Exhibit J
Waters of the State

Umatilla-Morrow County Connect Project

750 West Elm Avenue
PO Box 1148
Hermiston, OR 97838

Cole Bode
Vice President of Engineering
541-567-6414
UMCCproject@umatillaelectric.com

Application for Site Certificate

May 2025

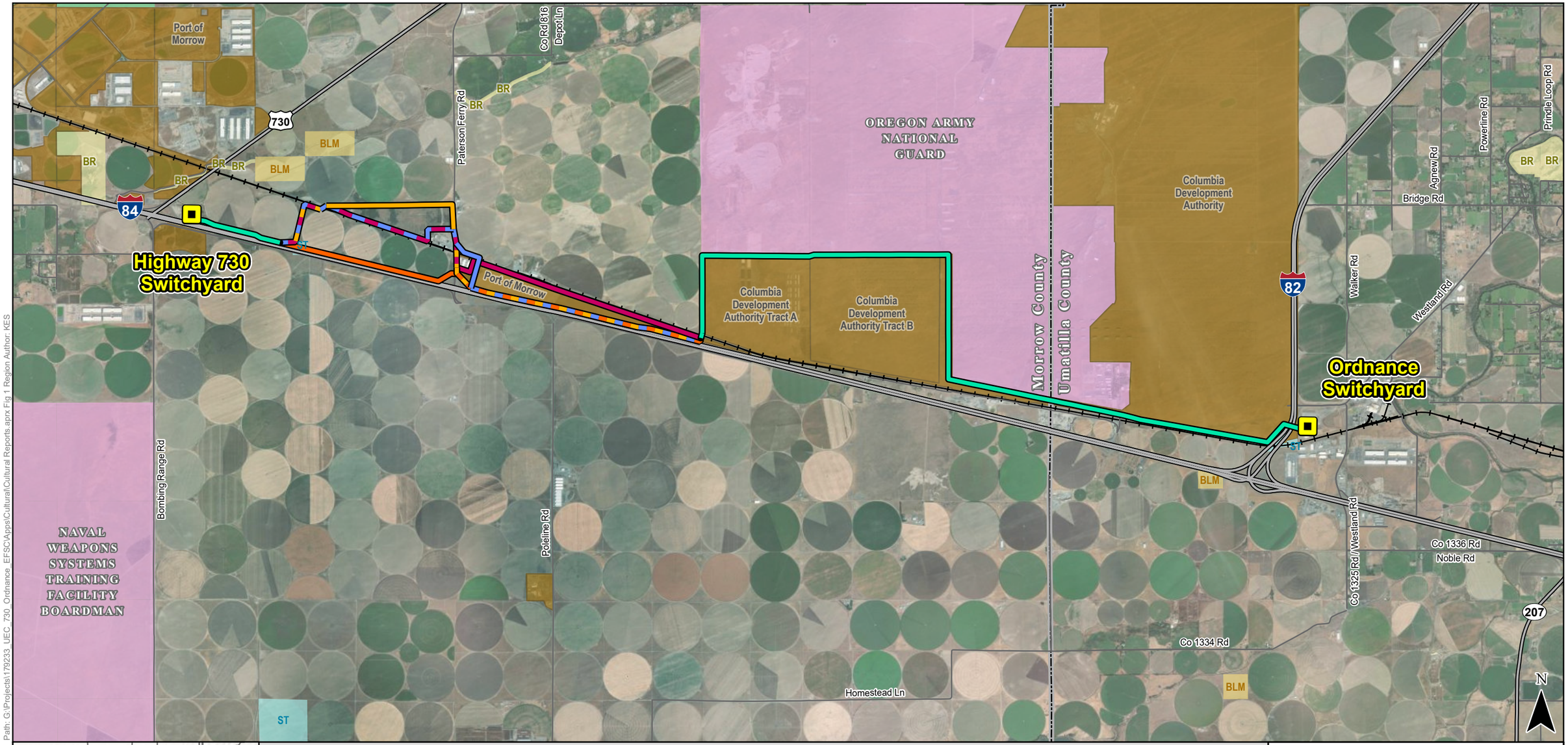
POWER ENGINEERS, INC.
3 CENTERPOINTE DRIVE
SUITE 500
LAKE OSWEGO, OR 97035 USA

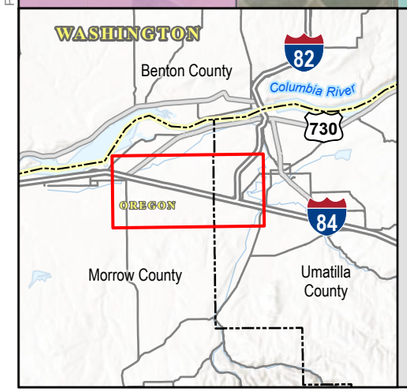
PHONE 503-892-6700
FAX 503-892-6799

Subject: November 2024 Addition of Route D to the Umatilla-Morrow County Connect Project, Umatilla and Morrow Counties, Oregon

In November of 2024, Umatilla Electric Cooperative (UEC) added a fourth alternative route, Route D, to the Umatilla-Morrow County Connect Project (Project). The most current design now includes four route alternatives, Routes A through D, located in Morrow and Umatilla Counties between the cities of Boardman and Hermiston (see Project Region Map, page 2).

The location of Route D was included in the larger wetland desktop analysis and aquatic resource field investigations conducted on April 15 to 18 and May 13 to 14, 2024. Although the alignment of Route D was not defined at the time of the wetland field investigations, the addition of Route D does not affect the previous wetland findings and recommendations. Therefore, no additional field investigations / surveys will be needed.





Project Components

- Project Endpoint
- Common Preferred Route
- Route A
- Route B
- Route C
- Route D

Transportation

- Highway
- Local Road
- Railroad

Boundaries

- County

Ownership

- Bureau of Land Management (BLM)
- Bureau of Reclamation (BR)
- Department of Defense
- Fish and Wildlife Service
- Local
- State (ST)

UMATILLA-MORROW COUNTY CONNECT PROJECT

Figure 1
Project Region

0 1000 2000 3000 Meters

0 3000 6000 9000 Feet

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 5/27/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Cultural\Cultural Reports aprx Fig 1 Region Author: KES

This page intentionally left blank.

TABLE OF CONTENTS

TABLES

ATTACHMENT

ACRONYMS AND ABBREVIATIONS

ASC	Application for Site Certificate
DSL	Department of State Lands
NOI	Notice of Intent
OAR	Oregon Administrative Rule
Project	Umatilla-Morrow County Connect Project
Project Order	First Amended Project Order, *In the Matter of the Application for Site Certificate for the Umatilla-Morrow County Connect Project* (April 04, 2024)
UMCC	Umatilla-Morrow County Connect Project
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

Exhibit J provides information regarding waters of the state for the Umatilla-Morrow County Connect Project (Project) as required by Oregon Administrative Rule (OAR) 345-021-0010(1)(j).

2.0 APPLICABLE RULES AND PROJECT ORDER PROVISIONS

2.1 Site Certificate Application Requirements

OAR 345-021-0010(1)(j) requirements are referenced in the sections below.

2.2 Project Order Provisions

The Project Order states that all paragraphs of OAR 345-021-0010(1)(j) apply to the Project. The Project Order includes the following discussion and additional specifications for the description of OAR 345-021-0010(1)(j)(A) through (F); bold text highlights details not already included in the OARs listed in Section 2.2.

Discussion: ***Exhibit J must include information based on literature and field study, as appropriate, about waters of this state, as defined under ORS 196.800, including, but not limited to all natural waterways, intermittent and perennial streams, lakes, and wetlands.***

Under OAR 345-021-0010(1)(j)(A), Exhibit J must include a description of all areas within the Project site boundary that might be waters of the state and maps showing the location of these features. ***Maps must also identify any areas of essential indigenous anadromous salmonid habitat designated under ORS 196.810 and OAR chapter 141, division 102 within the Project site boundary.***

Under OAR 345-021-0010(1)(j)(B), (C), and (F), Exhibit J must describe whether construction or operation of the proposed facility could result in potential adverse impacts to any of these streams or other waters of the state, assess the significance of those impacts, and describe proposed actions to avoid or mitigate adverse impacts and the applicant's proposed monitoring program, if any, for such impacts. ***If impacts to waters of the state cannot be avoided, Exhibit J must describe the amount and type of material that could be deposited or removed from any waters of the state, consistent with the requirements of OAR 141-085-0525, and any other information needed to determine whether a removal-fill permit is required under OAR chapter 141, division 085.***

A wetland delineation report that complies with OAR chapter 141, division 90 must be provided to the Department and Department of State Lands (DSL) before the application will be determined to be complete. The wetland delineation must be conducted using the standard wetland delineation methodology as outlined in the 1987 Army Corps manual and relevant supplements. The applicant should review the Long Linear Guidance document recommended by DSL. The applicant must also provide GIS data including the analysis area boundary and the boundaries of all delineated wetlands and waters to both Oregon Department of Energy and DSL. DSL comments received on the Notice of Intent (NOI) identify the need for a wetland delineation report and a removal fill permit, if applicable, for review as part of the applicant's analysis in the ASC.

Wetland delineation reports and, if applicable, removal-fill permit application materials can be sent directly by the applicant to DSL; however, all materials as well as DSL's concurrence with the wetland delineation must also be submitted to the Department as part of Exhibit J. The Department will work closely with DSL in review of the removal-fill permit application, if applicable.

Under OAR 345-021-0010(1)(j)(D) and (E), Exhibit J must include an analysis of whether a removal-fill permit is required. If a removal-fill permit is necessary for the proposed facility, Exhibit J must include all information required for the Council to decide on the removal-fill permit application, including all information required under OAR chapter 141 division 85. ***When required for an energy facility, a removal-fill permit should be included in and governed by the site certificate. The Department and DSL would maintain dual responsibility for compliance with any associated permit conditions. See Section III(e), Exhibit E – Permits, for additional discussion of state permits.***

3.0 ANALYSIS

3.1 Analysis Area

The analysis area for Exhibit J is the area within the Project site boundary (Umatilla-Morrow County Connect, Proposed Umatilla-Morrow County Connect Project [First Amended Project Order; April 04, 2024]). The Project features are fully described in Exhibit B, and the Project site boundary for each Project feature is described in Exhibit C. The location of the Project features and the Project site boundary is provided in Exhibit C.

3.2 Methods

3.2.1 Desktop Analysis

POWER Engineers, Inc. (POWER) conducted a desktop analysis to identify potential waters of the state. The following data sources were reviewed:

- Aerial imagery from Google Earth (1985 to 2024) (Google Earth Pro 2024)
- Morrow and Umatilla County Soil Survey obtained from Natural Resources Conservation Service (Soil Survey Staff 2024).
- Local Wetlands Inventories: Waterways and Wetlands (State of Oregon 2024a).
- More Oregon Wetlands Database (State of Oregon 2024b)
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (USFWS 2024).
- United States Geological Survey (USGS) National Hydrography Dataset (USGS 2019).

3.2.2 Field Investigation

POWER conducted an aquatic resources field investigation on April 15 to 18 and May 13 to 14, 2024. Based on the linear nature of the Project, the delineation was conducted in accordance with the DSL's *Guidelines for Delineations for Large or Linear Projects* (DSL 2017), in addition to the *Administrative Rules for Wetland Delineation Report Requirements and for Jurisdictional Determinations for the Purpose of Regulating Fill and Removal Within Waters of this State* (Oregon Secretary of State 2024). Details regarding the survey methodology are provided in the Aquatic Resources Delineation Report, included as Attachment J-1.

4.0 RESULTS

4.1 Related Council and Other Standards

General Standard of Review [OAR 345-022-0000], Removal of Material, Filling [Oregon Revised Statutes 196.795-.990], and Administrative Rules Governing the Issuance and Enforcement of Removal-Fill Authorizations Within Waters of Oregon Including Wetlands [OAR chapter 141, division 085].

4.2 Description and Location of Waters of the State

OAR 345-021-0010(1)(j): (A) A description of all areas within the site boundary that might be waters of this state and a map showing the location of these features;

Six wetlands were delineated in the Project site boundary during the field investigation. The Aquatic Resources Delineation Report is included in Attachment J-1 and includes a description of each delineation wetland and maps showing the location of these features.

There are no areas of essential indigenous anadromous salmonid habitat designated under Oregon Revised Statute 196.810 and OAR chapter 141, division 102, or other fish-bearing streams in the Project site boundary (Oregon Department of Fish and Wildlife 2023).

5.0 IMPACTS TO WATERS OF THE STATE

OAR 345-021-0010(1)(j): (B) An analysis of whether construction or operation of the proposed facility would adversely affect any waters of this state;

An existing access road that will be used for construction and maintenance of the Project crosses two delineated wetlands (Wetlands 5 and 6, as shown in Figure 4 in Attachment J-1). No improvements to this access road are anticipated.

All other wetlands in the Project site boundary will be spanned or otherwise avoided; therefore, no impacts will occur to those jurisdictional features.

6.0 DESCRIPTION OF SIGNIFICANCE OF IMPACTS TO WATERS OF THE STATE

OAR 345-021-0010(1)(j): (C) A description of the significance of potential adverse impacts to each feature identified in (A), including the nature and amount of material the applicant would remove from or place in the waters analyzed in (B);

The use of the existing road that crosses through Wetlands 5 and 6 could result in temporary and minor increases in erosion and sedimentation; however, erosion and siltation controls will be installed on either side of the access road at the wetland crossing consistent with the Erosion and Sediment Control Plan. The use of the access road is not expected to adversely affect the wetland. No measurable amount of material would be removed from or placed in Wetlands 5 and 6.

7.0 WHY REMOVAL-FILL AUTHORIZATION IS NOT NEEDED

OAR 345-021-0010(1)(j): (D) If the proposed facility would not need a removal-fill authorization, an explanation of why no such authorization is required for the construction and operation of the proposed facility;

A removal-fill authorization is not needed for the Project because the only Project activity that will occur in water of the state is the use of an existing access road through a wetland. The use of the road is not expected to result in a measurable amount of material removed from or placed in the wetland.

8.0 INFORMATION TO SUPPORT REMOVAL-FILL AUTHORIZATION

OAR 345-021-0010(1)(j): (E) If the proposed facility would need a removal-fill authorization, information to support a determination by the Council that the Oregon Department of State Lands should issue a removal-fill permit, including information in the form required by the Department of State Lands under OAR Chapter 141 Division 85; and

A removal-fill authorization is not needed for the Project.

9.0 MITIGATION AND MONITORING

OAR 345-021-0010(1)(j): (F) A description of proposed actions to mitigate adverse impacts to the features identified in (A) and the applicant's proposed monitoring program, if any, for such impacts.

9.1 Mitigation

9.1.1 Avoidance

- All wetlands and waterways will be avoided and/or spanned by Project features, other than the use of existing access roads.
- The Project is designed to be co-located with existing disturbance to the extent possible.

9.1.2 Minimization

- Wetlands will be flagged and avoided during construction. The construction contractor will be instructed to work outside these boundaries at all times.
- An Erosion and Sediment Control Plan will be developed. The plan will require that the construction contractor installs erosion and siltation controls near wetlands as designated in the plan.
- All areas of temporary disturbance will be reseeded in accordance with the Revegetation and Noxious Weed Control Plan (Exhibit P, Attachment P-3).
- The establishment and spread of noxious weeds will be minimized in accordance with the Revegetation and Noxious Weed Control Plan (Exhibit P, Attachment P-3).

9.2 Monitoring

A monitoring program is not proposed.

10.0 UEC PROPOSED SITE CERTIFICATE CONDITIONS

No conditions are proposed.

11.0 CONCLUSIONS

Exhibit J provides the information requested in OAR 345-021-0010(1)(j). Further, Exhibit J shows the design, construction, and operation of the Project would not adversely impact any waters of the state and the Project will not need a removal-fill authorization. The Delineation Report will be submitted to the Department of State Lands in concurrence with the submittal of this Application for Site Certificate (ASC).

12.0 COMPLIANCE CROSS-REFERENCES

Table J-1 identifies the location within the ASC of the information responsive to the application submittal requirements OAR 345-021-0010(1)(j) and the relevant Project Order provisions.

TABLE J-1. COMPLIANCE REQUIREMENTS AND RELEVANT CROSS-REFERENCES

REQUIREMENT	LOCATION
OAR 345-021-0010(1)(j) requires Exhibit J to include the following:	
(A) A description of all areas within the Project site boundary that might be waters of this state and a map showing the location of these features;	Section 4.2, Attachment J-1
(B) An analysis of whether construction or operation of the proposed facility would adversely affect any waters of this state;	Section 5.0
OAR 345-021-0010(1)(j): (C) A description of the significance of potential adverse impacts to each feature identified in (A), including the nature and amount of material the applicant would remove from or place in the waters analyzed in (B);	Section 6.0
OAR 345-021-0010(1)(j): (D) If the proposed facility would not need a removal-fill authorization, an explanation of why no such authorization is required for the construction and operation of the proposed facility;	Section 7.0
(E) If the proposed facility would need a removal-fill authorization, information to support a determination by the Council that the Oregon Department of State Lands should issue a removal-fill permit, including information in the form required by the Department of State Lands under OAR Chapter 141 Division 85; and	Section 8.0
(F) A description of proposed actions to mitigate adverse impacts to the features identified in (A) and the applicant's proposed monitoring program, if any, for such impacts.	Section 9.0

13.0 REFERENCES

Department of State Lands (DSL). 2017. Delineation Guidelines for Large or Linear Projects. January 2017. Salem, Oregon. https://www.oregon.gov/dsl/wetlands-waters/Documents/LinearLargeProjectDelineationGuidance.pdf. Accessed April-June 2024.

Google Earth Pro. 2024. Irrigon, Oregon.

Oregon Department of Fish and Wildlife (ODFW). 2023. Oregon Fish Habitat Distribution Data. https://nrimp.dfw.state.or.us/nrimp/default.aspx?pn=fishdistdata. Accessed October 2023.

Oregon Secretary of State. 2024. Administrative Rules for Wetland Delineation Report Requirements and for Jurisdictional Determinations for the Purpose of Regulating Fill and Removal Within Waters of this State. https://secure.sos.state.or.us/oard/viewSingleRule.action;JSESSIONID_OARD=ka8alluDwCY0xRPgYEgJKT3iJcJ0BIKhpT0MV5m3TpuVWoNByI0_!-1484258366?ruleVrsnRsn=301085. Accessed May 2024.

Soil Survey Staff. 2024. Web Soil Survey. Natural Resources Conservation Service, United States Department of Agriculture. Accessed May 24, 2024. http://websoilsurvey.sc.egov.usda.gov/.

State of Oregon. 2024a. Department of State Lands: Local Wetlands Inventories: Waterways & Wetlands. https://www.oregon.gov/dsl/WW/Pages/Inventories.aspx. Accessed April – June 2024.

_____. 2024b. More Oregon Wetlands: Oregon Wetland Explorer data portal https://geohub.oregon.gov/datasets/oregon-geo::iii-more-oregon-wetlands/explore Accessed February – June 2024.

United States Fish and Wildlife Service (USFWS). 2024. National Wetlands Inventory (1977 to present). United States Department of Interior, Branch of Habitat Assessment. Accessed April 10, 2024. https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper.

United States Geological Survey (USGS). 2019. National Hydrography Dataset. United States Department of Interior. Accessed May 22, 2024. https://www.usgs.gov/national-hydrography/access-national-hydrography-products.

ATTACHMENT J-1 AQUATIC RESOURCES DELINEATION REPORT

This page intentionally left blank.

June 26, 2024

UMATILLA ELECTRIC COOPERATIVE

Umatilla Morrow County Connect Project

Aquatic Resource Delineation Report

PROJECT NUMBER:
0179233

PROJECT CONTACT:
Quinn Radford, Senior Biologist
EMAIL:
Quinn.Radford@powereng.com
PHONE:
917-394-0055

POWER ENGINEERS

This page intentionally left blank.

Aquatic Resource Delineation Report

DATE: 2024

PREPARED FOR: UMATILLA ELECTRIC COOPERATIVE

PREPARED BY: QUINN RADFORD
559-696-6247
QUINN RADFORD@POWERENG.COM

SITE BOUNDARY: MORROW AND UMATILLA COUNTIES, OREGON

This page intentionally left blank.

TABLE OF CONTENTS

TABLE:

APPENDICES:

ACRONYMS AND ABBREVIATIONS

ARSC	Aquatic Resources of Special Concern
CDA	Columbia Development Authority
DSL	Oregon Department of State Lands
MOW	More Oregon Wetlands
NHD	National Hydrogeography Dataset
NWI	National Wetland Inventory
OAR	Oregon Administrative Rules
ODFW	Oregon Department of Fish and Wildlife
POWER	POWER Engineers, Inc.
Project	A 14-mile-long transmission line between UEC's existing Highway 730 Switchyard and UEC's Ordnance Switchyard called the Umatilla-Morrow County Connect Project
SWI	Statewide Wetlands Inventory
UEC	Umatilla Electric Cooperative
USACE	United States Army Corps of Engineers
WETS	Climate Analysis for Wetlands
WOTUS	Waters of the United States

1.0 INTRODUCTION

Umatilla Electric Cooperative (UEC) is proposing to construct, operate, and maintain a new approximately 14-mile-long transmission line between UEC's existing Highway 730 Switchyard and UEC's Ordnance Switchyard called the Umatilla-Morrow County Connect Project (Project; Appendix A - Figure 1). The Project will be a 230-kilovolt nominal, double-circuit electrical transmission line supported by steel structures and will provide transmission system interconnection between the Boardman and Hermiston areas. This interconnection will expand UEC's 230-kilovolt transmission system to increase reliability, provide a transmission path for renewable energy across the region, and establish an electrical grid capable of meeting the increasing demands of local communities, businesses, and industries within UEC's service territory. UEC intends to begin construction of the Project in 2026 and have the transmission line in service by July 2027, pending issuance of a site certificate from the Oregon Energy Facility Siting Council.

At the request of UEC, POWER Engineers, Inc. (POWER) conducted an aquatic resource delineation to support state and federal permitting efforts. The purpose of this Aquatic Resource Delineation Report (Report) is to document POWER's methods for identifying and delineating wetlands and other waters within the site boundary. The site boundary encompasses all temporary and permanent disturbance areas associated with two alternative routes (approximately 1,182 acres). POWER conducted the aquatic resources delineation in accordance with Oregon Department of State Lands (DSL) Delineations for Large or Linear Projects (January 2017) and Oregon Administrative Rules (OAR) 141-090-0005 to 0055. The report is organized in accordance with the requirements outlined in OAR 141-090-0035 (1-17).

2.0 LANDSCAPE SETTING AND LAND USE

The Project is located in the Columbia Plateau Level III ecoregion and the Pleistocene Lake Basins Level IV ecoregion in north-central Oregon (Thorson et al. 2003). Potential natural vegetation in the Pleistocene Lake Basins consists of sagebrush steppe dominated by basin big sagebrush (*Artemisia tridentata* spp. *tridentata*) and perennial bunchgrasses, including needle and thread (*Hesperostipa comata*), Indian ricegrass (*Oryzopsis hymenoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), and Sandberg bluegrass (*Poa secunda*). Non-native cheatgrass (*Bromus tectorum*) co-occurs with the native plant species and dominates disturbed areas (Thorson et al. 2003). Dominant land cover and uses in the Pleistocene Lake Basins are predominately irrigated cropland (winter wheat, potatoes, onions, alfalfa, and silage corn). Other land uses include rangeland and irrigated poplar tree farms (Thorson et al. 2003).

The eastern portion of the Project crosses through the former Umatilla Chemical Depot, now managed by the Columbia Development Authority. Large portions of the Columbia Development Authority are undeveloped and contain remnant native plant communities, which have potential to support special status plant and wildlife species. The western portion of the Project largely crosses through irrigated cropland.

Tax lots and national and statewide wetland inventory data within the site boundary are shown in Appendix A – Figure 2. The Morrow and Umatilla County soil survey was used to identify hydric soils in the site boundary (Soil Survey Staff 2024). The soil mapping units and hydric ratings occurring within the site boundary are described in Table 1. Soil mapping units in the site boundary are mapped in Appendix A - Figure 3.

TABLE 1 SOIL SERIES LOCATED WITHIN THE SITE BOUNDARY

SOIL SERIES	MAPPING UNIT	DRAINAGE	PERMEABILITY	REGIONAL OCCURRENCE	PROJECT AREA OCCURRENCE	HYDRIC RATING
Quincy loamy fine sand, gravely substratum 0 to 5 percent slopes	76B, 39C, 40C	Very deep, excessively drained	Very rapid or rapid	Central Washington and North Central Oregon. Extensive extent.	Nearly the entire site boundary	No
Burbank loamy fine sand	14B, 8B	Deep, excessively drained	Rapid	Central Washington and north-central Oregon. Series is of moderate extent.	Southeastern side of the site boundary.	No

3.0 SITE ALTERATION

The site boundary is located on a former military munitions depot, adjacent to a substation, and on land that has been converted to agricultural use.

The vast majority of the site boundary has been altered from what was originally upland shrub steppe habitat. Railroads, roads, buildings, power distribution structures, and cleared lots for parking and equipment storage have altered the landscape.

Irrigated cropland in and around the Project has altered the hydrological conditions that were historically present. The wetlands along Interstate 84 have been created from irrigation runoff in nearby center-pivot irrigated crop circles.

The northernmost PEM1C/PEM1F wetland in the site boundary identified by the National Wetland Inventory (NWI) is located on land that has most recently been used as a hybrid poplar plantation. Weak hydrological indicators in this area may be due to many years of hybrid poplar harvest rotations that could potentially alter the historical depth of the water table.

4.0 PRECIPITATION DATA AND ANALYSIS

Observed precipitation data were obtained from the Boardman, Oregon weather station via the National Oceanic and Atmospheric Administration Applied Climate Information System (NOAA 2024). The Climate Analysis for Wetlands (WETS) station used for analysis was the Boardman station. Both stations, at their nearest points, are located approximately 4.1 miles west of the site boundary. Aquatic resources in the site boundary were delineated during two separate field assessments on April 15 to 18 and May 13 to 14, 2024.

Table 2 summarizes observed precipitation on the date of each field assessment, two weeks prior to each field assessment, and percentage of normal precipitation for the water year-to-

date. The tables in Appendix B summarize precipitation data for three months prior to each field assessment. Table 2 indicates that the annual precipitation was above normal. However, the data in Appendix B shows that precipitation for the three months preceding the April and May field assessments was normal and dry.

TABLE 2 PRECIPITATION DATA FOR THE 2024 FIELD ASSESSMENTS

FIELD DATE	OBSERVED PRECIPITATION ON THE DATE OF THE FIELD ASSESSMENT (INCHES)	OBSERVED PRECIPITATION TWO WEEKS PRIOR TO THE FIELD ASSESSMENT DATA (INCHES)	PERCENTAGE OF NORMAL PRECIPITATION FOR THE WATER YEAR TO DATE
Field Assessment 1			
April 15, 2024	0	.01	245%
April 16, 2024	0	0	243%
April 17, 2024	0	0	241%
April 18, 2024	0	0	239%
Field Assessment 2			
May 13, 2024	0	0	232%
May 14, 2024	0	0	231%

5.0 METHODS

5.1 Data Gathering and Assessment

Prior to the field assessment, POWER used available online data to identify the presence of aquatic resources potentially jurisdictional by the United States Army Corps of Engineers (USACE), United States Environmental Protection Agency, and the State of Oregon. Presumed DSL jurisdiction of aquatic resources was based upon presence of hydrophytic vegetation and resource type (Oregon Secretary of State 2023). Presumed USACE jurisdiction was based on the presence of surface water and connectivity to a water of the United States (WOTUS).

The following data sources were referenced to identify potential jurisdictional waters prior to, during, and after the field assessments:

- Aerial imagery from Google Earth (1985 to 2024) (Google Earth Pro 2024)
- Morrow and Umatilla County Soil Survey obtained from Natural Resources Conservation Service (Soil Survey Staff 2024).
- Local Wetlands Inventories: Waterways & Wetlands (LWI) (State of Oregon 2024a).
- More Oregon Wetlands (MOW) Database (State of Oregon 2024b)
- United States Fish and Wildlife Service NWI (USFWS 2024).
- United States Geological Survey National Hydrography Dataset (NHD) (USGS 2019).

5.2 Field Assessment

Field assessments were conducted on April 15 to 18 and May 13 to 14, 2024 by POWER Senior Biologist Quinn Radford. Based on the linear nature of the Project, the delineation was conducted in accordance with the DSL guidelines for Delineations for Large or Linear Projects (DSL 2017), in addition to the *Administrative Rules for Wetland Delineation Report Requirements and for Jurisdictional Determinations for the Purpose of Regulating Fill and Removal Within Waters of this State* (Oregon Secretary of State 2023). Further, aquatic resources were mapped based on the *Oregon Wetland Mapping Standard, Version 2.1.1* (State of Oregon 2010 and DSL 2024).

The methodology used to determine the presence of wetlands used the three-parameter approach and was consistent with the *United States Army Corps of Engineers Wetlands Delineation Manual* (United States Army Corps of Engineers 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2010). USACE Arid West data forms within BioApp were used to determine the presence of hydrophytic vegetation, hydric soils, and wetland hydrology (BioApp 2024). To determine the presence of wetlands, sample points were taken at the lowest topographic elevation within an area containing some hydrophytic vegetation. Sample points were paired and placed on either side of suspected wetland boundaries, referencing Statewide Wetlands Inventory (SWI), NWI, MOW, and NHD data. Vegetation, soils, and hydrology data from paired sample points provided guidance as to where the boundaries should be delineated. Sample locations and polygons around wetlands and non-wetland waters were mapped using ArcGIS Field Maps for iPhone 15 Pro and a Juniper Geode receiver with submeter accuracy. Per DSL requirements, delineation of aquatic resources and sample points was completed within the required minimum horizontal accuracy of five meters (16 feet) or less within the Lambert projection. Photographs were taken within BioApp and Field Maps. All parcels where wetland features were sampled and delineated.

Plants were identified to species using flora of the region (OregonFlora 2024). The *National Wetland Plant List* (USACE 2020) was used to assign wetland indicator status for the Arid West region. Where present, aquatic features were also assigned hydrogeomorphic (Adamus and Field 2001) and Cowardin classifications (Cowardin et al. 1979).

POWER referenced the LWI, an online screening tool used to preliminarily map aquatic resources within the state of Oregon (State of Oregon 2024a). Some wetlands identified along State highway right-of-way had been previously mapped by Oregon Department of Transportation. Sample point locations were chosen based on field observations, aerial signatures, local soils, and federal/statewide wetland mapping data. The NWI database was referenced to determine the Cowardin Class for each delineated water feature. Additional sample points were taken in areas where the soil survey (Soil Survey Staff 2024), LWI (State of Oregon 2024a), on-line wetland mapper (USFWS 2018), NHD (USGS 2019) and/or NWI (USFWS 2024) depicted the potential presence of hydric soils, wetlands, or non-wetland waters.

Preliminary jurisdictional determinations were evaluated at the federal and state levels. The USACE administers federal wetlands and waters based on Section 404 of the Clean Water Act (33 United States Code Section 1344). The DSL administers state wetlands and waters based on Oregon's Removal-Fill Law (Oregon Revised Statute 196.795-990, OAR 141-085-515 (8)).

Federal and state jurisdictions sometimes overlap, however the wetlands found within the site boundary are potentially regulated by DSL, and not USACE. The preliminary jurisdictional

determinations considered the possibility that wetlands and other waters were regulated by either one or both agencies.

6.0 DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS

During the field assessment, six aquatic features were identified. Only one of the six aquatic features (Wetland 1) was identified in the NWI with a Cowardin classification. NWI classified W-1 as PEM1F. The rest of the features are most likely PEM1C wetlands.

There are no streams in the site boundary. Most aquatic resources have been disturbed by surrounding development, including roads, agriculture, railroads, and the former Umatilla Chemical Depot. All delineated features, except for the northernmost wetland, were likely created by irrigation from agricultural activities. Historical aerial imagery for each delineated feature is available in Appendix A – Figure 5. All of these aquatic features and their adjacent uplands have been colonized by noxious weeds.

Pursuant to the DSL guidance for “large or linear projects,” delineated wetlands and other waters are described in Appendices C and D. Appendix C provides data on latitude/longitude, soil series, hydric soils, NHD, NWI type, hydrogeomorphic class, whether the feature extends offsite, deviation from NWI/SWI, and additional information for each feature delineated. Appendix D provides data including date surveyed, map number, acreage, feature name, habitat for food and game fish, estimated inundation duration, presumed isolation or connectivity to a WOTUS, preliminary jurisdictional determination (DSL, USACE, both, none), and photo direction for each aquatic resource feature.

7.0 DEVIATION FROM NWI/MOW

Data from the LWI, NWI, and MOW was used to analyze approved wetland delineations in the vicinity of the site boundary (State of Oregon 2024a and 2024b, USFWS 2024). These online screening tools helped to identify approximate locations of potential wetlands and waterways. Maps displaying the aforementioned wetland data types within the site boundary can be found in Appendix A - Figure 2. Wetland determination sample points data were taken in all portions of the site boundary where there was significant deviation from known wetlands locations.

All six wetlands mapped by the MOW and NWI within the site boundary were delineated as shown in Appendix A - Figure 4. Slight variations were common for many features. Two significant deviations from previous delineations by the NWI and MOW were identified based on field visits conducted by POWER in the spring of 2024.

Wetland 1 which was mapped in NWI as PEM1C/PEM1F at coordinate 45.834361, -119.578505, was found to be significantly narrower than previously mapped by NWI. Multiple soil pits dug in this area did not reveal any hydric soil, hydrophytic plants, or wetland hydrology, and there was no evidence of semi-permanent flooding, which contradicts its partial PEM1F designation. Although the PEM1C section is geomorphically better positioned to collect water than the PEM1F section, the absence of flooding indicators suggests that semi-permanent flooding is also unlikely in this area.

Wetland 3 at coordinate 45.833129, -119612767 was shown in MOW (no Cowardin classification in MOW data) as two distinct polygons (Appendix A – Figure 2) but was mapped as only one polygon during the delineation as shown on Appendix A - Figure 4.

8.0 MAPPING METHOD

Sample points and wetland boundaries were mapped in the field using a Juniper Geode receiver with submeter accuracy synced with ArcGIS Field Maps for iPhone 15 Pro. GPS data was imported into the project Geographic Information System. The aquatic resource delineation map included in Appendix A - Figure 4 was mapped using Esri ArcGIS Pro 3.2.1 software.

9.0 ADDITIONAL INFORMATION

No areas of Essential Salmonid Habitat are present within the site boundary. No aquatic features in the site boundary exhibit connectivity to a WOTUS considered jurisdictional by USACE (USACE 2010 and 2014, USACE/USEPA 2014 and 2024, USEPA 2008).

POWER collected 19 sample points in polygons identified as wetlands by MOW and NWI spatial data. Due to the known inaccuracy of these polygons, multiple soil test pits were excavated to verify the presence of wetlands. Many of these tests revealed that areas marked as wetlands by MOW or NWI were actually upland. The additional soil pits helped refine the boundaries, showing significant or slight discrepancies from the initial NWI and MOW spatial data. In some instances, aerial imagery confirmed the field survey results.

10.0 RESULTS AND CONCLUSIONS

A total of six aquatic resource features were delineated within the site boundary. The location and numbering of aquatic resource polygons and sample points are provided in Appendix A - Figure 4. Details regarding each aquatic feature delineated are available in Appendix C, Appendix D, and Appendix E.

Table 3 summarizes the number and type of aquatic resources delineated within the site boundary, along with POWER's preliminary jurisdictional determination for each feature.

TABLE 3 SUMMARY OF DELINEATED AQUATIC RESOURCES IN THE SITE BOUNDARY AND PRELIMINARY JURISDICTIONAL DETERMINATION.

COWARDIN FEATURE TYPE	NUMBER OF FEATURES	NUMBER OF SAMPLE POINTS	ACRES	NUMBER OF FEATURES WITH PERENNIAL SURFACE WATER	NUMBER OF FEATURES WITH CONNECTIVITY TO A WATER OF THE STATE/WOTUS	PRELIMINARY JURISDICTIONAL DETERMINATION[1]	
						DSL	USACE
Unclassified Features	5	9	6.93	0	0	5 features	none
PEM1F	1	1	0.31	0	0	1 feature	none
Total	**6**	**10**	**7.24**	**0**	**0**	**6 features 7.24 acres**	**0 features 0 acres**

[1] The determination of each aquatic feature's inundation status, connectivity, and jurisdictional status represents POWER's professional opinion; the final determination of jurisdictional status is under the purview of the DSL.

Based on the field assessment and review of historic aerial photos, POWER has determined that all six delineated features are jurisdictional under DSL regulations. According to OAR 141-085-0515, DSL regulates all wetlands, waters (including perennial streams and ponds), and certain ditches. POWER also concludes that none of these features are jurisdictional under USACE regulations. The USACE governs wetlands and waters with a continuous surface water connection to a downstream WOTUS. Features that lack perennial inundation or a connection to a WOTUS are considered non-jurisdictional by USACE.

These preliminary jurisdictional determinations represent POWER's professional opinion; the final determination of jurisdictional status is under the purview of the DSL and USACE. Should any regulated aquatic features be impacted by the proposed Project, permitting with the respective agency (DSL and/or USACE) under the Oregon Removal-Fill Law or Section 404 of the Clean Water Act would be warranted.

11.0 DISCLAIMER

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

12.0 REFERENCES

Adamus, P.R. and D. Field. 2001. *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites*. Statewide Classification and Profiles. Oregon Division of State Lands, Salem, OR.

BioApp. 2024. Simplifying Wetland Delineation. https://bioapp.us/ Accessed March – December, 2024.

Brinson, M.M. 1993. *A Hydrogeomorphic Classification for Wetlands*, Technical Report WRP-DE-4. August 1993. United States Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Comstock. 2003. Ecoregions of Oregon (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000).

Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. December 1979. United States Department of the Interior, Fish and Wildlife Service, Office of Biological Services. Washington, D.C.

Department of State Lands (DSL). 2017. D*elineation Guidelines for Large or Linear Projects*. January 2017. Salem, Oregon. https://www.oregon.gov/dsl/wetlands-waters/Documents/LinearLargeProjectDelineationGuidance.pdf. Accessed April-June 2024.

DSL. 2024. Administrative Rules for Wetland Delineation Report Requirements (OAR 141-090-0035) https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=301085

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States, FGDC-STD-004-2013, Second Edition, Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Google Earth Pro. 2024. Irrigon, Oregon.

Munsell Color. 2010. Munsell Soil Color Charts. Grand Rapids, Michigan. 2009 Year Revised, 2022 Production.

National Oceanic and Atmospheric Administration (NOAA). 2024. Daily precipitation data, monthly summarized data, and WETS data for Boardman, OR. Regional Climate Centers Applied Climate Information System. United States Department of Commerce. Accessed May 22, 2024. http://agacis.rcc-acis.org/?fips=41049.

Natural Resource Conservation Service (NRCS) 2024a. Precipitation data for Boardman Weather Station, Boardman, OR. http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg/

_____. 2024b. WETS tables for Boardman, OR. https://agacis.rcc-acis.org/?fips=41049. Accessed May 22, 2024.

OregonFlora. 2024. https://oregonflora.org/index.php. Accessed April-June 2024.

Oregon Secretary of State. 2023. Administrative Rules for Wetland Delineation Report Requirements and for Jurisdictional Determinations for the Purpose of Regulating Fill and Removal Within Waters of this State. https://secure.sos.state.or.us/oard/viewSingleRule.action;JSESSIONID_OARD=ka8alluDwCY0xRPgYEgJKT3iJcJ0BIKhpT0MV5m3TpuVWoNByI0_!-1484258366?ruleVrsnRsn=301085. Accessed May 2024.

Soil Survey Staff. 2024. Web Soil Survey. Natural Resources Conservation Service, United States Department of Agriculture. Accessed May 24, 2024. http://websoilsurvey.sc.egov.usda.gov/.

State of Oregon, 2010. Oregon Wetland Mapping Standard, Version 2.1.1, September. Institute for Natural Resources, PSU.

_____. 2024a. Department of State Lands: Local Wetlands Inventories: Waterways & Wetlands. https://www.oregon.gov/dsl/WW/Pages/Inventories.aspx. Accessed April – June 2024.

_____. 2024b. More Oregon Wetlands: Oregon Wetland Explorer data portal https://geohub.oregon.gov/datasets/oregon-geo::iii-more-oregon-wetlands/explore Accessed February – June 2024.

Thorson, T.D., S.A. Bryce, D.A. Lammers, A.J. Woods, J.M. Omernik, J. Kagan, D.E. Pater, J.A. Comstock. 2003. Ecoregions of Oregon (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000).

United States Army Corps of Engineers (USACE). 2020. National Wetland Plant List, Version 3.5. Available at NWPL Home v3.4-f9c (army.mil) Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH

_____. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0*). United States Army Engineer Research and Development Center, Environmental Laboratory, Vicksburg, Mississippi.

United States Army Corps of Engineers and United States Environmental Protection Agency (USACE and USEPA). 2014. Definition of ‘‘Waters of the United States’’ Under the Clean Water Act. Federal Register 79(76): 22188-22274.

_____. 2023. Revised Definition of “Waters of the United States”. January 18, 2023.

United States Department of Agriculture, Natural Resources Conservation Service. National Soil Survey Handbook https://directives.nrcs.usda.gov//sites/default/files2/1712932090/35155.pdf (Accessed March - June 2024).

United States Environmental Protection Agency (USEPA). 2008. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States. http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos120208.pdf.

United States Fish and Wildlife Service (USFWS). 2024. National Wetlands Inventory (1977 to present). United States Department of Interior, Branch of Habitat Assessment. Accessed April 10, 2024. https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper

United States Geological Survey (USGS). 2019. National Hydrography Dataset. United States Department of Interior. Accessed May 22, 2024. https://www.usgs.gov/national-hydrography/access-national-hydrography-products.

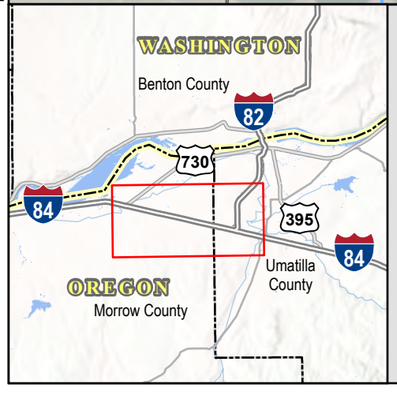
APPENDIX A FIGURES 1-5

Path: G:\Projects\179233_UEC_730_Ordnance_EFSCVApps\Reports\ASC_Figures_r2_aprx Figure J-1 Water Resources Author: KES

Highway 730 Switchyard

Ordnance Switchyard

Paterson Ferry Rd
Depot Ln
Co Rd 816
730
West Extension Irrigation Canal
Bombing Range Rd
T04N R25E
T04N R26E
T04N R27E
84
82
Morrow County
Umatilla County
Westland Irrigation Canal
Walker Rd
Agnew Rd
Bridge Rd
Powerline Rd
Westland A Canal
Westland F Canal
Prindle Loop Rd
Umatilla River
Umatilla River Canal
Hermiston
T04N R28E
Westland Rd
A Line Canal
Wink Pond
Butter Creek
Co 1325 Rd / Westland Rd
Noble Rd
Co 1336 Rd
Poleline Rd
T03N R25E
T03N R26E
T03N R27E
T03N R28E
Co 1334 Rd
High Line Canal
Homestead Ln
Lost Lake
207



Project Components
- Project Endpoint
- Project Site Boundary

Transportation
- Highway
- Local Road
- Railroad

Boundaries
- County
- Township

Wetlands
- National Wetland Inventory (NWI)
- More Oregon Wetlands (MOW)

Water Resources (NHD)
- Perennial Stream
- Intermittent Stream
- Canal or Ditch
- Aqueduct
- Waterbody
- Marsh
- Wash

National Flood Hazard Layer
- 1% Annual Change Flood Hazard
- Regulartory Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure J-1
Water Resources

0 0.5 1 1.5 2
Miles

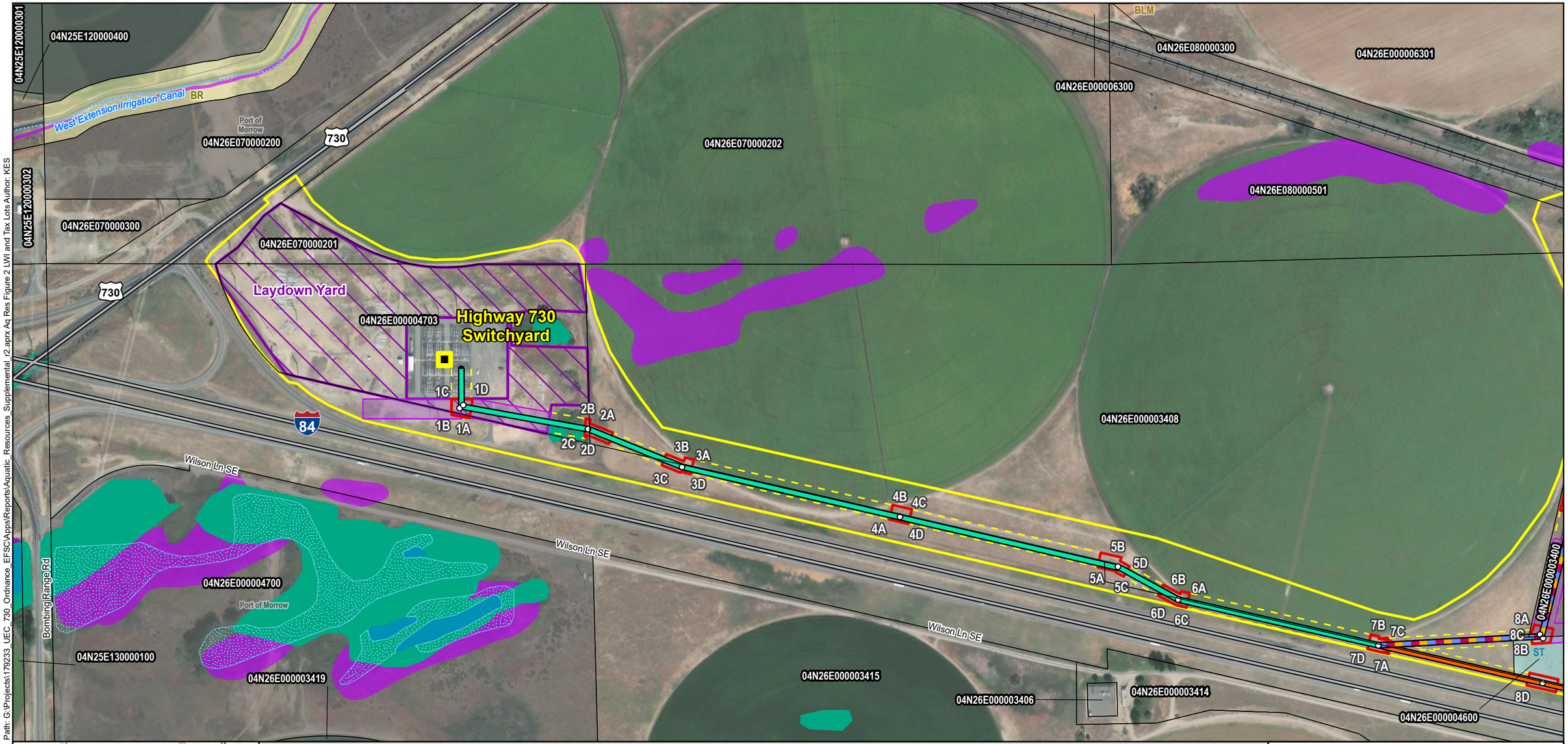
N

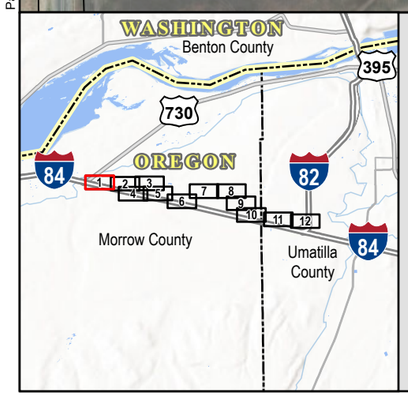
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/11/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components

- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Railroad

Ownership

- Bureau of Land Management (BLM)
- Bureau of Reclamation (BR)
- Local
- State (ST)
- Tax Lot

Water Resources (NHD)

- Canal or Ditch
- Waterbody
- Marsh

Wetlands

- National Wetland Inventory (NWI)
- More Oregon Wetlands (MOW)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

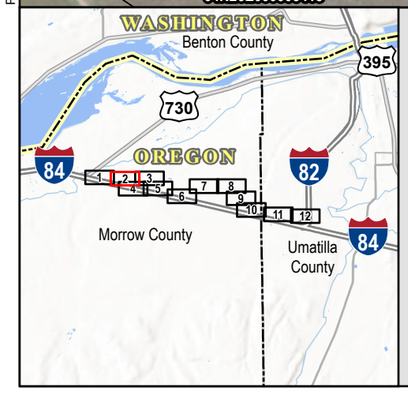
Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES

04N26E000006301
04N26E000006300
04N26E080000501
04N26E000003418
04N26E000003408
04N26E000003400
04N26E000004600
04N26E000003414
04N26E000003415
ST

11C 11A 11B 13C 13A 13B 12B 12A 12C 14B 14A 14C 15B 16B 17B 18B 19B 15A 15C 16C 16A 17C 17A 18A 18C 19C 19A 21C 21A 20A 20C 10C 10B 10A 9C 9B 9A 8A 8C 8B 8D 9D 10D 11D

84 82 395 730



Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Work Area
- Pulling and Tensioning Site

Transportation
- Railroad

Ownership
- State (ST)
- Tax Lot

Wetlands
- National Wetland Inventory (NWI)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

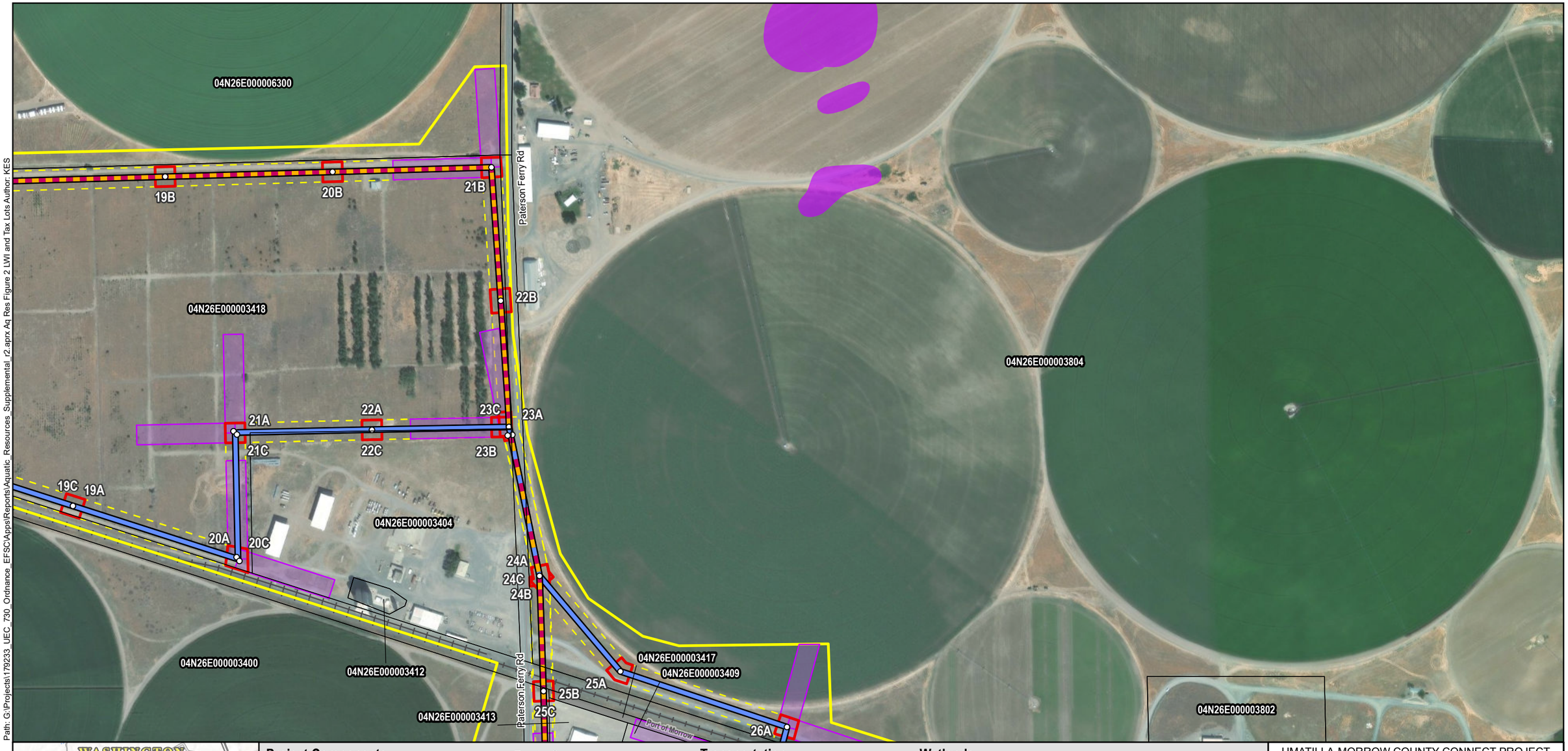
N

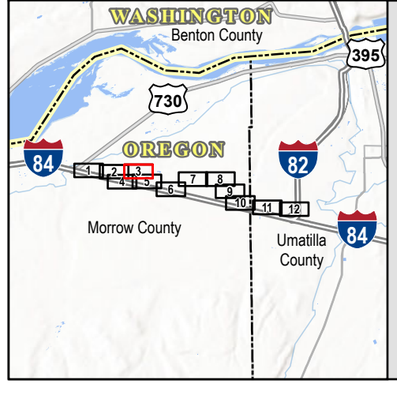
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordinance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C

Disturbance Areas

- Work Area
- Pulling and Tensioning Site

Transportation

- Railroad

Ownership

- Local
- Tax Lot

Wetlands

- National Wetland Inventory (NWI)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

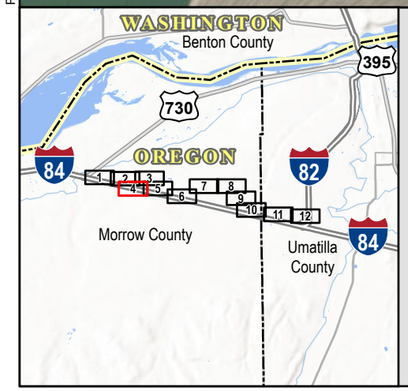
N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES



Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Work Area
- Pulling and Tensioning Site

Transportation
- Railroad

Ownership
- Local
- Tax Lot

Wetlands
- National Wetland Inventory (NWI)
- More Oregon Wetlands (MOW)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

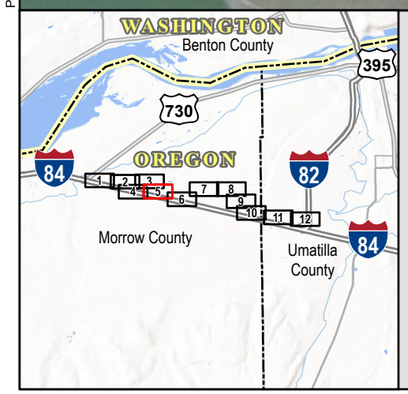
0 500 1,000
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Railroad

Ownership

- Local
- Tax Lot

Wetlands

- More Oregon Wetlands (MOW)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

N

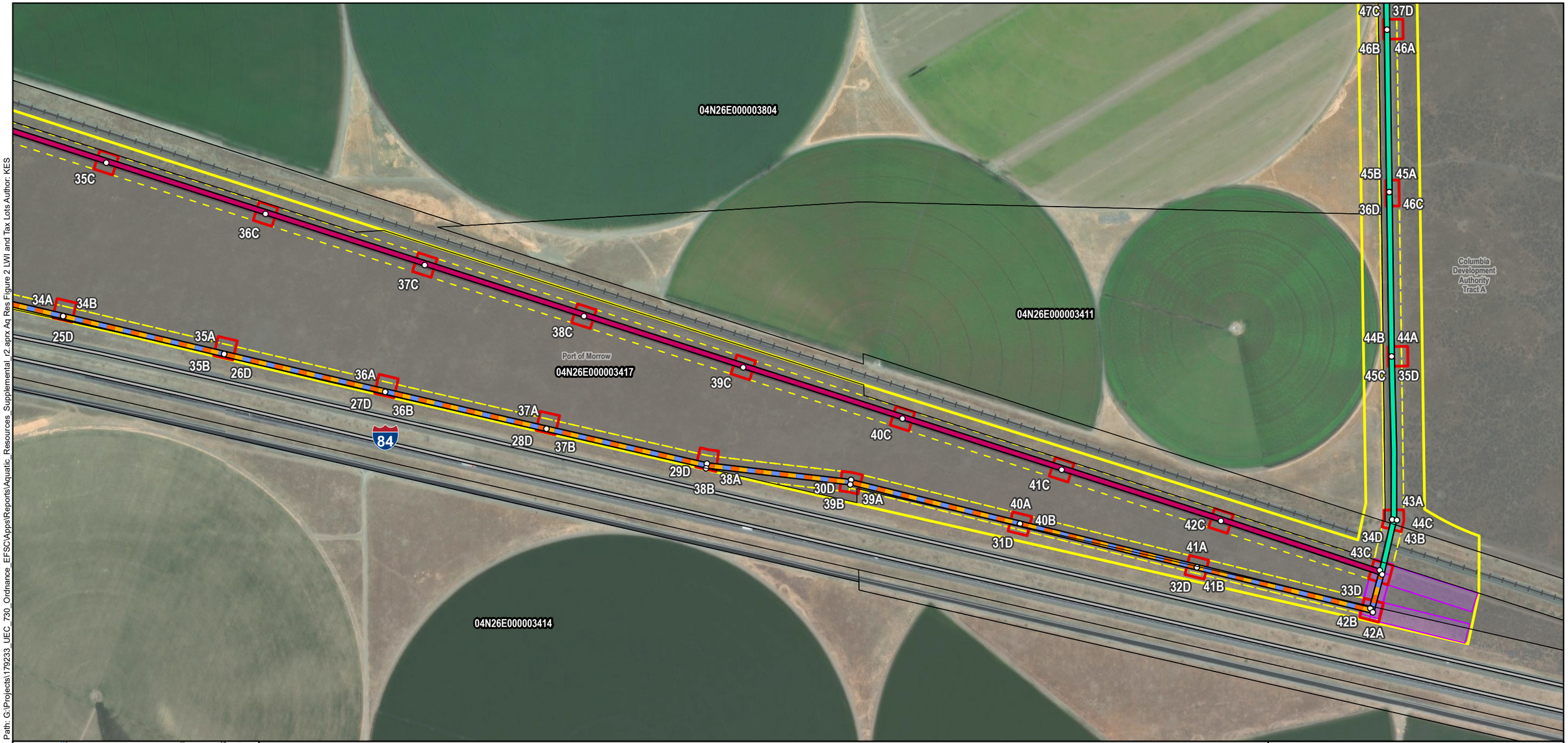
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area
- Pulling and Tensioning Site

Transportation

- Railroad

Ownership

- Local
- Tax Lot

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

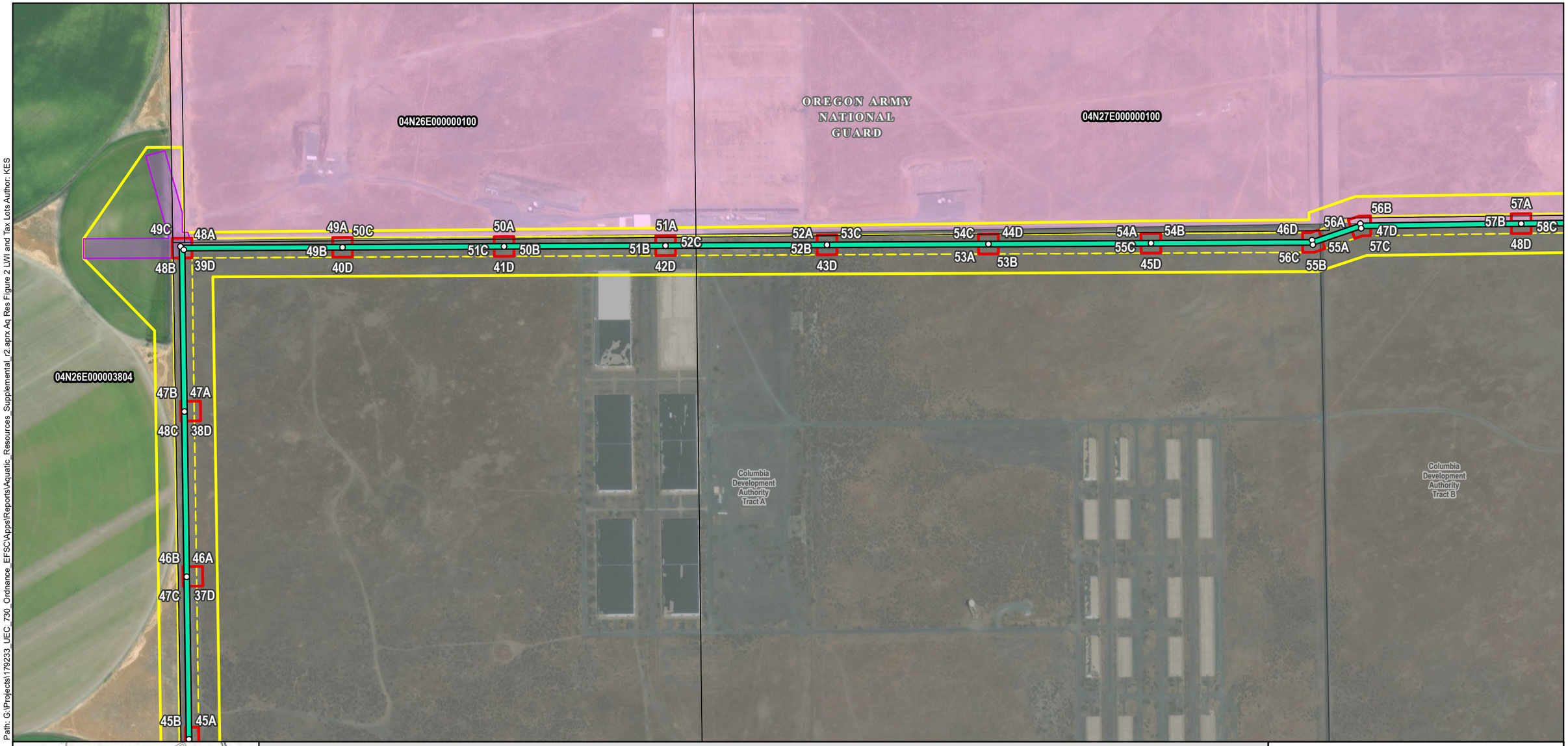
N

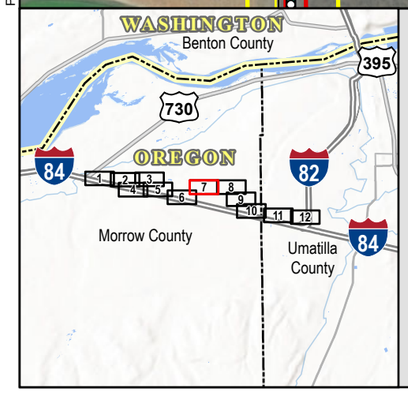
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area
- Pulling and Tensioning Site

Ownership

- Department of Defense
- Local
- Tax Lot

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots
Page 7 of 12

0 500 1,000
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES

OREGON ARMY NATIONAL GUARD

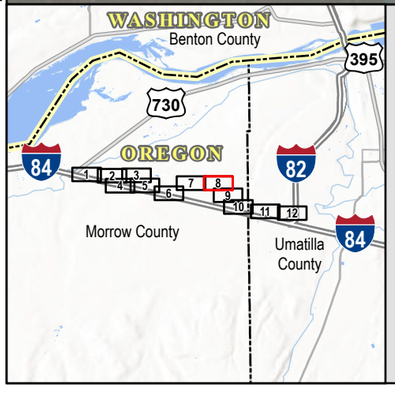
04N27E000000100

57A 57B 58C 48D 58A 58B 59C 49D 59A 60C 59B 50D 60A 61C 60B 51D 61A 62C 61B 52D 62A 63C 62B 53D 63A 63B 64C 54D 64A 64B 65C 55D 66C 65B 65A 56D

Columbia Development Authority Tract B

Columbia Development Authority Tract A

66B 66A 57D 67C 67B 67A 58D 68C 68A 59D 69C 68B



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area
- Pulling and Tensioning Site

Ownership

- Department of Defense
- Local
- Tax Lot

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

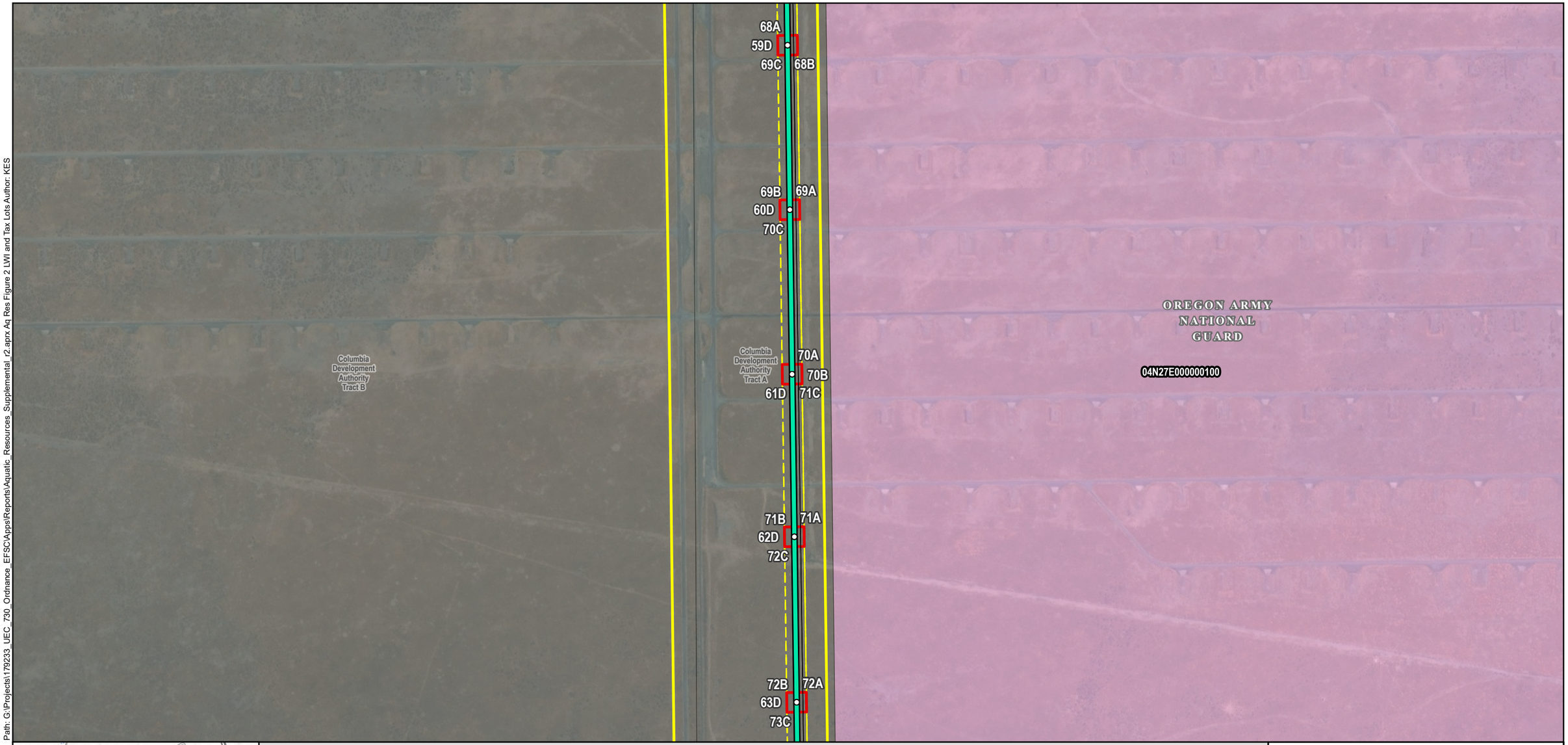
N

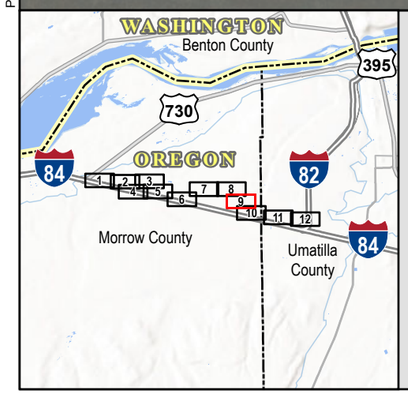
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I\2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area

Ownership

- Department of Defense
- Local
- Tax Lot

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

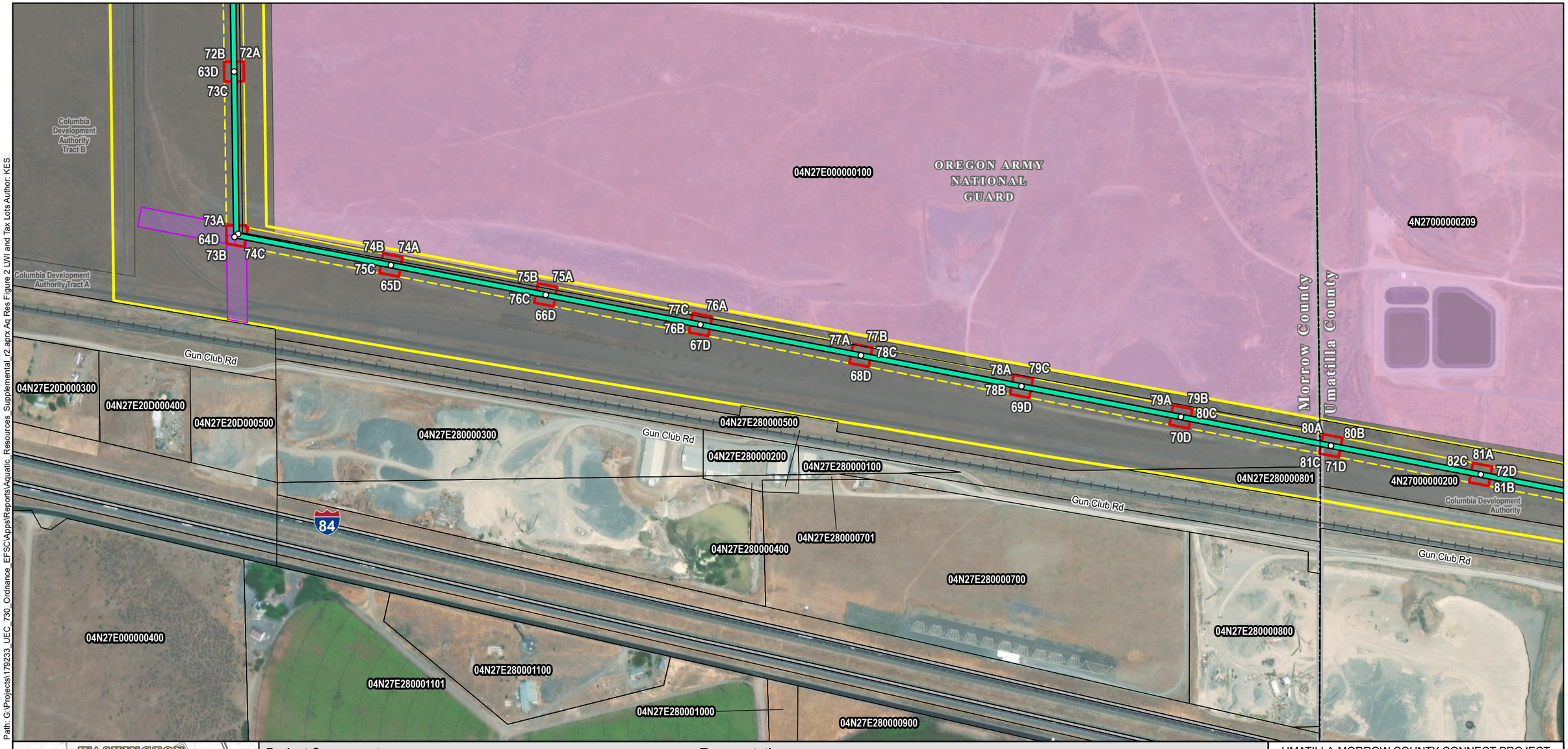
N

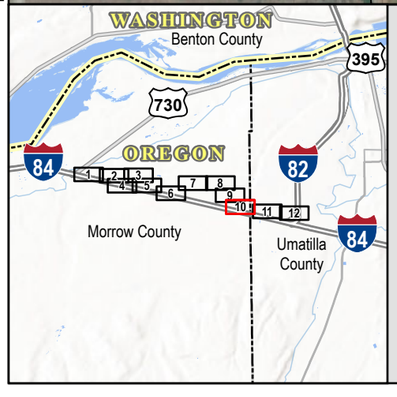
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSCApps\Reports\Aquatic_Resources_Supplemental_I2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area
- Pulling and Tensioning Site

Transportation

- Railroad

Boundaries

- County

Ownership

- Department of Defense
- Local
- Tax Lot

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

Page 10 of 12

0 500 1,000
Feet

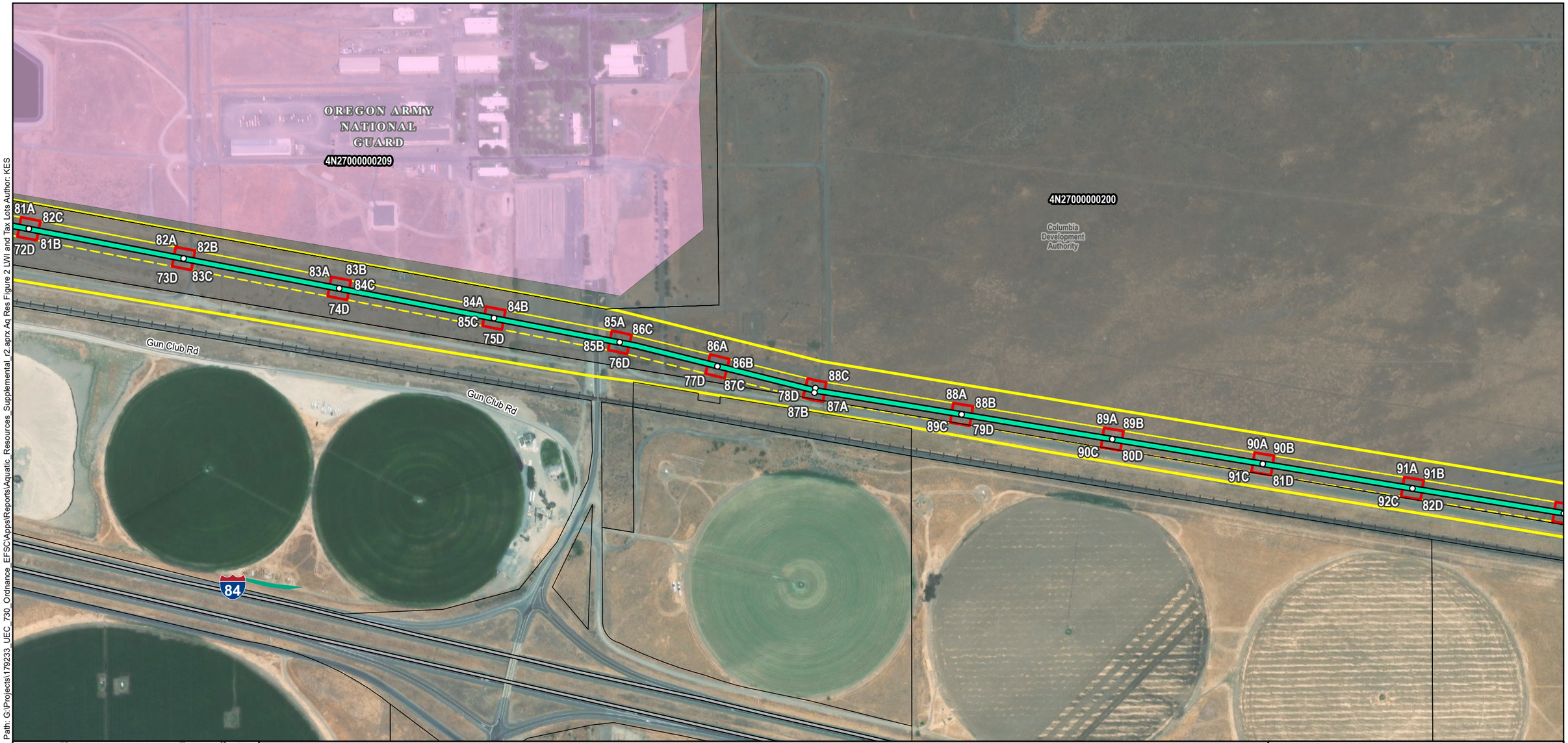
N

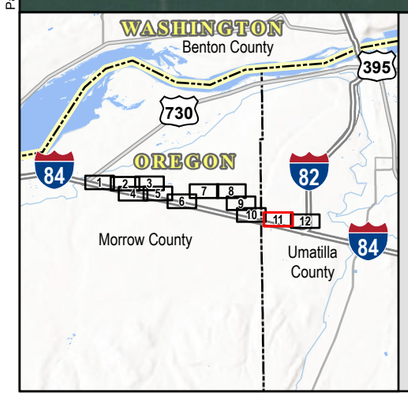
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Work Area

Transportation

- Railroad

Ownership

- Department of Defense
- Local
- Tax Lot

Wetlands

- More Oregon Wetlands (MOW)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

0 500 1,000
Feet

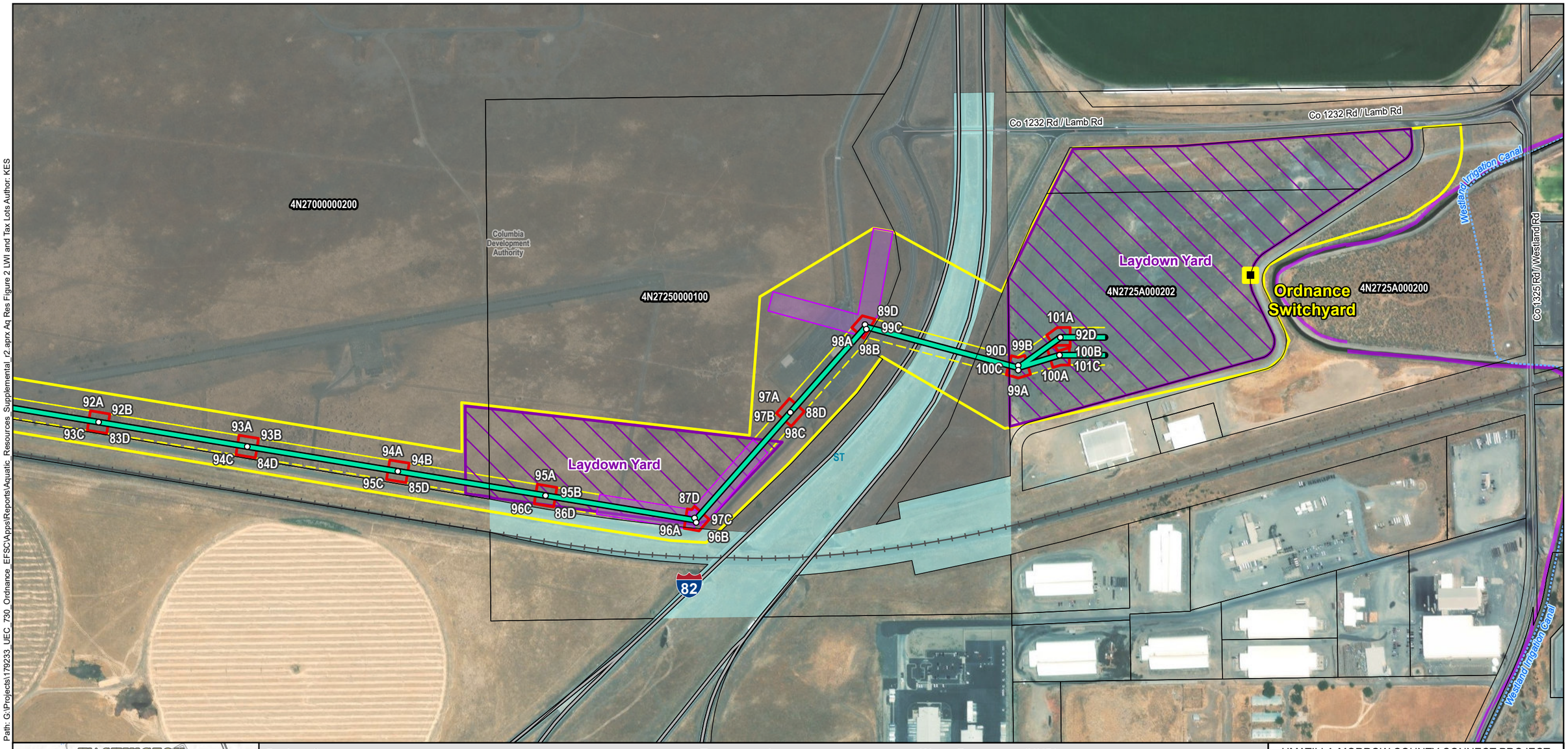
N

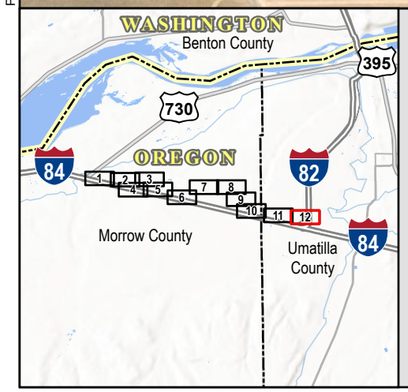
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 2 LWI and Tax Lots Author: KES





Project Components
- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Railroad

Ownership
- Local
- State (ST)
- Tax Lot

Water Resources (NHD)
- Canal or Ditch

Wetlands
- National Wetland Inventory (NWI)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 2
National/Statewide Wetland Inventory and Tax Lots

Page 12 of 12

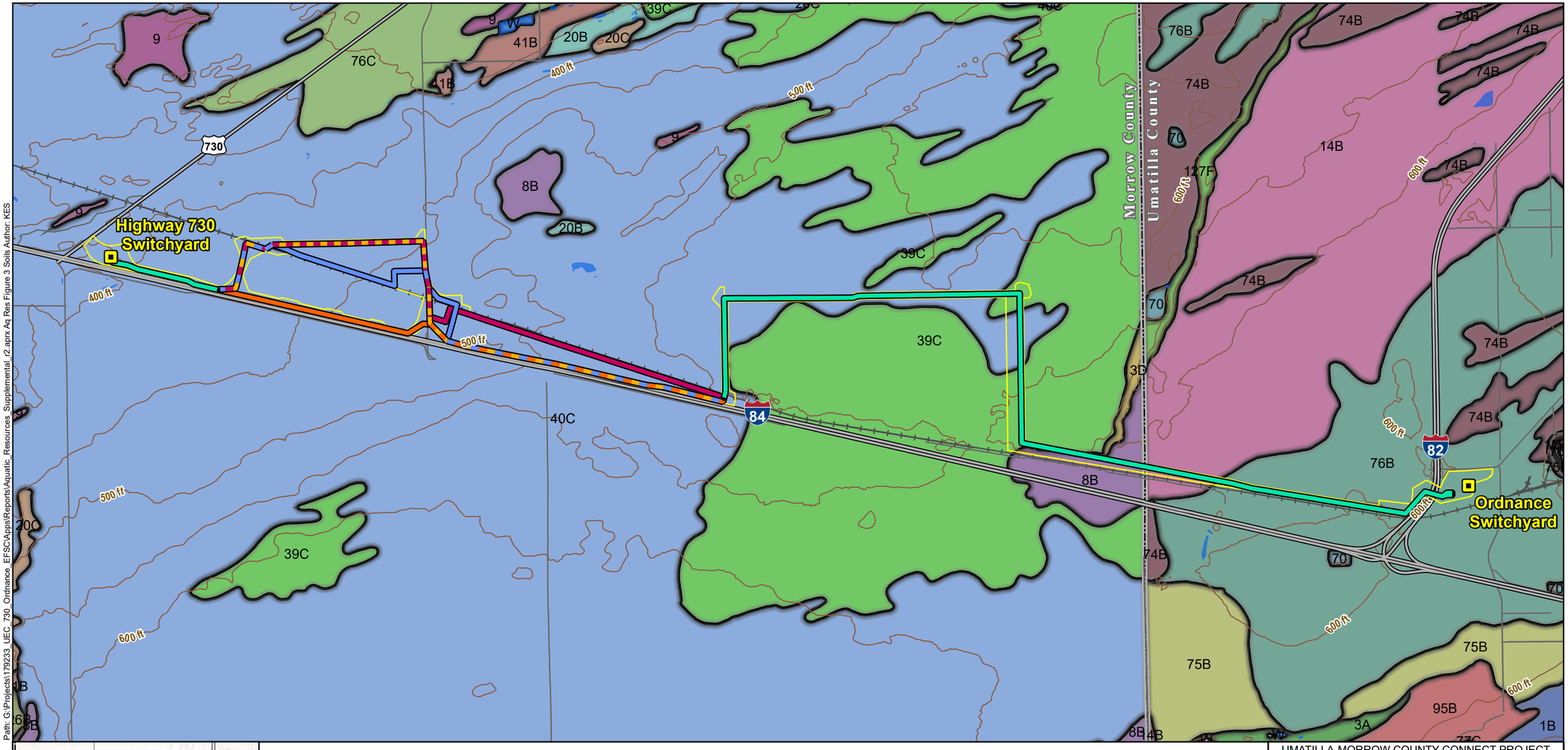
0 500 1,000
Feet

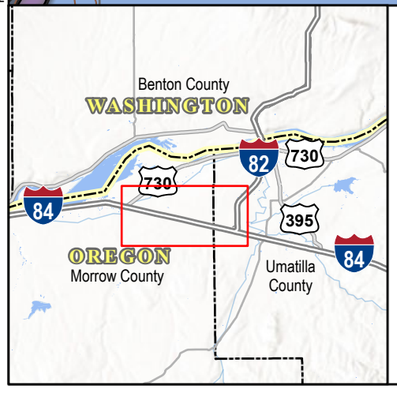
N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025





Project Components
- Project Endpoint
- Project Site Boundary
- Common Preferred Route

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Contours
- 50 foot

Boundaries
- County

Water Resources
- Waterbody

Soil Features
- Soil Unit*
- 13D - Gravden very gravelly loam, 5 to 20 percent slopes
- 14B - Burbank loamy fine sand, 0 to 5 percent slopes
- 39C - Quincy fine sand, 2 to 12 percent slopes
- 40C - Quincy loamy fine sand, 2 to 12 percent slopes
- 76B - Quincy loamy fine sand, gravelly substratum, 0 to 5 percent slopes
- 8B - Burbank loamy fine sand, 2 to 5 percent slopes

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 3
Soil Types

0 0.5 1 1.5 2
Miles

N

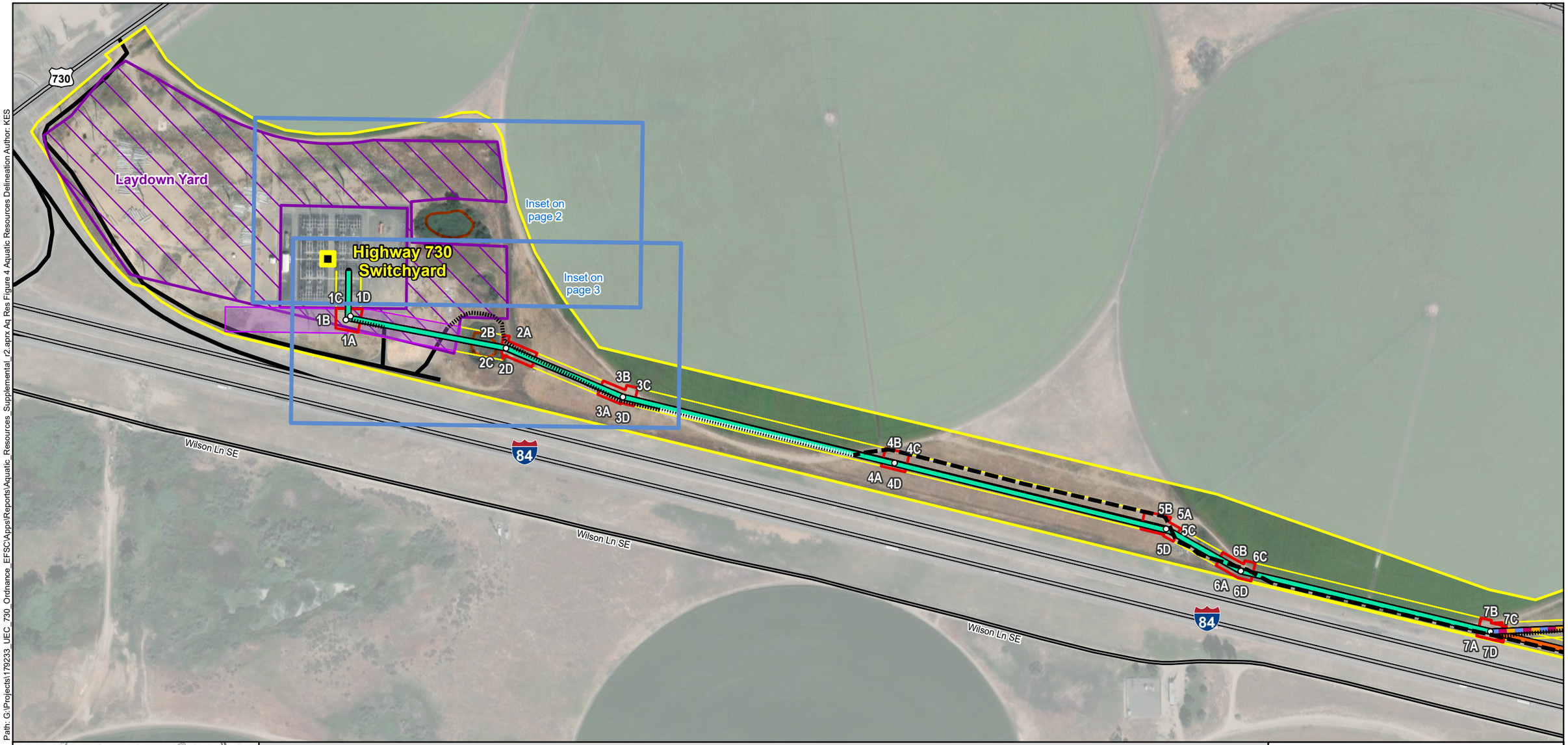
POWER ENGINEERS MEMBER OF WSP

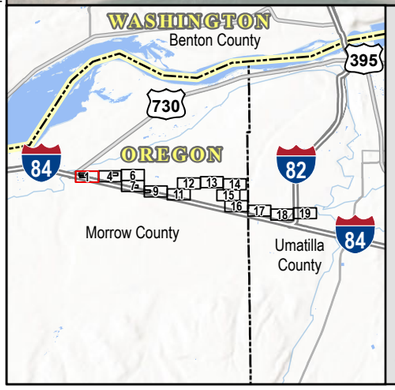
UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 3 Soils Author: KES

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components
- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Existing Access, May Need Improvements
- New Access
- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Highway
- Local Road
- Existing Road
- Railroad

Wetland Survey
- Delineated Wetland

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

Page 1 of 19

0 400 800
Feet

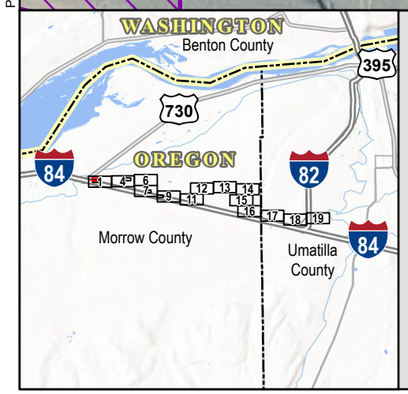
N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES



Project Components

- Project Endpoint
- Project Site Boundary
- Right of Way
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Yard

Wetland Survey

Sample ID

- Upland Sample Point
- Wetland Sample Point
- Photo Direction
- Delineated Wetland

Wetland ID	HGM	Cowardin	Acres
Wetland 2	None	None	0.37

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

Page 2 of 19

0 100 200
Feet

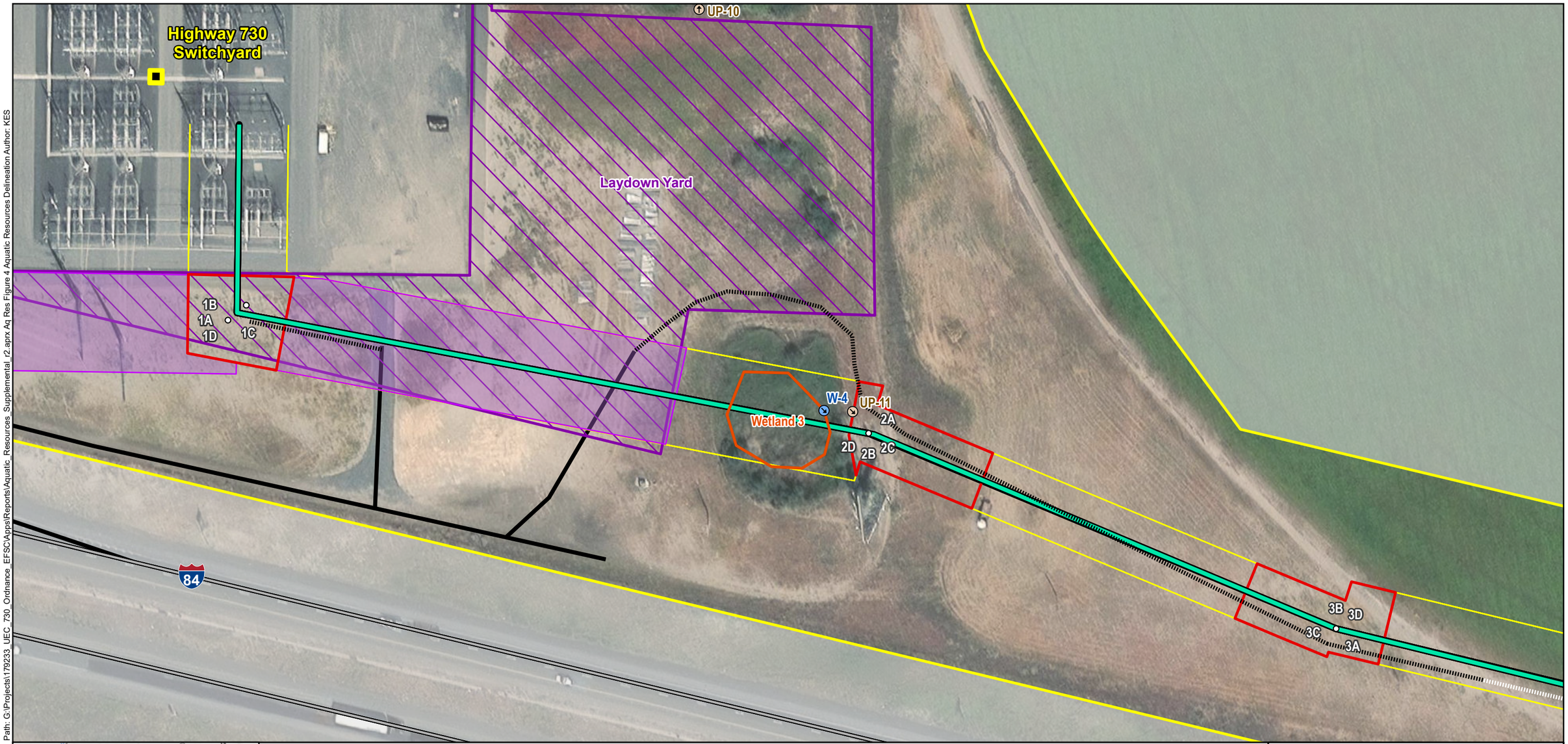
N

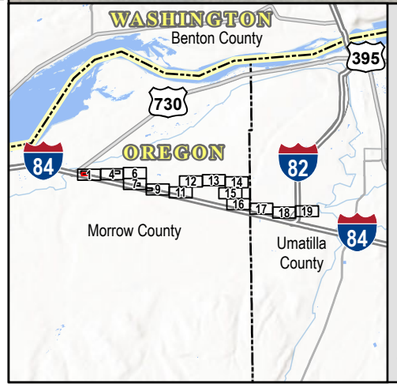
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- New Access
- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Highway
- Existing Road

Wetland Survey

Sample ID

- Upland Sample Point
- Wetland Sample Point
- Photo Direction
- Delineated Wetland

Wetland ID	HGM	Cowardin	Acres
Wetland 3	None	None	0.18

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

Page 3 of 19

0 100 200
Feet

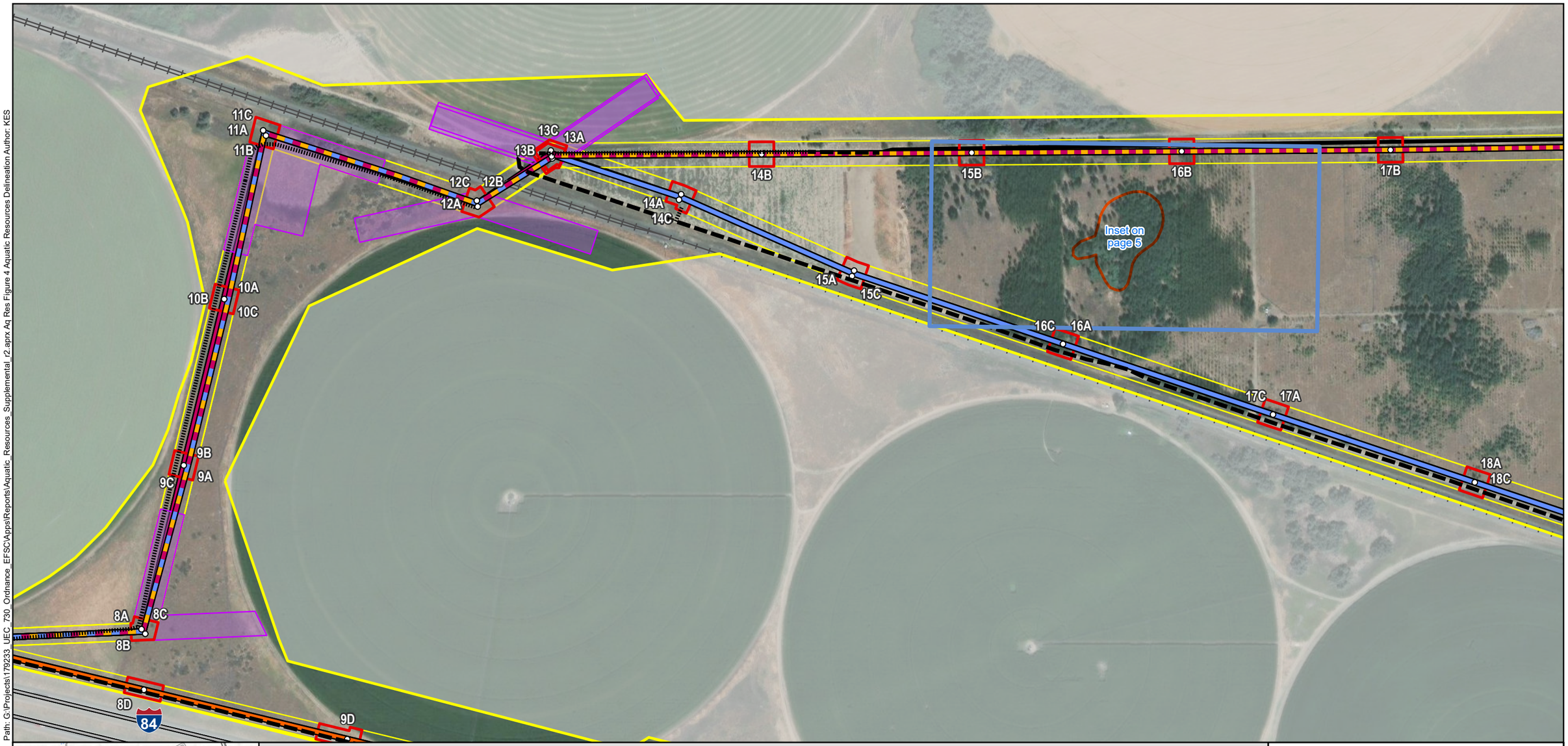
N

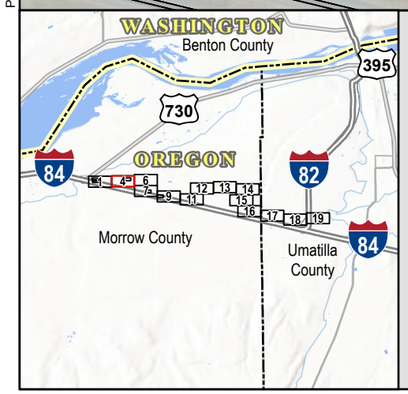
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site

Transportation

- Highway
- Existing Road
- Railroad

Wetland Survey

- Delineated Wetland

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES

15B

16B

UP-4

UP-3

UP-2

UP-1

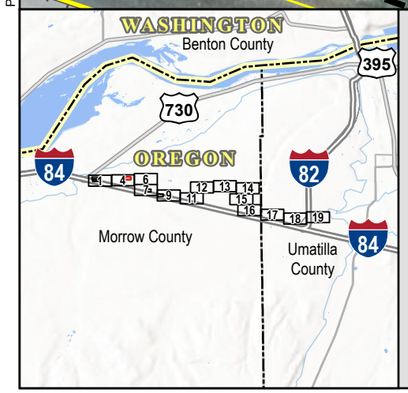
UP-6

UP-5

UP-7

W-1

Wetland 1



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C

Disturbance Areas

- Existing Access, May Need Improvements
- Work Area

Transportation

- Existing Road
- Railroad

Wetland Survey

Sample ID

- Upland Sample Point
- Wetland Sample Point
- Photo Direction
- Delineated Wetland

Wetland ID	HGM	Cowardin	Acres
Wetland 1	None	PEM1F/PEM1C	1.82

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 100 200
Feet

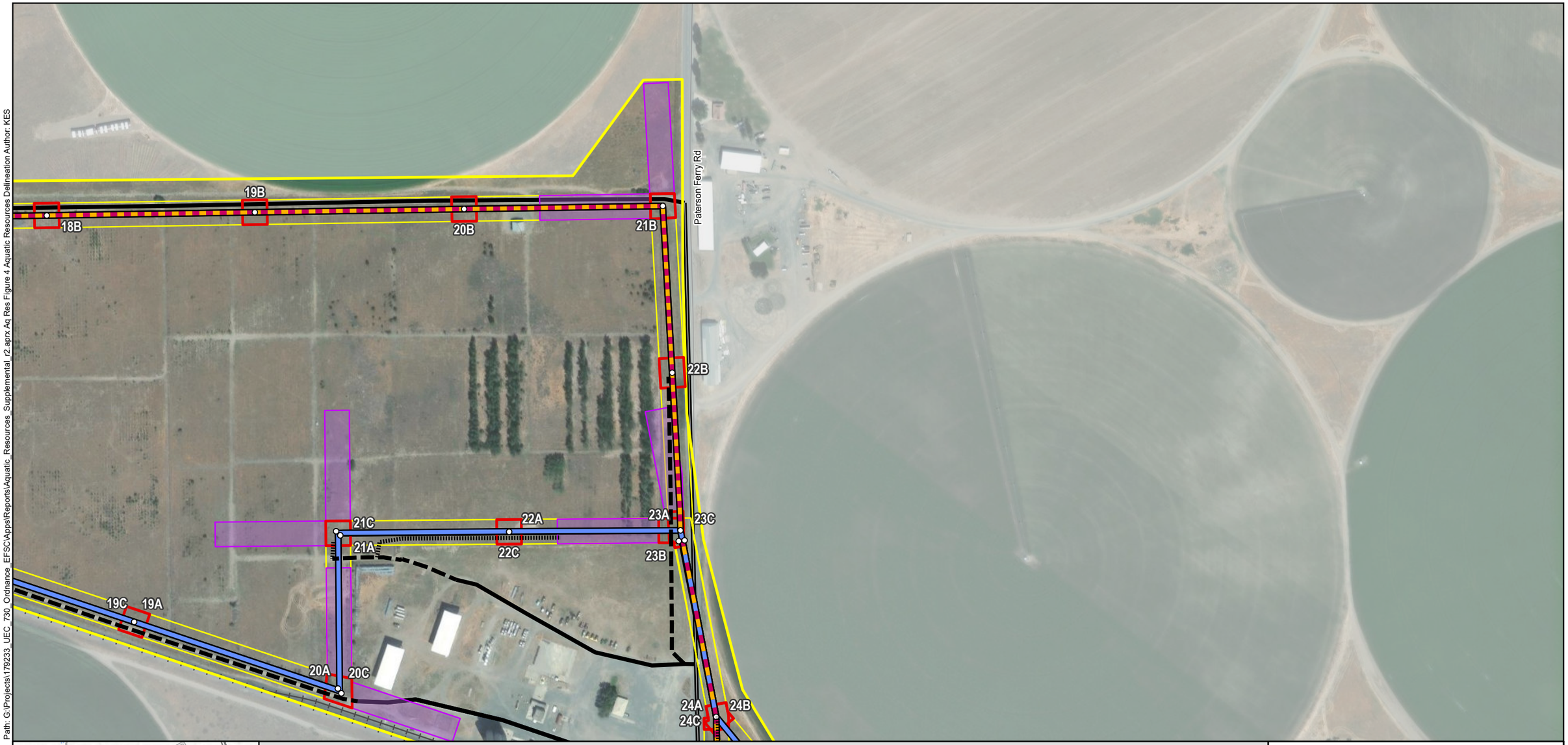
N

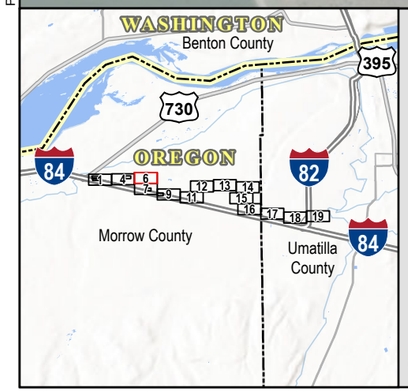
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C

Disturbance Areas

- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site

Transportation

- Local Road
- Existing Road
- Railroad

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

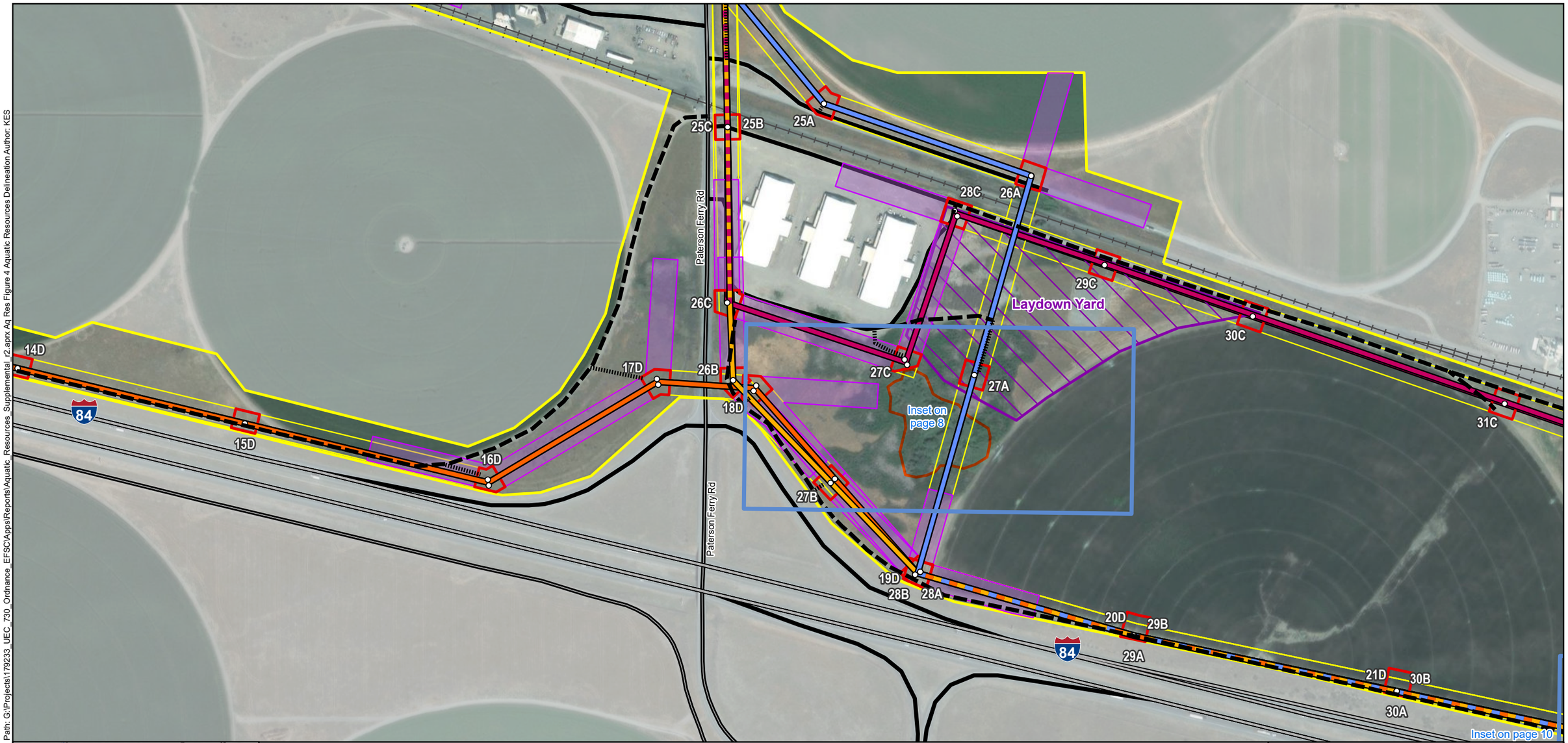
N

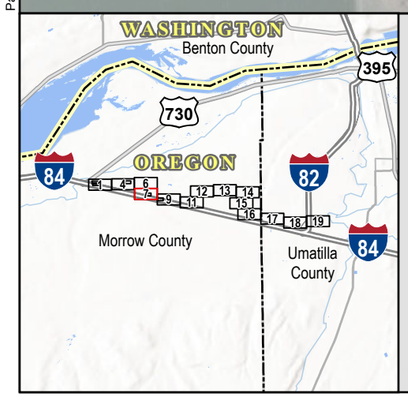
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Highway
- Local Road
- Existing Road
- Railroad

Wetland Survey

- Delineated Wetland

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

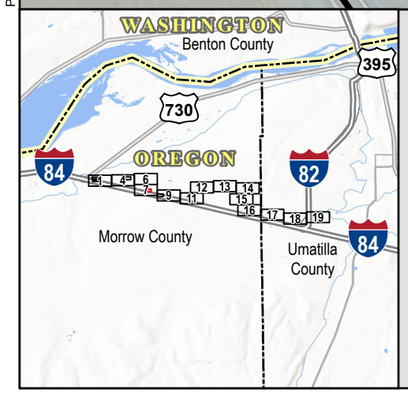
N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES



Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Existing Road

Wetland Survey

Sample ID
- Upland Sample Point
- Wetland Sample Point
- Photo Direction
- Delineated Wetland

Wetland ID	HGM	Cowardin	Acres
Wetland 4	None	None	2.47

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

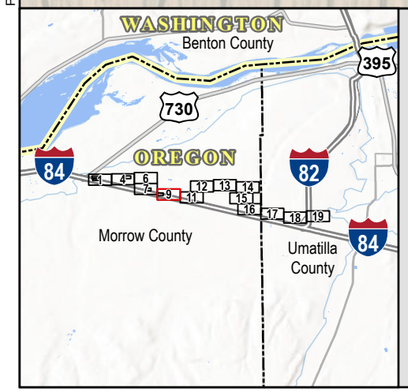
0 100 200
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025



Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Existing Access, May Need Improvements
- New Access
- Work Area

Transportation
- Highway
- Local Road
- Existing Road
- Railroad

Wetland Survey
- Delineated Wetland

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

Page 9 of 19

0 400 800
Feet

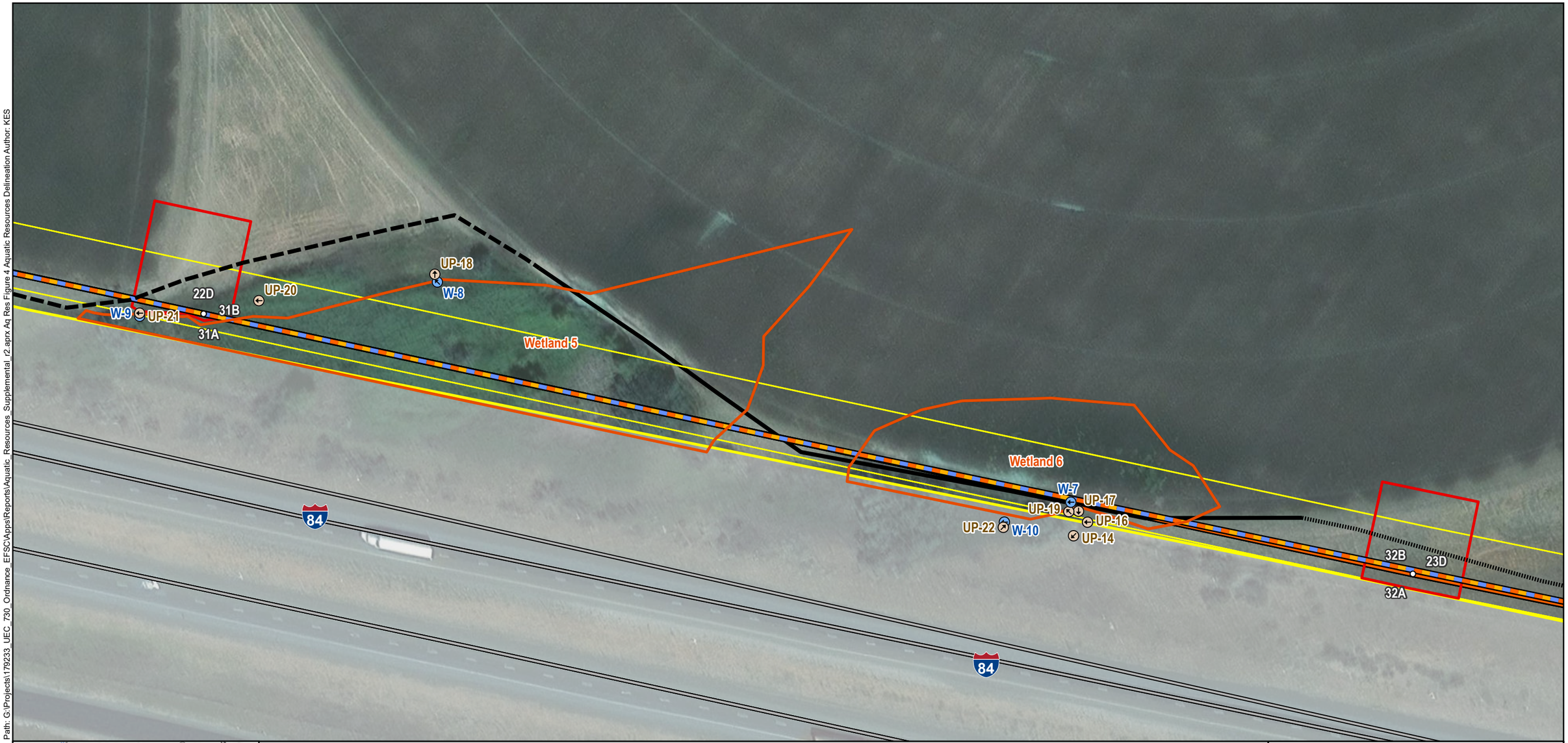
N

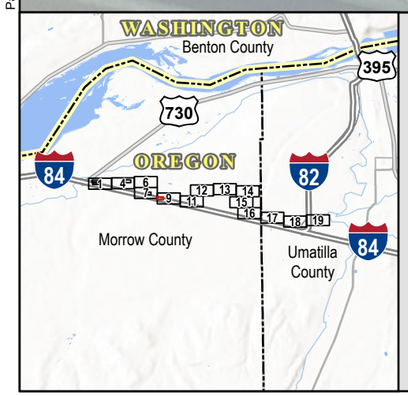
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route D

Disturbance Areas
- Existing Access, May Need Improvements
- New Access
- Work Area

Transportation
- Highway
- Existing Road

Wetland Survey

Sample ID
- Upland Sample Point
- Wetland Sample Point
- Photo Direction
- Delineated Wetland

Wetland ID	HGM	Cowardin	Acres
Wetland 5	None	None	1.61

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 100 200
Feet

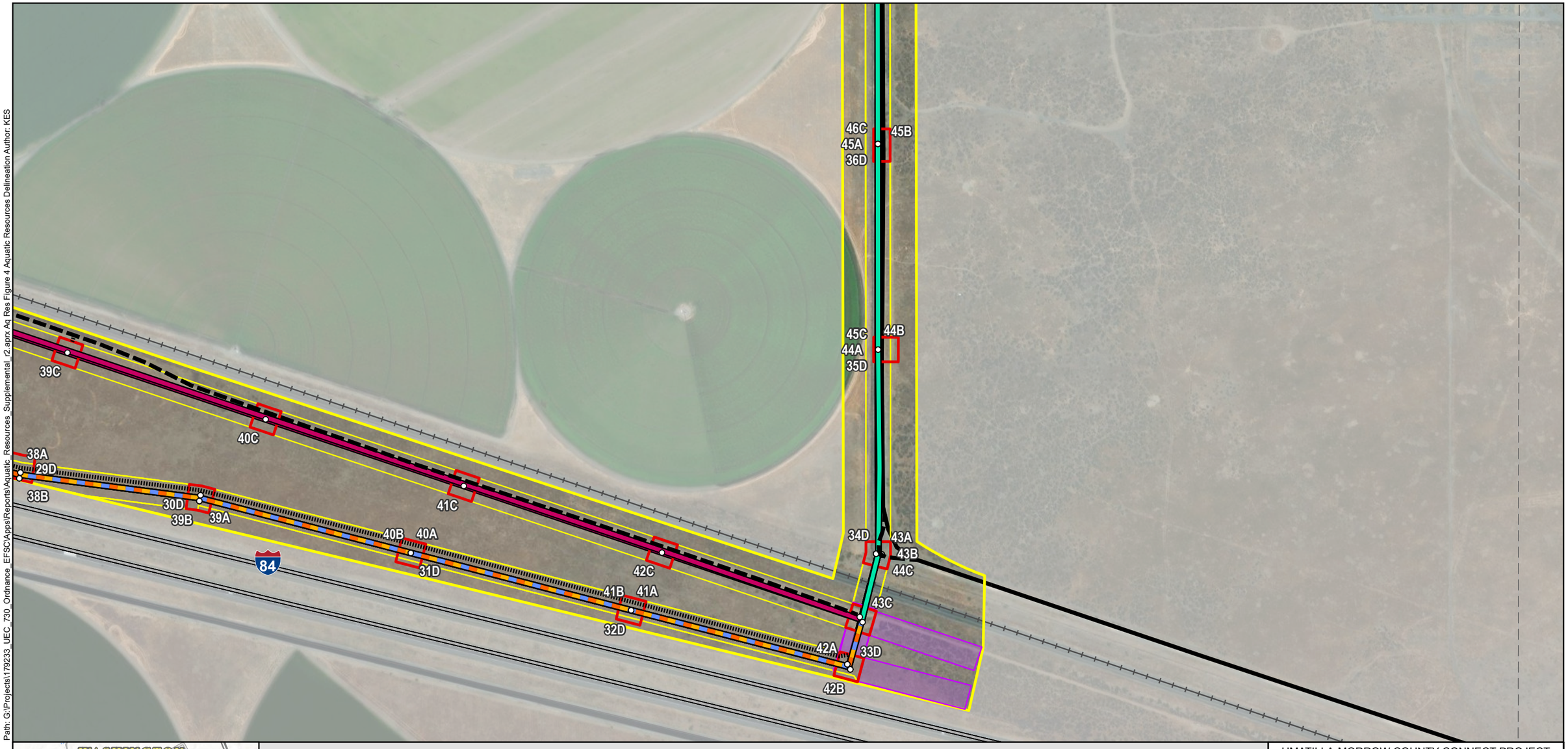
N

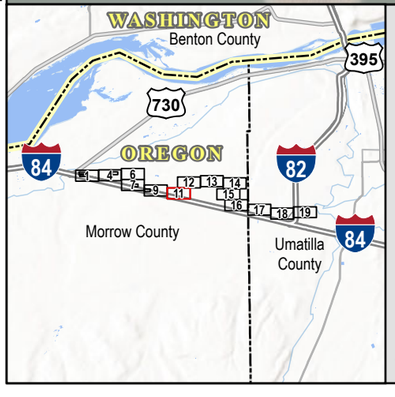
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site

Transportation

- Highway
- Local Road
- Existing Road
- Railroad

Boundaries

- Township

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

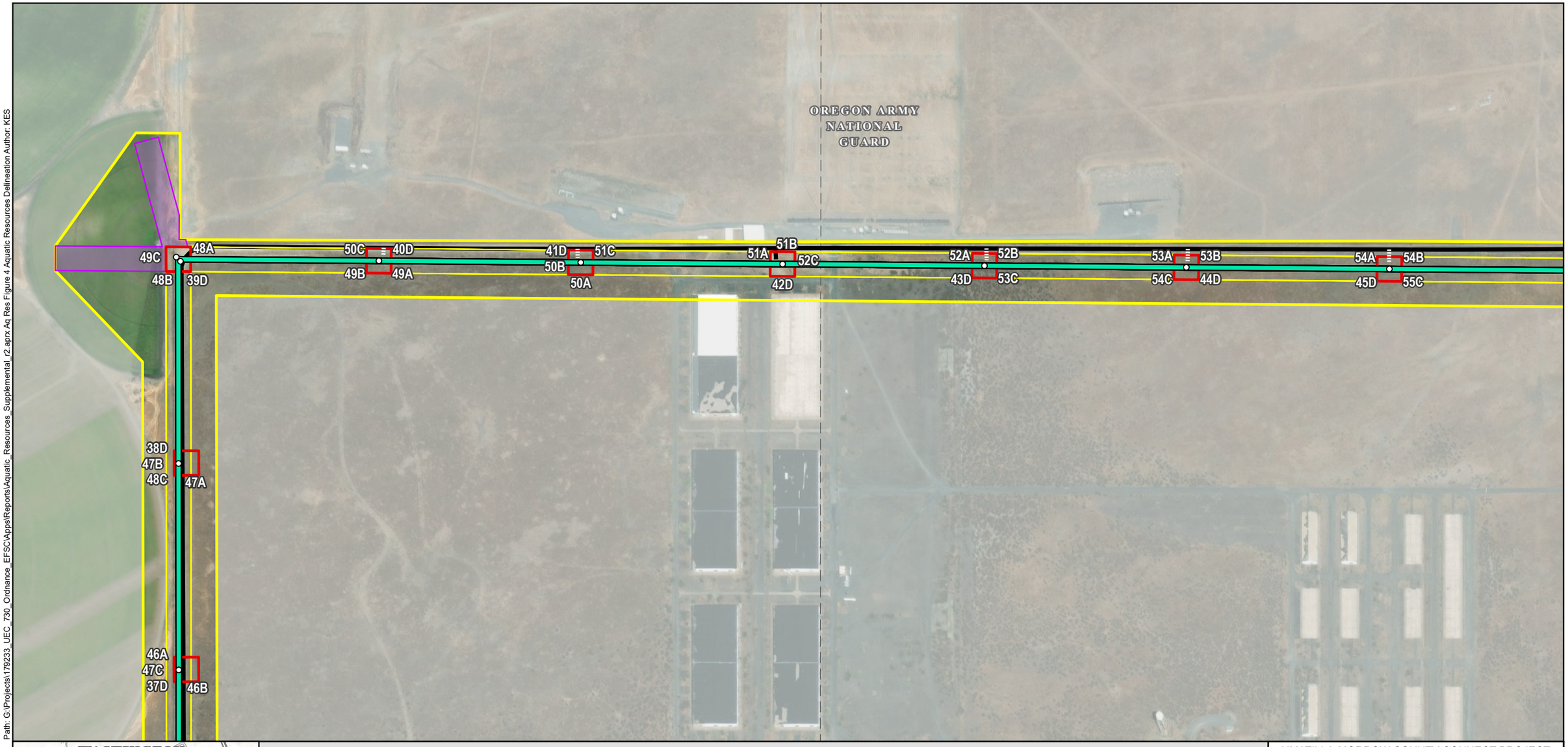
N

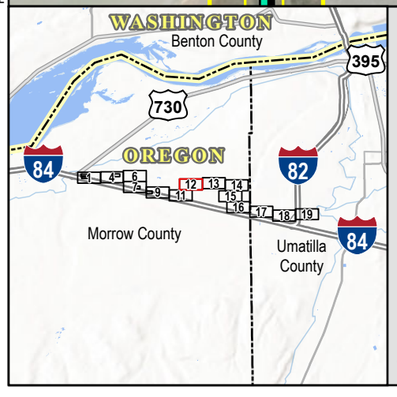
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Drive and Crush
- Work Area
- Pulling and Tensioning Site

Transportation

- Existing Road

Boundaries

- Township

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

N

POWER ENGINEERS MEMBER OF WSP

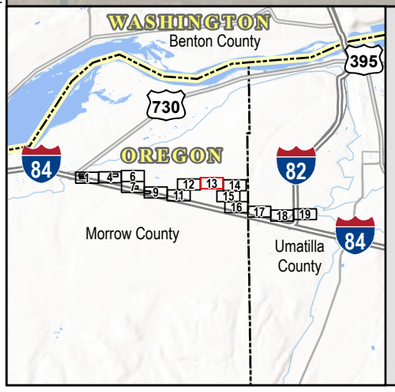
UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES

OREGON ARMY NATIONAL GUARD

46D 57C 56B 56A 55B 55A 56C 47D 57B 57A 48D 58C 58A 58B 59C 49D 59A 59B 60C 50D 60A 60B 51D 61C 61A 61B 52D 62C 62A 62B 63C 53D 63A 63B 64C 54D



Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Drive and Crush
- Work Area

Transportation
- Existing Road

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

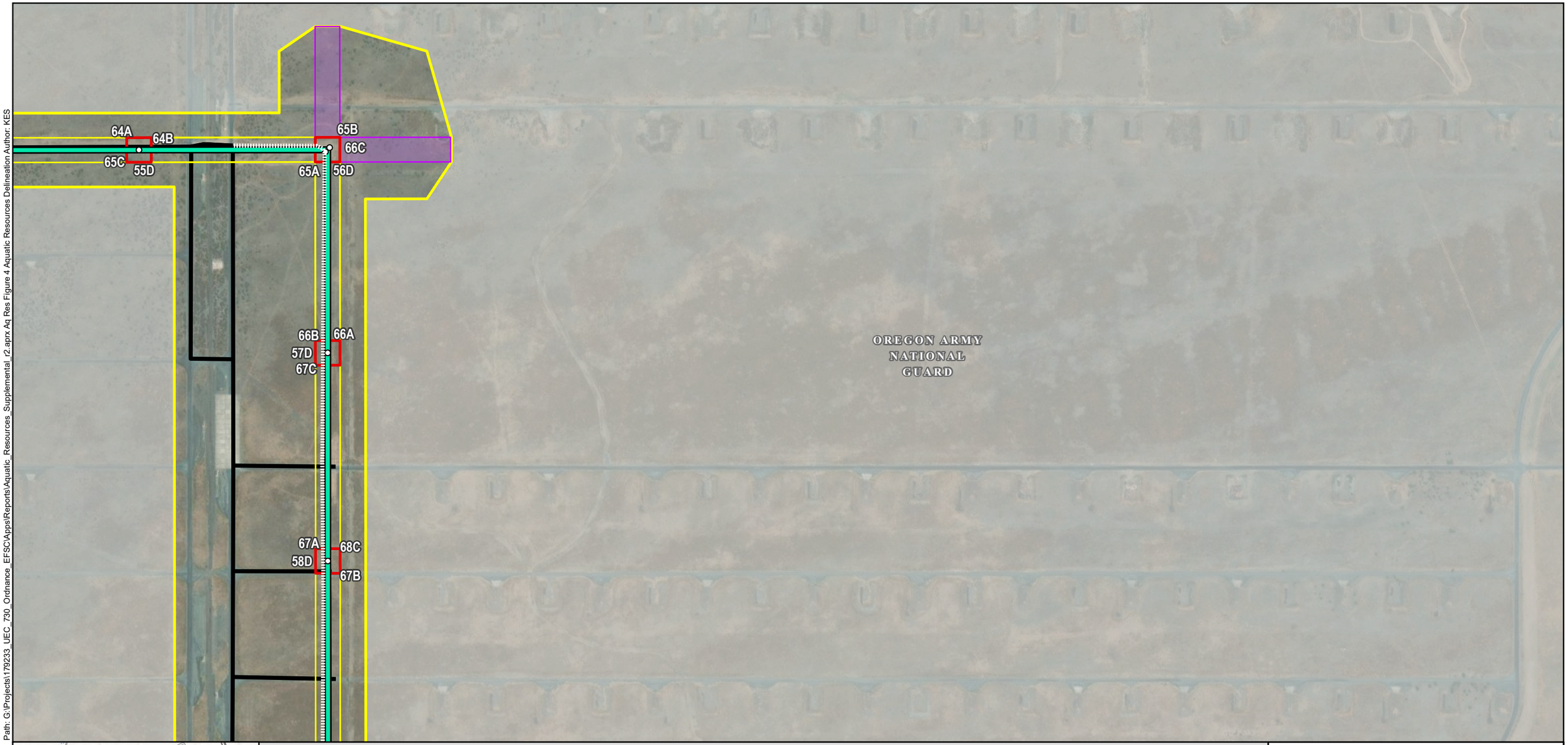
N

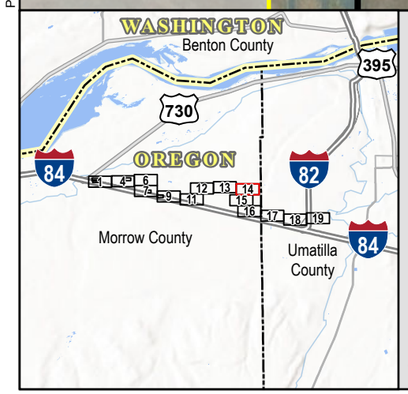
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Drive and Crush
- Work Area
- Pulling and Tensioning Site

Transportation

- Existing Road

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

N

POWER ENGINEERS MEMBER OF WSP

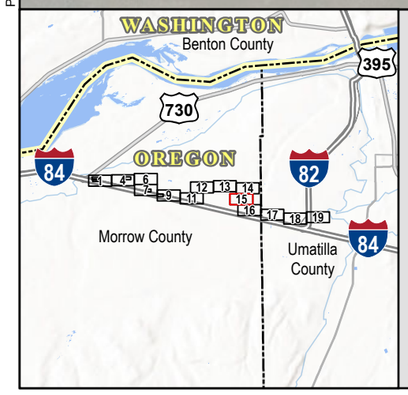
UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES

68A
68B
59D
69C
60D
69A
70C
69B
70B
70A
61D
71C
72C
71A
62D
71B

OREGON ARMY NATIONAL GUARD



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- Drive and Crush
- Work Area

Transportation

- Existing Road

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

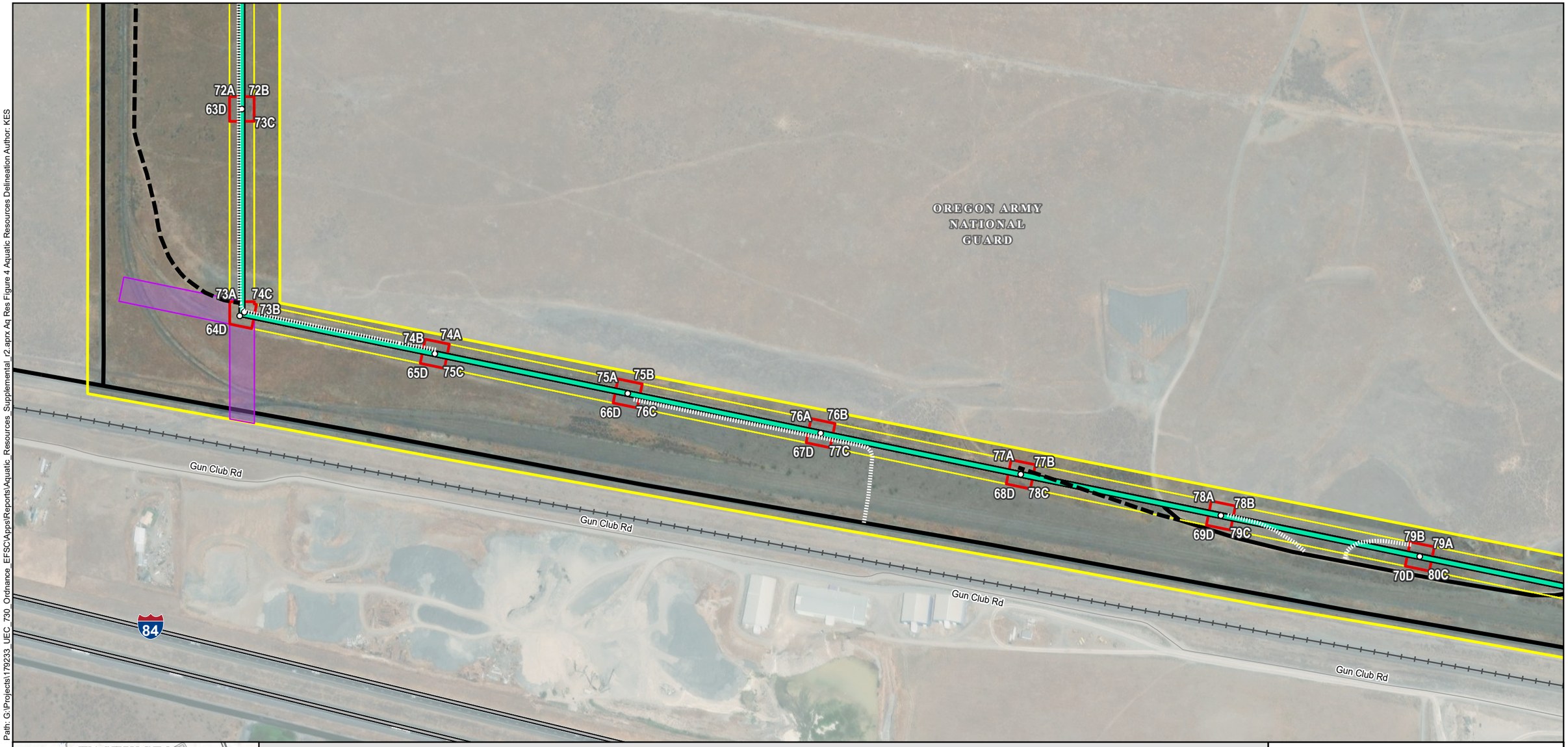
0 400 800
Feet

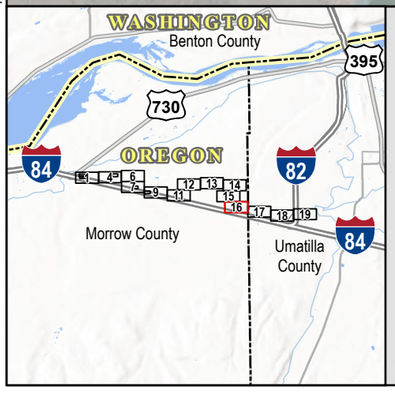
N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- Drive and Crush
- Work Area
- Pulling and Tensioning Site

Transportation

- Highway
- Local Road
- Existing Road
- Railroad

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

Page 16 of 19

0 400 800
Feet

N

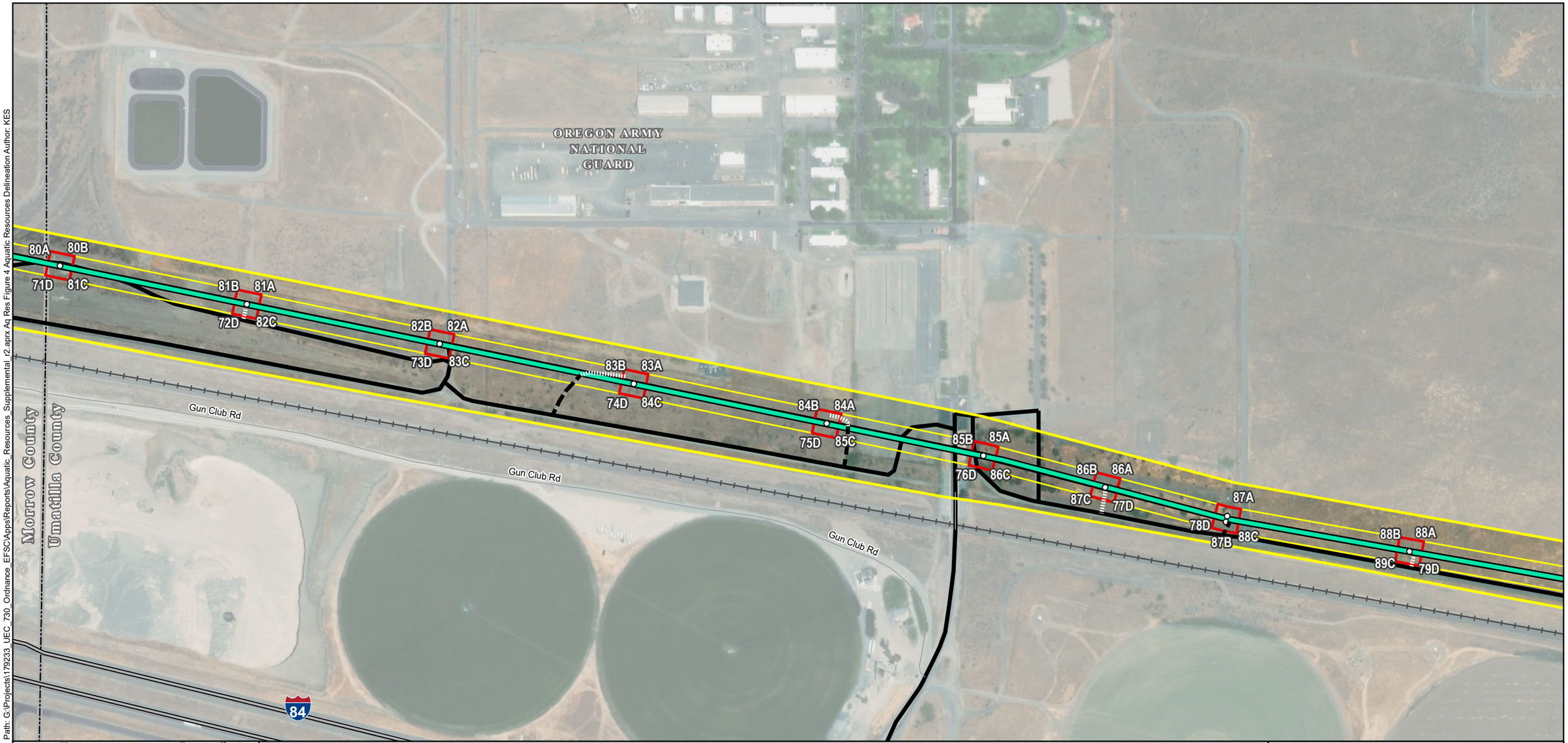
POWER ENGINEERS MEMBER OF WSP

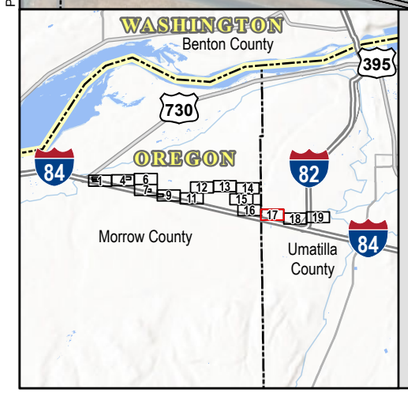
UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- Drive and Crush
- Work Area

Transportation

- Highway
- Local Road
- Existing Road
- Railroad

Boundaries

- County

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

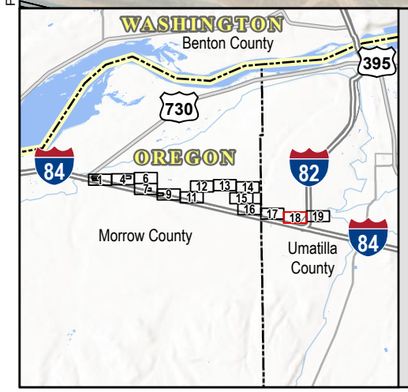
Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordinance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES

89B 89A 90C 80D 90B 90A 81D 91C 91B 91A 82D 92C 92B 92A 93C 83D 93B 93A 94C 84D 94B 94A 95C 85D 95B 95A 86D 96C 96A 87D 97C 96B 97A 98C 97B 88D

Laydown Yard

82



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Highway
- Existing Road
- Railroad

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

0 400 800
Feet

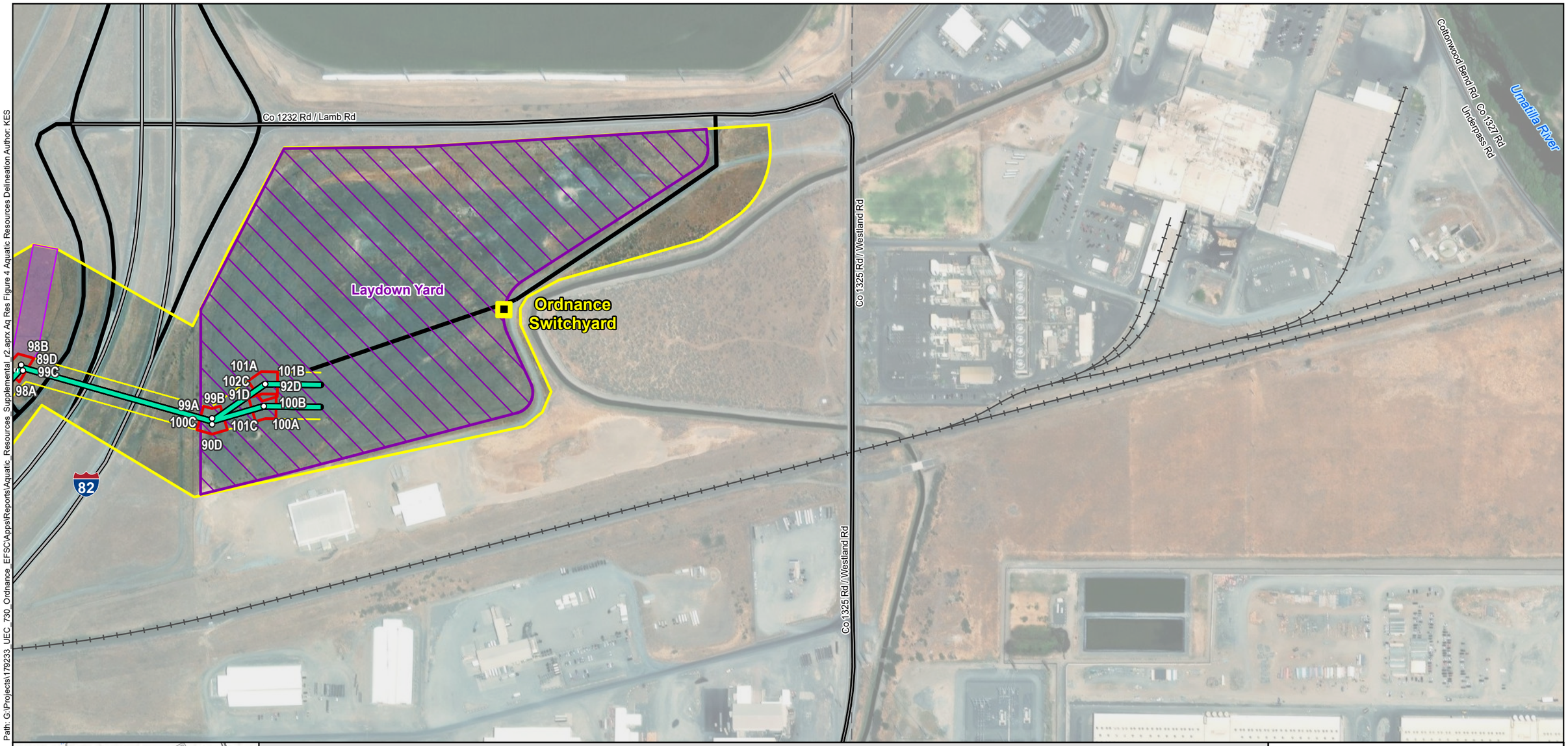
N

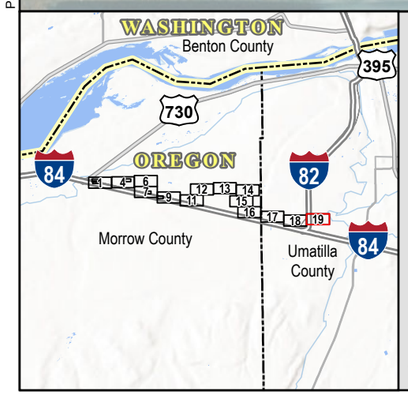
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 4 Aquatic Resources Delineation Author: KES





Project Components

- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Highway
- Local Road
- Existing Road
- Railroad

Boundaries

- Township

All field delineation was completed between April and May of 2024. Mapping of aquatic resources and sample point locations were completed at an accuracy level of 1 meter. Methods are further described in Section 5.0 of the Aquatic Resource Delineation Report (POWER 2024).

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 4
Aquatic Resource Delineation

Page 19 of 19

0 400 800
Feet

N

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

15B

16B

Wetland 1

N

Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C

Disturbance Areas

- Existing Access, May Need Improvements
- Work Area

Transportation

- Existing Road
- Railroad

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5a
Historical Imagery - Wetland 1
May 2016

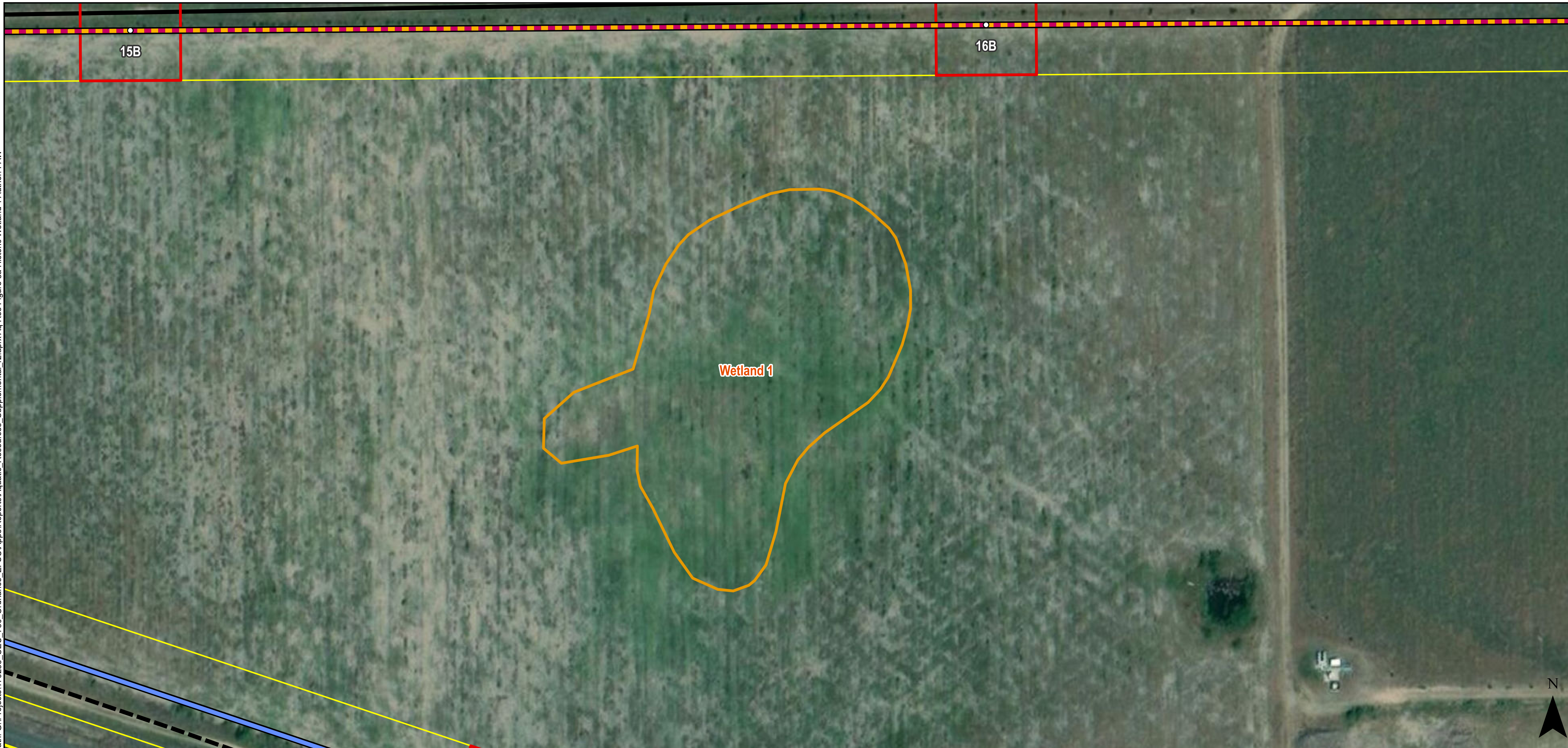
0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025



Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5a Historic Wetland 1 Author: PAW

Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route C

Disturbance Areas
- Existing Access, May Need Improvements
- Work Area

Transportation
- Existing Road
- Railroad

Wetland Survey
- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

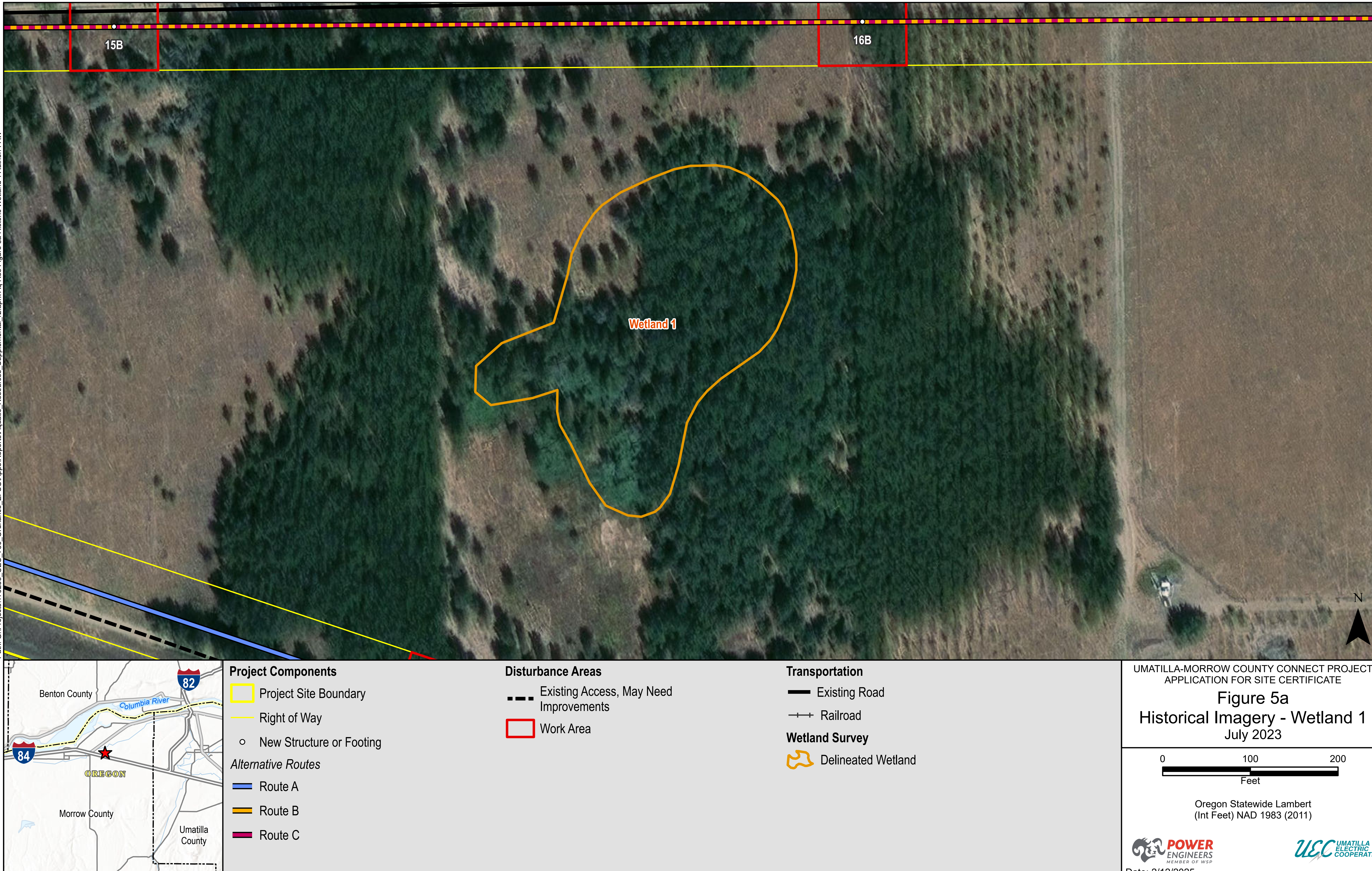
Figure 5a
Historical Imagery - Wetland 1
May 2018

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP
UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025



Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5a Historic Wetland 1 Author: PAW

Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C

Disturbance Areas

- Existing Access, May Need Improvements
- Work Area

Transportation

- Existing Road
- Railroad

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5a
Historical Imagery - Wetland 1
July 2023

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 5b Historic Wetland 2 Author: PAW

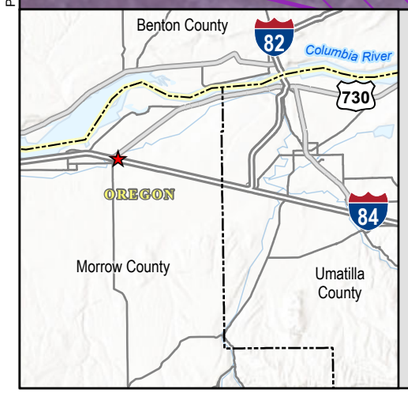
Laydown Yard

Wetland 2

Highway 730
Switchyard

1A
1B
1D
1C

N



Project Components

- Project Endpoint
- New Structure or Footing
- Project Site Boundary
- Right of Way
- Common Preferred Route

Disturbance Areas

- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5b
Historical Imagery - Wetland 2
May 2016

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS
MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordinance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I\2.aprx Aq Res Figure 5b Historic Wetland 2 Author: PAW

Laydown Yard

Wetland 2

Highway 730
Switchyard

1A
1B
1D
1C

N

Project Components

- Project Endpoint
- New Structure or Footing
- Project Site Boundary
- Right of Way
- Common Preferred Route

Disturbance Areas

- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5b
Historical Imagery - Wetland 2
May 2018

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordinance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_f2.aprx Aq Res Figure 5b Historic Wetland 2 Author: PAW

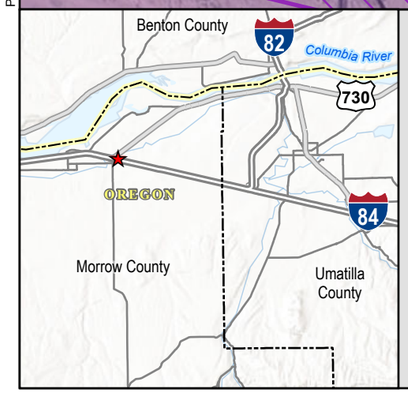
Laydown Yard

Wetland 2

Highway 730
Switchyard

1A
1B
1D
1C

N



Project Components

- Project Endpoint
- New Structure or Footing
- Project Site Boundary
- Right of Way
- Common Preferred Route

Disturbance Areas

- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5b
Historical Imagery - Wetland 2
July 2023

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5c Historic Wetland 3 Author: PAW

Highway 730 Switchyard

Laydown Yard

1B
1A
1D
1C

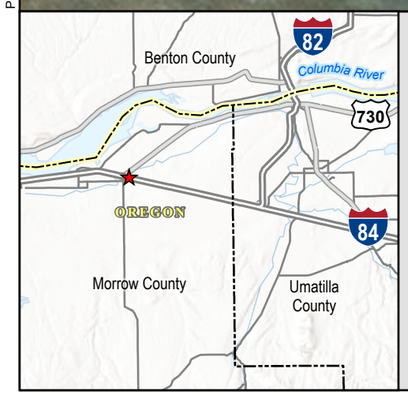
Wetland 3

2C
2B
2D
2A

3B
3D
3C
3A

84

N



Project Components
- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Disturbance Areas
- New Access
- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Existing Road

Wetland Survey
- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5c
Historical Imagery - Wetland 3
May 2016

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5c Historic Wetland 3 Author: PAW

Highway 730 Switchyard

Laydown Yard

1B
1A
1D
1C

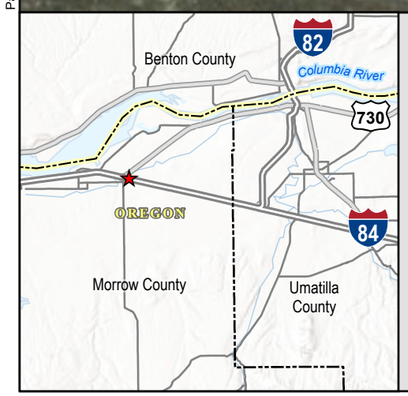
Wetland 3

2C
2B
2D
2A

3B
3D
3C
3A

84

N



Project Components
- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Disturbance Areas
- New Access
- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Existing Road

Wetland Survey
- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5c
Historical Imagery - Wetland 3
May 2018

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5c Historic Wetland 3 Author: PAW

Highway 730 Switchyard

Laydown Yard

1B
1A
1D
1C

Wetland 3

2C
2B
2D
2A

3B
3D
3C
3A

84

N

Project Components
- Project Endpoint
- Project Site Boundary
- Right of Way
- New Structure or Footing
- Common Preferred Route

Disturbance Areas
- New Access
- Drive and Crush
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Existing Road

Wetland Survey
- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5c
Historical Imagery - Wetland 3
July 2023

0 100 200
Feet

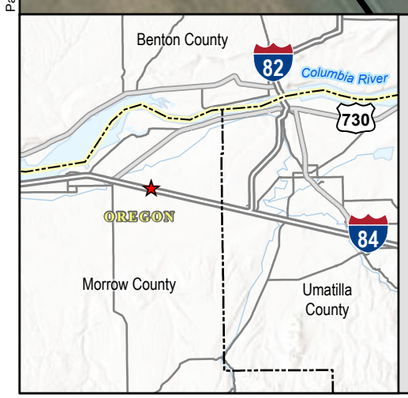
Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_I\2.aprx Aq Res Figure 5d Historic Wetland 4 Author: PAW



Project Components
- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes
- Route A
- Route B
- Route C
- Route D

Disturbance Areas
- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation
- Existing Road

Wetland Survey
- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5d
Historical Imagery - Wetland 4
May 2016

0 100 200
Feet

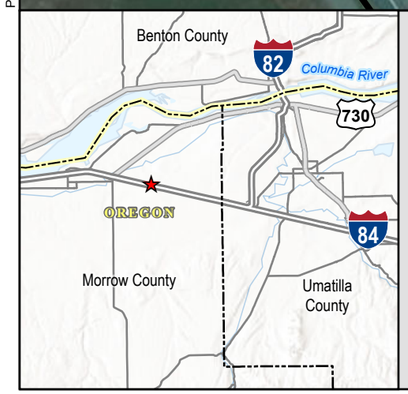
Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5d Historic Wetland 4 Author: PAW



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Existing Road

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5d
Historical Imagery - Wetland 4
May 2018

0 100 200
Feet

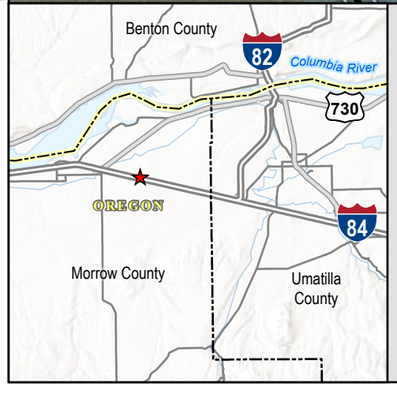
Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5d Historic Wetland 4 Author: PAW



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route C
- Route D

Disturbance Areas

- Existing Access, May Need Improvements
- New Access
- Work Area
- Pulling and Tensioning Site
- Yard

Transportation

- Existing Road

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5d
Historical Imagery - Wetland 4
July 2023

0 100 200
Feet

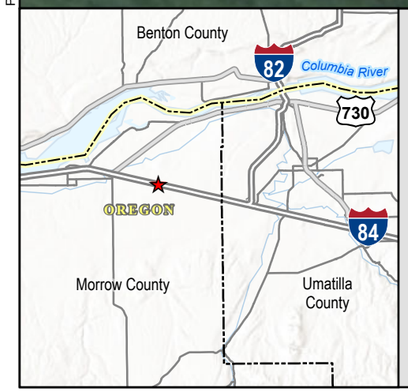
Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5e Historic Wetland 5 and 6 Author: PAW



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route D

Disturbance Areas

Project Access

- Existing Access, May Need Improvements
- New Access

Work Area

Transportation

- Existing Road

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5e
Historical Imagery - Wetlands 5 & 6
May 2016

0 100 200
Feet

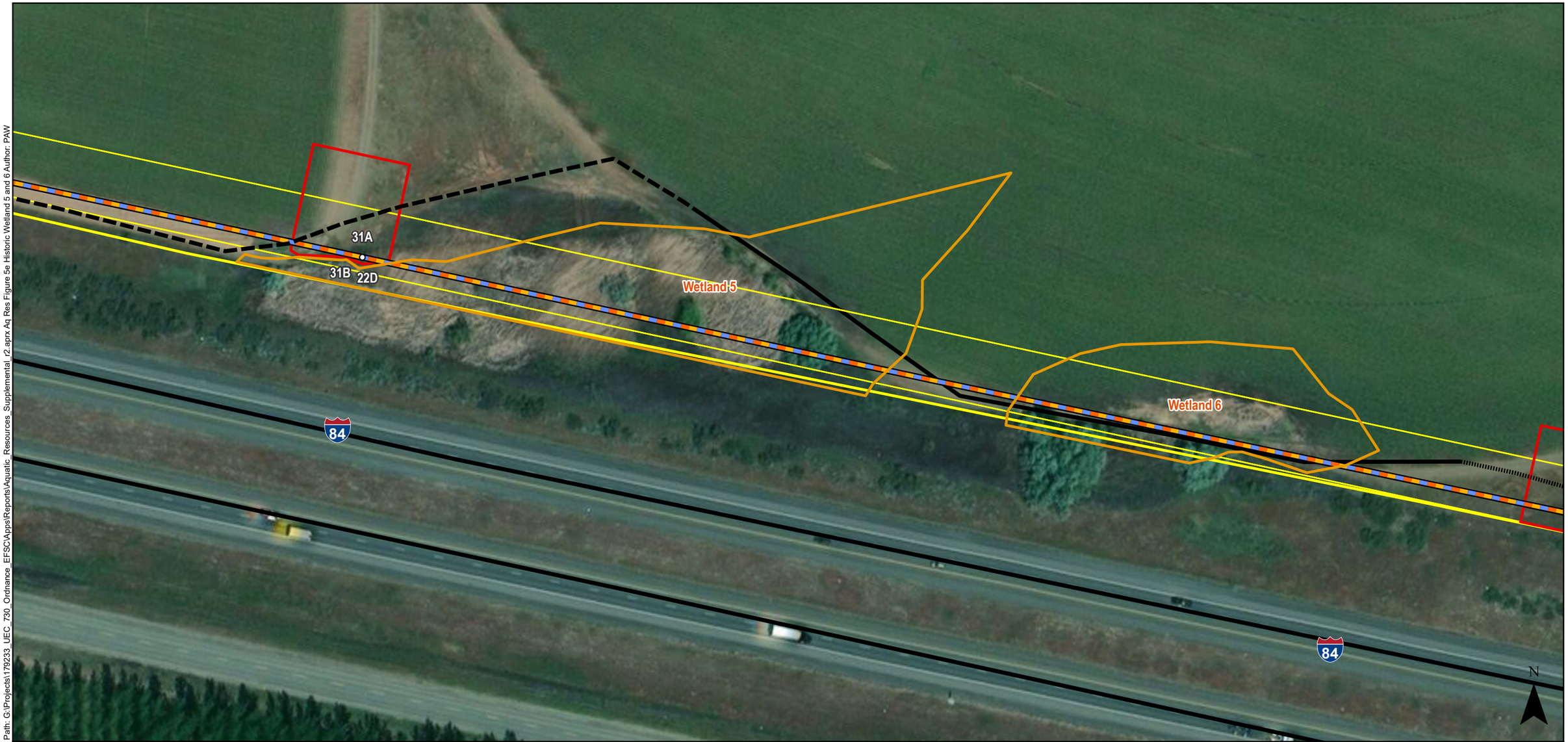
Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

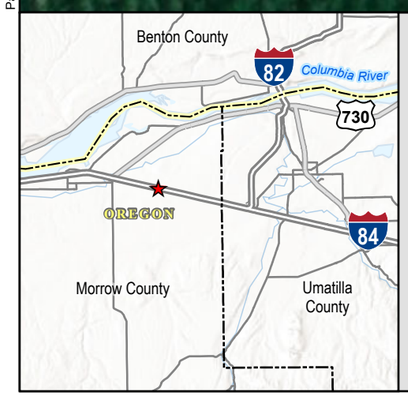
POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordnance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5e Historic Wetland 5 and 6 Author: PAW





Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route D

Disturbance Areas

Project Access

- Existing Access, May Need Improvements
- New Access
- Work Area

Transportation

- Existing Road

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5e
Historical Imagery - Wetlands 5 & 6
May 2018

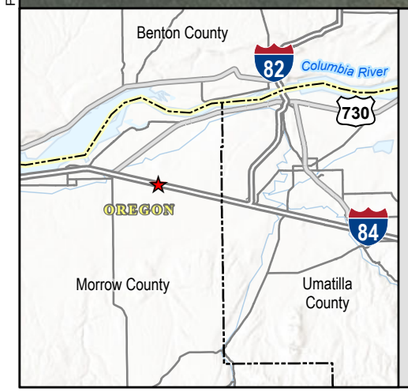
0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025



Project Components

- Project Site Boundary
- Right of Way
- New Structure or Footing

Alternative Routes

- Route A
- Route B
- Route D

Disturbance Areas

Project Access

- Existing Access, May Need Improvements
- New Access
- Work Area

Transportation

- Existing Road

Wetland Survey

- Delineated Wetland

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure 5e
Historical Imagery - Wetlands 5 & 6
July 2023

0 100 200
Feet

Oregon Statewide Lambert
(Int Feet) NAD 1983 (2011)

POWER ENGINEERS MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

Path: G:\Projects\179233_UEC_730_Ordinance_EFSC\Apps\Reports\Aquatic_Resources_Supplemental_r2.aprx Aq Res Figure 5e Historic Wetland 5 and 6 Author: PAW

APPENDIX B PRECIPITATION DATA FOR THREE MONTHS PRECEDING EACH FIELD ASSESSMENT

TABLE B1 PRECIPITATION DATA FOR THREE MONTHS PRECEDING THE APRIL FIELD ASSESSMENT

PRIOR MONTHS	WETS RAINFALL PERCENTILE (INCHES)		AVERAGE WETS PRECIP. (INCHES)	OBSERVED RAINFALL (INCHES)	CONDITION: DRY, WET, NORMAL	CONDITION VALUE (1=DRY, 2=NORMAL, 3=WET)	MONTH WEIGHT	CONDITION VALUE X MONTH WEIGHT
	30th	70th						
January	0.75	1.47	1.19	2.39	Wet	3	1	3
February	0.48	1.06	0.86	1.47	Wet	3	2	6
March	0.43	0.81	0.67	0.35	Normal	1	3	3
							Sum	**12**
								Normal

Rainfall of prior period was **drier** than normal (sum is 6-9), **normal** (sum is 10-14), **wetter** than normal (sum is 15-18)
WETS Station: Boardman, OR 1971-2024
Measured Rainfall: Boardman, OR January-March 2024
Source: http://agacis.rcc-acis.org/?fips=41029

TABLE B2 PRECIPITATION DATA FOR THREE MONTHS PRECEDING THE MAY FIELD ASSESSMENT

PRIOR MONTHS	WETS RAINFALL PERCENTILE (INCHES)		AVERAGE WETS PRECIP. (INCHES)	OBSERVED RAINFALL (INCHES)	CONDITION: DRY, WET, NORMAL	CONDITION VALUE (1=DRY, 2=NORMAL,3=WET)	MONTH WEIGHT	CONDITION VALUE X MONTH WEIGHT
	30th	70th						
February	0.48	1.06	0.86	1.47	Wet	3	1	3
March	0.43	0.81	0.68	0.35	Dry	1	2	2
April	0.25	0.85	0.66	0.06	Dry	1	3	3
							Sum	**8**
								Dry

Rainfall of prior period was drier than normal (sum is 6-9), normal (sum is 10-14), wetter than normal (sum is 15-18)
WETS Station: Boardman, OR 1971-2024
Measured Rainfall: Boardman, OR February-April 2024
Source: http://agacis.rcc-acis.org/?fips=41029

APPENDIX C LOCATION, SOILS AND SWI PER AQUATIC RESOURCE FEATURE

Table C-1. Location, Soils, and National/Statewide Wetland Inventory for Delineated Features

Feature Name	Feature Type	Latitude	Longitude	Soil Mapping Unit	NRCS Hydric Soil	NHD Category	NWI Classification	NWI Cowardin Class	HGM Class	Feature Extends Offsite	Deviation from NWI/MOW	Additional Info
Wetland 1	Palustrine emergent wetland, Seasonally flooded	45.834361	-119.578505	40C - Quincy loamy fine sand, 2 to 12 percent slopes	No	None	PEM1C/F	Palustrine	Flats	No	Yes	PEM1F does not appear to be an accurate classification for part of this wetland
Wetland 2	Palustrine emergent wetland, Semi-permanently flooded	45.834499	-119.613160	40C - Quincy loamy fine sand, 2 to 12 percent slopes	No	None	None	None	Flats	No	Slight	MOW polygons are inaccurate
Wetland 3	Palustrine emergent wetland, Seasonally flooded	45.833129	-119.612767	40C - Quincy loamy fine sand, 2 to 12 percent slopes	No	None	None	None	Flats	No	Slight	MOW polygons are inaccurate
Wetland 4	Palustrine emergent wetland, Seasonally flooded	45.825459	-119.556917	40C - Quincy loamy fine sand, 2 to 12 percent slopes	No	None	None	None	Flats	Yes	Slight	This wetland not on MOW, NWI, or LWI maps

Feature Name	Feature Type	Latitude	Longitude	Soil Mapping Unit	NRCS Hydric Soil	NHD Category	NWI Classification	NWI Cowardin Class	HGM Class	Feature Extends Offsite	Deviation from NWI/MOW	Additional Info
Wetland 5	Palustrine emergent wetland, Seasonally flooded	45.821593	-119.544779	40C - Quincy loamy fine sand, 2 to 12 percent slopes	No	None	None	None	Flats	Yes	Slight	MOW derived data
Wetland 6	Palustrine emergent wetland, Seasonally flooded	45.820927	-119.542519	40C - Quincy loamy fine sand, 2 to 12 percent slopes	No	None	None	None	Flats	Yes	Slight	MOW derived data

APPENDIX D ACREAGES AND RELEVANT DATA PER AQUATIC FEATURE

Table D-2: Acreages and Relevant Data Per Aquatic Feature

Feature Name	Date Surveyed	Appendix A, Figure 4 Map Number	Acreage within Site boundary	Contain Food and Game Fish	Paired Sample Points	Surface Water Depth (in.)	Estimated Inundation Duration (months)	Presumed Isolation or Connectivity to Waters of the United States	Aquatic Resource of Special Concern	Preliminary Jurisdictional Determination (DSL, USACE, Both, None)	Photo Direction
Wetland 1	04/17/24	Page 5	1.82	No	W-1,UP-1	0	None	Isolated	No	DSL	E
Wetland 2	04/18/24	Page 2	0.37	No	W-2,UP-9 W-3, UP-10	0	2 to 3	Isolated	No	DSL	E
Wetland 3	04/18/24	Page 3	0.18	No	W-4, UP-11	0	None	Isolated	No	DSL	SE
Wetland 4	04/18/24	Page 8	2.47	No	W-5, UP-12 W-6, UP-13	0	None	Isolated	No	DSL	SW
Wetland 5	05/13/24, 05/14/24	Page 10	1.61	No	W-8, UP-18 W-9, UP-21	0	None	Isolated	No	DSL	W
Wetland 6	05/13/24	Page 10	0.79	No	W-7, UP-19 W-10, UP-22	0	None	Isolated	No	DSL	NW

APPENDIX E ARID WEST DATA FORMS AND PHOTOS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-1

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834361 Long: -119.578505 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1F

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:
This well drained sandy soil may be affected by nearby irrigations in large crop circles. And when the irrigation season starts this area may experience more saturation from irrigation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	29	Y	FAC
2. *Populus nigra*	20	Y	NI
3.			
4.			
	49.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	20	Y	FACW
2. *Cynoglossum officinale*	15	Y	FACU
3. *Nepeta cataria*	12	Y	FACU
4. *Circium arvense*	10	N	NI
5.			
6.			
7.			
8.			
	57.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	20.00	x 2 =	40.00
FAC species	29.00	x 3 =	87.00
FACU species	27.00	x 4 =	108.00
UPL species	0.00	x 5 =	0.00
Column Totals:	76.00 (A)		235.00 (B)

Prevalence Index = B/A = 3.09

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

✔ 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:
A clear edge of Bromus tectorum was observed nearby, serving as a marker for the wetland boundary. However, there were insufficient hydrophytes in this area to classify it as a wetland. The deep, excessively drained soils support the growth of upland plants in area where wetlands are show by NWI to be present. Aerial photos indicate recent disturbances, leading to the rapid colonization of non-native, marginally hydrophytic plants in areas that may have once supported more hydric vegetation. Additionally, the cultivation of cottonwood trees has likely lowered the water table, altering the hydrological indicators over time. These factors suggest that this area was likely a wetland, as evidenced by hydrological and soil indicators.

SOIL

Sampling Point: W-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/2	97	7.5YR 5/6	3	CS	M	FSL	
8-30	7.5YR 3/2	80	7.5YR 5/6	20	CS	M	FSL	Very porous well drained soil

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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): 22

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:


W-1
2024-04-17
Lat/Long: 45.834361, -119.578505 (Data Form)
Direction: S

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-2

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834499 Long: -119.613160 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiandra*	30	Y	FACW
2. *Elaeagnus angustifolia*	10	Y	FAC
3.			
4.			
	40.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	35	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	35.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	65.00	x 2 =	130.00
FAC species	10.00	x 3 =	30.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	75.00 (A)		160.00 (B)

Prevalence Index = B/A = 2.13

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Very clear wetland site.

SOIL

Sampling Point: W-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/1	85	7.5YR 5/6	15	CS	M	FSL	
3-30	7.5R 5/3	95	10YR 5/6	5	CS	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✔ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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 site


W-2
Lat/Long: 45.834499, -119.613160 (Data Form)
W-1
2024-04-18
Direction: E

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-3

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834621 Long: -119.578937 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	100	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	100.00	x 2 =	200.00
FAC species	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		200.00 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: W-3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 6/2	95	7.5YR 5/6	5	CS	M	FSL	
4-20	7.5YR 5/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✔ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Clear wetland soil and wetland site

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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): 24

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:


W-3
Lat/Long: 45.834317, -119.613214
W-2
2024-04-18
Direction: N

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-4

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.833129 Long: -119.612767 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	100	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	100.00	x 2 =	200.00
FAC species	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		200.00 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

This is actually one wetland. Not two as shown on the MOW map. It is a contiguous polygon.

SOIL

Sampling Point: W-4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/1	90	7.5YR 5/6	10	CS	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✔ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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): 15

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

Large depression on the edge of a irrigated crop circle.

W-4 Lat/Long: 45.833129, -119.612767 (Data Form)

2024-04-18 Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-5

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.825459 Long: -119.556917 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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:
This is part of a wetland not previously recorded by any State or Federal databases.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	20	Y	FACW
2.			
3.			
4.			
	20.0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lepidium latifolium*	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	20.00	x 2 =	40.00
FAC species	100.00	x 3 =	300.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	120.00 (A)		340.00 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:
Total colonization of soil pit area by Lepidium latifolium.

SOIL

Sampling Point: W-5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-28	7.5YR 3/2	85	7.5YR 4/4	15	CS	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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): _____

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

W-5 Lat/Long: 45.825459, -119.556917 (Data Form)

2024-04-18 Direction: SW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-6

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.824947 Long: -119.556846 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Schoenoplectus acutus*	70	Y	OBL
2. *Urtica dioica*	15	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	85.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70.00	x 1 =	70.00
FACW species	0.00	x 2 =	0.00
FAC species	15.00	x 3 =	45.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	85.00 (A)		115.00 (B)

Prevalence Index = B/A = 1.35

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Clear line of rush at wetland boundary.

SOIL

Sampling Point: W-6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 3/1	100					FSL	
3-40	7.5YR 3/2	80	7.5YR 4/4	20	CS	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

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

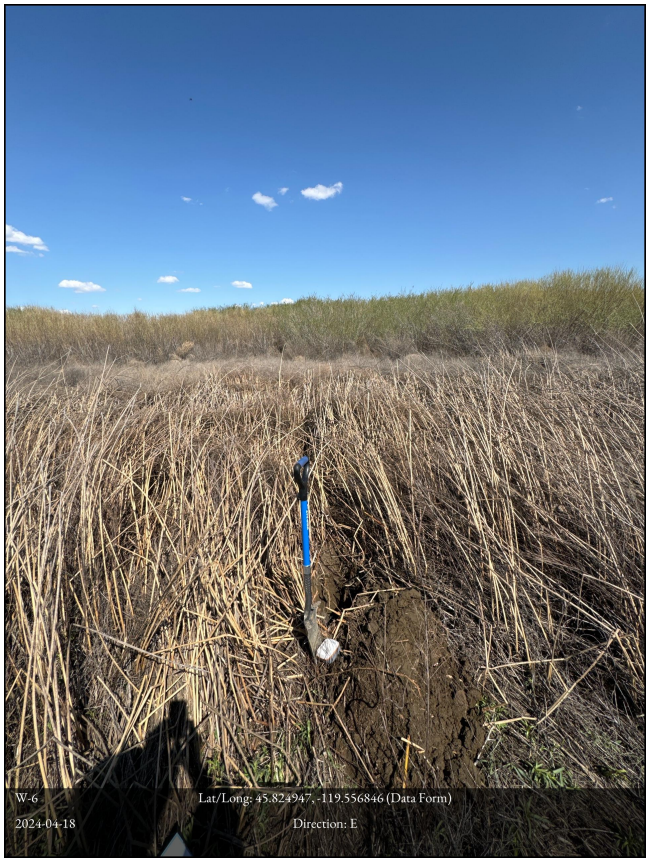
Water Table Present? Yes ✔ No ___ Depth (inches): 22

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:



W-6 Lat/Long: 45.824947, -119.556846 (Data Form)

2024-04-18 Direction: E

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-7

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820982 Long: -119.54225 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	15	Y	FAC
2.			
3.			
4.			
	15.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Zea mays*	5	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (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	15.00	x 3 =	45.00
FACU species	0.00	x 4 =	0.00
UPL species	5.00	x 5 =	25.00
Column Totals:	20.00 (A)		70.00 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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 pit on the edge of the crop circle. The last row corn Is 6 inches south of pit. Highly disturbed from regular cultivation of food crops. Hydrology and Soils point to a wetland.

SOIL

Sampling Point: W-7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	7.5YR 4/4	85	7.5YR 5/8	15	CS	M	FSL	Irrigated field

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✔ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Wetland soil is obvious. But problematic vegetation and an irrigation induced wetland. Topography begins to slope down to the west from this soil pit.

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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): 35

Wetland Hydrology Present? **Yes** ✔ **No** ___

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

Remarks:

W-7 Lat/Long: 45.820982, -119.54225 (Data Form)

2024-05-13 Direction: W

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-8

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.821593 Long: -119.544779 Datum: WGS84

Soil Map Unit Name: None 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	45	Y	FACW
2. *Lepidium latifolium*	15	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	60.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	45.00	x 2 =	90.00
FAC species	15.00	x 3 =	45.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	60.00 (A)		135.00 (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Edge of wetland.

SOIL

Sampling Point: W-8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					FSL	
2-4	7.5YR 4/3	100					FSL	
4-24	7.5YR 4/3	80	7.5YR 5/8	20	CS	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✔ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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:

W-8
2024-05-13
Lat/Long: 45.821593, -119.544779 (Data Form)
Direction: NW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-9

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.821507 Long: -119.545955 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Typha latifolia*	20	Y	OBL
2. *Bassia scoparia*	10	Y	FAC
3. *Phytolacca americana*	5	N	FAC
4.			
5.			
6.			
7.			
8.			
	35.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20.00	x 1 =	20.00
FACW species	0.00	x 2 =	0.00
FAC species	15.00	x 3 =	45.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	35.00 (A)		65.00 (B)

Prevalence Index = B/A = 1.86

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: W-9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 4/2	100					FSL	
6-24	7.5YR 5/6	100			CS	M/PL	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Clear matrix of pure sandy redox at about 6". Irrigation induced redox soils from topography. It is a low spot on the southern edge of the road.

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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): 30

Wetland Hydrology Present? **Yes** ✔ **No** ___

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

Remarks:


W-9
Lat/Long: 45.821507, -119.545955 (Data Form)
2024-05-13
Direction: W

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-14

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: W-10

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): Convex Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820927 Long: -119.542519 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Bassia scoparia*	70	Y	FAC
2. *Lepidium latifolium*	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	90.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (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	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	90.00 (A)		270.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

P

SOIL

Sampling Point: W-10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/3	100					FSL	
5-30	7.5YR 4/3	90	7.5YR 5/8	10	CS	M	FSL	Sandy redox

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

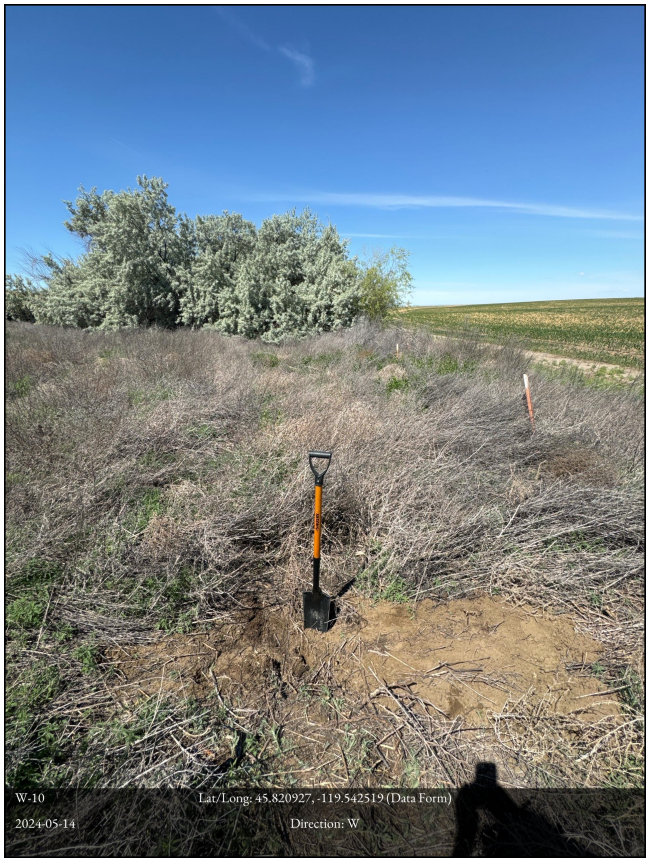
Water Table Present? Yes ___ No ✔ Depth (inches): _____

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:


W-10
Lat/Long: 45.820927, -119.542519 (Data Form)
2024-05-14
Direction: W

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-1

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834447 Long: -119.578619 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1C

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus nigra*	45	Y	NI
2.			
3.			
4.			
	45.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	90	Y	NI
2. *Cynoglossum officinale*	7	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	97.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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 0.00	x 3 =	0.00
FACU species 7.00	x 4 =	28.00
UPL species 0.00	x 5 =	0.00
Column Totals: 7.00 (A)		28.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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:

No obvious Hydro plants in the vicinity of this soil pit. Suggesting an upland.

SOIL

Sampling Point: UP-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/1	100					FSL	
3-27	10YR 4/2	90	10YR 4/6	10	C	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Similar soil as SP-1 with less redox concentrations.

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No wetland hydrology.

UP-1
2024-04-17
Lat/Long: 45.834447, -119.578619 (Data Form)
Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-2

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834621 Long: -119.578937 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1F

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	85	Y	NI
2. *Cynoglossum officinale*	4	N	FACU
3. *Salsola tragus*	3	N	FACU
4.			
5.			
6.			
7.			
8.			
	92.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 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: 0.00 (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	0.00	x 3 =	0.00
FACU species	7.00	x 4 =	28.00
UPL species	0.00	x 5 =	0.00
Column Totals:	7.00 (A)		28.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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:

No hydric plants

SOIL

Sampling Point: UP-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/1	100					FSL	
2-30	7.5YR 4/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

No redox in soil

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

UP-2 Lat/Long: 45.834621, -119.578937 (Data Form)

2024-04-17 Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-16

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-3

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834419 Long: -119.578921 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1C

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	80	Y	NI
2. *Salsola tragus*	10	N	FACU
3. *Galium aparine*	2	N	FACU
4.			
5.			
6.			
7.			
8.			
	92.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 8 % Cover of Biotic Crust 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: 0.00 (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	0.00	x 3 =	0.00
FACU species	12.00	x 4 =	48.00
UPL species	0.00	x 5 =	0.00
Column Totals:	12.00 (A)		48.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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: UP-3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/1	100					FSL	
2-25	10YR 5/2	90	7.5YR 4/6	10	C	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No wetland hydrology here


UP-3
Lat/Long: 45.834419,-119.578921 (Data Form)
2024-04-16
Direction: SW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-4

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Microtopography Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834254 Long: -119.579064 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1F

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus nigra*	50	Y	NI
2.			
3.			
4.			
	50.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	45	Y	NI
2. *Galium aparine*	5	N	FACU
3. *Cynoglossum officinale*	3	N	FACU
4.			
5.			
6.			
7.			
8.			
	53.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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	0.00	x 3 =	0.00
FACU species	8.00	x 4 =	32.00
UPL species	0.00	x 5 =	0.00
Column Totals:	8.00 (A)		32.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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: UP-4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/2	100					FSL	
2-30	7.5R 3/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No hydrology indicators


UP-4
Lat/Long: 45.834254, -119.579064 (Data Form)
2024-04-17
Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-5

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834593 Long: -119.578779 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1F

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus nigra*	30	Y	NI
2.			
3.			
4.			
	30.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	85	Y	NI
2. *Cynoglossum officinale*	30	Y	FACU
3. *Galium aparine*	10	N	FACU
4. *Salsola tragus*	8	N	FACU
5.			
6.			
7.			
8.			
	133.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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	0.00	x 3 =	0.00
FACU species	48.00	x 4 =	192.00
UPL species	0.00	x 5 =	0.00
Column Totals:	48.00 (A)		192.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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: UP-5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					FSL	
2-28	10YR 6/2	95	10YR 3/6	5	C	M	FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Less moist than SP-2

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No hydrology indicators present.

UP-5 Lat/Long: 45.834556, -119.578753

2024-04-17 Direction: E

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-6

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834419 Long: -119.57892 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification: PEM1F

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus nigra*	50	Y	NI
2.			
3.			
4.			
	50.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	25	Y	NI
2. *Cynoglossum officinale*	8	Y	FACU
3. *Galium aparine*	5	N	FACU
4.			
5.			
6.			
7.			
8.			
	38.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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	0.00	x 3 =	0.00
FACU species	13.00	x 4 =	52.00
UPL species	0.00	x 5 =	0.00
Column Totals:	13.00 (A)		52.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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:

No distinct wetland plants

SOIL

Sampling Point: UP-6

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
0-2	7.5YR 2.5/1	100					FSL	
2-24	7.5YR 3/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

No redox in soil

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

UP-6 Lat/Long: 45.834419, -119.57892 (Data Form)

2024-04-17 Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-17

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-7

Investigator(s): Quinn Radford Section, Township, Range: sec 16 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834254 Long: -119.579064 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification:

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus nigra*	45	Y	NI
2.			
3.			
4.			
	45.0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Cynoglossum officinale*	30	Y	FACU
2. *Bromus tectorum*	15	Y	NI
3.			
4.			
5.			
6.			
7.			
8.			
	45.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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	0.00	x 3 =	0.00
FACU species	30.00	x 4 =	120.00
UPL species	0.00	x 5 =	0.00
Column Totals:	30.00 (A)		120.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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:

No hydric plants.

SOIL

Sampling Point: UP-7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	7.5YR 3/2	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Upland soil

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

UP-7 Lat/Long: 45.834254, -119.579064 (Data Form)

2024-04-17 Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-8

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.835208 Long: -119.612745 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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 _____ Hydric Soil Present? Yes _____ No ✔ Wetland Hydrology Present? Yes _____ No ✔	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✔

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	75	Y	FACW
2. *Rumex venosus*	10	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	85.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	75.00	x 2 =	150.00
FAC species	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	10.00	x 5 =	50.00
Column Totals:	85.00 (A)		200.00 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: UP-8

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
0-24	10YR 5/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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:

Clearly Upland Site.

Remarks:


UP-8
2024-04-18
Lat/Long: 45.835208, -119.612745 (Data Form)
Direction: NW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-9

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 3-7

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834505 Long: -119.613044 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	15	Y	FAC
2.			
3.			
4.			
	15.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Lepidium latifolium*	85	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	85.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (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	100.00	x 3 =	300.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		300.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: UP-9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 5/4	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Clear Upland site.

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

UP-9 Lat/Long: 45.834505, -119.613044 (Data Form)

2024-04-18 Direction: SW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-10

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 3-7

Subregion (LRR): LRR B, MLRA 7 Lat: 45.834246 Long: -119.613268 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	45	Y	NI
2. *Rumex venosus*	25	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	70.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (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	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	25.00	x 5 =	125.00
Column Totals:	25.00 (A)		125.00 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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: UP-10

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
0-24	10YR 5/4	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

No hydric soil.

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No hydrology


UP-10
Lat/Long: 45.834246, -119.613268 (Data Form)
No hydric soil
2024-04-18
Direction: N

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-11

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Crest Local relief (concave, convex, none): Microtopography Slope (%): 8-15

Subregion (LRR): LRR B, MLRA 7 Lat: 45.833126 Long: -119.612653 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	25	Y	FAC
2.			
3.			
4.			
	25.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	60	Y	NI
2. *Rumex venosus*	20	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	80.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (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 25.00	x 3 =	75.00
FACU species 0.00	x 4 =	0.00
UPL species 20.00	x 5 =	100.00
Column Totals: 45.00 (A)		175.00 (B)

Prevalence Index = B/A = 3.89

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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:

Upland plants

SOIL

Sampling Point: UP-11

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
0-20	10YR 6/2	100						

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:


UP-11
Lat/Long: 45.833126, -119.612653 (Data Form)
2024-04-18
Direction: SE

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-12

Investigator(s): Quinn Radford Section, Township, Range: sec 18 T004N R026E

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.825492 Long: -119.556973 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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 _____ Hydric Soil Present? Yes _____ No ✔ Wetland Hydrology Present? Yes _____ No ✔	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✔

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lepidium latifolium*	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

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: 100.00 (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	100.00	x 3 =	300.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		300.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: UP-12

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
0-24	7.5YR 3/1	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No hydrology.

Remarks:

UP-12 Lat/Long: 45.825492, -119.556973 (Data Form)

2024-04-18 Direction: S

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-13

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.824933 Long: -119.556928 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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 _____ Hydric Soil Present? Yes _____ No ✔ Wetland Hydrology Present? Yes _____ No ✔	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✔

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lepidium latifolium*	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

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: 100.00 (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	100.00	x 3 =	300.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		300.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Totally colonized by lepidium.

SOIL

Sampling Point: UP-13

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
0-2	7.5YR 2.5/1	100					FSL	
2-24	7.5YR 4/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:


UP-13
Lat/Long: 45.824933, -119.556928 (Data Form)
2024-04-18
Direction: E

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow Sampling Date: 2024-04-18

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-14

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820889 Long: -119.542243 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes NWI classification:

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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	40	Y	FAC
2.			
3.			
4.			
	40.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bassia scoparia*	20	Y	FAC
2. *Bromus tectorum*	10	Y	NI
3.			
4.			
5.			
6.			
7.			
8.			
	30.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust _____

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: 66.67 (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	60.00	x 3 =	180.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	60.00 (A)		180.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: UP-14

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
0-24	7.5YR 4/4	100						

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Upland soil

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:


UP-14
Lat/Long: 45.820889, -119.542243 (Data Form)
2024-04-18
Direction: SW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-16

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Microtopography Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820927 Long: -119.542188 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	25	Y	FAC
2.			
3.			
4.			
	25.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bassia scoparia*	20	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	20.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (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	45.00	x 3 =	135.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	45.00 (A)		135.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Upslope from road 12-16".

SOIL

Sampling Point: UP-16

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
0-30	7.5YR 4/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

No redox at all

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:


UP-16
Lat/Long: 45.820927, -119.542188 (Data Form)
2024-05-13
Direction: W

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-17

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Microtopography Slope (%): 3-7

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820957 Long: -119.542224 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Elaeagnus angustifolia*	50	Y	FAC
2.			
3.			
4.			
	50.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Zea mays*	10	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (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	50.00	x 3 =	150.00
FACU species	0.00	x 4 =	0.00
UPL species	10.00	x 5 =	50.00
Column Totals:	60.00 (A)		200.00 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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 pit is just above the road grade.

SOIL

Sampling Point: UP-17

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
0-1	7.5YR 2.5/2	100					FSL	
1-30	7.5YR 4/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

No redox in soil

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

UP-17 Lat/Long: 45.820957, -119.542224 (Data Form)

2024-05-13 Direction: S

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-18

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Concave Slope (%): 3-7

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820956 Long: -119.542262 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Elaeagnus angustifolia*	35	Y	FAC
2.			
3.			
4.			
5.			
	35.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus tectorum*	10	Y	NI
2. *Salsola tragus*	10	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	20.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (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 35.00	x 3 = 105.00
FACU species 10.00	x 4 = 40.00
UPL species 0.00	x 5 = 0.00
Column Totals: 45.00 (A)	145.00 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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: UP-18

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
0-2	7.5YR 4/3	100					FSL	
2-28	7.5YR 3/1	100					FSL	No redox anywhere in the soil.

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No hydrology indicators


UP-18
Lat/Long: 45.820956, -119.542262 (Data Form)
2024-05-13
Direction: SW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-19

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.821615 Long: -119.544789 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Lepidium latifolium*	40	Y	FAC
2. *Phragmites australis*	20	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	60.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	20.00	x 2 =	40.00
FAC species	40.00	x 3 =	120.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	60.00 (A)		160.00 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: UP-19

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
0-24	7.5YR 5/4	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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:

No wetland hydrology characteristics detectible.


UP-19
Lat/Long: 45.821615, -119.544789 (Data Form)
2024-05-13
Direction: NW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-13

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-20

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820912 Long: -119.542523 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	70	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	70.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	70.00	x 2 =	140.00
FAC species	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	70.00 (A)		140.00 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Though Phragmites is within the plot, the upland soil and lack of hydrology show this clearly is not a wetland site.

SOIL

Sampling Point: UP-20

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
0-33	7.5YR 4/3	100					FSL	NO REDOX

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

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:

No hydrology.

UP-20 Lat/Long: 45.820912, -119.542523 (Data Form)

2024-05-13 Direction: W

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-14

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-21

Investigator(s): Quinn Radford Section, Township, Range: sec 15 T004N R026E

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Microtopography Slope (%): 3-7

Subregion (LRR): LRR B, MLRA 7 Lat: 45.821506 Long: -119.545965 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bassia scoparia*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust _____

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: 100.00 (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	5.00	x 3 =	15.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	5.00 (A)		15.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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:

Little veg. Because it is a road

SOIL

Sampling Point: UP-21

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5YR 4/2	100					FSL	
7-10	7.5YR 4/2	97	7.5YR 5/6	3	C	M	FSL	
10-30	7.5YR 4/2	100					FSL	Very thin band of redox then no redox at all

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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:

Not a hydric soil - just on the edge of depression where water doesn't pool.

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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No hydrological indicators


UP-21
Lat/Long: 45.821506, -119.545965 (Data Form)
2024-05-14
Direction: W

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Umatilla-Morrow County Connect Project City/County: Morrow County Sampling Date: 2024-05-14

Applicant/Owner: Umatilla Electric Cooperative State: Oregon Sampling Point: UP-22

Investigator(s): Quinn Radford Section, Township, Range: sec 22 T004N R026E

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR B, MLRA 7 Lat: 45.820912 Long: -119.542523 Datum: WGS84

Soil Map Unit Name: Quincy loamy fine sand, 2 to 12 percent slopes 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 _____ Hydric Soil Present? Yes _____ No ✔ Wetland Hydrology Present? Yes _____ No ✔	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✔

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lepidium latifolium*	45	Y	FAC
2. *Bassia scoparia*	40	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	85.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (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	85.00	x 3 =	255.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	85.00 (A)		255.00 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ 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: UP-22

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 -26	7.5YR 5/3	100					FSL	

[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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ 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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ 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) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

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:

No Hydrological indicators

UP-22 Lat/Long: 45.820912, -119.542523 (Data Form)

2024-05-14 Direction: NE

This page intentionally left blank.