>X</u>	<u>FAC</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
2	<u>50</u>	<u>X</u>	<u>(FAC)</u>	<u>X</u> 2- Dominance Test is >50%	
3	_____	_____	_____	_____ 3-Prevalence Index is ≤ 3.0 ¹	
4	_____	_____	_____	_____ 4-Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
5	_____	_____	_____	_____ 5- Wetland Non-Vascular Plants ¹	
6	_____	_____	_____	_____ Problematic Hydrophytic Vegetation ¹ (Explain)	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
_____ = 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	_____	_____	_____		
_____ = 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? (includes capillary fringe) Yes No Depth (inches): >14

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 documentation

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Photos taken January 29, 2024



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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