Appendix O

Wetlands and Waters Delineation Report

Tualatin

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11 June 2024, Revised 19 November 2024

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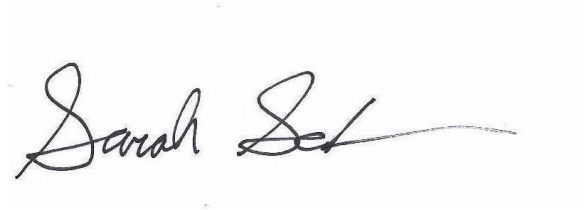


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Wetlands and Waters Delineation Report

Tualatin BESS Project
0717214





Richard Peel
Project Manager

Sarah Seekins
Partner in Charge

Environmental Resources Management, Inc.
1201 3rd Avenue
Floor 22
Seattle, WA 98101
T +1 435 462 8591

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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
Applicant	BrightNight LLC
APT	Antecedent Precipitation Tool
BESS	Battery Energy Storage System
CFR	Code of Federal Regulations
DEQ	Department of Environmental Quality
DSL	Department of State Lands
ERM	Environmental Resources Management, Inc.
FAC	Facultative plants
FACU	Facultative upland plants
FACW	Facultative wetland plants
NHD	National Hydrography Database
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate wetland plants
ODFW	Oregon Department of Fish and Wildlife
ORWAP	Oregon Rapid Assessment Protocol
PEM	Palustrine Emergent Wetland

Acronyms	Description
PHS	Priority Habitats and Species
Project	Tualatin BESS Project
PSS	Paulestrine Scrub-Shrub
SWI	Statewide Wetlands Inventory
UPL	Upland plants
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1. INTRODUCTION

Environmental Resources Management, Inc. (ERM), has prepared this Wetlands and Waters Delineation Report on behalf of BrightNight LLC (Applicant) for the proposed Tualatin battery energy storage system (BESS) Project (Project). The study area is approximately 80.2 acres of privately owned land in unincorporated Washington County, and City of Sherwood, Oregon. The Project Location Map is attached as Figure 1. The study area is located north, east, and south of the Home Depot commercial site at 20260 Southwest Pacific Highway and includes 8 parcels (tax parcel numbers 2S120D001100, 2S120D001200, 2S120D000700, 2S129A000801, 2S129A001651, 2S129A001650, 2S129B001900 and 2S129A001651). The Tax Lot Map is attached as Figure 2. Most of the study area is in unincorporated Washington County, whereas the substation area to the southwest is within Sherwood City limits. In-text Figure 1 shows the study area location.

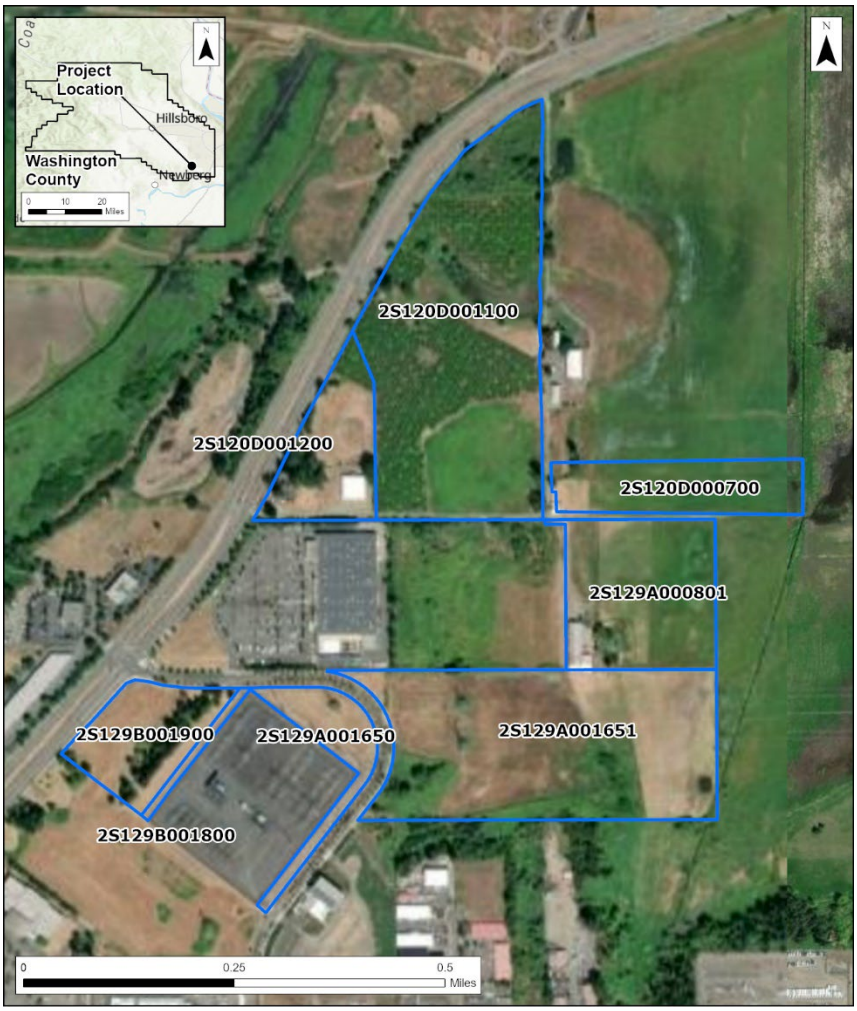


FIGURE 1: STUDY AREA

ERM completed a wetlands and waters delineation for the Project on 24 and 25 January and 16 May 2024 to determine the presence of wetlands and waters in the study area. This report

documents the presence and geographic extent of wetlands and waters and describes how these features were distinguished from uplands. Delineation boundaries are subject to verification and approval from the Oregon Department of State Lands (DSL), Washington County, and City of Sherwood. Refer to Appendix A for the Delineated Wetlands and Waters Map which show delineated wetlands and waters and collected data point locations.

1.1 LANDSCAPE SETTING AND LAND USE

1.1.1 PREVIOUS

The land within the study area was historically manipulated for cropland and agricultural use with associated low density residential development. Evidence of limited commercial land use in the area was observed in aerial photograph imagery dating back to 1985. The land use has stayed primarily agricultural except for the Home Depot commercial development which was built in 2001.

1.1.2 CURRENT

The study area is within two different Washington County Land Use Districts: Exclusive Farm Use District, 80-acre minimum lot size and Exclusive Forest Conservation District, 80-acre minimum lot size.

The primary land use in the study area is prior agricultural, light industrial, and residential. The study area is privately owned by multiple landowners and bordered by the SW Pacific Highway, multiple businesses, and agricultural areas. The Tualatin River National Wildlife Refuge is located northwest (across SW Pacific Highway) and east of the study area. A recent aerial image is included on the Tax Lot Map provided as Figure 2.

1.1.3 SITE ALTERATIONS

The study area was historically manipulated for residential and agricultural use, as observed in aerial photographs dating back to 1984, detailing the conversion of the land to hazelnut orchard. Although unmaintained, the orchard dominates the northern section of the study area.

1.2 PRECIPITATION DATA AND ANALYSIS

The Regional Delineation Supplement Version 2.0 (United States Army Corps of Engineers [USACE] 2010) recommends using methods described in Chapter 19 in the Engineering Field Handbook (USDA/NRCS 2021) to determine if precipitation occurring in the three full months prior to January 2024 (when the delineations were performed) was normal, drier than normal, or wetter than normal. Since this publication, the USACE has developed the Antecedent Precipitation Tool (APT) to support decisions as to whether field data collection and other site-specific observations occurred under normal climatic conditions. The APT facilitates the comparison of antecedent or recent rainfall conditions for a given location to the range of normal rainfall conditions that occurred during the preceding 30 years. In addition to providing a standardized methodology to evaluate normal precipitation conditions (“precipitation normalcy”), the APT can also be used to

assess the presence of drought conditions, as well as the approximate dates of the wet and dry seasons for a given location.

Field work was completed during the wet season and under normal conditions. When considering the three prior months, normal precipitation conditions were present. Overall, hydrologic conditions were considered normal. Heavy precipitation was recorded in the ten days preceding field work. Refer to Table 1 below and Appendix B for the comprehensive APT results.

TABLE 1: ANTECEDENT PRECIPITATION

30 Days Ending	Rainfall Percentile (1971–2023)		2023 Measured Rainfall (Inches)	Condition (Dry, Wet, Normal)	Condition Value (1 = dry, 2 = normal, 3 = wet)	Month Weight	Multiply Previous Two Columns
	30th	70th					
2024-12-24	5.66	9.77	9.55	Normal	2	3	6
2023-11-24	4.53	8.10	4.85	Normal	2	2	4
2023-10-24	1.87	4.07	2.76	Normal	2	1	2
						Sum	12
						Score[1]:	**Normal**

[1] The overall score is reflective of antecedent versus normal precipitation for the specified dates. A value of 6–9 points is considered **drier** than normal; a value of 10–14 points is considered **normal**; and a value of 15–18 points is considered ***wetter*** *than normal.* APT | US EPA

2. METHODS

2.1 DESKTOP METHODS

Prior to the field investigation, ERM reviewed data sources for information on vegetation patterns, topography, drainage, and potential of known critical areas, including wetlands, in the study area. Data sources included are listed below.

- U.S. Geological Survey (USGS) Topographical Contours
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soil survey maps
- DSL Statewide Wetlands Inventory (SWI)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps
- USGS National Hydrography Database (NHD) maps
- Current and historic aerial imagery (Google Earth and Esri Topographic Web Mapping).

ERM reviewed the reference materials for preliminary identification of potential wetlands and waters and other critical areas abutting the study area.

2.2 FIELD METHODS

ERM conducted a field survey to verify any potential wetland or waterbody features identified during the desktop assessment, and to further survey for other potential features not identified through desktop analysis.

Field survey data was collected with a Global Positioning System unit with sub-meter accuracy. Potentially regulated features were evaluated using indicators of wetland or waterbody characteristics, or the lack thereof. Potential wetland and waterbody features identified during the desktop assessment were assessed by pedestrian survey, and if appropriate, delineated.

2.2.1 DETERMINATION OF WETLANDS

ERM identified and classified wetland and upland conditions within the study area in accordance with the following standard protocols consistent with:

- Routine Determination Method described in the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (USACE 2010); and
- USFWS Classification System (Cowardin et al. 1979).

Wetlands are distinguished from uplands based on examination of the presence of hydrophytic vegetation, hydric soils, and wetland hydrology as described in more detail in the sections below. To determine that a feature may be a wetland, typically all three parameters must be present. USACE Wetland Determination Data Forms were completed to aid in these determinations and are included as Appendix C. Photographs from the field visit are included as Appendix D.

Following wetland determinations, each wetland was rated according to the Oregon Rapid Wetland Assessment Protocol (ORWAP), version 3.2 (Adamus, 2020). The ORWAP data forms are included in Appendix E.

2.2.1.1 DETERMINATION OF HYDROPHYTIC VEGETATION

ERM identified hydrophytic and upland vegetation in the field by visual determination of dominant plant species (defined as plants that comprise 20 percent or more of the cover value observed at a given location). At each data point, herbaceous vegetation was analyzed within a defined circumference: 20-foot diameter for tree and shrub stratums and 10-foot diameter for herb and woody vine stratums. The percent cover was visually estimated and recorded for each species present. Vegetation was observed within the growing season for the region. The *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) defines the regional growing season as when two or more different non-evergreen vascular plant species growing in the wetland or surrounding areas exhibit one or more indicators of biological activity (e.g., emergence from the ground, appearance of new growth, or bud burst on woody plants) (USACE 2010).

The indicator status of each observed plant species was confirmed using the Western Mountains, Valleys, and Coast Region 2022 Wetland Plant List (USACE 2023). Species not listed were

assumed to be upland plants (UPL), as directed by the 2010 Regional Supplement (USACE 2010). An area is considered to have hydrophytic vegetation when more than 50 percent of the dominant species is obligate wetland plants (OBL), facultative wetland plants (FACW), or facultative plants (FAC), or if the number of dominant species that are OBL, FACW, or FACW divided by the number of total dominant species is less than or equal to 3.0. Indicator status categories are defined in Table 2 below.

TABLE 2: PLANT INDICATOR STATUS CATEGORIES

Indicator Category[1]	Indicator Symbol	Definition
Obligate Wetland Plants	OBL	Plants that occur almost always (estimated probability >99%) in wetlands under natural conditions, but that may also occur rarely (estimated probability <1%) in non-wetlands
Facultative Wetland Plants	FACW	Plants that occur usually (estimated probability >67%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands
Facultative Plants	FAC	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands
Facultative Upland Plants	FACU	Plants that occur sometimes (estimated probability 1% to <33%) in wetlands but occur more often (estimated probability >67% to 99%) in non-wetlands
Upland Plants	UPL	Plants that occur rarely (estimated probability <1%) in wetlands but occur almost always (estimated probability >99%) in non-wetlands under natural conditions

[1] The USFWS NWI originally developed and defined these categories, and the National Plant List Panel subsequently modified them.

2.2.1.2 DETERMINATION OF HYDRIC SOILS

ERM examined soil profiles in and along the perimeter of potential wetlands and identified the soil type(s) using the Munsell soil chart (USDA 2009), descriptions in the Field Indicators of Hydric Soils in the United States (USDA 2018), and the USDA/NRCS Web Soil Survey (USDA/NRCS Undated). The Munsell System includes three components to classify soil color: hue (soil color), value (lightness and darkness), and chroma (color intensity) defined in a book of color chips. Hydric soils were identified using the *Field Indicators of Hydric Soils in the United States* (USDA 2018).

2.2.1.3 DETERMINATION OF WETLAND HYDROLOGY

ERM determined wetland hydrology to be present if one or more of the following characteristics were present:

- Landscape position and surface topography convey and concentrate water (e.g., the position of the site relative to an upslope water source, location within a distinct wetland drainage pattern, or concave surface topography with accumulated water);

- Inundation or saturation for a long duration (defined by the NRCS as inundation in a single event that ranges from 7 days to 1 month) is either inferred based on field indicators or observed during field surveys; and/or
- Residual evidence of ponding or flooding is observed (e.g., scour marks, sediment deposits, algal matting, and drift lines).

Assessment of hydrologic criteria was based on primary and secondary indicators. If the data point was situated above the level of seasonal inundation or saturation, the criteria were not met; conversely, if it was situated below the elevation of seasonal inundation or saturation, the criteria were met.

2.2.2 DETERMINATION OF WATERBODIES

Regulated waterbodies are stream channels or impoundments with a defined ordinary high-water mark. The USACE defines an ordinary high-water mark as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE 2005).

3. RESULTS

3.1 DESKTOP RESULTS

The results of the desktop analysis are described below; associated maps are provided in Appendix F.

- According to USGS contour data, the surrounding site topography consists of valleys, rolling hills and flat open space with the highest elevation point at about 130 feet above mean sea level (USGS 2023).
- The NRCS Soil Survey Geographic Database identified ten soil map units across the study area. Most of the study area is mapped as Labish mucky clay and Hillsboro loam (0 to 3 percent slopes). Labish mucky clay is classified by the USDA-NRCS as hydric soils. Other soil types mapped within the study area include Aloha silt loam and Quatama loam.[1] A soil map is provided in Appendix F as Figure F-1.
- According to DSL SWI, the northernmost corner of Parcel 2S120D001100 and the properties immediately east consist of soil map unit 61462: poorly drained predominantly hydric soil. A detailed description of how the assessed wetlands differ from the SWI depiction is provided in each wetland assessment summary below. The SWI map is provided in Appendix F as Figure F-2.
- The USFWS NWI mapping identifies two freshwater emergent wetlands and one freshwater pond on the site and a freshwater forested/shrub wetland offsite. The NWI map is provided in Appendix F as Figure F-3.

[1] State Soil Data Access Hydric Soils List: NRCS State Hydric Soils List (usda.gov)

- Under the Cowardin et al. (1979) classification system, the two freshwater emergent wetlands are classified as Palustrine Emergent Persistent Seasonally Flooded (PEM1C) habitat (USFWS undated).
- The freshwater forested/shrub wetland is mapped as a depressional Palustrine Scrub-Shrub (PSS) wetland. The freshwater forested/shrub wetland is mapped as connecting to a much larger wetland network, likely contributing and receiving hydrology from the mapped Rock Creek to the east.
- The mapped freshwater pond is classified as (PUBFx), with an unconsolidated bottom, a water regime that is semi permanently flooded, and identified as previously excavated.
- There is one NHD-mapped perennial stream (Rock Creek), that is mapped as flowing parallel to the east and through the southeastern end of the study area. Rock Creek is classified as an upper perennial riverine system with an unconsolidated bottom that is semi permanently flooded and excavated. Rock Creek then flows into the Tualatin River, an NHD-mapped riverine habitat classified as an upper perennial riverine system with an unconsolidated bottom that is permanently flooded (R3UBH) (USFWS undated). The NHD map is provided in Appendix F as Figure F-4.

3.2 FIELD RESULTS

3.2.1 DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS

Three wetlands (Wetlands A through C), one stream (Rock Creek), and one excavated pond (Pond A), were observed and/or delineated during the initial field surveys in January 2024. The field survey in May 2024 did not identify any additional wetland or waters features in the study area. Note that all identified wetlands and waters are located within unincorporated Washington County. These features are described below and summarized in Table 3. Point locations and delineated features are shown on the Delineated Wetlands and Waters Exhibit in Appendix A. Photographs from the field visit are included as Appendix D, and the ORWAP wetland data is included in Appendix E. In addition, delineation boundaries are subject to verification and approval from the Oregon Department of State Lands; refer to Appendix G for DSL Correspondence.

TABLE 3: DELINEATED WETLAND AND WATER FEATURES

Feature	Data Point(s)	NWI	NHD	Jurisdiction[1]
Wetland A	DP4W	Mapped PEM1/SS1C	N/A	Likely state jurisdiction only.
Wetland B	DP1W	Mapped PEM1/SS1C	N/A	Likely state jurisdiction only.
Wetland C	DP7W, DP9W, DP10W	Mapped PSS1/EM1C	N/A	Likely under both state and federal jurisdictional waterbody given that it has a direct

Feature	Data Point(s)	NWI	NHD	Jurisdiction[1]
				connection to Rock Creek.
Pond A	N/A	Mapped PUBFx	Not Mapped	Excavated farm pond. Likely state jurisdiction only.
Rock Creek	N/A (off-site)	Mapped R3UBFx	Mapped Perennial	Likely both state and federal jurisdictional given its perennial hydrologic connection to the Tualatin River.

NHD = National Hydrography Database; NWI = National Wetlands Inventory; R3UBFx = riverine, perennial, streambed, seasonally flooded, excavated; PEM1/SS1C = Palustrine Emergent, Persistent, scrub-shrub, broad-leaved deciduous, seasonally flooded. Seasonally Flooded wetland; PSS1 = Palustrine, scrub-shrub, broad-leaved deciduous, emergent, persistent, seasonally flooded; PUBFx = Paulstrine, unconsolidated bottom, semi permanently flooded, excavated.

[1] Federal jurisdiction based on the 2023 United States Environmental Protection Agency and USACE final rule to amend the final "Revised Definition of 'Waters of the United States'" rule (33 Code of Federal Regulations [CFR] 328 and 40 CFR 120). State regulations determined under Oregon Administrative Rules 635-415-0000 through 635-415-0025

3.2.1.1 WETLAND A

Wetland A is approximately 2.62 acres and located in the northern portion of the northern parcel (tax parcel number 2S120D001100). It is likely that Wetland A was historically excavated to raise the surrounding landscape for the orchard. Wetland A would likely be considered isolated, however there is a potential drainage connection to the agricultural fields to the east. Wetland vegetation is dominated primarily by FACW species meadowsweets (Spiraea sp.), reed canary grass (*Phalaris arundinacea*), and FAC species hawthorn (Crataegus sp.), nootka rose (*Rosa nutkana*), and Himalayan blackberry (*Rubus armeniacus*). Soils observed in the test pit were clay loam meeting hydric soil indicator Depleted Matrix (F3). Wetland hydrology criteria were met through primary indicators Surface Water (A1), High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), and Water-Stained Leaves (B9). Wetland hydrology criteria were also met through secondary indicators Water-Stained Leaves (B9), Saturation Visible on Aerial Imagery (C9) and Geomorphic Position (D2). The wetland boundary was determined based on the transition of hydrophytic vegetation to upland dominant vegetation, and presence of primary hydrology indicators. Wetland A is classified by Cowardin et al. (1979) as a depressional Palustrine Scrub Shrub Wetland (PSS).

Following the ORWAP assessment, Wetland A is classified as a Palustrine Scrub Shrub wetland, the predominant HGM classification is depressional, and the soil unit mapped in most of the AA was 27. The wetland Hydrologic Function (WS) received a higher function rating and a lower values rating. The wetland Water Quality Support (SR, PR, or NR) received a higher function rating and a higher values rating. The wetland Fish Habitat (FA or FR) received a lower function rating and a lower values rating. The wetland Aquatic Habitat (AM, WBF, or WBN) received a higher function

rating and a higher values rating. The wetland Ecosystem Support (WC, INV, PD, POL, SBM, or OE) received a moderate function rating and a higher values rating.

3.2.1.2 WETLAND B

Wetland B is approximately 2.1 acres and located centrally on the northern parcel (tax parcel number 2S120D001100). Similar to Wetland A, it is likely that Wetland B was historically created as a farm pond, dug out to berm up the surrounding landscape for the orchard. This wetland would likely be considered isolated, however there is a small pipe that allows drainage to the agricultural fields to the east. Wetland vegetation is dominated primarily by FACW species soft rush (*Juncus effusus*), FAC species red alder (*Alnus rubra*) and FAC species Himalayan blackberry (*Rubus armeniacus*). Soils observed in the test pit were a loam that met hydric soil indicator Loamy Mucky Mineral (F1). Wetland hydrology criteria were met through primary indicators Surface Water (A1), High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), and Water-Stained Leaves (B9). Wetland hydrology criteria were also met through secondary indicator Saturation Visible on Aerial Imagery (C9). The wetland boundary was determined based on the transition of hydrophytic vegetation to upland dominant vegetation, and presence of primary hydrology indicators. Wetland B is a depressional wetland with a pond interior and an emergent fringe. Wetland B is classified by Cowardin et al. (1979) as a depressional PEM.

Following the ORWAP assessment, Wetland B is classified as a Palustrine Emergent wetland, the predominant HGM classification is depressional, and the soil unit mapped in most of the AA was 37A. The wetland Hydrologic Function (WS) received a moderate function rating and a lower values rating. The wetland Water Quality Support (SR, PR, or NR) received a moderate function rating and a higher values rating. The wetland Fish Habitat (FA or FR) received a lower function rating and a lower values rating. The wetland Aquatic Habitat (AM, WBF, or WBN) received a higher function rating and a higher values rating. The wetland Ecosystem Support (WC, INV, PD, POL, SBM, or OE) received a moderate function rating and a higher values rating.

3.2.1.3 WETLAND C

Wetland C spans three study area parcels (tax parcel numbers 2S120D000700, 2S129A000801, 2S129A001651) and extends north, south and east of the study area. The portion of Wetland C that is in the study area is 20.72 acres. Wetland C is connected to a larger wetland network associated with the mapped Rock Creek, to the east. As such, Wetland C is likely not isolated. During the field delineation, Wetland C was heavily flooded and utilized by waterfowl. As such, only the accessible unflooded fringe was evaluated. Wetland vegetation is dominated primarily by FACW species reed canary grass (*Phalaris arundinacea*), FAC species crab grass (*Digitaria ischaemum*), and perennial ryegrass (*Lolium perenne*). Soils observed in the three test pits were a clay loam, silt clay loam, and clay silt that met hydric soil indicators Loamy Mucky Mineral (F1) and Depleted Below Dark Surface (A11). Wetland hydrology criteria were met through primary indicators High Water Table (A2), Saturation (A3), and secondary indicators Saturation Visible on Aerial Imagery (C9). The wetland boundary was determined based on the transition of hydrophytic vegetation to upland dominant vegetation, and presence of primary hydrology

indicators. Wetland C is classified by Cowardin et al. (1979) as depressional PSS, however the field evaluation observed Wetland C to be a depressional PEM.

Following the ORWAP assessment, Wetland C is classified as a Palustrine Scrub-Shrub wetland, the predominant HGM classification is depressional, and the soil unit mapped in most of the AA was 27. The wetland Hydrologic Function (WS) received a moderate function rating and a lower values rating. The wetland Water Quality Support (SR, PR, or NR) received a moderate function rating and a higher values rating. The wetland Fish Habitat (FA or FR) received a moderate function rating and a higher values rating. The wetland Aquatic Habitat (AM, WBF, or WBN) received a higher function rating and a higher values rating. The wetland Ecosystem Support (WC, INV, PD, POL, SBM, or OE) received a moderate function rating and a higher values rating.

3.2.1.4 POND A

Pond A is an artificially excavated pond on the southeast portion of the study area (tax parcel number 2S129A000801), west of Wetland C. Pond A is likely an isolated, excavated pond used for livestock. Although Pond A was not formally delineated due to proximity to an occupied private residence, the boundaries were evident on imagery. Pond A was observed to match the mapped status under Cowardin et al. (1979) as a Palustrine, unconsolidated bottom, semi permanently flooded (PUBFx).

3.2.1.5 OFF-SITE ROCK CREEK

One water meeting stream criteria was identified outside of the study area to the east. Due to the flooded nature of the study area, Rock Creek was completely obscured by Wetland C and inaccessible for formal evaluation. Rock Creek is mapped by NHD and is classified as a riverine system upper perennial, unconsolidated bottom, semi permanently flooded, that was excavated. Wetland C likely receives and contributes hydrology to Rock Creek. Rock Creek is a mapped tributary to the Tualatin River. Given the permanent hydrologic connection to the Tualatin River approximately 0.5-mile north of the study area, Rock Creek is presumed to be fish-bearing.

3.2.2 DEVIATION FROM SWI

The delineated wetlands and non-wetland waters deviate from the SWI mapped resources as follows:

- Wetland A: DSL SWI maps the area within Wetland A as predominantly hydric soil map unit 61462: poorly drained. This soil map unit extends outside the study area to the east and south. No wetland units were mapped within Wetland A by DSL SWI.
- Wetland B: DSL SWI does not depict presence of predominantly hydric soil or wetlands within Wetland B.
- Wetland C: DSL SWI maps Wetland C as predominantly hydric soil map unit 61462: poorly drained. This area extends outside the study area to the east and north. No wetlands were mapped by DSL SWI around Wetland C.
- Pond A: DSL SWI depicts Pond A as a Palustrine, unconsolidated bottom, artificially flooded (PUBK) freshwater pond that is not mapped within a predominantly hydric soil unit.

- Rock Creek: DSL SWI depicts Rock Creek within predominantly hydric soil map unit 61462: poorly drained. This soil map unit exists on either side of Rock Creek and extends outside the study area to the northeast. DWL SWI also depicts Rock Creek as a palustrine, emergent, persistent, seasonally flooded, excavated freshwater wetland (PEM1Cx) through the channel alignment.

3.3 MAPPING METHODS

Photographs, sample plots, and wetland and stream features were recorded using a Trimble R1 GNSS Receiver with 2 to 3 feet (sub-meter precision) accuracy. The Trimble R1 is configured to differentially correct positions in real-time using the Satellite Based Augmentation System. All delineated features within the study area are shown in Appendix A – Delineated Wetlands and Waters Map.

4. REGULATORY CONSIDERATIONS

4.1 LOCAL CONSIDERATIONS

Washington County regulates significant natural resources including waters and wetlands under Article 422.2. Washington County codes section 422 discusses standards for safe development within riparian areas, Water Areas and Wetlands, or Water Areas and Wetlands. Fish and Wildlife Habitat shall comply with applicable state and federal regulatory guidelines. As all three wetlands and Rock Creek are in the mapped 100-year floodplain, they are likely categorized as significant natural resources. Table 4 below summarizes the identified wetlands, waters, and associated buffer requirements. Per Washington County Code section 422-3.4.C.3.b, Significant Natural Resource areas require a standard 25-foot vegetation buffer of closely spaced (6 to 8 feet) trees and shrubs.

Washington County states that any development requiring a permit in these Significant Natural Resource Areas should reduce its impact, to the maximum extent feasible, on the unique or fragile character or features of the Significant Natural Area. Appropriate impact reducing measures shall include additional landscaping or open space and relocation of the proposed site of a building, structure, or use on the lot.

TABLE 4: IDENTIFIED WETLANDS, WATERS AND BUFFERS

Feature	Wetland Category[1]	Buffer Width
Wetland A	PSS	25 feet
Wetland B	PEM	25 feet
Wetland C	PEM	25 feet
Rock Creek (off-site)	F (fish-bearing, perennial)	25 feet

[1] Wetland categories per the Cowardin Classification System (Cowardin et al.1979).

[2] Buffer widths determined by Washington County Code section 422-3.4.C.3.b.

4.2 STATE CONSIDERATIONS

DSL regulates all wetlands under the state Removal-Fill Law. The Oregon Department of Environmental Quality (DEQ) reviews federal permits and licenses affecting all wetlands for compliance with Oregon's water-quality standards under section 401 of the Clean Water Act. Regions containing Riparian Corridors, Water Areas and Wetlands, and Fish and Wildlife Habitat Waters must follow the developmental guidelines discussed in Washington County Code 422-3.3. In addition to county guidelines, the State of Oregon applied consistent goals and standards to mitigate impacts to fish and wildlife habitat caused by land and water development actions. The policy discussed in Oregon Administrative Rules 635-415-0000 through 635-415-0025 provides goals and standards for general application to individual development actions, and for the development of more detailed policies for specific classes of development actions or habitat types.

4.3 FEDERAL CONSIDERATIONS

On 18 January 2023, the final "Revised Definition of 'Waters of the United States'" rule was published in the Federal Register, and the rule took effect on 20 March 2023. Based on the 2023 final rule from the U.S. Environmental Protection Agency and USACE to amend the final "Revised Definition of 'Waters of the United States'" rule (33 CFR 328 and 40 CFR 120), Recommended Water of the United States (WOTUS) Determinations, features with a direct surface connection to a WOTUS are likely jurisdictional.

Wetland C will likely fall under federal jurisdiction because there is a direct surface connection to a perennial waterway (Rock Creek). Potential direct impacts to Wetland C and/or Rock Creek would require Section 401 permitting with the USACE. Wetlands A and B are likely isolated and will likely not require federal permitting for impacts. However, all jurisdictional determinations are subject to review and approval by the USACE.

5. CONCLUSIONS

ERM completed a wetlands and waters delineation for the Project in January and May 2024 to determine whether wetlands and waters exist at the study area.

Three wetlands, one pond, and one perennial stream were observed. This delineation is subject to verification and approval from the Oregon DEQ and Washington County.

- The delineated wetlands included two PEM wetlands (Wetlands B and C) and one PSS wetland (Wetland A). As per county regulations, these wetlands likely require a 25-foot buffer width with the implementation of closely spaced trees and shrubs.
- Rock Creek, outside of the study area, was not formally observed due to limited access, but is likely regulated by county, state, and federal guidelines. Wetland C is hydrologically connected to Rock Creek and likely regulated to similar standards.

All identified wetlands and waters are likely considered Oregon Waters of the State and will require review by the DEQ if direct impacts are proposed. Potential direct impacts to Rock Creek or Wetland C would require Section 401 permitting with the USACE and are subject to local state review and permitting.

6. DISCLAIMER

This report documents the investigation, best professional judgement, and conclusions of the investigators. It is correct and complete to the best of their 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 DSL in accordance with Oregon Administrative Rules 141-090-0005 (Purpose) through 141-090-0055 (Effective Date).

7. REFERENCES

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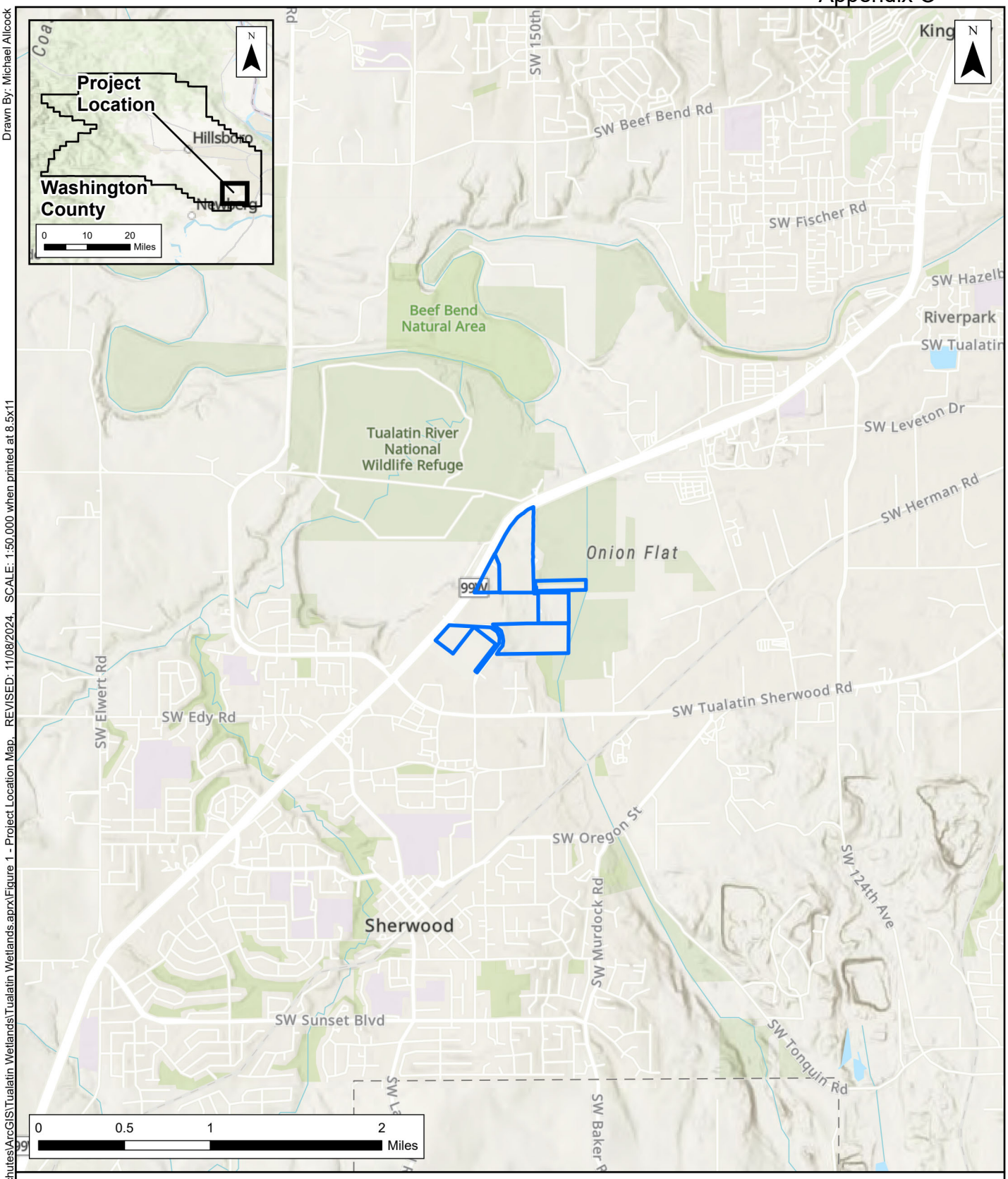
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Legend

Project Location

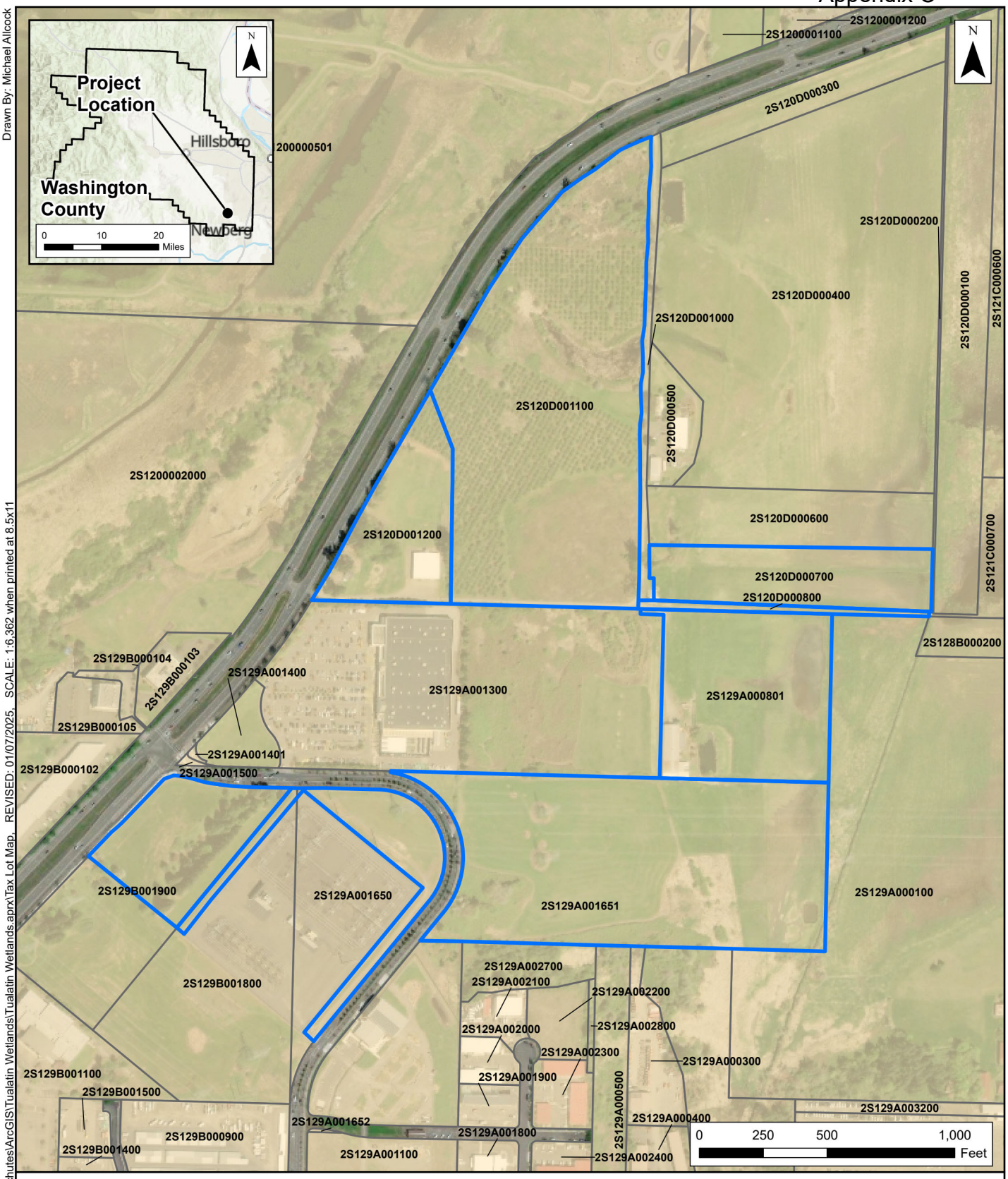
Figure 1
Project Location Map
Tualatin BESS
BrightNight Power
Washington County, OR

ERM

Source: Esri - World Topographic Map; WGS 1984 Web Mercator Auxiliary Sphere

Drawn By: Michael Allcock

M:\US\Projects\A-C\Brightnight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Figure 1 - Project Location Map, REVISED: 11/08/2024, SCALE: 1:50,000 when printed at 8.5x11



Drawn By: Michael Allcock

M:\US\Projects\A-C\Brightnight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Tax Lot Map, REVISED: 01/07/2025, SCALE: 1:6,362 when printed at 8.5x11

Legend

- Study Area
- Tax Lots

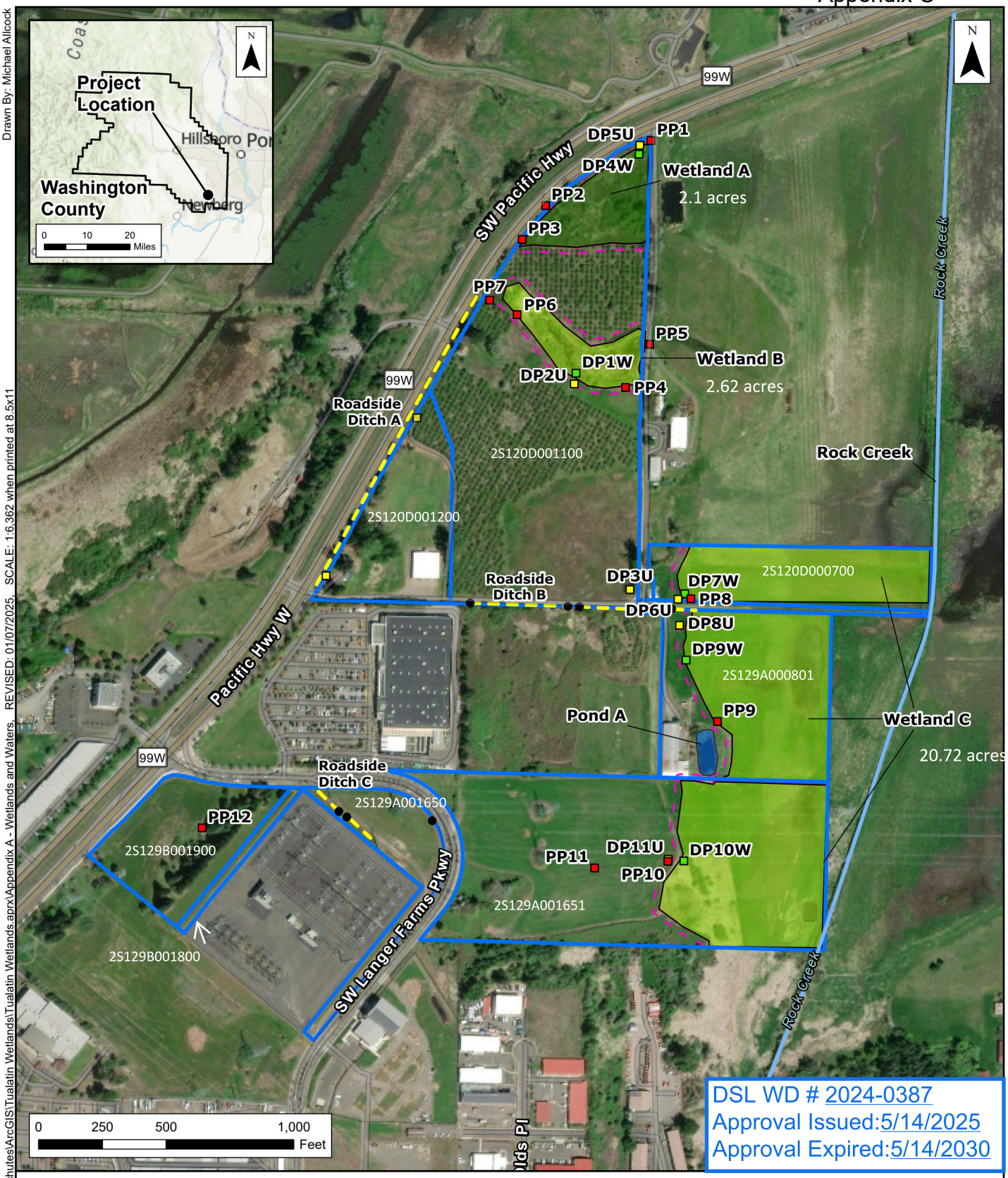
Tax Lot Map

Tualatin BESS
BrightNight Power
Washington County, OR

ERM

Source: Esri - World Aerial Map; NAD 1983 HARN StatePlane Oregon North FIPS 3601

APPENDIX A DELINEATED WETLANDS AND WATERS MAP



DSL WD # 2024-0387
Approval Issued:5/14/2025
Approval Expired:5/14/2030

Legend

- Study Area
- Wetland Data Point
- Upland Data Point
- Photo Point
- Roadside Ditch
- Culvert
- Wetland 25ft Buffer
- PSS, Depressional
- PEM, Depressional
- Pond A
- Rock Creek

Delineated Wetlands and Waters Map

Figure 6

Tualatin BESS
BrightNight Power
Washington County, OR

Note:
Delineated boundaries GPS accuracy +/- 3'.

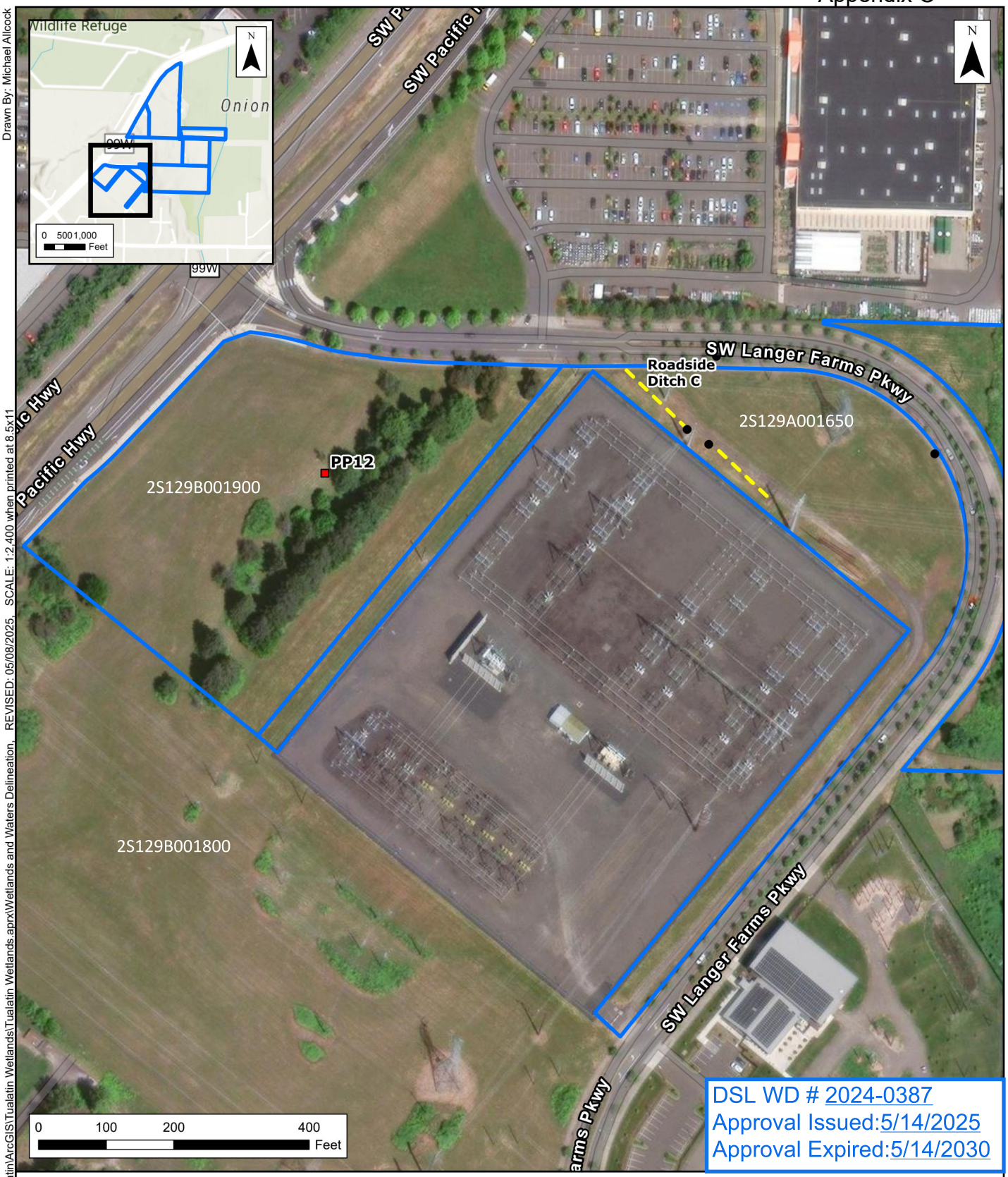
Rock Creek and Pond A - Location verified by aerial imagery, available mapped features, and lidar. +/- 10'

ERM

Drawn By: Michael Allcock

M:\US\Projects\A-C\BrightNight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Appendix A - Wetlands and Waters, REVISED: 01/07/2025, SCALE: 1:6,362 when printed at 8.5x11

Source: Esri - World Imagery Map; NAD 1983 HARN StatePlane Oregon North FIPS 3601



Drawn By: Michael Allcock

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Legend

- Study Area
- Roadside Ditch
- Photo Point
- Culvert

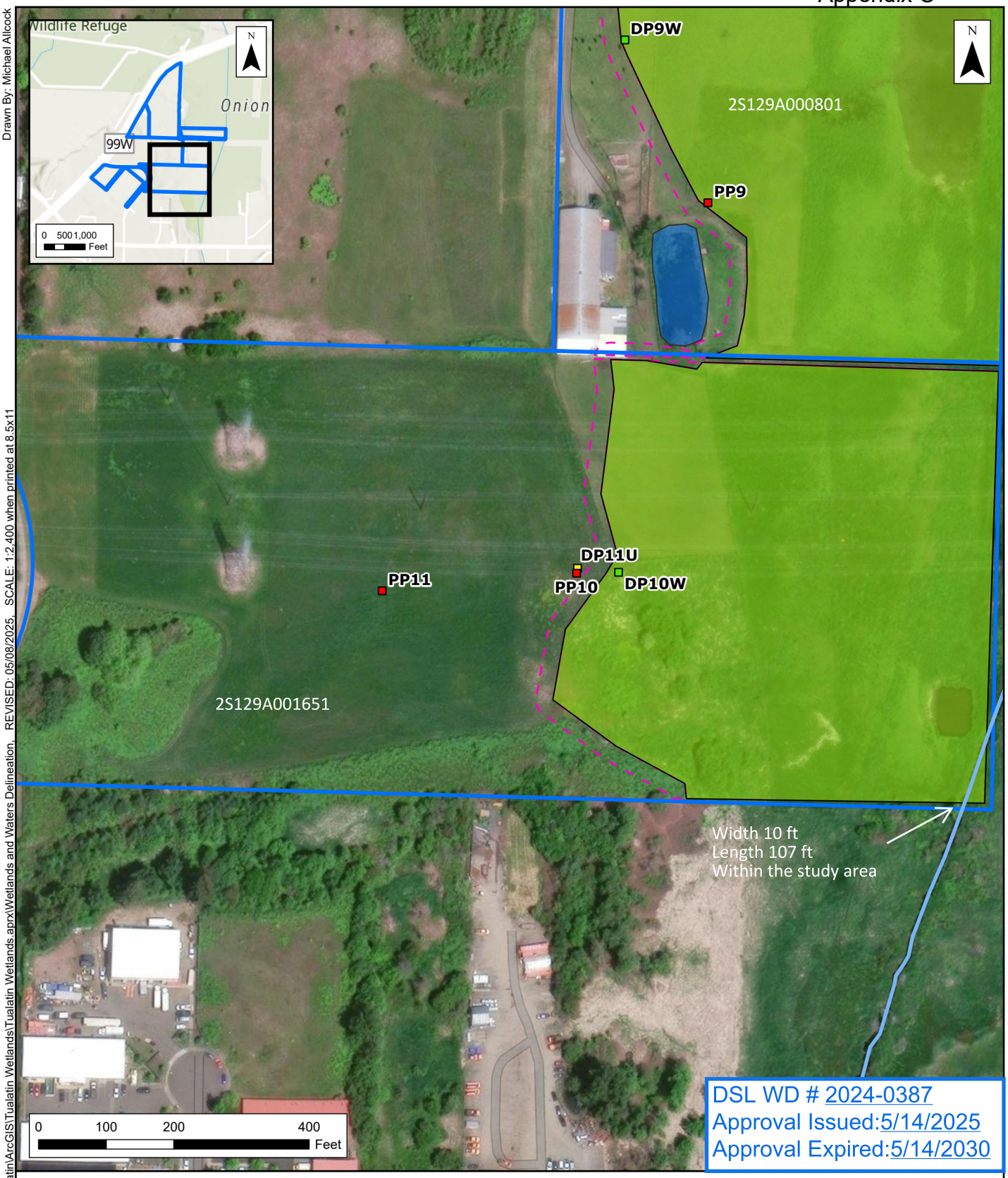
Note:
Delineated boundaries GPS accuracy +/- 3'.

Rock Creek and Pond A - Location verified by aerial imagery, available mapped features, and lidar. +/- 10'

Wetlands and Waters
Tualatin BESS
BrightNight Power
Washington County, OR

ERM

Source: Esri - World Imagery Map; NAD 1983 HARN StatePlane Oregon North FIPS 3601



Drawn By: Michael Allcock

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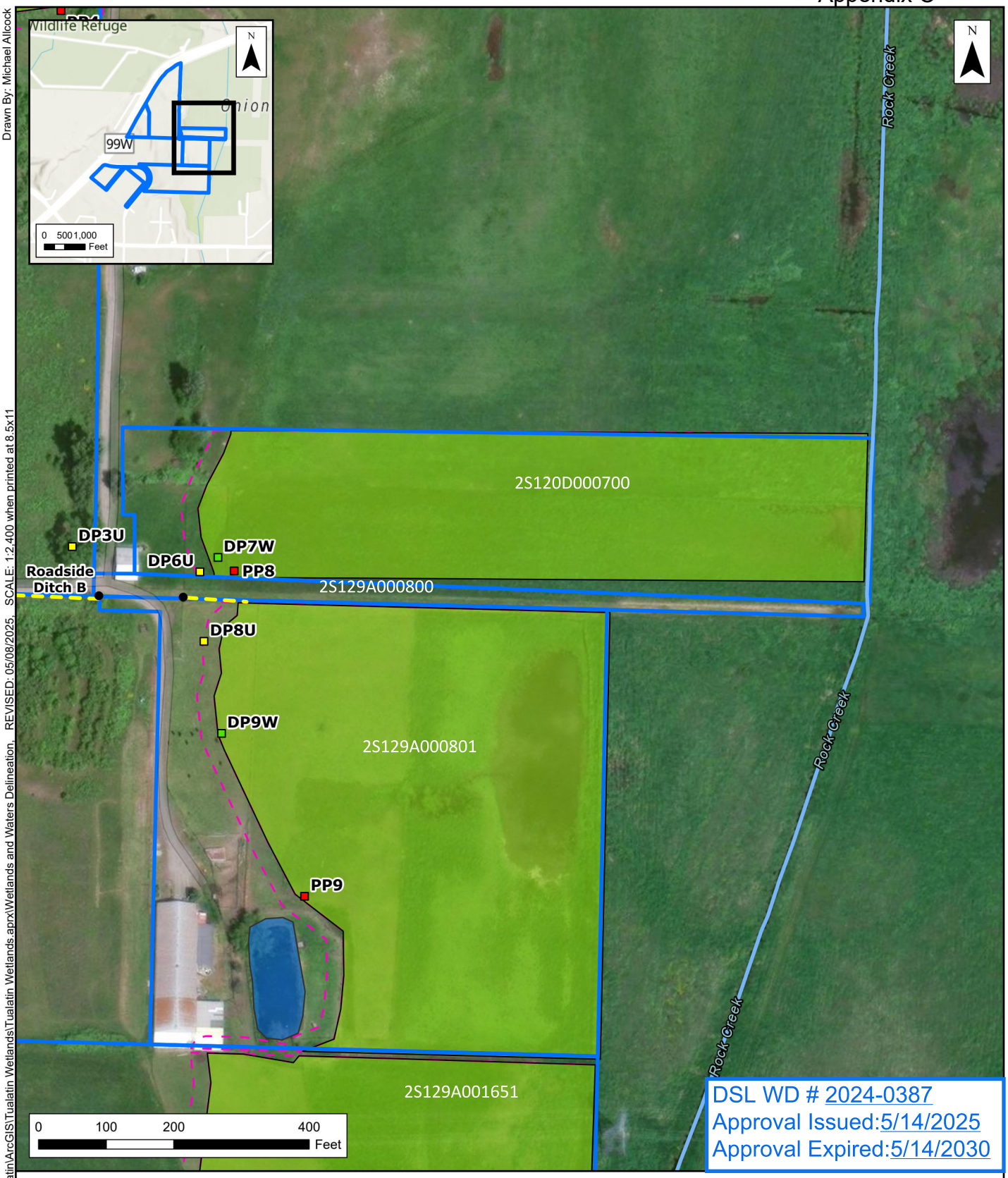
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Wetlands and Waters
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Washington County, OR

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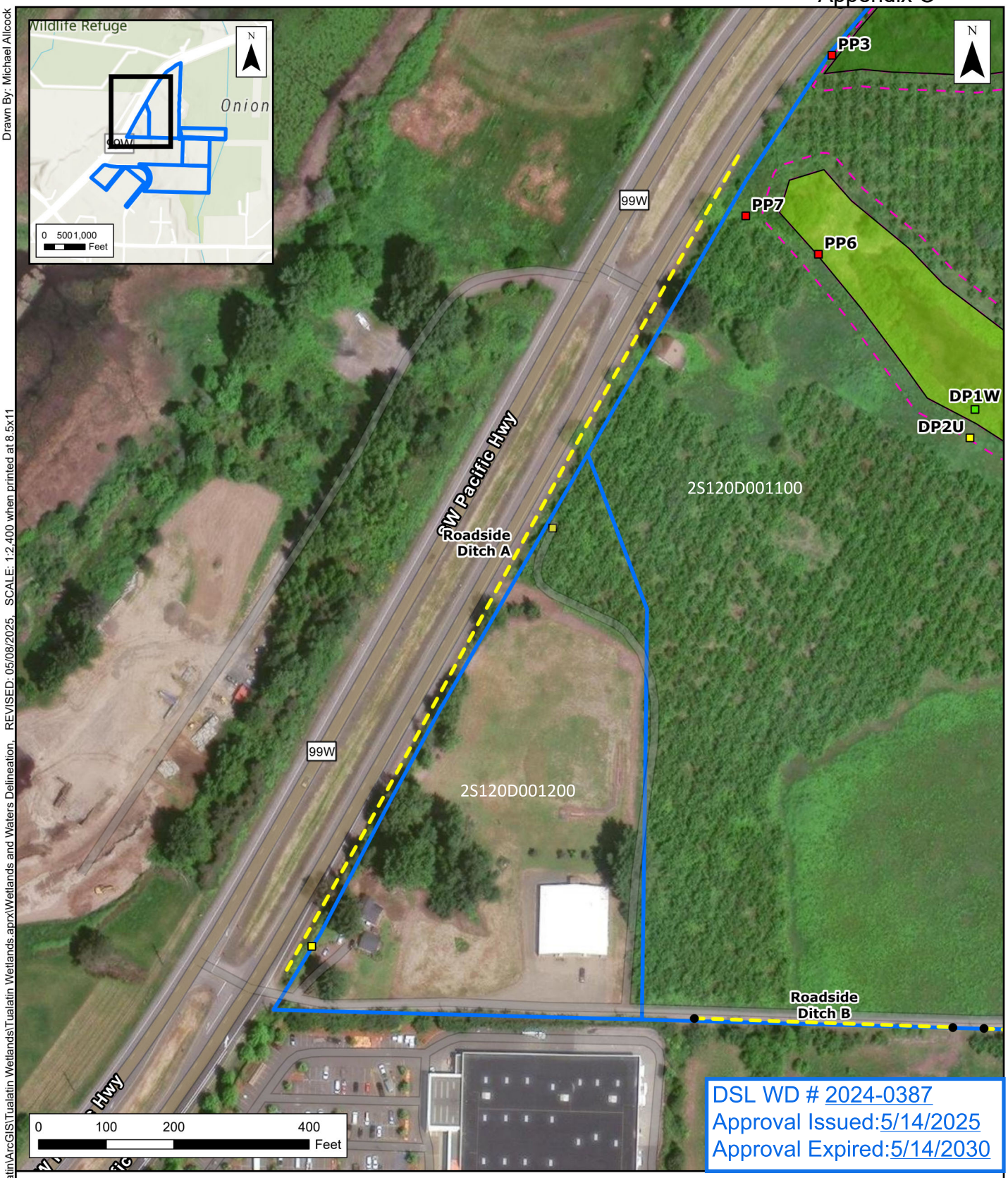
Wetlands and Waters
Tualatin BESS
BrightNight Power
Washington County, OR

ERM

Source: Esri - World Imagery Map; NAD 1983 HARN StatePlane Oregon North FIPS 3601

Drawn By: Michael Allcock

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DSL WD # 2024-0387
Approval Issued:5/14/2025
Approval Expired:5/14/2030

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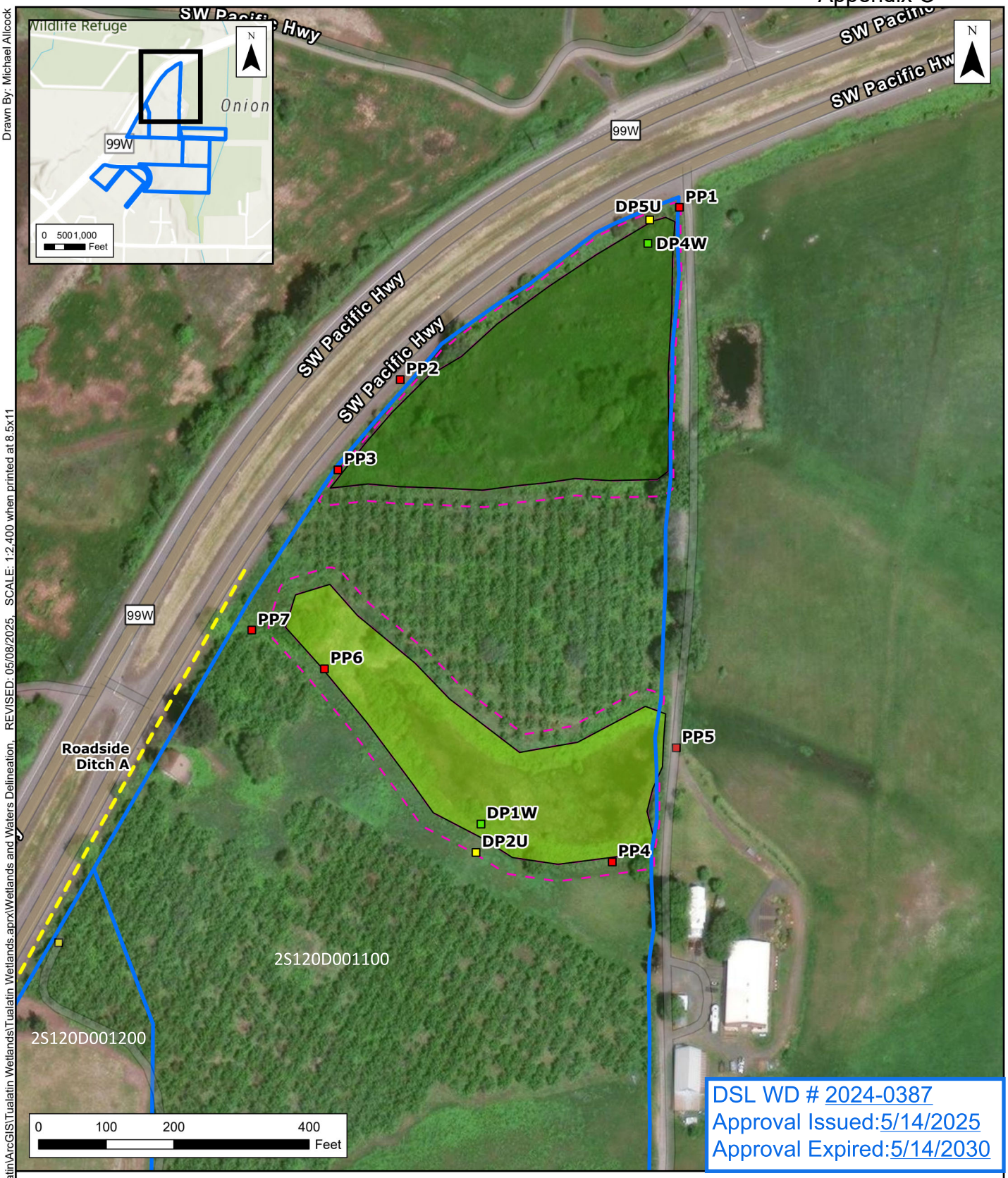
Wetlands and Waters
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Drawn By: Michael Allcock

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Wetlands and Waters

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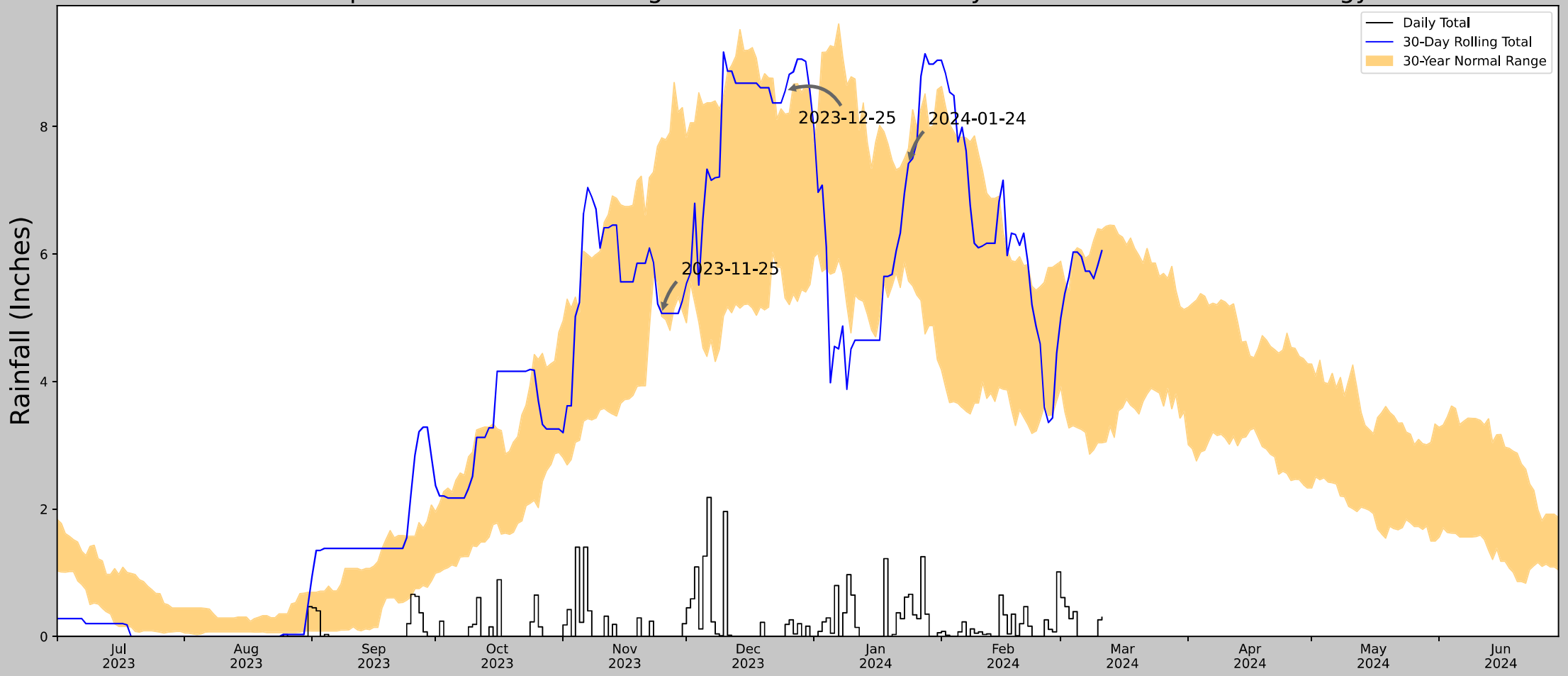
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APPENDIX B ANTECEDENT PRECIPITATION TOOL RESULTS

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.374933, -122.832115
Observation Date	2024-01-24
Elevation (ft)	137.203
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-01-24	5.576772	7.656299	7.42126	Normal	2	3	6
2023-12-25	5.305906	8.192914	8.559055	Wet	3	2	6
2023-11-25	5.020079	7.822835	5.066929	Normal	2	1	2
Result							Normal Conditions - 14

US Army Corps of Engineers

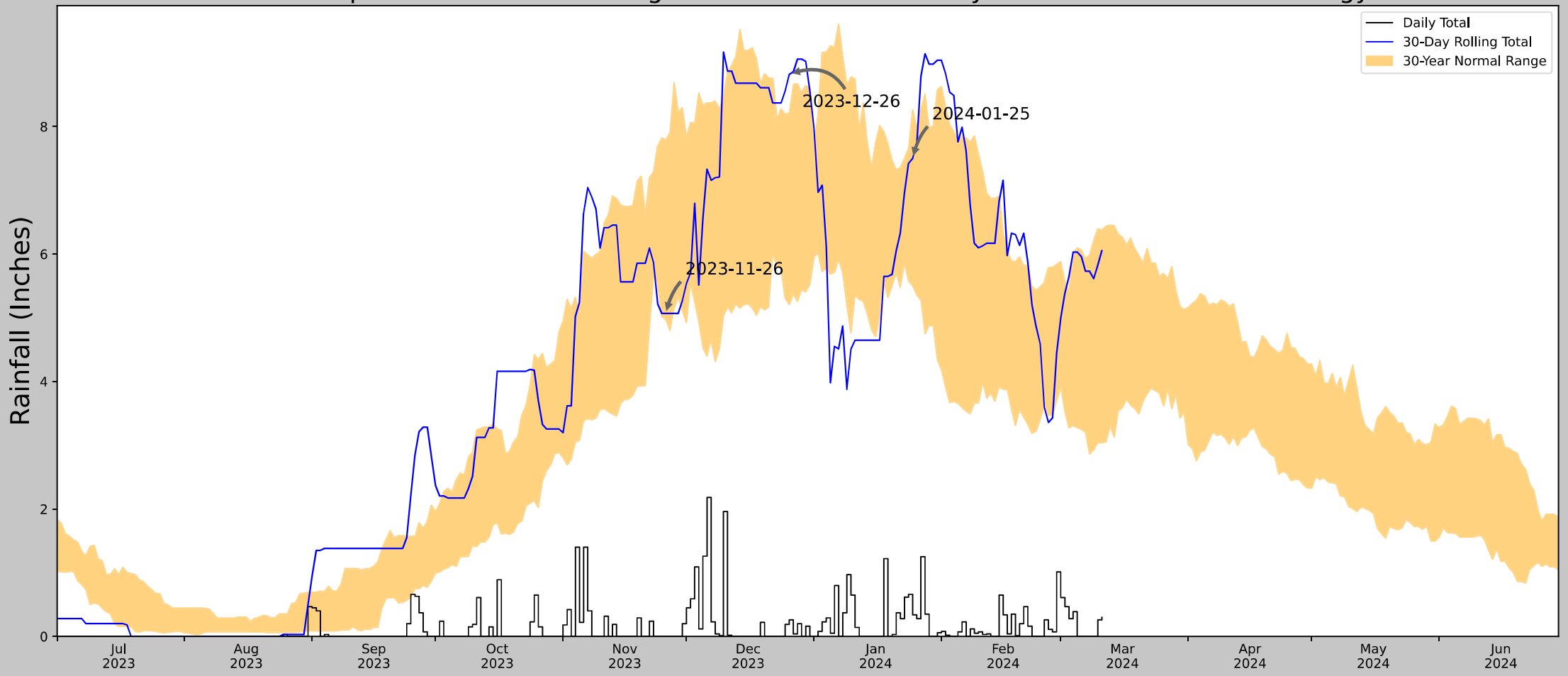
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
REX 1 S	45.3033, -122.9133	515.092	6.328	377.889	5.239	11256	90
NEWBERG 0.3 N	45.3102, -122.9608	207.021	2.357	308.071	1.787	28	0
DUNDEE 1.0 NNW	45.2905, -123.01	454.068	4.782	61.024	2.444	12	0
SHERWOOD 2.0 NW	45.38, -122.8716	285.105	5.673	229.987	3.858	1	0
TIGARD 3.2 W	45.4185, -122.8392	479.003	8.735	36.089	4.246	4	0
AURORA STATE AP	45.2467, -122.7708	195.866	7.956	319.226	6.12	31	0
N WILLAMETTE EXP STN	45.2817, -122.7517	149.934	7.995	365.158	6.517	17	0
BEAVERTON 2 SSW	45.4547, -122.8203	270.013	11.393	245.079	7.919	3	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.374933, -122.832115
Observation Date	2024-01-25
Elevation (ft)	137.203
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-01-25	5.5	8.261811	7.5	Normal	2	3	6
2023-12-26	5.20748	8.209449	8.818898	Wet	3	2	6
2023-11-26	4.970473	7.794488	5.066929	Normal	2	1	2
Result							Normal Conditions - 14

US Army Corps of Engineers

ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
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APPENDIX C USACE WETLAND DETERMINATION DATA FORMS

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

Project/Site: Tualatin City/County: Washington County Sampling Date: 2024-01-24

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP1-W

Investigator(s): Richard Peel, Samantha Bennett Section, Township, Range: Sec 20, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.377582 Long: -122.832373 Datum: WGS84

Soil Map Unit Name: Quatama Loam, 0-3% slope (37A) NWI classification: PEM1/SS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus Rubra	10%	Y	FAC
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Holcus lantas	5%	N	FAC
2. Juncus effusus	85%	Y	FACW
3. Kumlienia cooleyae	5%	N	FACW
4. Cirisium arvense	5%	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1. Rubus armeniacus	40%	Y	FAC
2.			
	40% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	90.00	x 2 =	180.00
FAC species	60.00	x 3 =	180.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	150.00 (A)		360.00 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP1-W

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 3/3	100%					Loam	Mucky with some organic material
6-18"	10YR 3/3	100%	10YR 5/8	7%			Loam	
18+"	10YR 4/2	90%	10YR 4/6	10%			Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): At 0"

Water Table Present? Yes ✓ No ___ Depth (inches): At 0"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): At 0"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-24

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP2-U

Investigator(s): Richard Peel, Samantha Bennett Section, Township, Range: Sec 20, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.377466 Long: -122.832395 Datum: WGS84

Soil Map Unit Name: Quatama Loam, 0-3% slope (37A) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Taraxacum officinale	10%	N	FACU
2. Jacobaea vulgaris	10%	N	FACU
3. Holcus lantas	70%	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

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	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	70.00	x 3 =	210.00
FACU species	20.00	x 4 =	80.00
UPL species	0.00	x 5 =	0.00
Column Totals:	90.00 (A)		290.00 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP2-U

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/1	100%					Clay Loam	
4-7"	10YR 3/2	100%					Clay Loam	
7-18"	10YR 4/3	100%					Clay Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ✓ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 18"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 7-18"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-24

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP3-U

Investigator(s): Richard Peel, Samantha Bennett Section, Township, Range: Sec 20, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.375278 Long: -122.831459 Datum: WGS84

Soil Map Unit Name: Aloha Silt Loam (1) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Taraxacum officinale	5%	N	FACU
2. Juncus effusus	60%	Y	FACW
3. Agrostis capillaris	30%	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

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	0.00	x 1 =	0.00
FACW species	60.00	x 2 =	120.00
FAC species	30.00	x 3 =	90.00
FACU species	5.00	x 4 =	20.00
UPL species	0.00	x 5 =	0.00
Column Totals:	95.00 (A)		230.00 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP3-U

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 3/1	100%					Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 5-6"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 5-6"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP4-W

Investigator(s): Richard Peel, Kevin Keuster Section, Township, Range: Sec 20, T02S, R001W

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.380098 Long: -122.831583 Datum: WGS84

Soil Map Unit Name: Hillsboro Loam, 3-7% slopes (21B) NWI classification: PEM1/SS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Crataegus sp.	30%	Y	FAC
2.			
3.			
4.			
	30% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1. Crataegus sp.	40%	Y	FAC
2.			
3.			
4.			
5.			
	40% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Spiraea sp.	40%	Y	FACW
2. Phalaris arundinacea	30%	N	FACW
3. Rosa nutkana	30%	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1. Rubus armeniacus	30%	Y	FAC
2.			
	30% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	70.00	x 2 =	0.00
FAC species	130.00	x 3 =	390.00
FACU species	0.00	x 4 =	20.00
UPL species	0.00	x 5 =	0.00
Column Totals:	200.00 (A)		410.00 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP4-W

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 4/1	93%	10YR 4/6	7%	C	M	Clay loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 0"

Water Table Present? Yes ✓ No ___ Depth (inches): 1"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP5-U

Investigator(s): Richard Peel, Kevin Keuster Section, Township, Range: Sec 20, T02S, R001W

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 20%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.380117 Long: -122.831535 Datum: WGS84

Soil Map Unit Name: Hillsboro Loam, 3-7% slopes (21B) NWI classification: PEM1/SS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Crataegus sp.	100%	Y	FAC
2.			
3.			
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Polystichum munitum	5%	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1. Rubus armeniacus	30%	Y	FAC
2.			
	30% = Total Cover		

% Bare Ground in Herb Stratum 0%

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: 0.67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	130.00	x 3 =	390.00
FACU species	5.00	x 4 =	20.00
UPL species	0.00	x 5 =	0.00
Column Totals:	135.00 (A)		410.00 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8"	10YR 3/2	100%					Loam	
8-18"	10YR 4/3	100%					Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP6-U

Investigator(s): Richard Peel, Samantha Bennett Section, Township, Range: Sec 20, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.374905 Long: -122.830685 Datum: WGS84

Soil Map Unit Name: Labish mucky clay (27) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Taraxacum officinale	5%	N	FACU
2. Lolium perenne	90%	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

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	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	90.00	x 3 =	270.00
FACU species	5.00	x 4 =	20.00
UPL species	0.00	x 5 =	0.00
Column Totals:	95.00 (A)		290.00 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP6-U

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 3/1	100%					Clay Silt	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 8"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 7"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP7-W

Investigator(s): Samantha Bennett, Callie Steed Section, Township, Range: Sec 29, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.374534 Long: -122.830567 Datum: WGS84

Soil Map Unit Name: Labish Mucky Clay (27) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Lolium perenne	95%	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

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 0.00	x 1 = 0.00
FACW species 0.00	x 2 = 0.00
FAC species 95.00	x 3 = 285.00
FACU species 0.00	x 4 = 0.00
UPL species 0.00	x 5 = 0.00
Column Totals: 95.00 (A)	285.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP4-W

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 3/1	100%					Clay Silt	Mucky

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ✓ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes ✓ No ___ Depth (inches): 0"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP8-U

Investigator(s): Samantha Bennett, Kevin K., Callie S. Section, Township, Range: Sec 29, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.372390 Long: -122.830749 Datum: WGS84

Soil Map Unit Name: Labish mucky clay (27) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Phalaris arundinacea	85%	Y	FACW
2. Daucus carota	5%	N	FACU
3. Trifolium repens	5%	N	FAC
4. Plantago lanceolata	5%	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

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	0.00	x 1 =	0.00
FACW species	85.00	x 2 =	170.00
FAC species	5.00	x 3 =	15.00
FACU species	10.00	x 4 =	40.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		225.00 (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 3/2	100%					Clay Silt	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP9-W

Investigator(s): Samantha Bennett, Kevin K., Callie S. Section, Township, Range: Sec 29, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.372380 Long: -122.830516 Datum: WGS84

Soil Map Unit Name: Labish Mucky Clay (27) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil ✓, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Phalaris arundinacea	95%	Y	FACW
2. Grass sp.	5%	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

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	0.00	x 1 =	0.00
FACW species	95.00	x 2 =	190.00
FAC species	5.00	x 3 =	15.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		205.00 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP9-W

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 2/2	100%					Clay loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 5"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP10-W

Investigator(s): Samantha Bennett, Callie Steed Section, Township, Range: Sec 29, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.375247 Long: -122.830626 Datum: WGS84

Soil Map Unit Name: Labish Mucky Clay (27) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil ✓, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: The vegetation in this area is disturbed and mixed with invasive species. It is our best professional judgement that even though the vegetation present does not meet hydrophytic vegetation indicators, the presence of sufficient primary wetland indicators has been met.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Digitaria ischaemum	90%	Y	FAC
2. Taraxacum officinale	5%	N	FACU
3. Common weed species	5%	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 2% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	95.00	x 3 =	285.00
FACU species	5.00	x 4 =	20.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		305.00 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation is disturbed with invasive species

SOIL

Sampling Point: DP10-W

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 3/2	95%	10YR 3/6	5%	C	M	Silt clay loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Water Table Present? Yes ✓ No ___ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0"

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: Tualatin City/County: Washington County Sampling Date: 2024-01-25

Applicant/Owner: BrightNight State: Oregon Sampling Point: DP11-U

Investigator(s): Samantha Bennett, Callie Steed Section, Township, Range: Sec 29, T02S, R001W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Microtopography Slope (%): 0-3%

Subregion (LRR): LLR A, MLRA 2 Lat: 45.375189 Long: -122.830719 Datum: WGS84

Soil Map Unit Name: Labish Mucky Clay (27) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil ✓, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 10 ft)			
1. Taraxacum officinale	5%	N	FACU
2. Digitaria ischaemum	80%	Y	FACU
3. Trifolium repens	5%	N	FAC
4. Plantago lanceolata	5%	N	FACU
5. Common weed species	5%	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 10 ft)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	10.00	x 3 =	30.00
FACU species	90.00	x 4 =	360.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		390.00 (B)

Prevalence Index = B/A = 3.9

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP11-U

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15"	10YR 3/2	100%					Loam	OM layer at 3" and gravel
15"+								Shovel refusal, gravel layer

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Gravel

Depth (inches): at 15"

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

APPENDIX D PHOTOGRAPH LOG

PHOTOGRAPHIC LOG

Appendix O

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 1 **Date:** 24 January 2024 **Photo ID: PP1_ Bio Observation Pt** **Description:** Wetland Habitat (Wetland B) facing south.	
Photo No. 2 **Date:** 24 January 2024 **Photo ID: PP2_ Bio Observation Pt** **Description:** Wetland habitat (Wetland A) facing southwest. Photo taken from road.	
Photo No. 3 **Date:** 24 January 2024 **Photo ID: PP3_ Bio Observation Pt** **Description:** Wetland habitat (Wetland B) facing south. Photo taken approx. 15 feet from road.	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 4 **Date:** 24 January 2024 **Photo ID: DP1W_Soil Pit** **Description:** Wetland sample pit in Wetland A.	
Photo No. 5 **Date:** 24 January 2024 **Photo ID: DP1W_Soil** **Description:** Wetland soil plug in Wetland A.	
Photo No. 6 **Date:** 24 January 2024 **Photo ID: DP1W_Habitat** **Description:** Wetland habitat (Wetland A) facing north.	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 7	Date: 24 January 2024
Photo ID: DP2U_Soil Pit	
Description: Upland sample pit in Wetland A.	



Photo No. 8	Date: 24 January 2024
Photo ID: DP2U_Soil	
Description: Upland soil plug in Wetland A.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 9	**Date:** 24 January 2024	
Photo ID: DP2U_Habitat		
Description: Wetland and Upland Habitat (Wetland A) facing east.		
Photo No. 10	**Date:** 24 January 2024	
Photo ID: PP4_ Bio Observation Pt		
Description: Wetland Habitat (Wetland A) facing northwest.		
Photo No. 11	**Date:** 24 January 2024	
Photo ID: PP5_ Bio Observation Pt		
Description: Wetland habitat (Wetland A) photo point facing west.		
Photo No. 12	**Date:** 24 January 2024	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo ID: PP6_ Bio Observation Pt

Description:
Western end of the site, facing northeast.



Photo No. 13 | **Date:** 24 January 2024

Photo ID: PP7_ Bio Observation Pt

Description:
Photo point facing NE.



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 14	Date: 24 January 2024	
Photo ID: DP3U_Soil Pit		
Description: Upland sample pit north of DP4U.		

Photo No. 15	Date: 24 January 2024	
Photo ID: DP3U_Soil		
Description: Upland soil plug on the western end of the site, facing northeast.		

Photo No. 16	Date: 24 January 2024	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo ID: DPU3_Habitat **Description:** Western end of the site, facing northeast.	
Photo No. 17 **Date:** 25 January 2024 **Photo ID: DP4W_Soil Pit** **Description:** Wetland sample pit in Wetland B.	
Photo No. 18 **Date:** 25 January 2024	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo ID: DP4W_Soil

Description:
Wetland soil plug in Wetland B.



Photo No. 19 | **Date:** 25 January 2024

Photo ID: DP4W_Habitat

Description:
Wetland habitat (Wetland B) facing south.



Photo No. 20 | **Date:** 25 January 2024

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo ID: DP5U_Soil Pit

Description:
Upland sample pit in Wetland B.



Photo No. 21 | **Date:** 25 January 2024

Photo ID: DP5U_Soil

Description:
Upland soil plug in Wetland B.



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 22	Date: 25 January 2024

Photo ID: DP5U_Habitat

Description:
Upland habitat in Wetland B.



Photo No. 23	Date: 25 January 2024

Photo ID: DP6U_Soil

Upland soil plug in Wetland C.



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 24	Date: 25 January 2024	
Photo ID: DP6U_Soil pit		
Upland sample pit in Wetland C.		

Photo No. 25	Date: 25 January 2024	
Photo ID: DP6U_Habitat		
Upland habitat in Wetland C.		

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 26	Date: 25 January 2024

Photo ID: DP7W_Habitat

Description:
Wetland habitat in Wetland C.



Photo No. 27	Date: 25 January 2024

Photo ID: DP7W_Soil

Description:
Wetland soil plug in Wetland C.



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 28 **Date:** 25 January 2024 **Photo ID: DP7W_Soil Pit** **Description:** Wetland sample pit in Wetland C.	
Photo No. 29 **Date:** 25 January 2024 **Photo ID: DP8U_Soil Pit** **Description:** Upland sample pit in Wetland C.	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 30	Date: 25 January 2024
Photo ID: DP8U_Habitat	
Description: Upland habitat in Wetland C.	



Photo No. 31	Date: 25 January 2024
Photo ID: DP8U_Soil	
Description: Upland soil plug in Wetland C.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 32	Date: 25 January 2024
Photo ID: PP8_ Bio Observation Pt	
Description: Wetland habitat (Wetland C) facing north.	



Photo No. 33	Date: 25 January 2024
Photo ID: DP9W_Soil Pit	
Description: Wetland sample pit in Wetland C.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 34	Date: 25 January 2024
Photo ID: DP9W_Habitat	
Description: Wetland habitat in Wetland C.	



Photo No. 35	Date: 25 January 2024
Photo ID: DP9W_Soil	
Description: Wetland soil plug in Wetland C.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 36	Date: 25 January 2024
Photo ID: PP9_ Bio Observation Pt	
Description: Wetland habitat (Wetland C) facing northwest.	



Photo No. 37	Photo No. 30
Photo ID: DP10W_Habitat	
Description: Wetland habitat in Wetland C.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 38	**Date:** 25 January 2024
Photo ID: DP10W_Soil	
Description: Wetland soil plug in Wetland C.	
Photo No. 39	**Date:** 25 January 2024
Photo ID: DP10W_Soil Pit	
Description: Wetland sample pit in Wetland C.	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 40	Date: 25 January 2024
Photo ID: DP11U_Soil Pit	
Description: Upland sample pit in Wetland C.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 41	Date: 25 January 2024
Photo ID: DP11U_Soil	
Description: Upland soil plug in Wetland C.	



Photo No. 42	Date: 25 January 2024
Photo ID: DP11U_Habitat	
Description: Upland habitat in Wetland C facing east.	



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 43 **Date:** 25 January 2024 **Photo ID: PP10_ Bio Observation Pt** **Description:** Upland habitat (Wetland C) facing southeast.	
Photo No. 44 **Date:** 25 January 2024 **Photo ID: PP11_ Bio Observation Pt** **Description:** Upland habitat (Wetland C) facing south.	
Photo No. 45 **Date:** 25 January 2024 **Photo ID: PP12_ Bio Observation Pt** **Description:** Upland habitat in the southeastern extent of the Project site. Photo point facing SW.	

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tualatin BrightNight	Washington County, Washington	0718448

Photo No. 46	Date: 16 May 2024	
Photo ID: --		
Description: Upland habitat in the western extent of the Project site. Photo point facing SW.		

APPENDIX E OWRAP DATA

OREGON EXPLORER

Oregon Rapid Wetland Assessment Protocol (ORWAP) Report

Report Generated: February 2, 2024 11:59 AM

Wetland A

Assessment Area: 2.6 Acres

Location Map



Location Information

Latitude	45.3793445721151	Longitude	-122.832048108076
Elevation	125 ft	Annual precipitation	47 in
Watershed (HUC12)		Rock Creek-Tualatin River (170900100503)	
Presettlement Vegetation Class		Ash-willow swamp	
Rare Wetland Type(s)		None	
Hydrologic Landscape Class		Wet	
In Special Protected Area?		No	

View Salinity Maps (pdf)

Soil Information

Soil Name	Labish mucky clay
Soil Symbol	27
Hydric Rating	Yes
Hydric Percent	100
Percent Area	54.4%
Erosion Hazard	Slight

Dom. Cond. Non-irrigated Capability Class	Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Soil Name	Quatama loam, 3 to 7 percent slopes
Soil Symbol	37B
Hydric Rating	No
Hydric Percent	4
Percent Area	41.9%
Erosion Hazard	Moderate
Dom. Cond. Non-irrigated Capability Class	Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Soil Name	Hillsboro loam, 3 to 7 percent slopes
Soil Symbol	21B
Hydric Rating	No
Hydric Percent	0
Percent Area	3.7%
Erosion Hazard	Moderate
Dom. Cond. Non-irrigated Capability Class	Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Soil Name	Quatama loam, 0 to 3 percent slopes
Soil Symbol	37A
Hydric Rating	No
Hydric Percent	4
Percent Area	0.1%
Erosion Hazard	Slight
Dom. Cond. Non-irrigated Capability Class	Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Watershed Information

HUC Best

HUC Code	HUC Name	Is HUC Best?	Greatest Criteria met	FW, s/f, lg (Acres)	FW, em, lg (Acres)	EST, s/f, lg (Acres)	EST, s/f, lg (Acres)
HUC8: 17090010	Tualatin	No	n/a	179.6	115.8	0	0
HUC10: 1709001005	Lower Tualatin River	No	n/a	16.1	40.5	0	0
HUC12: 170900100503	Rock Creek-Tualatin River	Yes	type diversity	16	10.7	0	0

[abbreviations: FW- freshwater (wetland); em- Emergent; lg- largest; s/f- Shrub/Forested; EST- Estuarine (wetland)

HUC 12 Functional Deficit									
HUC Code	HUC Name	WS	SR	NT	WC	INV	AM	FH	WB
HUC12: 170900100503	Rock Creek-Tualatin River								

[abbreviations: WS= Water Storage, SR= Sediment Retention, NT= Nutrient Retention (PR or NR), WC= Water Cooling (Thermoregulation), INV= Invertebrate Habitat, AM= Amphibian Habitat, FH= Fish Habitat (FA or FR), WB= Waterbird Habitat (WBF or WBN)]

Rare Species Scores

Rare Species Type	Maximum score	Sum Score	Rating
Non-anadromous Fish Species	0	0	None
Amphibian & Reptile Species	0	0	None
Feeding Waterbirds	0	0	None
Nesting Waterbirds	0	0	None
Songbirds, Raptors, and Mammals	0	0	None
Invertebrate Species	0.33	0.33	Low
Plant Species	0	0	None

Scores have taken into account several factors for each rare species record contained in the official database of the Oregon Biodiversity Information Center (ORBIC): (a) the regional rarity of the species, (b) their proximity to the point of interest, and (c) the “certainty” that ORBIC assigns to each of those records.

Element of Occurrence (Rare Species)

View wildlife list for Rock Creek-Tualatin River (170900100503)

Within Assessment Area	No EO Records
Within 1 mile	No EO Records
In HUC12 watershed	5 EO Records

Element of Occurrence Record(s) in HUC12

1 Steelhead (Upper Willamette River ESU, winter run)
[4 occurences]
Oncorhynchus mykiss pop. 33
ORBIC State Status: S2
ORBIC Global Status: G5T2Q
ODFW Strategy Species: No

2 Western ridged mussel
[1 occurences]
Gonidea angulata
ORBIC State Status: S2S3
ORBIC Global Status: G3
ODFW Strategy Species: No

• HUC Best: Oregon watersheds (HUC8, HUC10, HUC12) with greatest type diversity, proportional area, or density of wetlands according to available National Wetland Inventory maps.

"Type diversity" is the number of unique NWI codes in the watershed (e.g., PEMA, PEMC, PEMCx) and excluded types that have no vegetation component (e.g., PUBH, R3US2).

"Density" is the number of vegetated NWI polygons divided by the acreage of the watershed; many of these polygons may be contiguous with each other, forming a single wetland.

"Proportional Area" is the proportion of the watershed's total area occupied by vegetated wetlands as mapped by NWI.

• The digital maps used to determine this do not show many wetlands or cover the entire state. Data were compiled only from watersheds that have been at least 90% mapped by NWI (see worksheets for HUC8, 10, and 12). Data were received in November 2008 from ORBIC.

• METHODS: The above 3 metrics can be strongly correlated with watershed size and with each other. To minimize that bias, the rankings of the residuals from a regression analysis were used, rather than simply the top-ranking watersheds, to identify the most "important" watersheds for each metric at each scale. That is, the watersheds were identified that were in the top 5% in terms of variety of mapped wetland types for watersheds of that size, the largest area of mapped wetlands as a proportion of the watershed area for watersheds of that size, and/or the greatest number of mapped wetland polygons for watersheds with that much wetland area.

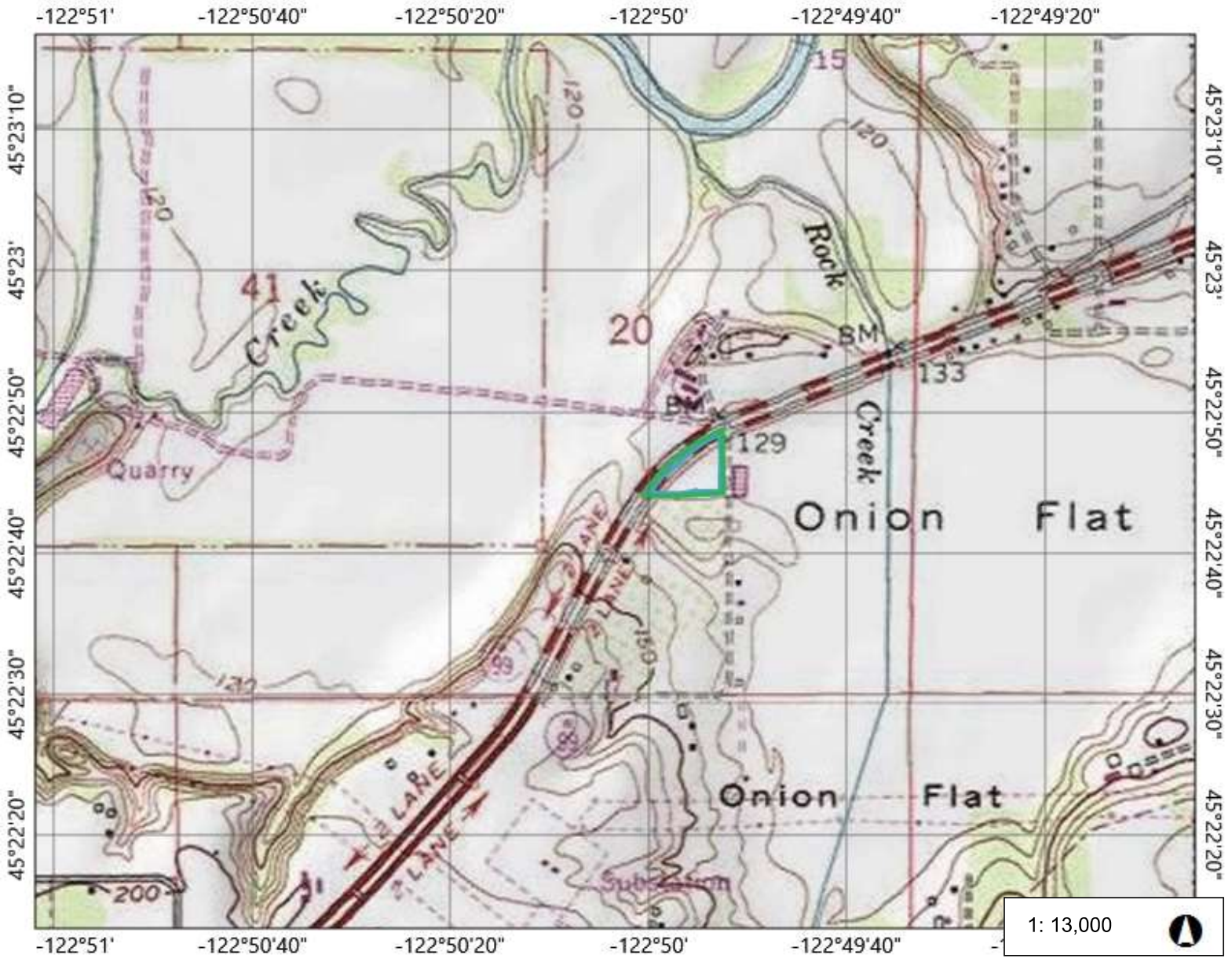
• Global rank. ORBIC participates in an international system for ranking rare, threatened and endangered species throughout the world. The system was developed by The Nature Conservancy and is now maintained by NatureServe in cooperation with Heritage Programs or Conservation Data Centers (CDCs) in all 50 states, in 4 Canadian provinces, and in 13 Latin American countries. The ranking is a 1-5 scale, primarily based on the number of known occurrences, but also including threats, sensitivity, area occupied, and other biological factors. In this book, the ranks occupy two lines. The top line is the Global Rank and begins with a "G". If the taxon has a trinomial (a subspecies, variety or recognized race), this is followed by a "T" rank indicator. A "Q" at the end of this line indicates the taxon has taxonomic questions. The second line is the State Rank and begins with the letter "S". The ranks are summarized as follows: 1 = Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences; 2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences; 3 = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences; 4 = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences; 5 = Demonstrably widespread, abundant, and secure; H = Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered; X = Presumed extirpated or extinct; U = Unknown rank; ? = Not yet ranked, or assigned rank is uncertain.

• This report contains both centroid-based and polygon-based data. The Location Information and Watershed Information sections of the report contain centroid based data (determined by the center point of the polygon), while the remaining sections are polygon-based (determined from the entire polygon).

• The rare species results in this report are based on a subset of the ORBIC rare species dataset. The ORWAP tool only reports on rare species that meet the following criteria: wetland habitat species that are tracked by ORBIC, excluding historical or extirpated sites or those with low mapping accuracy. More information about specific sites and additional species can be obtained from ORBIC through data requests, see https://inr.oregonstate.edu/orbic/data-requests for details.

OREGON EXPLORER

Tualatin Wetland A Topo with RCA





Legend

States & Provinces

- Other States and Provinces
- Oregon

Notes

Add your notes here

0.4 0 0.21 0.4 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

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OREGON EXPLORER

Tualatin Wetland A Aerial with RCA





Legend

States & Provinces

- Other States and Provinces
- Oregon

Notes

Add your notes here

1: 3,250

0.1 0 0.05 0.1 Miles

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OREGON EXPLORER

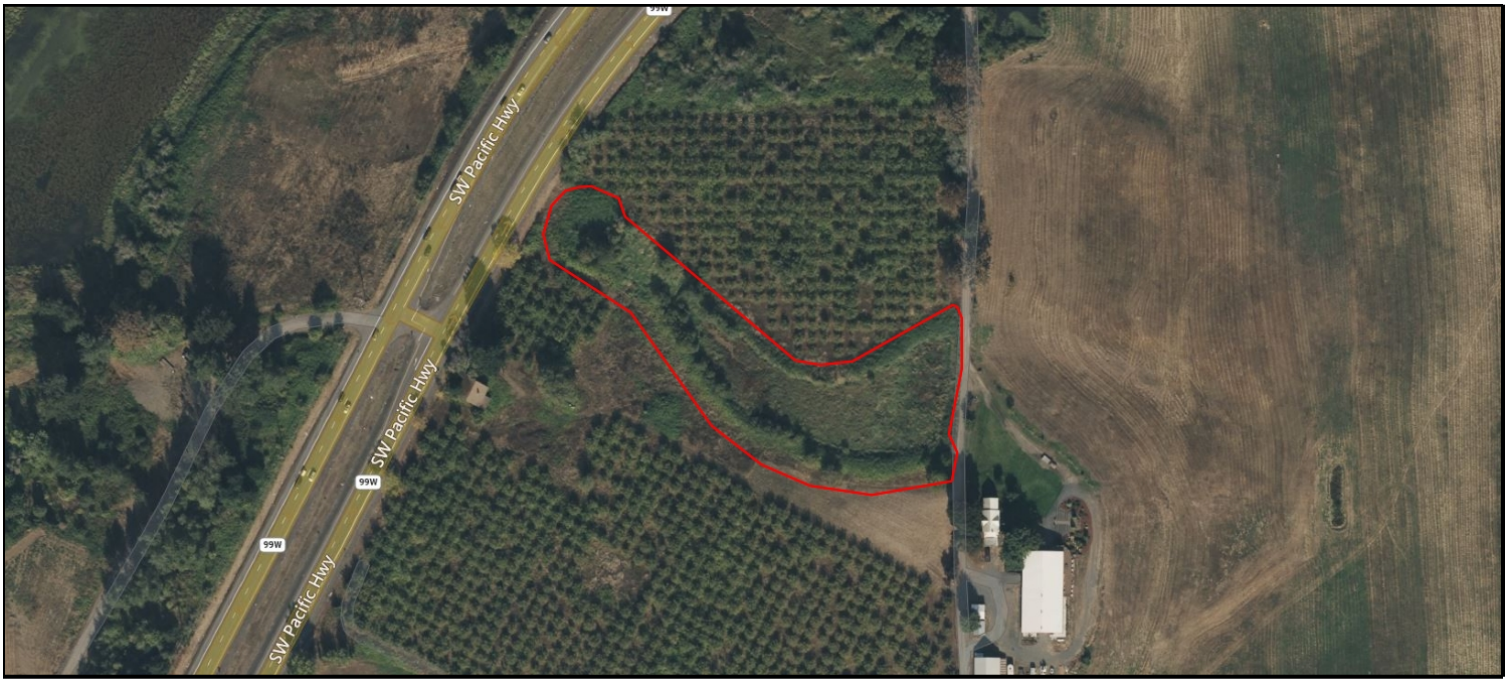
Oregon Rapid Wetland Assessment Protocol (ORWAP) Report

Report Generated: February 2, 2024 12:05 PM

Wetland B

Assessment Area: 2.6 Acres

Location Map



Location Information

Latitude	45.3779004518488	Longitude	-122.832367758566
Elevation	119 ft	Annual precipitation	47 in
Watershed (HUC12)		Rock Creek-Tualatin River (170900100503)	
Presettlement Vegetation Class		Douglas fir	
Rare Wetland Type(s)		None	
Hydrologic Landscape Class		Wet	
In Special Protected Area?		No	

View Salinity Maps (pdf)

Soil Information

Soil Name	Quatama loam, 0 to 3 percent slopes
Soil Symbol	37A
Hydric Rating	No
Hydric Percent	4
Percent Area	100%
Erosion Hazard	Slight

Dom. Cond. Non-irrigated Capability Class	Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Watershed Information

HUC Best

HUC Code	HUC Name	Is HUC Best?	Greatest Criteria met	FW, s/f, lg (Acres)	FW, em, lg (Acres)	EST, em, lg (Acres)	EST, s/f, lg (Acres)
HUC8: 17090010	Tualatin	No	n/a	179.6	115.8	0	0
HUC10: 1709001005	Lower Tualatin River	No	n/a	16.1	40.5	0	0
HUC12: 170900100503	Rock Creek-Tualatin River	Yes	type diversity	16	10.7	0	0

[abbreviations: FW- freshwater (wetland); em- Emergent; lg- largest; s/f- Shrub/Forested; EST- Estuarine (wetland)

HUC 12 Functional Deficit

HUC Code	HUC Name	WS	SR	NT	WC	INV	AM	FH	WB
HUC12: 170900100503	Rock Creek-Tualatin River								

[abbreviations: WS= Water Storage, SR= Sediment Retention, NT= Nutrient Retention (PR or NR), WC= Water Cooling (Thermoregulation), INV= Invertebrate Habitat, AM= Amphibian Habitat, FH= Fish Habitat (FA or FR), WB= Waterbird Habitat (WBF or WBN)]

Rare Species Scores

Rare Species Type	Maximum score	Sum Score	Rating
Non-anadromous Fish Species	0	0	None
Amphibian & Reptile Species	0	0	None
Feeding Waterbirds	0	0	None
Nesting Waterbirds	0	0	None
Songbirds, Raptors, and Mammals	0	0	None
Invertebrate Species	0.33	0.33	Low
Plant Species	0	0	None

Scores have taken into account several factors for each rare species record contained in the official database of the Oregon Biodiversity Information Center (ORBIC): (a) the regional rarity of the species, (b) their proximity to the point of interest, and (c) the “certainty” that ORBIC assigns to each of those records.

Element of Occurrence (Rare Species)

View wildlife list for Rock Creek-Tualatin River (170900100503)

Within Assessment Area	No EO Records
Within 1 mile	No EO Records
In HUC12 watershed	5 EO Records

Element of Occurrence Record(s) in HUC12

1 Steelhead (Upper Willamette River ESU, winter run)
[4 occurences]
Oncorhynchus mykiss pop. 33
ORBIC State Status: S2
ORBIC Global Status: G5T2Q
ODFW Strategy Species: No

2 Western ridged mussel
[1 occurences]
Gonidea angulata
ORBIC State Status: S2S3
ORBIC Global Status: G3
ODFW Strategy Species: No

• HUC Best: Oregon watersheds (HUC8, HUC10, HUC12) with greatest type diversity, proportional area, or density of wetlands according to available National Wetland Inventory maps.

"Type diversity" is the number of unique NWI codes in the watershed (e.g., PEMA, PEMC, PEMCx) and excluded types that have no vegetation component (e.g., PUBH, R3US2).

"Density" is the number of vegetated NWI polygons divided by the acreage of the watershed; many of these polygons may be contiguous with each other, forming a single wetland.

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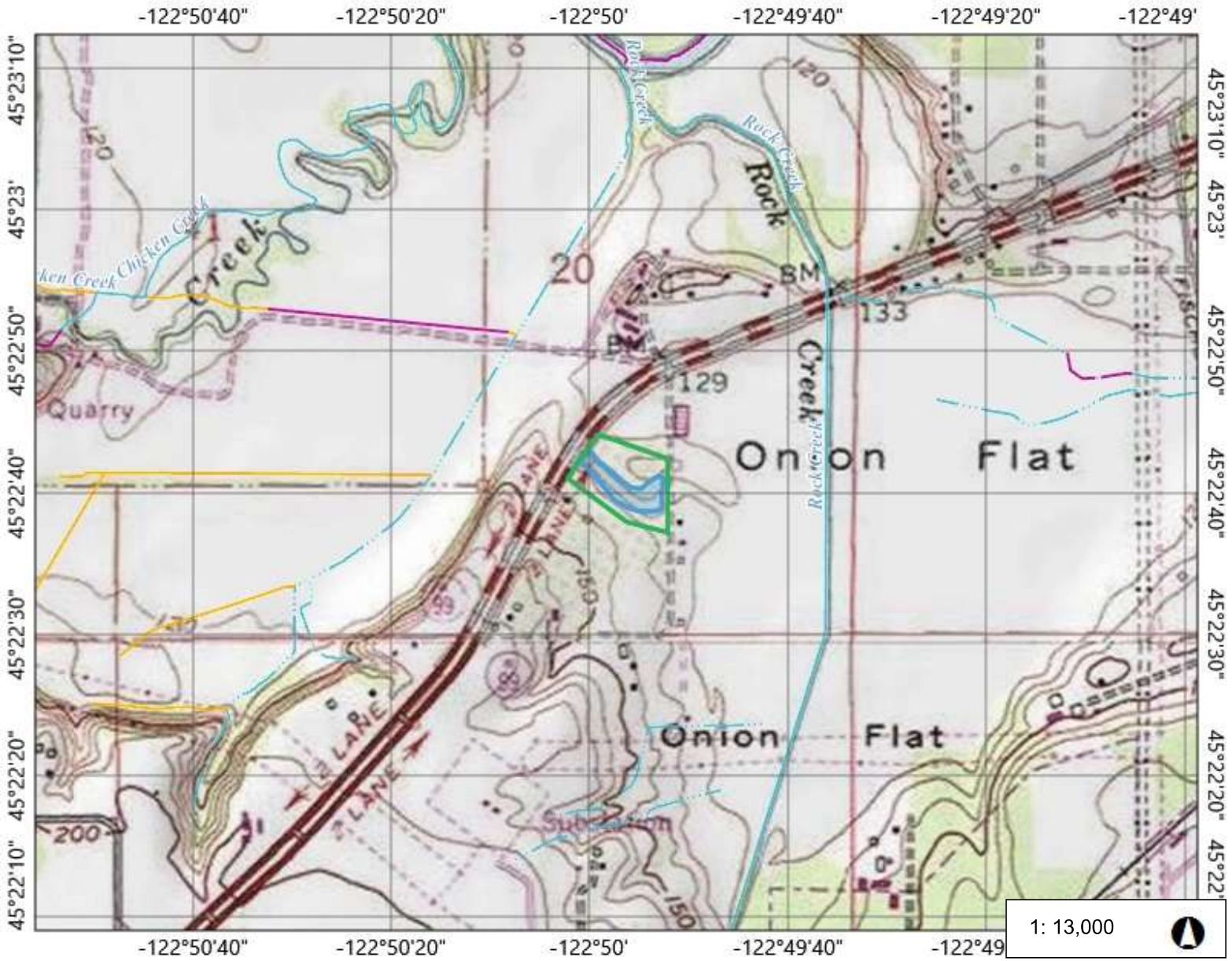
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OREGON EXPLORER

Tualatin Wetland B RCA





Legend

States & Provinces
- Other States and Provinces
- Oregon

Flowline - Large Scale
- Perennial
- Intermittent
- Ephemeral
- Artificial Path
- Canal Ditch
- Coastline
- Connector
- Pipeline
- Underground Conduit

1: 13,000

Notes

Add your notes here

0.4 0 0.21 0.4 Miles

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OREGON EXPLORER

Tualatin Wetland B Aerial





Legend

States & Provinces
- Other States and Provinces
- Oregon

Flowline - Large Scale
- Perennial
- Intermittent
- Ephemeral
- Artificial Path
- Canal Ditch
- Coastline
- Connector
- Pipeline
- Underground Conduit

1: 3,250

0.1 0 0.05 0.1 Miles

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Notes

Add your notes here

OREGON EXPLORER

Oregon Rapid Wetland Assessment Protocol (ORWAP) Report

Report Generated: February 2, 2024 12:08 PM

Assessment Area: 21.6 Acres

Location Map



Location Information

Latitude	45.3738064065679	Longitude	-122.829263136747
Elevation	118 ft	Annual precipitation	47 in
Watershed (HUC12)		Rock Creek-Tualatin River (170900100503)	
Presettlement Vegetation Class		Ash-willow swamp	
Rare Wetland Type(s)		None	
Hydrologic Landscape Class		Wet	
In Special Protected Area?		Yes	

View Salinity Maps (pdf)

Soil Information

Soil Name	Labish mucky clay
Soil Symbol	27
Hydric Rating	Yes
Hydric Percent	100
Percent Area	99.6%
Erosion Hazard	Slight

Dom. Cond. Non-irrigated Capability Class	Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Soil Name	Aloha silt loam
Soil Symbol	1
Hydric Rating	No
Hydric Percent	1
Percent Area	0.2%
Erosion Hazard	Slight
Dom. Cond. Non-irrigated Capability Class	Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Soil Name	Quatama loam, 3 to 7 percent slopes
Soil Symbol	37B
Hydric Rating	No
Hydric Percent	4
Percent Area	0.1%
Erosion Hazard	Moderate
Dom. Cond. Non-irrigated Capability Class	Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Watershed Information

HUC Best

HUC Code	HUC Name	Is HUC Best?	Greatest Criteria met	FW, s/f, lg (Acres)	FW, em, lg (Acres)	EST, em, lg (Acres)	EST, s/f, lg (Acres)
HUC8: 17090010	Tualatin	No	n/a	179.6	115.8	0	0
HUC10: 1709001005	Lower Tualatin River	No	n/a	16.1	40.5	0	0
HUC12: 170900100503	Rock Creek-Tualatin River	Yes	type diversity	16	10.7	0	0

[abbreviations: FW- freshwater (wetland); em- Emergent; lg- largest; s/f- Shrub/Forested; EST- Estuarine (wetland)

HUC 12 Functional Deficit

HUC Code	HUC Name	WS	SR	NT	WC	INV	AM	FH	WB
HUC12: 170900100503	Rock Creek-Tualatin River								

[abbreviations: WS= Water Storage, SR= Sediment Retention, NT= Nutrient Retention (PR or NR), WC= Water Cooling (Thermoregulation), INV= Invertebrate Habitat, AM= Amphibian Habitat, FH= Fish Habitat (FA or FR), WB= Waterbird Habitat (WBF or WBN)]

Rare Species Scores

Rare Species Type	Maximum score	Sum Score	Rating
Non-anadromous Fish Species	0	0	None
Amphibian & Reptile Species	0	0	None
Feeding Waterbirds	0	0	None
Nesting Waterbirds	0	0	None
Songbirds, Raptors, and Mammals	0	0	None
Invertebrate Species	0.33	0.33	Low
Plant Species	0	0	None

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Element of Occurrence (Rare Species)

View wildlife list for Rock Creek-Tualatin River (170900100503)

Within Assessment Area	1 EO Records
Within 1 mile	1 EO Records
In HUC12 watershed	5 EO Records

Element of Occurrence Record(s) in HUC12

1 Steelhead (Upper Willamette River ESU, winter run)
[4 occurences]
Oncorhynchus mykiss pop. 33
ORBIC State Status: S2
ORBIC Global Status: G5T2Q
ODFW Strategy Species: No

2 Western ridged mussel
[1 occurences]
Gonidea angulata
ORBIC State Status: S2S3
ORBIC Global Status: G3
ODFW Strategy Species: No

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"Type diversity" is the number of unique NWI codes in the watershed (e.g., PEMA, PEMC, PEMCx) and excluded types that have no vegetation component (e.g., PUBH, R3US2).

"Density" is the number of vegetated NWI polygons divided by the acreage of the watershed; many of these polygons may be contiguous with each other, forming a single wetland.

"Proportional Area" is the proportion of the watershed's total area occupied by vegetated wetlands as mapped by NWI.

• The digital maps used to determine this do not show many wetlands or cover the entire state. Data were compiled only from watersheds that have been at least 90% mapped by NWI (see worksheets for HUC8, 10, and 12). Data were received in November 2008 from ORBIC.

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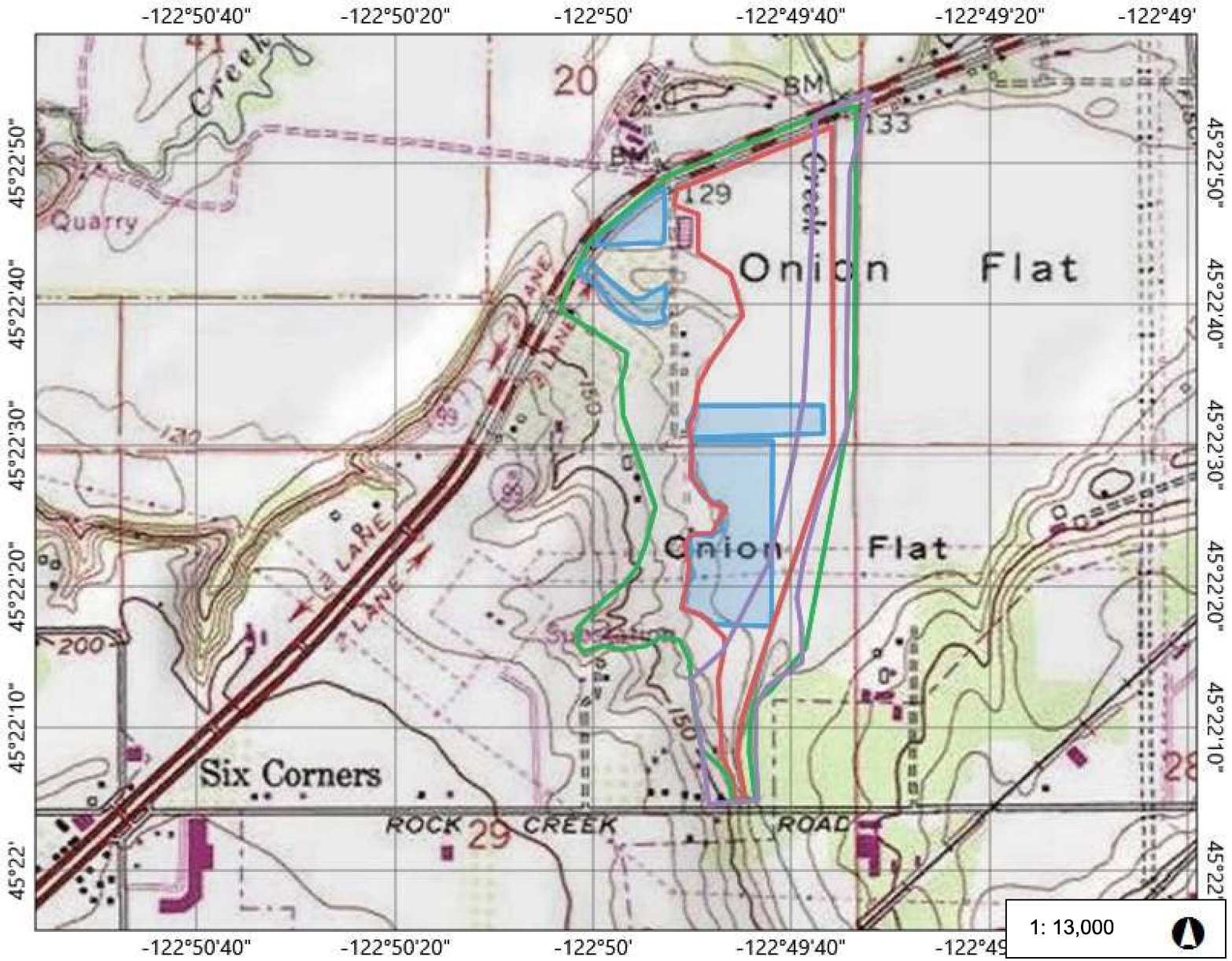
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OREGON EXPLORER

Tualatin ORWAP Wetland C





Legend

States & Provinces

- Other States and Provinces
- Oregon

Notes

Green line: RCA
Purple line: SCA
Red Line: Complete wetland
Blue polygons: Wetlands within project area.

0.4 0 0.21 0.4 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

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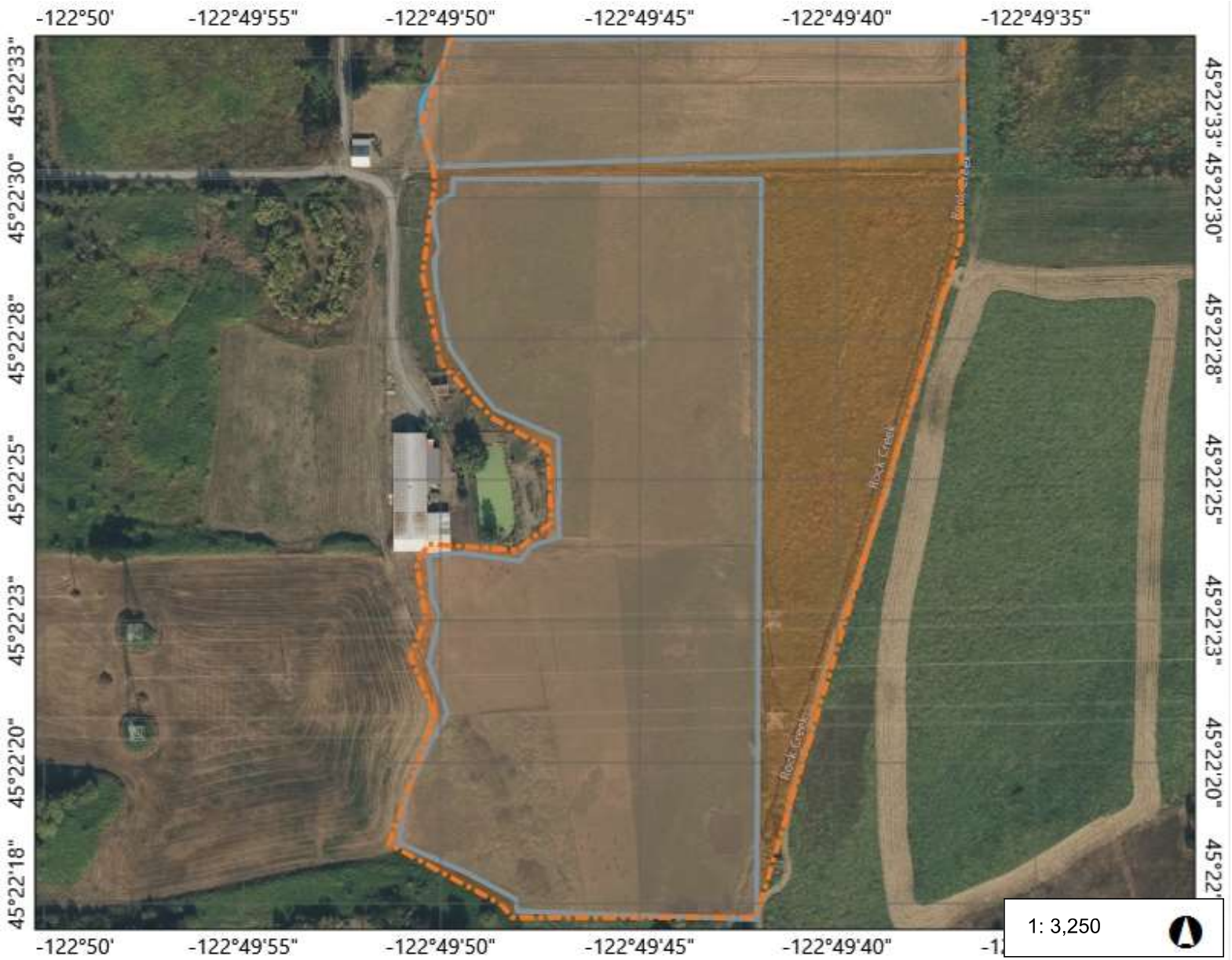
This map is a user generated static output for reference only from: ORWAP and SFAM Map Viewer

Data layers that appear on this map may or may not be accurate, current, or reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION.

OREGON EXPLORER

Tualatin ORWAP Wetlands Parcels 2-4





Legend

States & Provinces

- Other States and Provinces
- Oregon

1: 3,250

Notes

Add your notes here

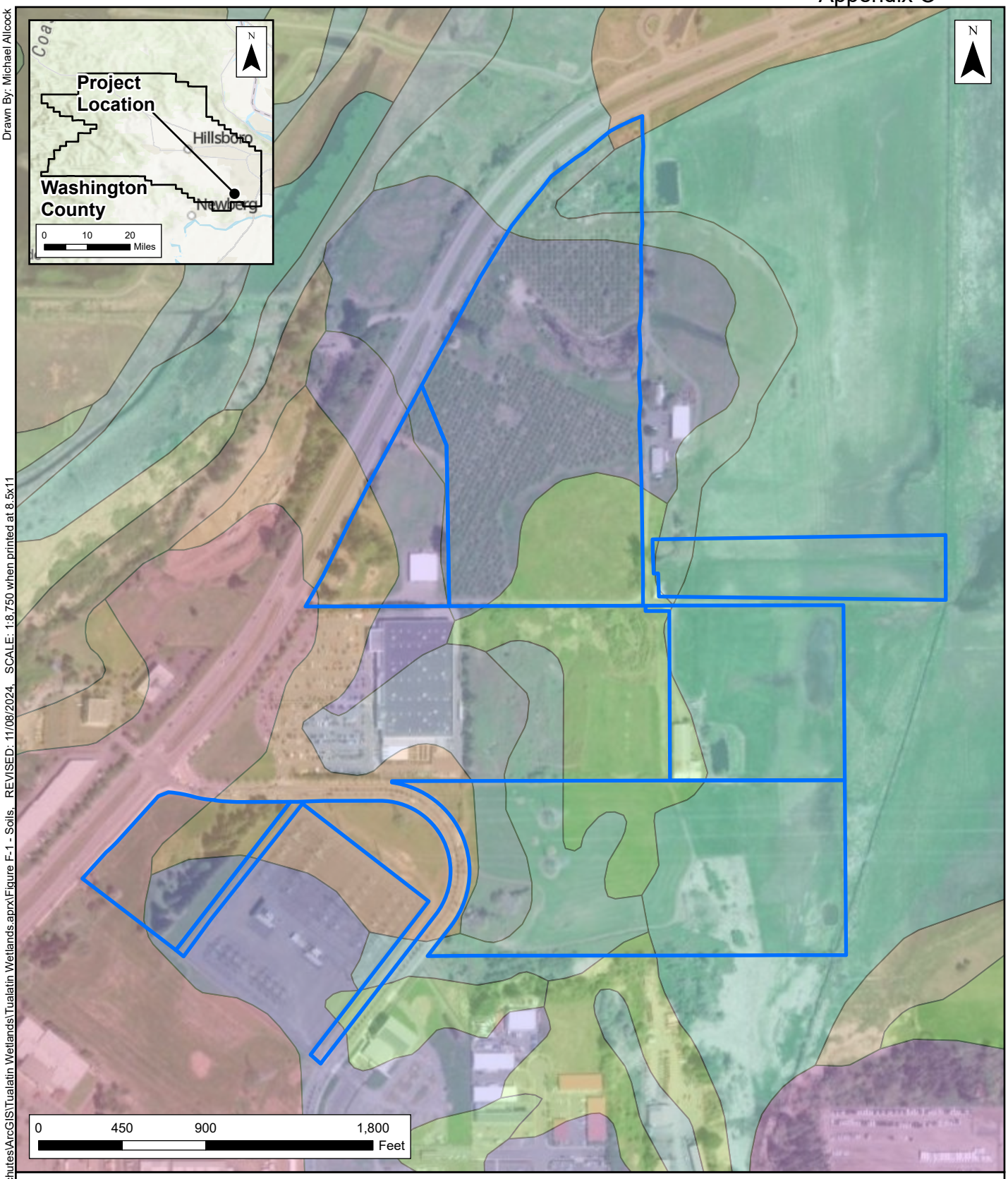
0.1 0 0.05 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Oregon Explorer (https://oregonexplorer.info)

This map is a user generated static output for reference only from:
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Data layers that appear on this map may or may not be accurate, current, or reliable.
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APPENDIX F DESKTOP ANALYSIS BACKGROUND MAPS



Drawn By: Michael Allcock

M:\US\Projects\A-C\Brightnight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Figure F-1 - Soils, REVISED: 11/08/2024, SCALE: 1:8,750 when printed at 8.5x11

Legend

- Project Location

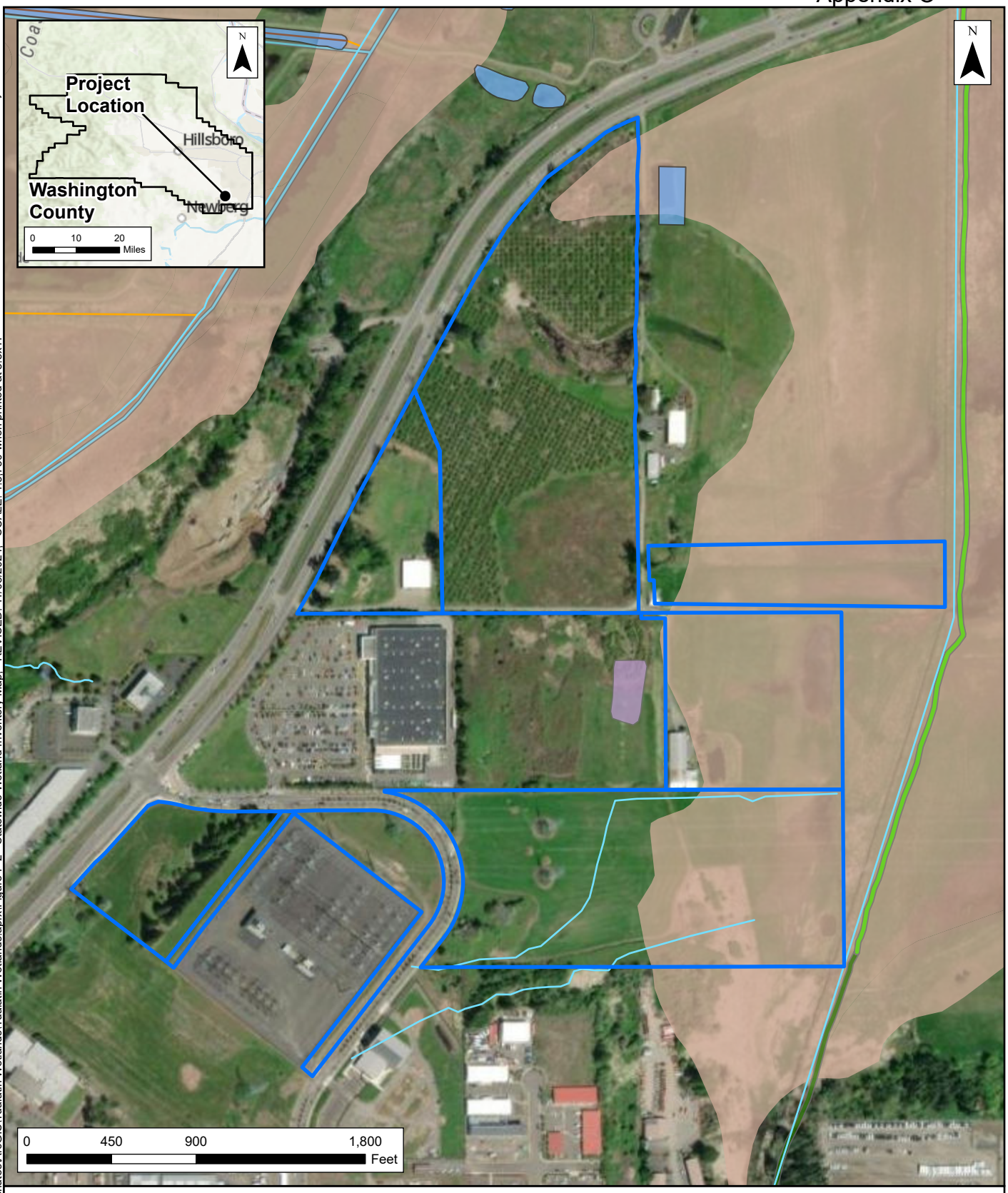
Mapunit Name

- Aloha silt loam
- Briedwell stony silt loam, 0 to 7 percent slopes
- Cove clay
- Cove silty clay loam
- Hillsboro loam, 0 to 3 percent slopes
- Hillsboro loam, 12 to 20 percent slopes
- Hillsboro loam, 3 to 7 percent slopes
- Hillsboro loam, 7 to 12 percent slopes
- Labish mucky clay
- McBee silty clay loam
- Quatama loam, 0 to 3 percent slopes
- Quatama loam, 3 to 7 percent slopes
- Quatama loam, 7 to 12 percent slopes
- Wapato silty clay loam
- Xerochrepts and Haploxerolls, very steep

Source: Esri - World Aerial Map; WGS 1984 Web Mercator Auxiliary Sphere

Figure F-1
Soils Map
Tualatin BESS
BrightNight Power
Washington County, OR

ERM



Drawn By: Michael Allcock

M:\US\Projects\A-C\BrightNight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Figure F-2 - Statewide Wetland Inventory Map, REVISED: 11/08/2024, SCALE: 1:8,750 when printed at 8.5x11

Legend

- Project Location

National Hydrography Dataset Plus High Resolution

NHD Stream Type

- Artificial Path
- Canal / Ditch
- Stream / River
- NHD Waterbody

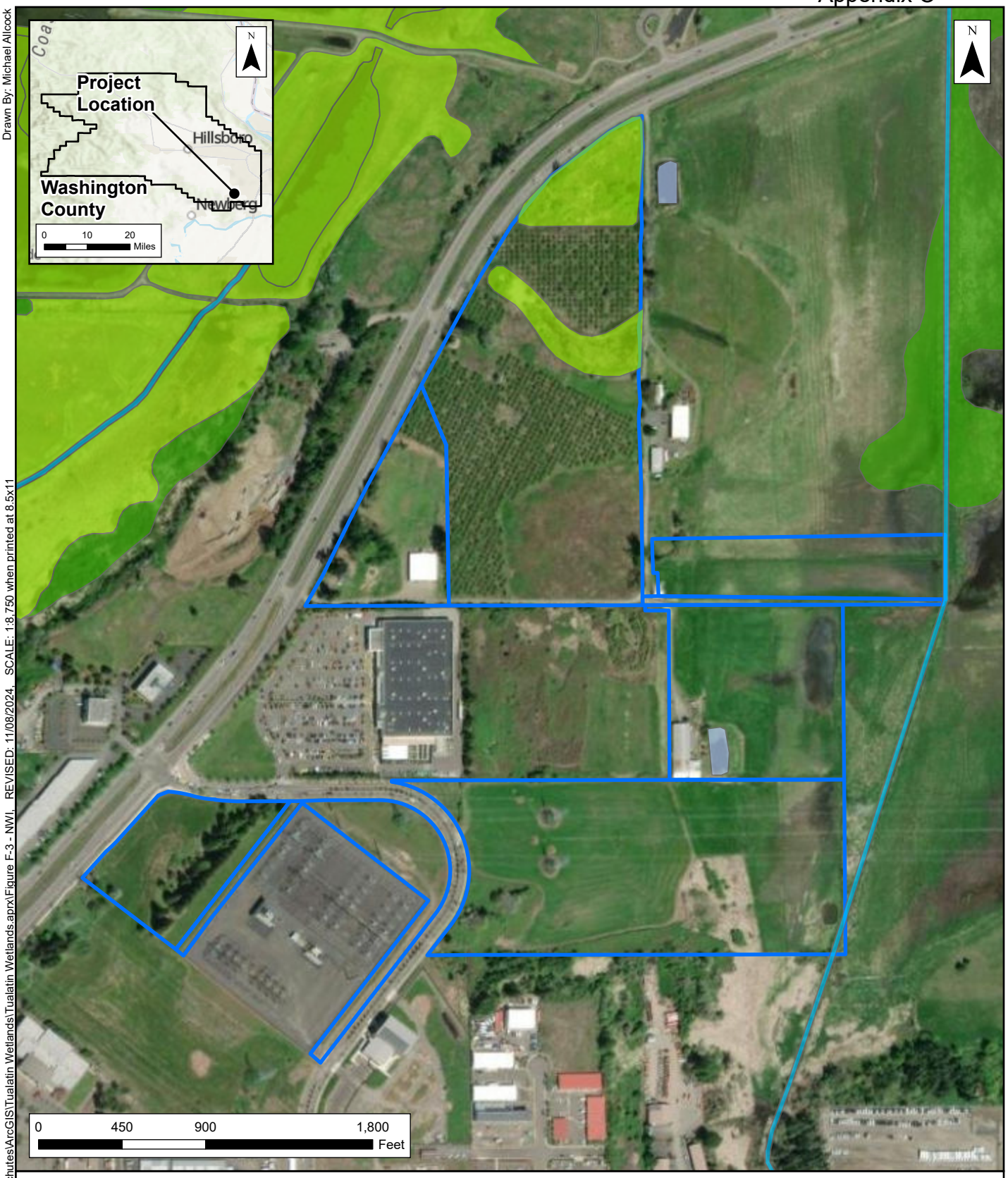
Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- SWI Predominantly Hydric Soil Map Units

Source: Esri - World Aerial Map; WGS 1984 Web Mercator Auxiliary Sphere

Figure F-2
Statewide Wetland Inventory Map
Tualatin BESS
BrightNight Power
Washington County, OR

ERM



Drawn By: Michael Allcock

M:\US\Projects\A-C\BrightNight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Figure F-3 - NWI, REVISED: 11/08/2024, SCALE: 1:8,750 when printed at 8.5x11

Legend

- Project Location

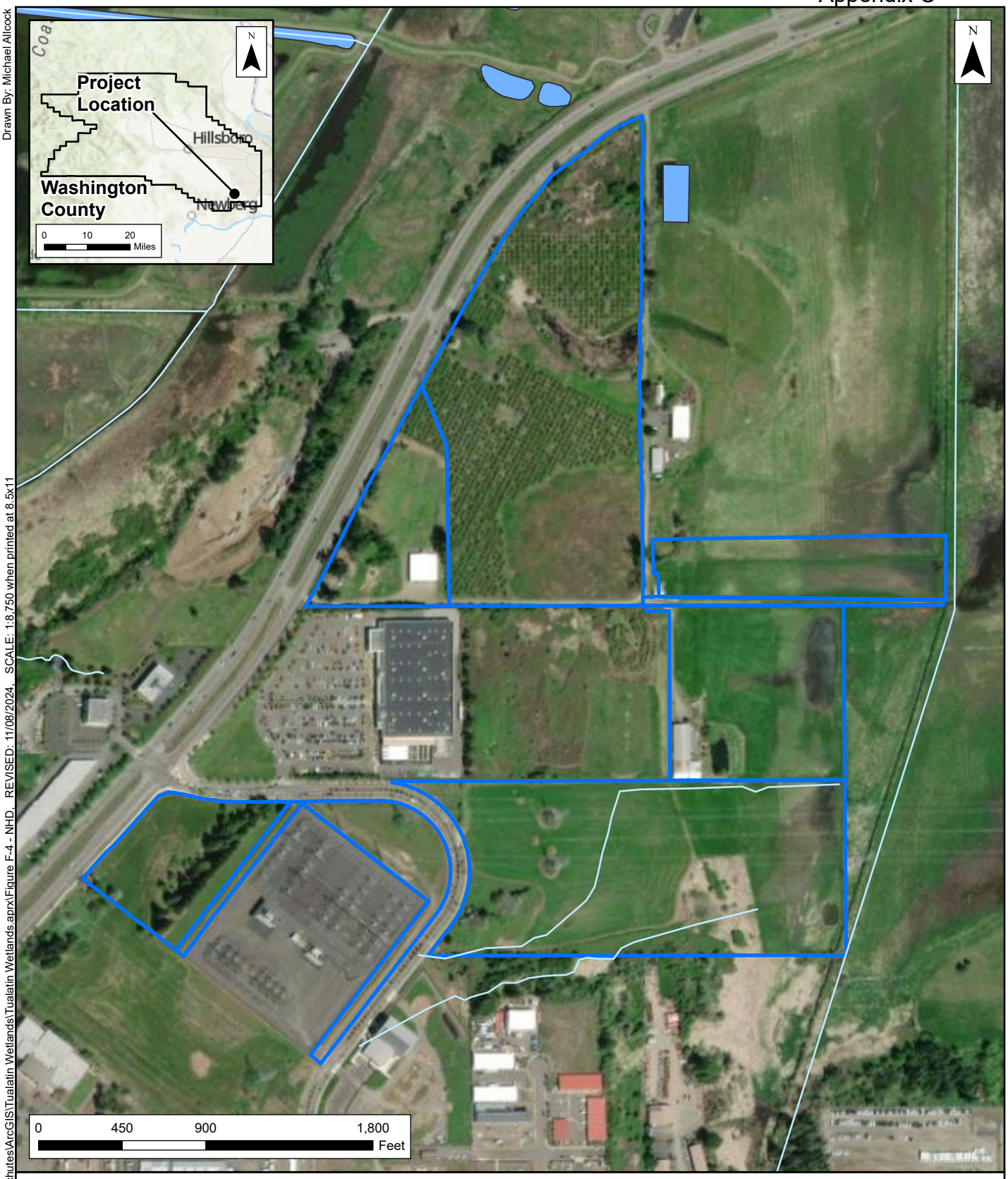
Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Figure F-3
National Wetlands Inventory Map
Tualatin BESS
BrightNight Power
Washington County, OR

ERM

Source: Esri - World Aerial Map; WGS 1984 Web Mercator Auxiliary Sphere



Drawn By: Michael Allcock

M:\US\Projects\A-C\BrightNight\Deschutes\ArcGIS\Tualatin Wetlands\Tualatin Wetlands.aprx\Figure F-4 - NHD, REVISED: 11/08/2024, SCALE: 1:8,750 when printed at 8.5x11

Legend

- Project Location
- NHD Stream
- NHD Waterbody

Figure F-4
National Hydrography Map
Tualatin BESS
BrightNight Power
Washington County, OR

ERM

Source: Esri - World Aerial Map; WGS 1984 Web Mercator Auxiliary Sphere

APPENDIX G DSL CORRESPONDENCE

Oregon
Tina Kotek, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

State Land Board

Tina Kotek
Governor

Tobias Read
Secretary of State

Elizabeth Steiner
State Treasurer

May 14, 2025

BrightNight, LLC
Attn: Todd Ellwood
515 North Flagler Drive, Suite 250 West Palm Beach,
FL 33401

Re: WD # 2024-0387 **Approved With Revision**
Wetland Delineation Report for the Tualatin BESS Project
Washington County; T2S R1W S20D TL700, 800, 1100, 1200;
T2S R1W S29A TL801 and Portions of TLs 1650, 1651
T2S R1W S29B Portions of TL 1800, 1900

Dear Todd Ellwood:

The Department of State Lands has reviewed the wetland delineation report prepared by Environmental Resource Management for the site referenced above. Please note that the study area includes only a portion of the tax lots described above (see the attached maps). Based upon the information presented in the report, and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in Figure 6, 6A to 6E of the report. Please replace all copies of the preliminary wetland maps with these final Department-approved maps.

Within the study area, three wetlands (A, B and C) totaling 25.44 acres, one stream (Rock Creek), an excavated pond, and three roadside ditches were identified. The wetlands and the historically excavated pond are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). However, Rock Creek, is an essential salmonid stream, therefore, fill or removal of any amount of material within the OHWL and hydrologically-connected Wetland C may require a state permit. The three roadside ditches are exempt per OAR 141-085-0515(10) and therefore, are not subject to current state Removal-Fill requirements.

This concurrence is for purposes of the state Removal-Fill Law only. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal, other state agencies or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine

jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of impacts to waters of this state. Because measures to avoid and minimize impacts to waters of this state may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. If you have any questions, please contact Chris Stevenson, PWS Wetland Ecologist at (503) 798-7622.

Sincerely,

Daniel Evans Digitally signed by Daniel Evans
Date: 2025.05.14 13:23:57 -07'00'

Daniel Evans, PWS
Wetland Ecology Specialist

Enclosures

ec: Richard Peel, Environmental Resource Management
City of Tualatin Planning Department
Brittney Campos, Corps of Engineers
Rebecca Loiselle, DSL
Lindsey Obermiller, Clean Water Services

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Appendix O

A complete report and signed report cover form, along with applicable review fee, are required before a report review timeline can be initiated by the Department of State Lands. All applicants will receive an emailed confirmation that includes the report's unique file number and other information.

Ways to submit report:

- **Under 50MB -** A single unlocked PDF can be emailed to: wetland.delineation@dsl.oregon.gov.
- **50MB or larger -** A single unlocked PDF can be uploaded to the Jurisdiction Box.com folder. Email wetland.delineation@dsl.oregon.gov of the new upload.
- Unbound paper report and signed cover form can be mailed to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.

Ways to pay review fee:

- By credit card on DSL's epayment portal after receiving the unique file number from DSL's emailed confirmation.
- By check payable to the Oregon Department of State Lands attached to the unbound paper report OR attached to the complete signed cover form if report submitted electronically.

Contact and Authorization Information

☒ Applicant ☐ Owner Name, Firm and Address:

Todd Ellwood
BrightNight, LLC
515 North Flagler Drive, Suite 250
West Palm Beach, FL 33401

Business phone # (850) 963-6011
Mobile phone # (optional)
E-mail: todd.ellwood@brightnightpower.com

☒ Authorized Legal Agent, Name and Address (if different):

Richard Peel
Environmental Resource Management (ERM)

Business phone # (360) 580-7419
Mobile phone # (optional) (360) 580-7419
E-mail: richard.peel@erm.com

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Richard Peel **Signature:** Richard Peel Digitally signed by Richard Peel Date: 2024.07.16 10:25:23 -07'00'

Date: 07/16/2024 Special instructions regarding site access: Access via parking lot of provided address.

Project and Site Information

Project Name: Tualatin

Latitude: 45.377029 Longitude: -122.831326
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
Battery energy storage system (BESS)

Tax Map # 2S120D 2S120D000800
Tax Lot(s) 2S120D001100, 2S120D001200, 2S120D000700, ~~2S129A006~~

Tax Map # 2S129A000801,
Tax Lot(s) 2S129A001651, 2S129A001650, 2S129B001900 and 2S129B001800

Project Street Address (or other descriptive location):
Directly west of:
19270 SW Pacific Hwy
Sherwood OR

Township T02S Range R001W Section 20 , 29A,B QQ

Use separate sheet for additional tax and location information

City: County: Washington

Waterway: Rock Creek River Mile:

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:

Richard Peel
Environmental Resource Management (ERM)
1050 SW 6th Ave Suite 1650
Portland, OR 97204

Phone # (360) 580-7419
Mobile phone # (if applicable) (360) 580-7419
E-mail: richard.peel@erm.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: Richard Peel Digitally signed by Richard Peel Date: 2024.07.16 10:25:36 -07'00' Date: 07/16/2024

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 80.2 Total Wetland Acreage: 25.4400

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr:
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # _____

☐ Fee payment submitted $ _____
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # _____ Expiration date_____
☐ LWI shows wetlands or waters on parcel
Wetland ID code _____

For Office Use Only

DSL Reviewer: CS Fee Paid Date: ____ / ____ / ____ DSL WD # 2024-0387

Date Delineation Received: 07 / 16 / 2024 DSL App.# _____

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Colombia
France
Germany
Ghana
Guyana
Hong Kong
India
Indonesia
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Kenya
Malaysia
Mexico
Mozambique
The Netherlands
New Zealand
Peru
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South Korea
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ERM's Seattle Office
1201 3rd Ave
Floor 22
Seattle, WA 98101

T: +1 425-462-8591
F: +1 425-455-3573

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