

Request for Amendment 5 for the Biglow Canyon Wind Farm

Exhibit O. State and Local Laws and Regulations

Part 1. Wetlands and Other Jurisdictional Waters

**Submitted to
Oregon Energy Facility Siting Council**

Prepared for



Portland General Electric Company

Prepared by



October 2026

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Attachment O1-1. Wetland Delineation Report

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AC	alternating current
BCWF or Facility	Biglow Canyon Wind Farm
BESS	battery energy storage system
BIGL 2 or Project Developer	BIGL 2, LLC
Certificate Holder or PGE	Portland General Electric Company
Council or EFSC	Energy Facility Siting Council
gen-tie	generation tie
kV	kilovolt
MW	megawatt
MWh	megawatt-hour
OAR	Oregon Administrative Rules
ODOE	Oregon Department of Energy
ODSL	Oregon Department of State Lands
ORS	Oregon Revised Statutes
PV	photovoltaic
RFA	Request for Amendment
SDAM	Streamflow Duration Assessment Method for the Pacific Northwest
Site Certificate	Site Certificate on Amendment 4
Solar Facility	solar energy generation and battery storage components
WOTUS	waters of the United States

1.0 Introduction

The Portland General Electric Company (PGE or Certificate Holder) submits this Request for Amendment (RFA) 5 to the Site Certificate on Amendment 4, issued March 27, 2026 (Site Certificate) for the Biglow Canyon Wind Farm (BCWF or Facility) to add a second phase of solar photovoltaic (PV) energy generation and battery storage capacity to the BCWF following the solar power generation and battery storage capacity approved under RFA 4.

BCWF, owned and operated by PGE, is located within an approved site boundary comprising approximately 25,000 acres, approximately 2.5 miles northeast of the town of Wasco in Sherman County, Oregon (Background Exhibit Figure 1). The BCWF operates under the Site Certificate from the Oregon Energy Facility Siting Council (Council or EFSC) as administered by the Oregon Department of Energy (ODOE). BCWF currently consists of 217 operating wind turbines, with a maximum blade tip height of 445 feet, and a peak generating capacity of 450 megawatts (MW) (Wind Facility). RFA 4, approved March 27, 2026, added 125 MW alternating current (AC) generating capacity from PV solar arrays and 500 megawatt-hours (MWh) in battery storage capacity. The solar energy generation and battery storage components (Solar Facility) described in RFA 4 are currently under construction.

In RFA 5, PGE proposes to add up to 200 MW AC generating capacity from PV solar arrays and 1,000 MWh in battery storage capacity (RFA 5 Solar Facility) by expanding the overall BCWF site boundary by approximately 839 acres. The RFA 5 Solar Facility is located across approximately 622 acres of the existing BCWF site boundary and 839 acres of expanded site boundary (together, RFA 5 Site Boundary; see Background Exhibit Figure 4).

The RFA 5 Site Boundary provides a conservative estimate of the maximum area needed for development and micro siting through final design and construction for the RFA 5 Solar Facility, rather than the anticipated disturbance footprint. Primary infrastructure includes solar arrays, inverters, battery energy storage system (BESS) facilities and their subcomponents (i.e., inverters), one collector substation, and medium-voltage collector lines (herein collectively referred to as “Solar Components”). Additionally, the Solar Components include operations and maintenance (O&M) structures, site access roads, internal roads, perimeter fencing, facility entry gates, and temporary laydown areas. The maximum generating capacity from the Solar Components will be 200 MW AC. Power generated from the Solar Components will be transferred to the grid via a 230-kilovolt (kV) generation tie (gen-tie) transmission line, approximately 2.7 miles long. The RFA 5 Solar Facility includes the Solar Components and the gen-tie transmission line.

PGE will own and operate the RFA 5 Solar Facility as a part of the BCWF, which, to date, has been developed by BIGL 2, LLC (BIGL 2, or Project Developer). BIGL 2, in its capacity as the Project Developer, supports PGE in this RFA 5 and may construct and temporarily operate the RFA 5 Solar Facility on behalf of PGE under a Build-Transfer Agreement.

The information contained herein supports demonstration of compliance with the State and Local Laws and Regulations approval standard for Oregon Administrative Rules (OAR) 345-022-00160.

2.0 Wetlands and Other Jurisdictional Waters – OAR 345-022-0160(1)(a)

OAR 345-022-0160 To assist the Council in determining compliance with all state and local laws and regulations applicable to EFSC and the siting process, submit the following, as directed by the project order described in OAR 345-015-0160:

(1) Regarding Water

(a) Information based on literature and field study, as appropriate, about waters of this state, as defined under ORS 196.800, including:

2.1 Surveys – OAR 345-022-0160(1)(a)(A)

(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;

The RFA 5 Site Boundary reflects the study area for RFA 5 within the meaning of Oregon Revised Statute (ORS) 345-001-0010(35) (Figure 01-1). Existing land use within the RFA 5 Site Boundary is generally dominated by wheat and carrot seed farming, and the infrastructure needed to manage the existing wind farm (e.g., gravel roads). All permanent and temporary disturbances associated with RFA 5 are proposed within the RFA 5 Site Boundary; however, not all of this area will be disturbed.

A wetland delineation survey was conducted in July 2024 by Tetra Tech ahead of submitting RFA 4. The wetland study area for this survey included areas that are now the RFA 5 Site Boundary. The wetland delineation report that was produced after this survey and submitted to the Oregon Department of State Lands (ODSL) as Wetland Delineation Report WD #2025-0012 is attached to this exhibit as Attachment 01-1.

2.1.1 Definitions

2.1.1.1 State

ORS 196.800(15) defines “Waters of the State” as:

All natural waterways, tidal and non-tidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and non-navigable bodies of water in this state and those portions of the ocean shore, as defined in ORS 390.605, where removal or fill activities are regulated under a state-assumed permit program as provided in 33 United States Code 1344(g) of the Federal Water Pollution Control Act, as amended.

Wetlands are defined in ORS 196.800(17) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The ODSL definition of wetlands mirrors the federal definition; see OAR 141-085-0510 (110).

2.1.1.2 Jurisdictional Versus Non-Jurisdictional Waters

Not all wetlands and streams are within the jurisdiction of state or federal regulation, and not all waters falling within the state’s jurisdiction fall under federal jurisdiction. For RFA 5, several jurisdictional distinctions are important to estimate impacts only to jurisdictional wetlands and other waters. These include determinations related to the following:

- Ephemeral streams, which generally are not under state jurisdiction and are evaluated on a case-by-case basis for federal jurisdiction, as distinct from perennial and intermittent (USACE 2005, USACE 2008); and
- Artificially created roadside and farm ditches, which are considered waters of the State if they contain food or game fish and are connected to waters of the State (OAR 141-085-0515(8)) and waters of the United States (WOTUS) if they connect to other WOTUS and are not ephemeral (EPA and USACE 2011).

Ephemeral streams are defined in the Streamflow Duration Assessment Method for the Pacific Northwest (SDAM; Nadeau 2015) as streams that flow:

...only in direct response to precipitation. Water typically flows only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the stream bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water).

In contrast, intermittent streams are defined by Oregon as “any stream which flows during a portion of every year and which provides spawning, rearing or food-producing areas for food and game fish” (OAR 141-085-0510(49)). Food-producing streams are typically one stream order above a fish-bearing stream.

While the term “jurisdictional waters” is used in this Exhibit, the Certificate Holder recognizes that final determination of agency jurisdiction will be made by ODSL, based on the information presented by the Certificate Holder.

2.1.2 Delineation Methods

Field investigations for the delineation of wetlands and other waters within the wetland study area were conducted by Tetra Tech from July 9 to 12, 2024. Detailed descriptions of delineation methods for wetlands and other waters are provided in the Wetland and Other Waters Delineation Report

(Attachment 01-1). This report was submitted to ODSL as Wetland Delineation Report WD #2025-0012 and received concurrence.

2.1.3 Delineation Results

The wetland and other waters surveys resulted in no wetlands or water features being identified within the RFA 5 Site Boundary. Per the definitions under OAR 141-085-0510 and OAR 141-085-0515, no jurisdictional features are present within the RFA 5 Site Boundary (Figure O-1.1).

2.2 Effects on Waters of the State – OAR 345-022-0160(1)(a)(B)

(B) An analysis of whether construction or operation of the proposed facility would adversely affect any waters of this state;

Since no wetlands or water features are present within the RFA 5 Site Boundary, no impacts are expected to any waters of this State.

2.3 Significance of Impacts – OAR 345-022-0160(1)(a)(C)

(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);

Since no wetlands or water features are present within the RFA 5 Site Boundary, no impacts are expected to any waters of this State.

2.4 Removal-Fill Information – OAR 345-022-0160(1)(a)(D)(E)

(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;

(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

Since no wetlands or water features are present within the RFA 5 Site Boundary, remove-fill authorization is not anticipated to be needed.

2.5 Mitigation and Monitoring Program for Waters of the State – OAR 345-022-0160(1)(a)(F)

(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.

Since no wetlands or water features are present within the RFA 5 Site Boundary, no mitigation or monitoring program is required.

3.0 References

- EPA (U.S. Environmental Protection Agency) and USACE (U.S. Army Corps of Engineers). 2011. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*.
<http://www.epa.gov/owow/wetlands/pdf/RapanosGuidance6507.pdf>
- Nadeau, Tracie-Lynn. 2015. Streamflow Duration Assessment Method for the Pacific Northwest. EPA 910-K-14-001, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.
- USACE (U.S. Army Corps of Engineers). 2005. Regulatory Guidance Letter (RGL) 05-05 Ordinary High Water Mark Identification. December 2005.
- USACE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.
<https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7627>

4.0 Approval Standards and Submittal Requirements

Table 01-1. Approval Standards and Submittal Requirements Matrix

Requirements	Location
OAR 345-022-0160 State and Local Laws and Regulations	–
Submittal Requirements	
To assist the Council in determining compliance with all state and local laws and regulations applicable to EFSC and the siting process, submit the following, as directed by the project order described in OAR 345-015-0160:	–
(1) Regarding Water	–
(a) Information based on literature and field study, as appropriate, about waters of this state, as defined under ORS 196.800, including:	Section 2.0
(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;	Section 2.1
(B) An analysis of whether construction or operation of the proposed facility would adversely affect any waters of this state;	Section 2.2
(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 2.3
(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 2.4

Request for Amendment 5
Exhibit 01. Wetlands and Other Jurisdictional Waters

Requirements	Location
(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 2.4
(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 2.5

Figures

Biglow Canyon Wind Farm Request for Amendment #5

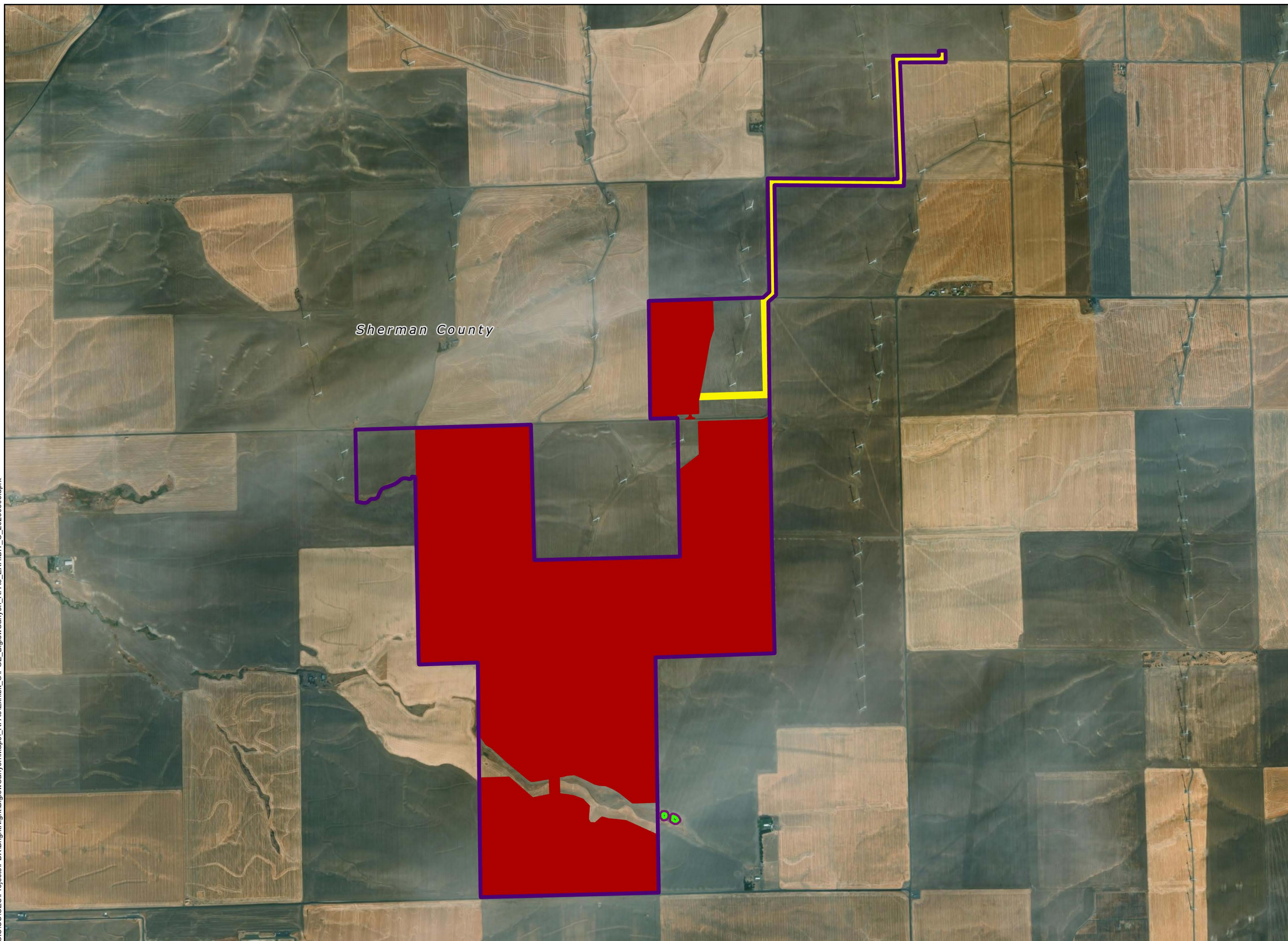
Figure O1-1 Delineated Wetlands and Waters

SHERMAN COUNTY, OR

- RFA5 Site Boundary
- State Boundary
- County Boundary
- City/Town
- Exclusion Zone
- Field Delineated Wetlands (Cowardin; HGM)
 - PEM; Flats
- Impacts
 - Temporary
 - Permanent



Reference Map



1:25,000

WGS 1984 UTM Zone 10N

0 1 2 Miles

NOT FOR CONSTRUCTION

Attachment 01-1. Wetland Delineation Report



Oregon

Tina Kotek, Governor

Department of State Lands

775 Summer Street NE, Suite 100

Salem, OR 97301-1279

(503) 986-5200

FAX (503) 378-4844

www.oregon.gov/dsl

August 12, 2025

State Land Board

BIGL bn, LLC

Attention: Todd Ellwood

Tina Kotek

Governor

Re: WD # 2025-0012 **Approved**
Wetland Delineation Report for Biglow Canyon Wind Farm
Sherman County; Many Tax Lots, See Table Below

Tobias Read

Secretary of State

Elizabeth Steiner

State Treasurer

Dear Todd Ellwood:

The Department of State Lands has reviewed the wetland delineation report prepared by Tetra Tech Inc for the site referenced above. Please note that the study area includes only a portion of the tax lots described in the table (see the attached maps). Based upon the information presented in the report, and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in Figure 5 and 5.1 – 5.28 of the report. Please replace all copies of the preliminary wetland maps with these final Department-approved maps.

Within the study area, three wetlands (WT01 through WT03) and four waterways (ST01 through ST04) were identified. Wetlands WT03 (totaling approximately 4.21 acres) and ST04 are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined).

Wetlands WT01 and WT02 and the ephemeral streams (ST01, ST02, and ST03) are exempt per OAR 141-085-0515(6) and -0510(67); therefore, are not subject to current state Removal-Fill requirements.

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

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

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

Thank you for having the site evaluated. If you have any questions, please contact the Wetland Ecologist, Trevor Griffiths, at (971) 375-8886.

Sincerely,

Daniel Evans

Digitally signed by Daniel
Evans
Date: 2025.08.15 10:38:28
-07'00'

Daniel Evans, PWS
Wetland Ecology Specialist

Enclosures

ec: Katie Pyne, Tetra Tech Inc.
Sherman County Planning Department
Corps of Engineers
Richard Fitzgerald, DSL
Joy Lovett, ODFW

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

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

Ways to submit report:

- ❖ **Under 50MB** - A single unlocked PDF can be emailed to: wetland.delineation@dsl.oregon.gov.
- ❖ **50MB or larger** - A single unlocked PDF can be uploaded to [DSL's Box.com](#) website. After upload notify DSL by email at: wetland.delineation@dsl.oregon.gov.
- ❖ **OR** a hard copy of the unbound report and signed cover form can be mailed to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.

Ways to pay review fee:

- ❖ By credit card on [DSL's epayment portal](#) after receiving the unique file number from DSL's emailed confirmation.
- ❖ By check payable to the Oregon Department of State Lands attached to the unbound mailed hardcopy **OR** attached to the complete signed cover form if report submitted electronically.

Contact and Authorization Information			
☒ Applicant ☐ Owner Name, Firm and Address: BIGL bn, LLC (subsidiary of BrightNight, LLC) Attention: Todd Ellwood, Senior Director Permitting		Business phone # (850) 963-6011 Mobile phone # (optional) E-mail: todd.ellwood@brightnightpower.com	
☐ Authorized Legal Agent, Name and Address (if different):		Business phone # Mobile phone # (optional) E-mail:	
I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.			
Typed/Printed Name: Todd Ellwood		Signature: Todd Ellwood	
Date: 01/09/2025		Special instructions regarding site access: _____	
Project and Site Information			
Project Name: Biglow Canyon Wind Farm		Latitude: 45.642280 Longitude: 120.607011 decimal degree - centroid of site or start & end points of linear project	
Proposed Use: Solar energy generation and battery storage at existing wind farm		Tax Map # - Tax Lot(s) See report	
Project Street Address (or other descriptive location): 2.5 miles northeast of Wasco		Tax Map # - Tax Lot(s) See report	
City: Wasco County: Sherman		Township 02N Range 18E Section 19 QQ Use separate sheet for additional tax and location information	
Waterway: N/A		River Mile: N/A	
Wetland Delineation Information			
Wetland Consultant Name, Firm and Address: Katie Pyne, Tetra Tech Inc 19803 North Creek Parkway Bothell, WA 98011		Phone # - Mobile phone # (if applicable) (425) 273-3098 E-mail: katie.pyne@tetrattech.com	
The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.			
Consultant Signature: Katie Pyne		Date: 01/10/2025	
Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent			
Wetland/Waters Present? ☒ Yes ☐ No		Study Area size: 3980 acres Total Wetland Acreage: 4.5800	
Check Applicable Boxes Below			
☐ R-F permit application submitted		☐ Fee payment submitted \$ _____	
☐ Mitigation bank site		☐ Resubmittal of rejected report (\$100)	
☒ EFSC/ODOE Proj. Mgr: Christopher Clark		☐ Request for Reissuance. See eligibility criteria. (no fee)	
☐ Wetland restoration/enhancement project (not mitigation)		DSL # _____ Expiration date _____	
☐ Previous delineation/application on parcel If known, previous DSL # _____		☐ LWI shows wetlands or waters on parcel Wetland ID code _____	
For Office Use Only			
DSL Reviewer: JS		Fee Paid Date: ____ / ____ / ____	
Date Delineation Received: 1 / 10 / 25		DSL WD # 2025-0012	
DSL App.# _____		_____	

Table 1. Tax Lot Numbers within the Study Area

Tax Lot Number	
01N170000100	02N1700008201
01N170000200	02N1700008300
02N1700005100	01N1800001600
02N1700008100	01N1800001601
02N1700008200	02N1800003800
02N1800003900	02N1800004000
02N1800004200	02N1800004300
02N1800004400	02N1800004500
02N1800001600	02N1800001700
02N1800007600	02N1800007900

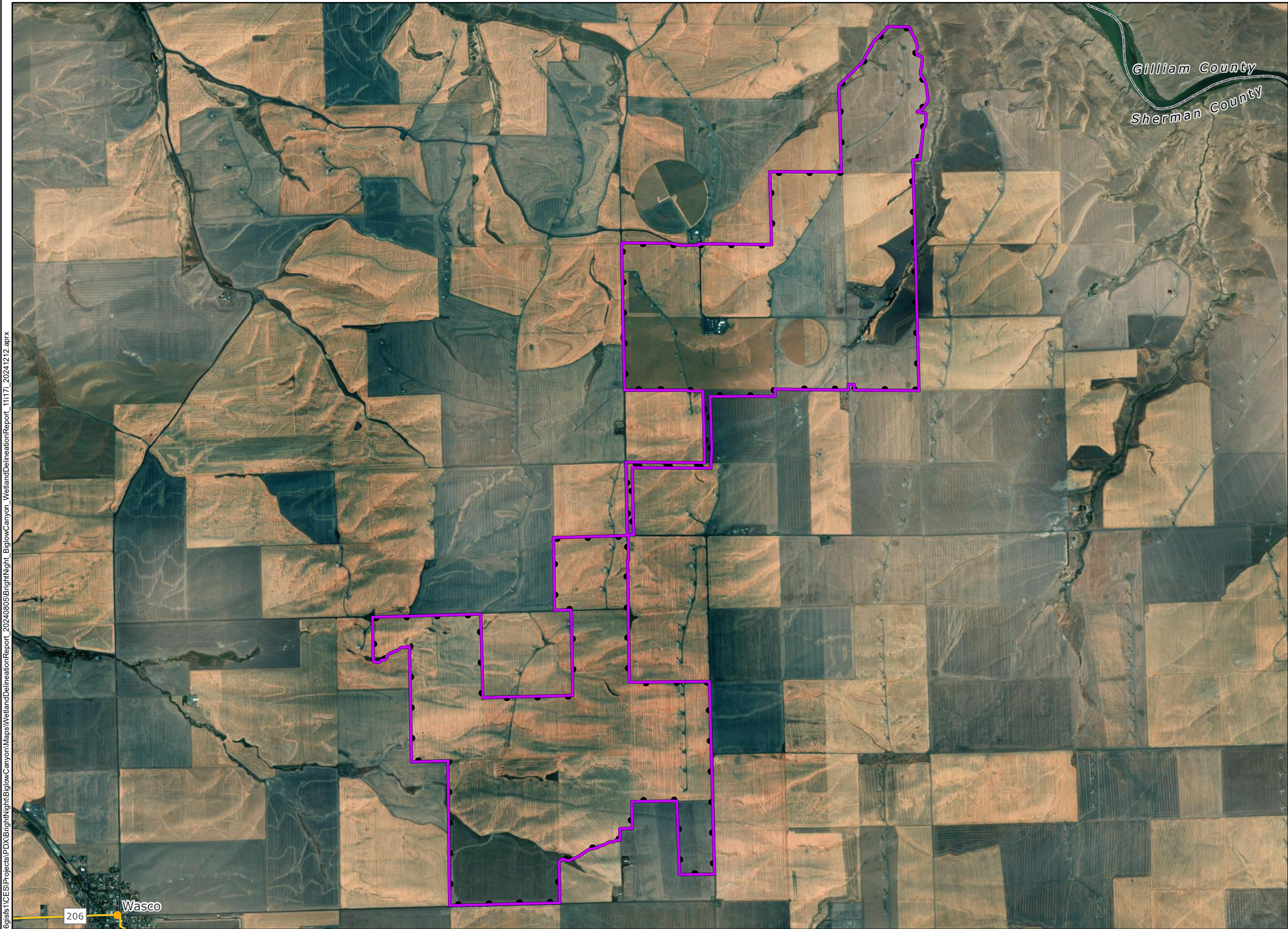
Wetlands Mapped in the Project Study Area

Wetland Name	Cowardin Classification	HGM	Acres	General Conditions
WT01	Palustrine Emergent	Depressional Closed Nonpermanent	0.15	Relatively flat topography at bottom of basin vegetated with dense stand of <i>Hordeum jubatum</i> . No standing water and soils were dry but had redox.
WT02	Palustrine Emergent	Depressional Closed Nonpermanent	0.22	Pond with wetland vegetation (<i>Myriophyllum verticillatum</i>) across water surface and <i>Phragmites australis</i> and <i>Schoenoplectus acutus</i> at edges.
WT03	Riverine Streambed	Riverine Flow Through	4.21	Wetland has riparian canopy made up of silver maple, walnut, and black locust in some locations but is mostly vegetated by reed canary grass (<i>Phalaris arundinacea</i>) and speedwell (<i>Veronica americana</i>).

Waters Mapped in the Project Study Area

Wetland Name	Duration	Length (ft)	Average Width (ft)	General Conditions
ST01	Ephemeral	133	2	Dry ephemeral drainage full of upland vegetation and weeds. Appears to have been used as a trash dump.
ST02	Ephemeral	113	2	Dry ephemeral drainage full of upland vegetation and weeds, including intermediate wheatgrass, cheatgrass, and Russian thistle.
ST03	Ephemeral	331	2	Dry ephemeral drainage full of upland vegetation and weeds including, intermediate wheatgrass, cheatgrass, and Russian thistle.
ST04	Intermittent	2487	3	Delineated using desktop imagery due to access issues. Surveyors could see the stream from the canyon edge and determined that it is intermittent. Narrow and has sagebrush in the riparian area.

\\css706g\ists\ICES\Projects\PD\BrightNight\BiglowCanyon\Maps\WellandDelineationReport_20240805\BrightNight_BiglowCanyon_WellandDelineationReport_11171_20241212.aprx



Biglow Canyon Wind Farm Request for Amendment 4

Figure 1
Project Location

SHERMAN COUNTY, OR

-  Solar Micrositing Area
-  Survey Area
-  City/Town
-  County Boundary
-  State Highway



Data Sources

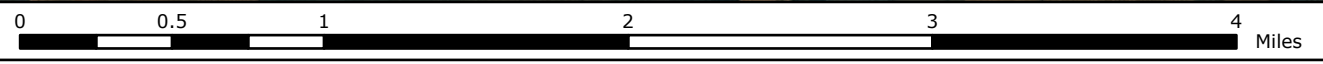
BrightNight-Project Infrastructure; Tiger-Roads;
ESRI-Topographic

Reference Map



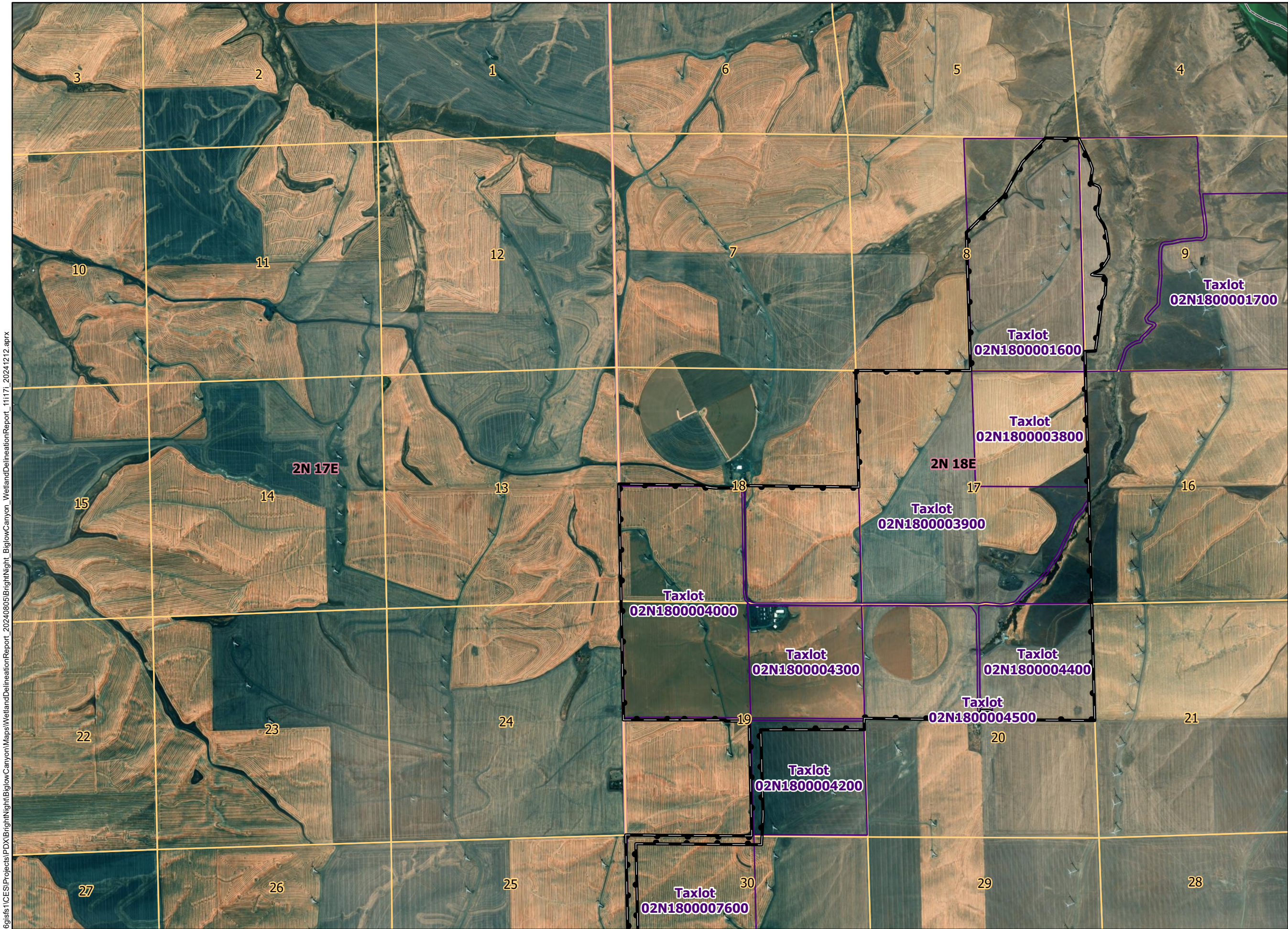
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WGS 1984 UTM Zone 10N



NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 2.1 Tax Lot Detail Map

SHERMAN COUNTY, OR

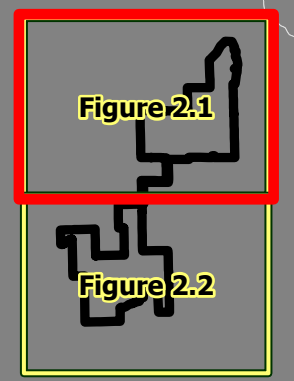
- Study Area
- Taxlot Boundary
- Section
- Township
- County Boundary



Data Sources

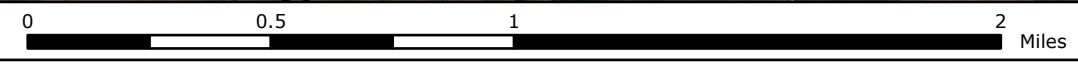
BrightNight-Project Infrastructure: Tiger-Roads;
ESRI-Aerial, Sherman County-Taxlots

Reference Map



1:25,000

WGS 1984 UTM Zone 10N



NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 2.2 Tax Lot Detail Map

SHERMAN COUNTY, OR

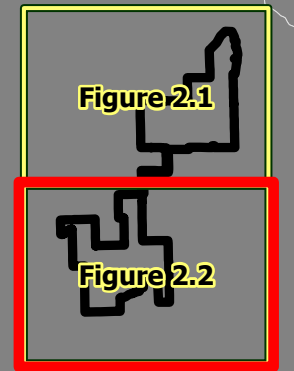
- Study Area
- Taxlot Boundary
- Section
- Township
- County Boundary



Data Sources

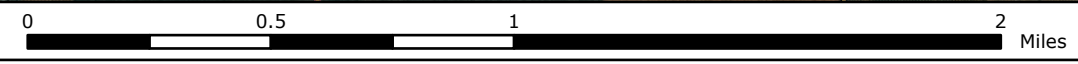
BrightNight-Project Infrastructure: Tiger-Roads;
ESRI-Aerial, Sherman County-Taxlots

Reference Map



1:25,000

WGS 1984 UTM Zone 10N



NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5 Wetlands and Waters Delineation Map

SHERMAN COUNTY, OR

- Map Grid
- Study Area
- Taxlot Boundary
- County Boundary
- Photo Point
- Sample Plot
- Intermittent
- Ephemeral
- Field Delineated Wetlands (Cowardin; HGM)
 - PEM; Flats
 - PSS; Flats

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

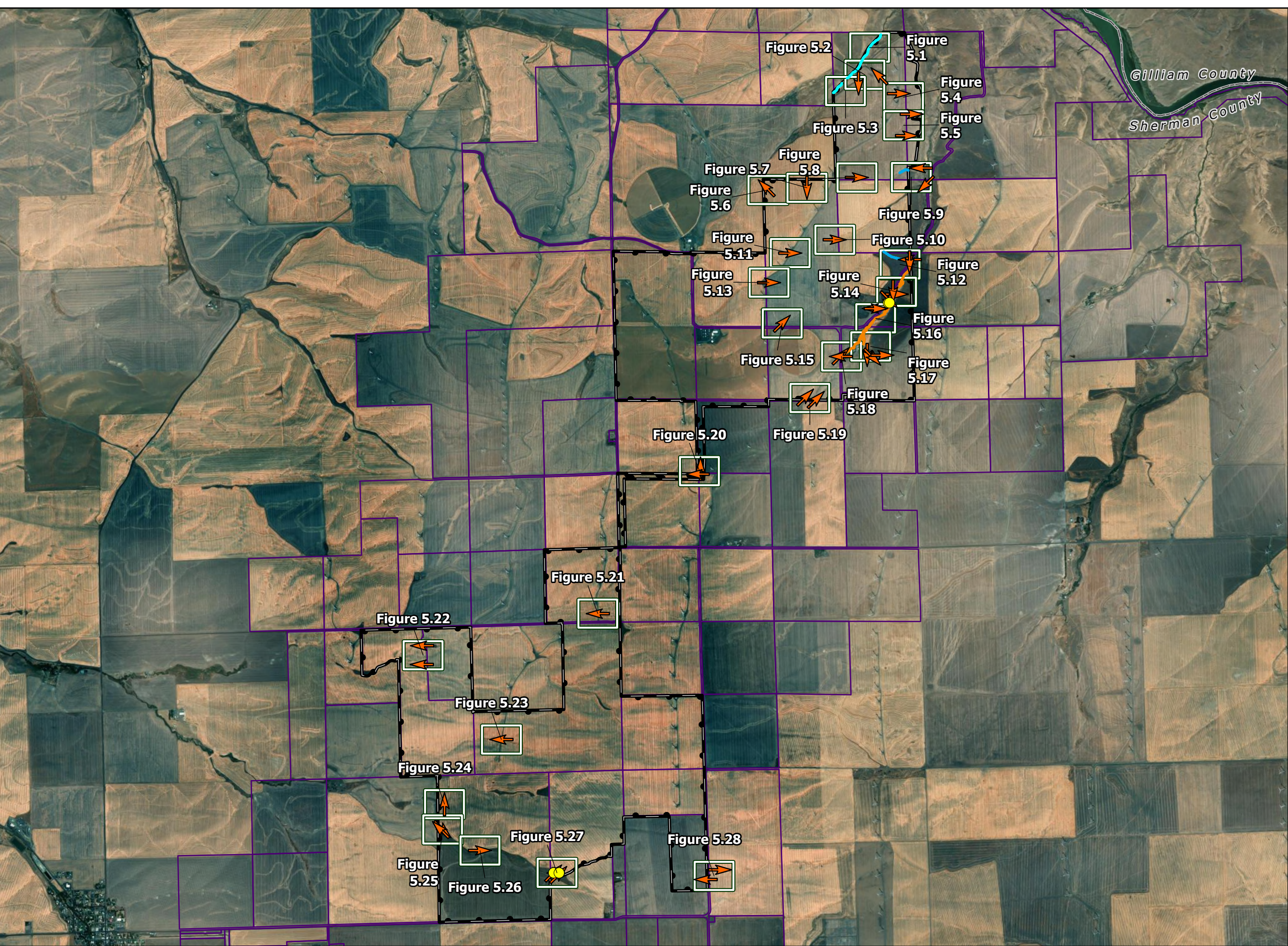
DSL WD # 2025-0012
Approval Issued: 8/12/2025
Approval Expires: 8/12/2030



Data Sources

BrightNight-Project Infrastructure; Tiger-Roads;
ESRI-Aerial

Reference Map



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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.1
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

-  Study Area
-  Taxlot Boundary
-  Intermittent

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

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Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources

Reference Map

BrightNight-Project Infrastructure; Tiger-Roads;
ESRI-Aerial

Figure 2.1

Figure 2.2



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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**Biglow Canyon
Wind Farm Request
for Amendment 4**

**Figure 5.2
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

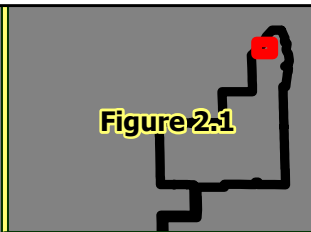
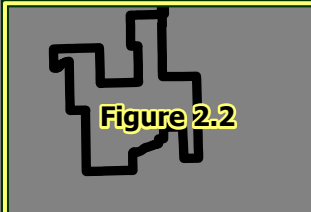
-  Study Area
-  Taxlot Boundary
-  Photo Point
-  Intermittent

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1
	 Figure 2.2



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.3
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

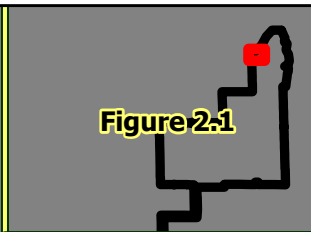
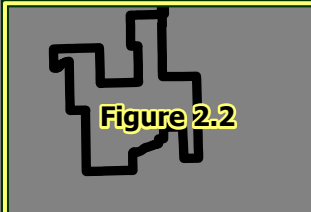
-  Study Area
-  Taxlot Boundary
-  Photo Point
-  Intermittent

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

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Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1
	 Figure 2.2



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.4
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

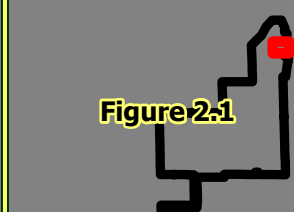
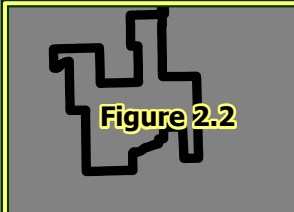
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

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Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1  Figure 2.2



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.5
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

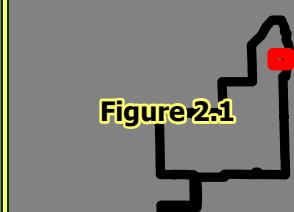
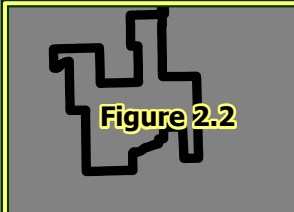
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are $\leq$ 1 meter of the ground location.

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Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1
	 Figure 2.2



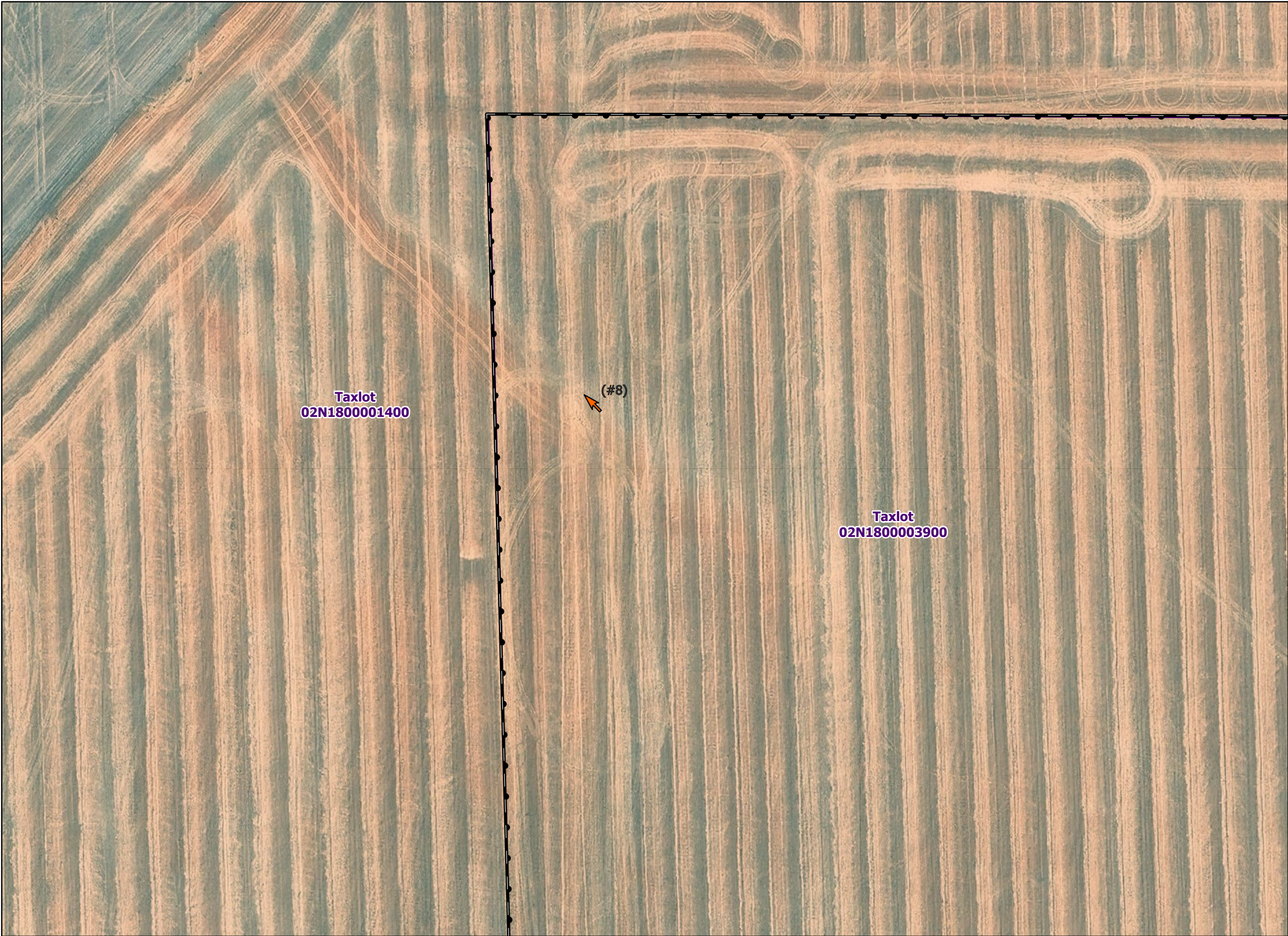
1:1,200

WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.6
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

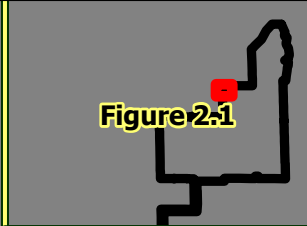
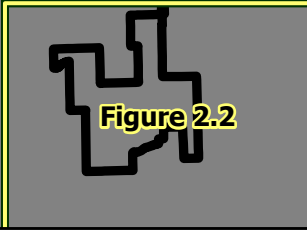
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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**Biglow Canyon
Wind Farm Request
for Amendment 4**

**Figure 5.7
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

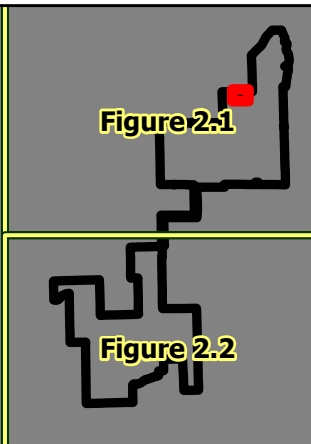
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

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Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



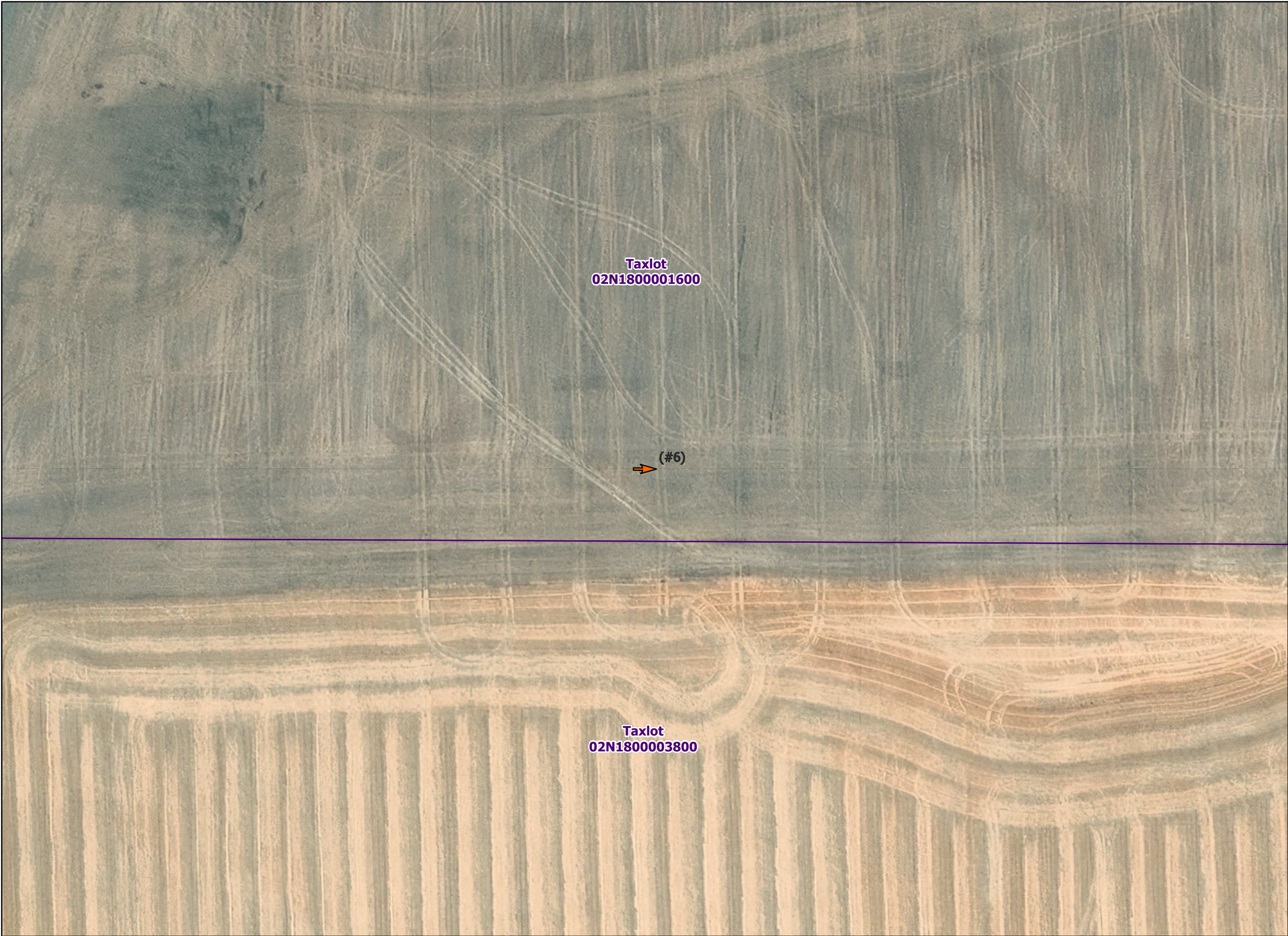
1:1,200

WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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**Biglow Canyon
Wind Farm Request
for Amendment 4**

**Figure 5.8
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

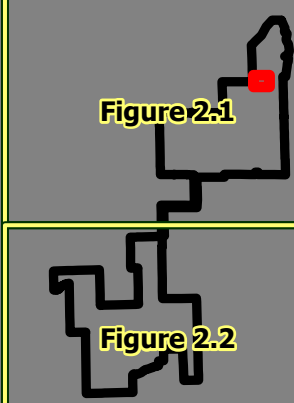
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

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DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.9
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

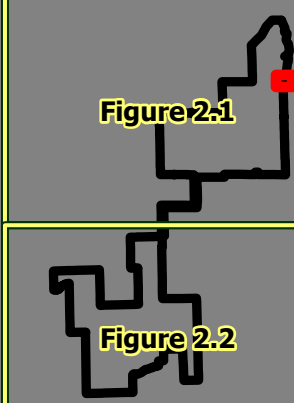
-  Study Area
-  Taxlot Boundary
-  Photo Point
-  Ephemeral

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DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.10
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

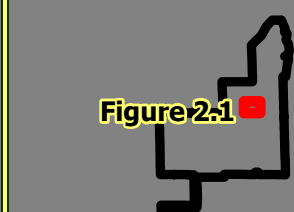
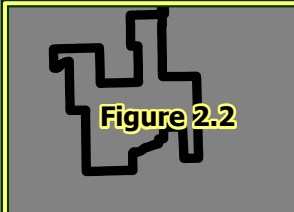
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1
	 Figure 2.2



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WGS 1984 UTM Zone 10N



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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.11
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

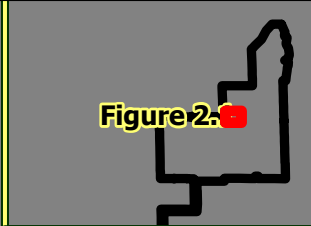
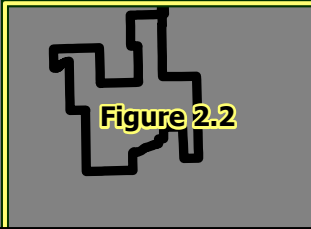
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	
	



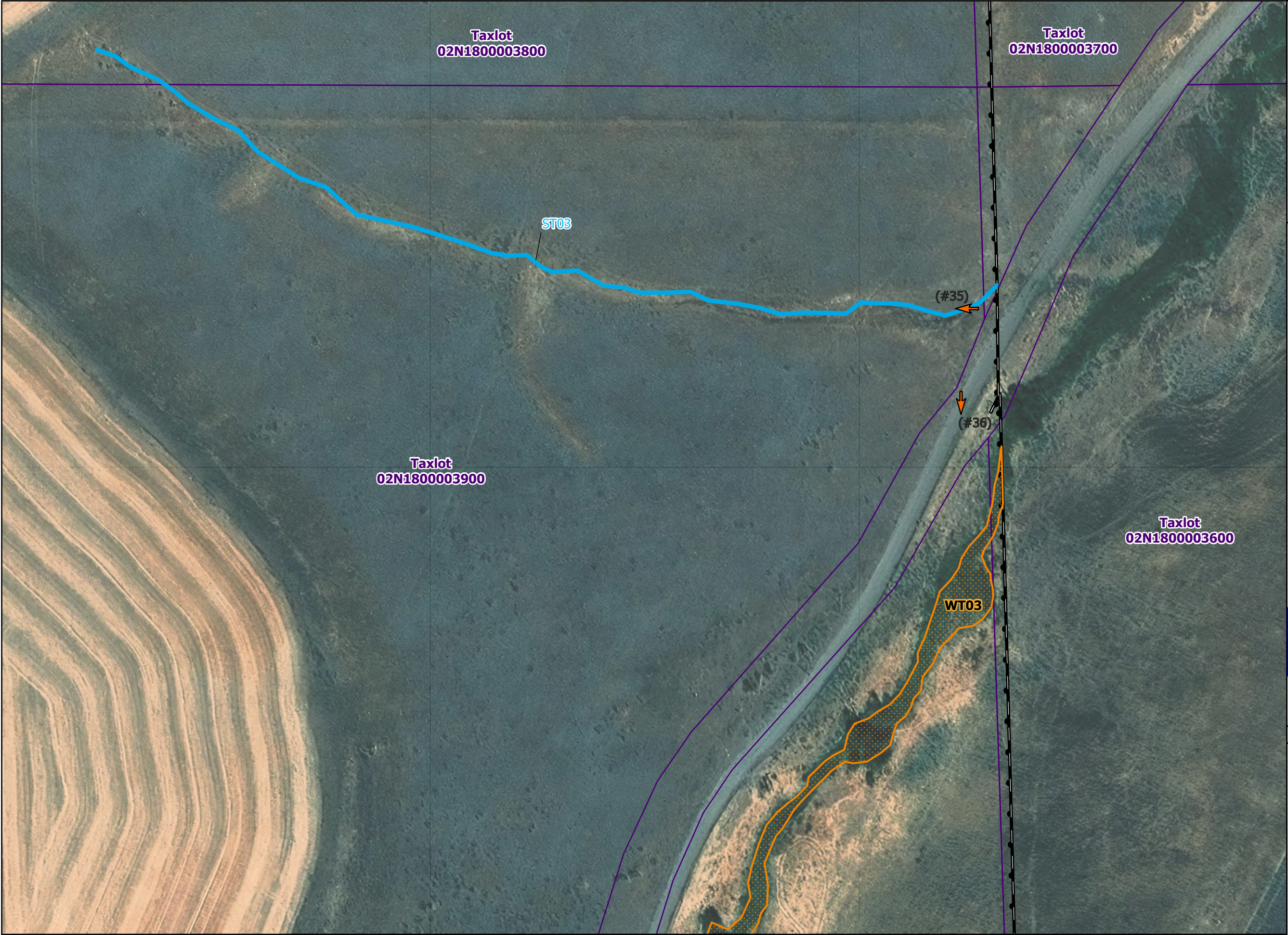
1:1,200

WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.12
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

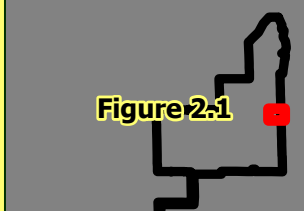
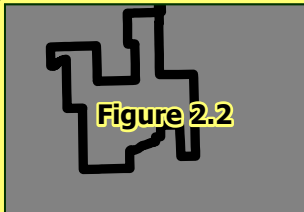
-  Study Area
-  Taxlot Boundary
-  Photo Point
-  Ephemeral
-  Field Delineated Wetlands (Cowardin; HGM)
-  PSS; Flats

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Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 



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WGS 1984 UTM Zone 10N



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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.13
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

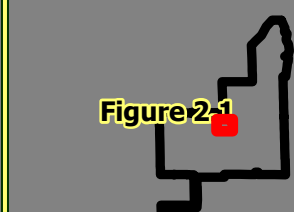
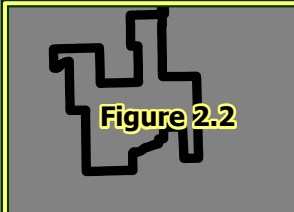
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.14
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

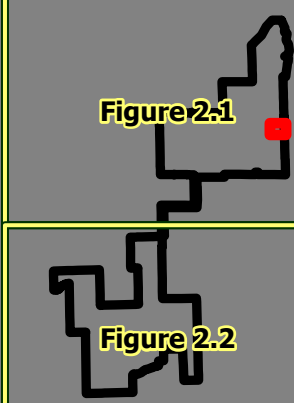
-  Study Area
-  Taxlot Boundary
-  Photo Point
-  Sample Plot
- Field Delineated Wetlands (Cowardin; HGM)
 -  PSS; Flats

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Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



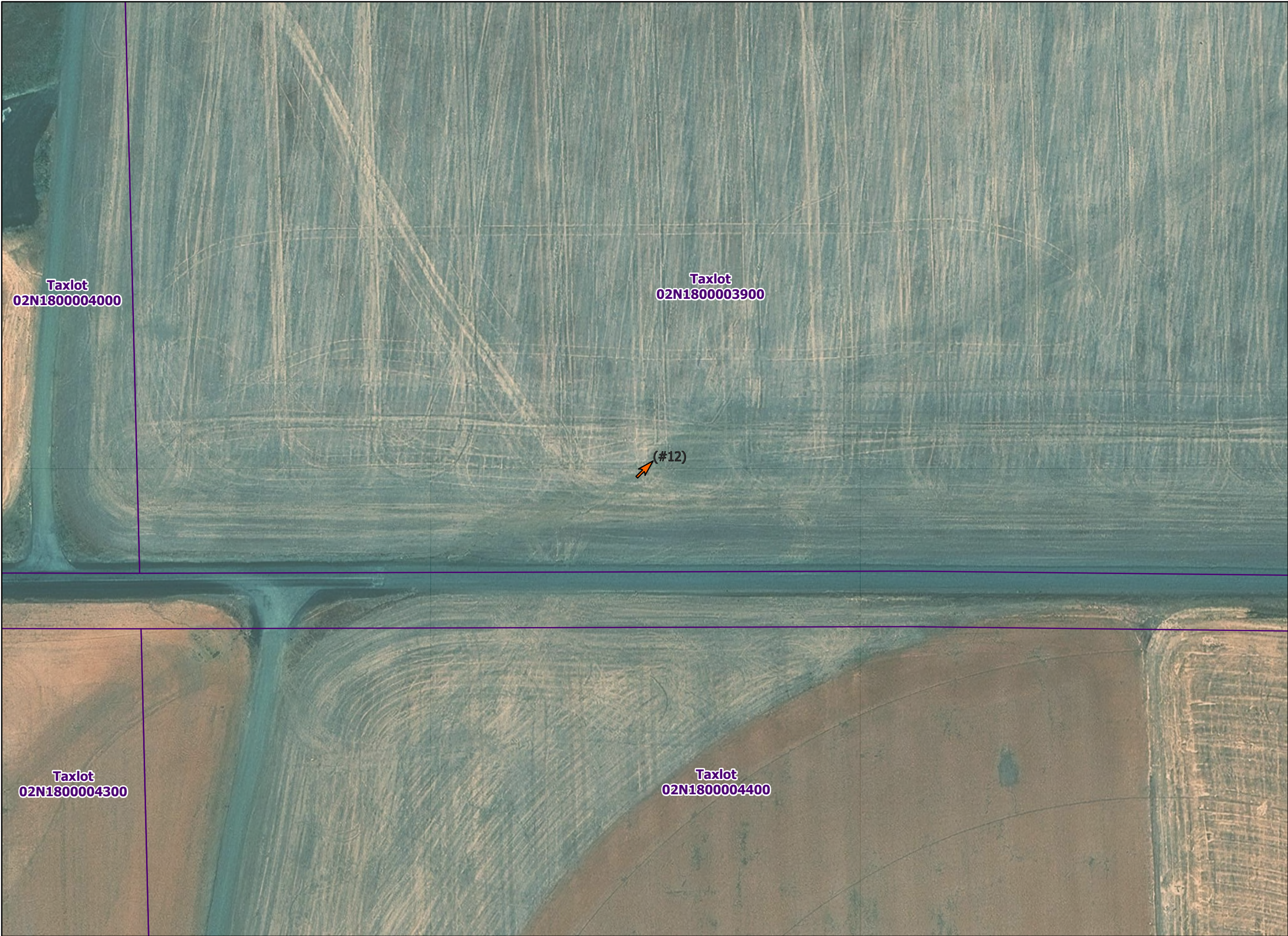
1:1,200

WGS 1984 UTM Zone 10N

0 125 250 500
US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.15
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

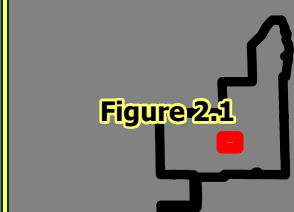
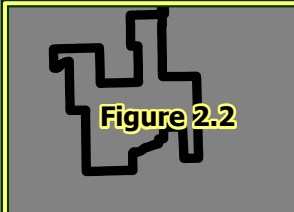
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1
	 Figure 2.2



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.16
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

- Study Area
- Taxlot Boundary
- Photo Point
- Ephemeral
- Field Delineated Wetlands (Cowardin; HGM)
- PSS; Flats

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

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Approval Issued:8/12/2025
Approval Expires:8/12/2030

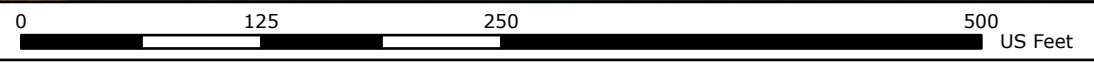


Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N



NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.17
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

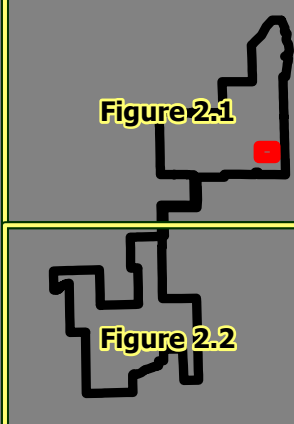
-  Study Area
-  Taxlot Boundary
-  Photo Point
- Field Delineated Wetlands
(Cowardin; HGM)
-  PSS; Flats

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Approval Issued:8/12/2025
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Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



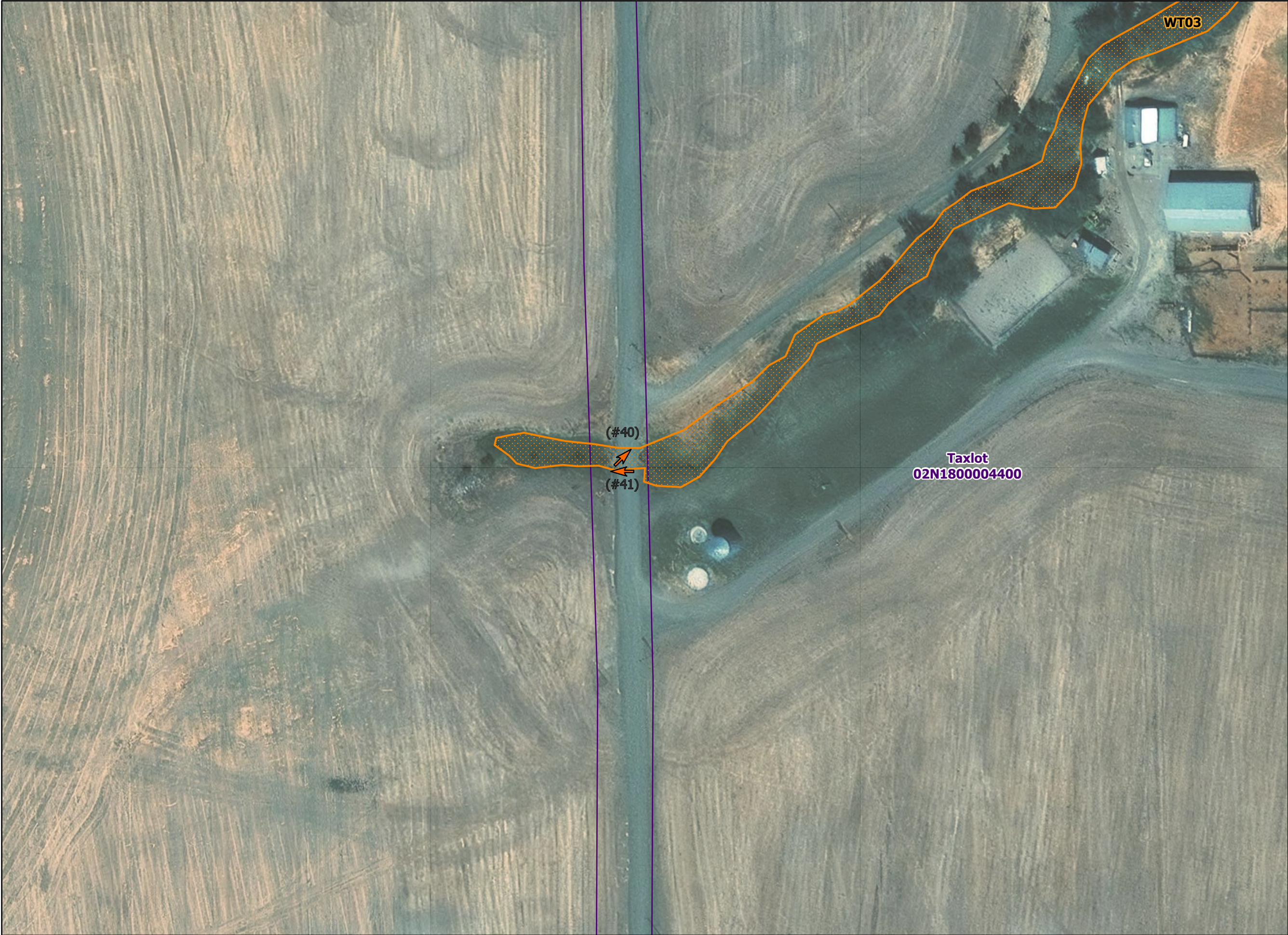
1:1,200

WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.18
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

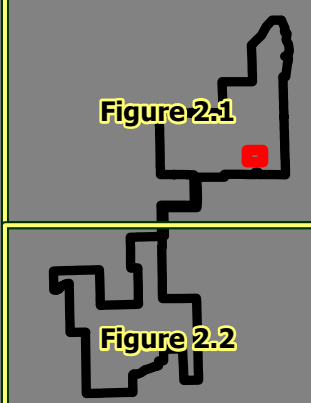
-  Study Area
-  Taxlot Boundary
-  Photo Point
- Field Delineated Wetlands (Cowardin; HGM)
 -  PSS; Flats

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Approval Issued:8/12/2025
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Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.19
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

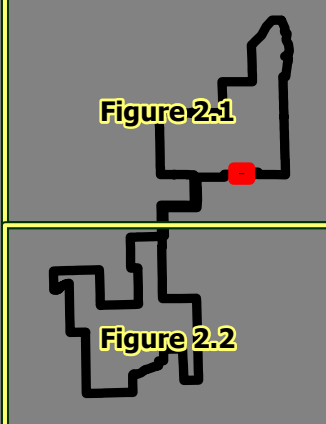
-  Study Area
-  Taxlot Boundary
-  Photo Point

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Approval Issued:8/12/2025
Approval Expires:8/12/2030

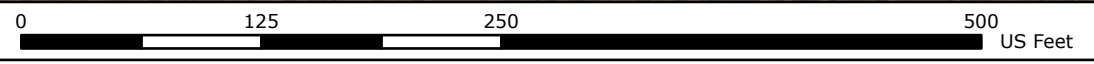


Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N



NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.20
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

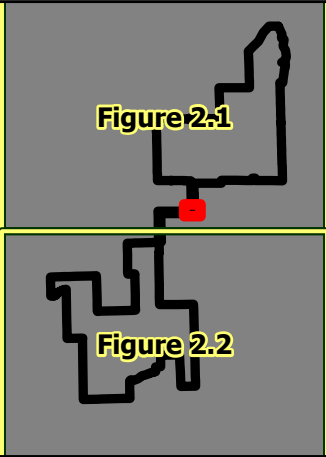
DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources

Reference Map

BrightNight-Project Infrastructure; Tiger-Roads;
ESRI-Aerial



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WGS 1984 UTM Zone 10N

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500

US Feet

NOT FOR CONSTRUCTION

Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.21 Wetlands and Waters Delineation Map

SHERMAN COUNTY, OR

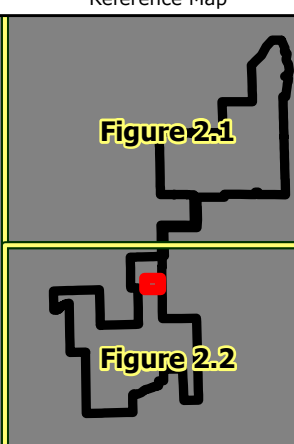
-  Study Area
-  Taxlot Boundary
-  Photo Point

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DSL WD # 2025-0012
Approval Issued: 8/12/2025
Approval Expires: 8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	

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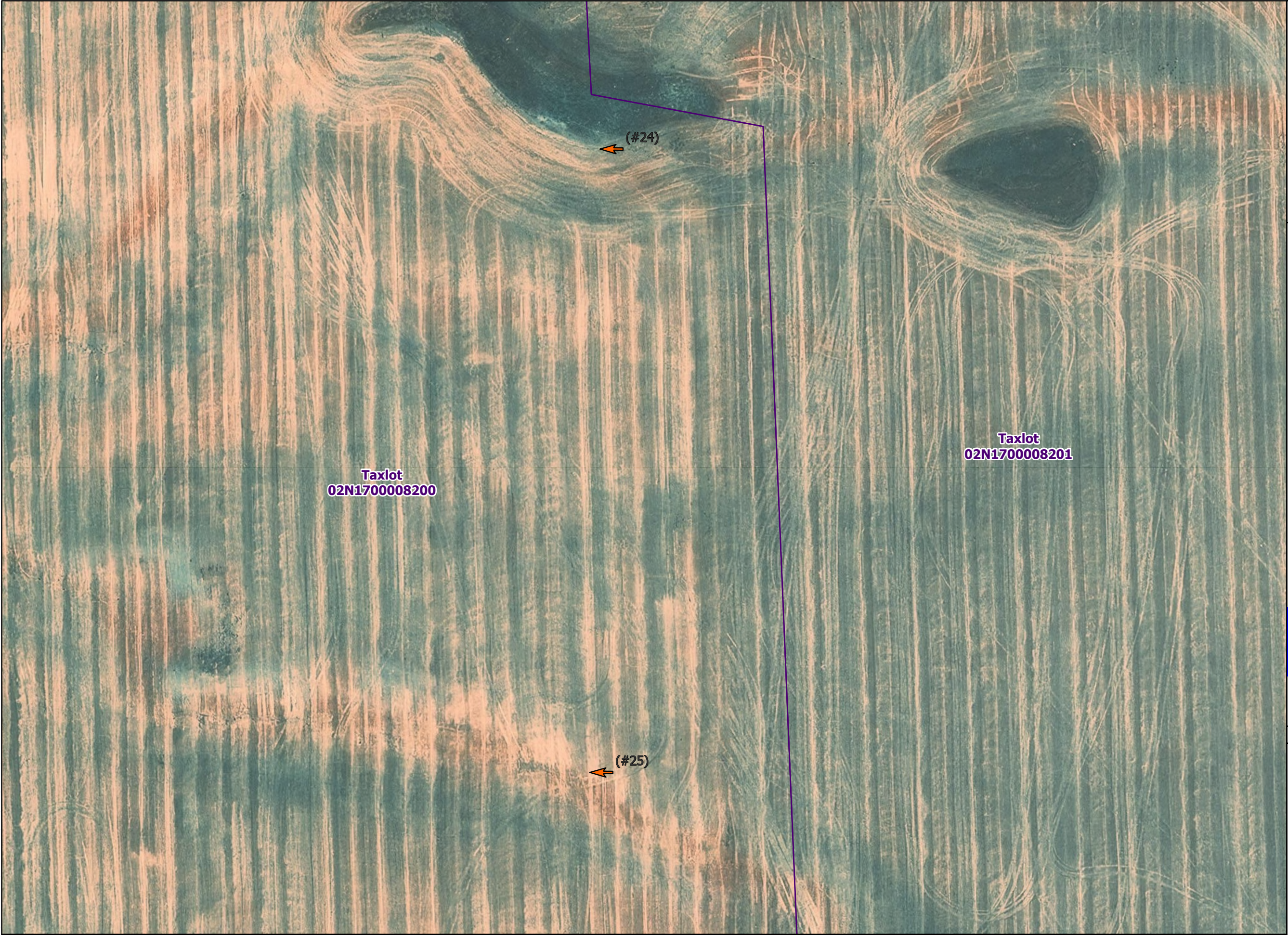
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WGS 1984 UTM Zone 10N

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NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.22
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

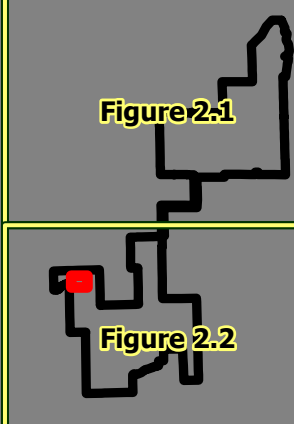
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 Figure 2.1 Figure 2.2



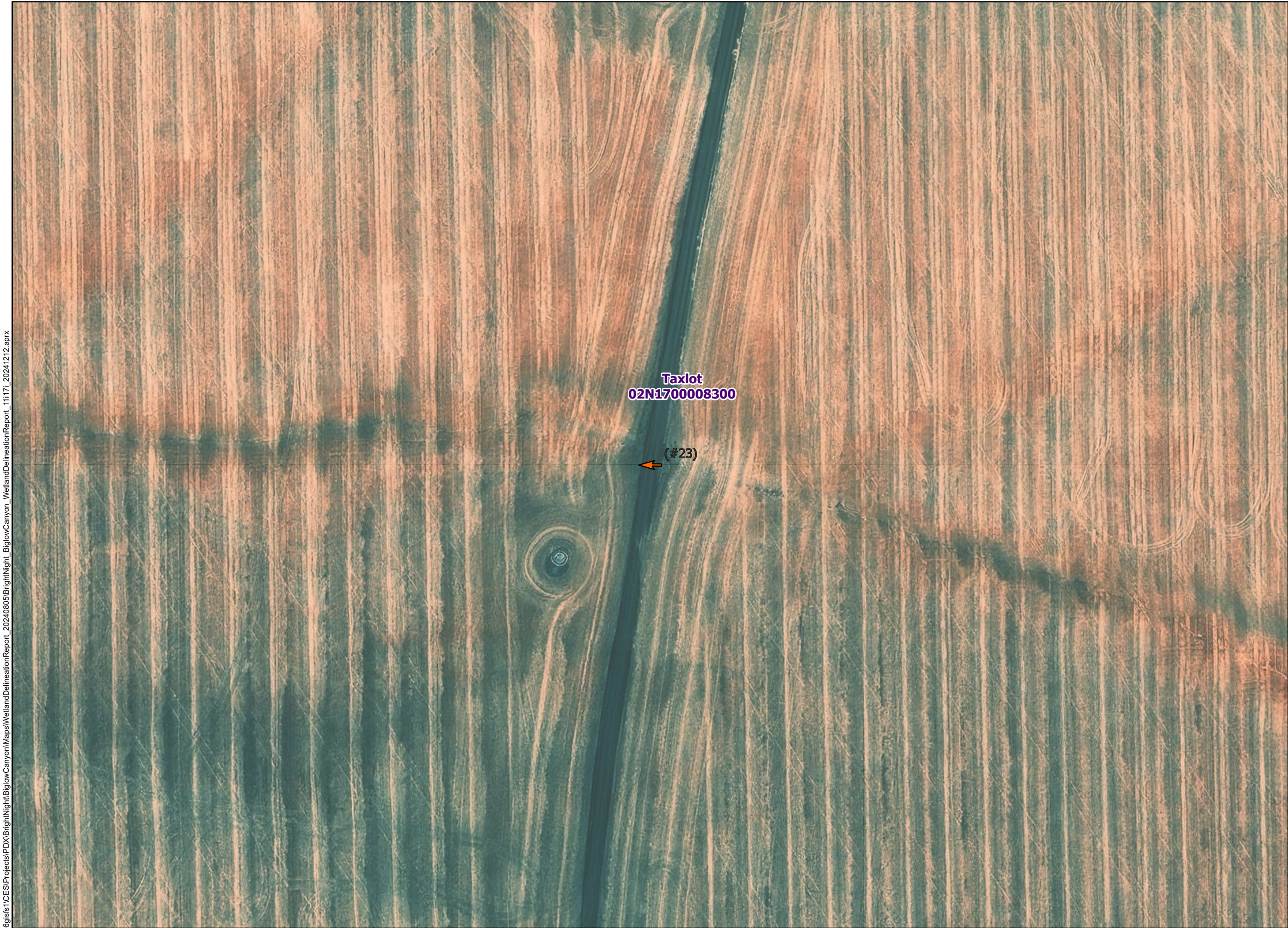
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WGS 1984 UTM Zone 10N

0 125 250 500
US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.23
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

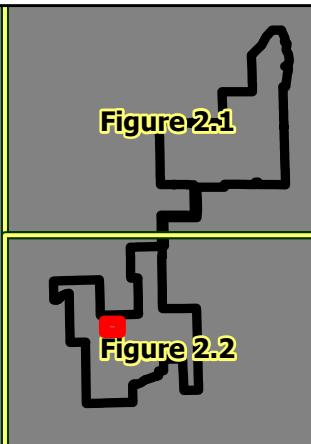
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 <p>Figure 2.1</p> <p>Figure 2.2</p>



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WGS 1984 UTM Zone 10N

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.24
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

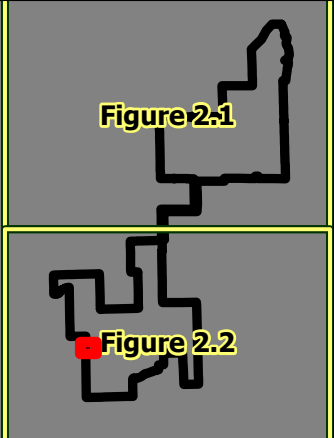
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.25
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

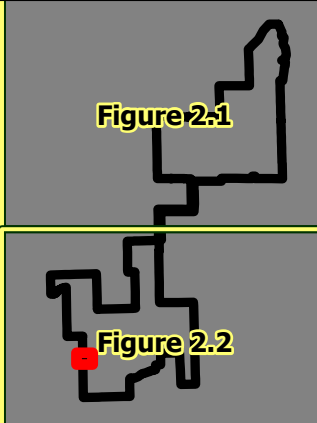
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued: 8/12/2025
Approval Expires: 8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	

Taxlot
01N170000300

Taxlot
01N170000200

(#28) (#26)



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.26
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

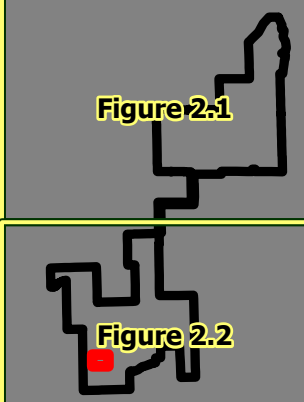
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads;	
ESRI-Aerial	



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WGS 1984 UTM Zone 10N

0 125 250 500 US Feet

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Biglow Canyon Wind Farm Request for Amendment 4

**Figure 5.27
Wetlands and Waters
Delineation Map**

SHERMAN COUNTY, OR

- Study Area
- Taxlot Boundary
- Photo Point
- Sample Plot
- Field Delineated Wetlands (Cowardin; HGM)
 - PEM; Flats

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

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DSL WD # 2025-0012
Approval Issued: 8/12/2025
Approval Expires: 8/12/2030

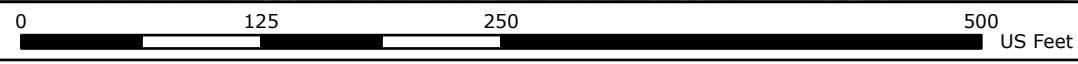


Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	



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WGS 1984 UTM Zone 10N



NOT FOR CONSTRUCTION

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Biglow Canyon Wind Farm Request for Amendment 4

Figure 5.28
Wetlands and Waters
Delineation Map

SHERMAN COUNTY, OR

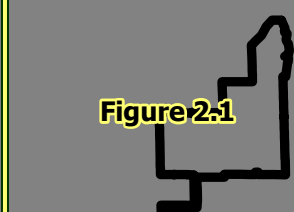
-  Study Area
-  Taxlot Boundary
-  Photo Point

All delineated wetlands and waters are considered to extend outside of the study area unless otherwise noted

Wetland boundaries, sample plots, and photo points were collected using a sub-meter grade GPS device collecting real-time, sub-meter GNSS data. Mapped features are ≤ 1 meter of the ground location.

DSL WD # 2025-0012
Approval Issued:8/12/2025
Approval Expires:8/12/2030



Data Sources	Reference Map
BrightNight-Project Infrastructure; Tiger-Roads; ESRI-Aerial	 



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WGS 1984 UTM Zone 10N

0 125 250 500
US Feet

NOT FOR CONSTRUCTION

Request for Amendment 5 for the Biglow Canyon Wind Farm

Exhibit O. State and Local Laws and Regulations

Part 2. Water Use

**Submitted to
Oregon Energy Facility Siting Council**

Prepared for



Portland General Electric Company

Prepared by



October 2026

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Attachment 02-1. Water Source Letters

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AC	alternating current
BCWF or Facility	Biglow Canyon Wind Farm
BESS	battery energy storage system
BIGL 2 or Project Developer	BIGL 2 bn, LLC
BMP	best management practice
Certificate Holder or PGE	Portland General Electric Company
Council or EFSC	Energy Facility Siting Council
gen-tie	generation-tie
kV	kilovolt
Mgal	million gallons
MW	megawatt
MWh	megawatt-hour
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and maintenance
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ODOE	Oregon Department of Energy
ORS	Oregon Revised Statutes
PV	photovoltaic
RFA	Request for Amendment
Site Certificate	Site Certificate on Amendment 4
Solar Facility	solar power generation facility
Wind Facility	operational wind energy facility

1.0 Introduction

The Portland General Electric Company (PGE or Certificate Holder) submits this Request for Amendment (RFA) 5 to the Site Certificate on Amendment 4, issued March 27, 2026 (Site Certificate) for the Biglow Canyon Wind Farm (BCWF or Facility) to add a second phase of solar photovoltaic (PV) energy generation and battery storage capacity to the BCWF following the solar power generation and battery storage capacity approved under RFA 4.

BCWF, owned and operated by PGE, is located within an approved site boundary comprising approximately 25,000 acres, approximately 2.5 miles northeast of the town of Wasco in Sherman County, Oregon (Background Exhibit Figure 1). The BCWF operates under the Site Certificate from the Oregon Energy Facility Siting Council (Council or EFSC) as administered by the Oregon Department of Energy (ODOE). BCWF currently consists of 217 operating wind turbines, with a maximum blade tip height of 445 feet, and a peak generating capacity of 450 megawatts (MW) (Wind Facility). RFA 4, approved March 27, 2026, added 125 MW alternating current (AC) generating capacity from PV solar arrays and 500 megawatt-hours (MWh) in battery storage capacity. The solar energy generation and battery storage components (Solar Facility) described in RFA 4 are currently under construction.

In RFA 5, PGE proposes to add up to 200 MW AC generating capacity from PV solar arrays and 1,000 MWh in battery storage capacity (RFA 5 Solar Facility) by expanding the overall BCWF site boundary by approximately 839 acres. The RFA 5 Solar Facility as proposed under RFA 5 is located across approximately 622 acres of the existing BCWF site boundary and 839 acres of expanded site boundary, for a total of approximately 1,461 acres (together, RFA 5 Site Boundary; see Background Exhibit Figure 4).

The RFA 5 Site Boundary provides a conservative estimate of the maximum area needed for development and micro-siting through final design and construction for the Solar Facility as proposed under RFA 5, rather than the anticipated disturbance footprint. Primary infrastructure includes solar arrays, inverters, battery energy storage system (BESS) facilities and their subcomponents (i.e., inverters), one collector substation, and medium-voltage collector lines (herein collectively referred to as “Solar Components”). Additionally, the Solar Components include operations and maintenance (O&M) structures, site access roads, internal roads, perimeter fencing, facility entry gates, and temporary laydown areas. The maximum generating capacity from the Solar Components will be 200 MW AC. Power generated from the Solar Components will be transferred to the grid via a 230-kilovolt (kV) generation tie (gen-tie) transmission line, approximately 2.7 miles long. The RFA 5 Solar Facility includes the Solar Components and the gen-tie transmission line.

PGE will own and operate the RFA 5 Solar Facility as a part of the BCWF, which, to date, has been developed by BIGL 2, LLC (BIGL 2, or Project Developer). BIGL 2, in its capacity as the Project Developer, supports PGE in this RFA 5 and may construct and temporarily operate the RFA 5 Solar Facility on behalf of PGE under a Build-Transfer Agreement.

The information contained herein supports demonstration of compliance with the Waste Minimization approval standard for Oregon Administrative Rules (OAR) 345-022-0120.

The information contained herein supports demonstration of compliance with the State and Local Laws and Regulations approval standard for OAR 345-022-0160.

2.0 Description of Water Use – OAR 345-022-0160(1)(b)(A)

(b) Information about anticipated water use during construction and operation of the proposed facility. The applicant must include:

(A) A description of the use of water during construction and operation of the proposed facility;

2.1 Water Use During Construction

Construction water use is estimated at a maximum of approximately 33.5 million gallons (Mgal; up to 106,931 gallons per day) over the construction of the RFA 5 Solar Facility and under annual average conditions. This water will either be sourced from the City of Wasco or other approved sources, supplied via tanker trucks, or may be supplemented by a nearby exempt well, provided such use of well water would not cause the rate of extraction to exceed 5,000 gallons in any one-day period. This analysis accounts for the conservative estimate of construction water use for full build-out of the Solar Components. Water during construction will be used for site dust control, road compaction, concrete mixing for foundations, equipment washing, and fire suppression. Anticipated water use during construction is outlined in Table 02-1.

- **Site dust control.** The primary use of water during construction will be for dust control. The analysis in Table 02-1 assumes that water will be used to control dust generation throughout the construction site, in all disturbed areas including but not limited to access roads, foundation installations, and trenching for collector lines. Water for dust control and road compaction will be applied via tanker truck in a manner that avoids erosion and sediment discharge and is consistent with the best management practices (BMPs) presented in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit (Site Condition PRE-SP-01 in the Fourth Amended Site Certificate [Council 2026]). Water use for dust control assumes work activities happening 6 days per week, during construction, for a total of approximately 30.6 Mgal during construction. Actual water use for dust control will vary, depending on the timing of construction and the season, construction activities, precipitation, soil conditions, temperature, and frequency of repeat disturbance. These factors are not controlled or easily estimated by the contractor.
- **Road compaction.** Water for road construction assumes 25 gallons per lineal foot of road. Section 3.1.3.6 of the RFA 5 Background Exhibit identifies approximately 17.6 miles of new access roads. Approximately 129,067 gallons of water per month (2,323,200 gallons total) will be used for Solar Components service road construction and earthwork compaction.

- **Concrete mixing.** Concrete mixing for foundations will use a standard assumption of 39 gallons of water per cubic yard of concrete. Section 7.0 of Exhibit N identifies 1,800 cubic yards of concrete needed for foundations (BESS, inverters/transformers, substations, and O&M buildings and structures). No on-site batch plant is proposed as part of RFA 5. For the construction of foundations, the Certificate Holder anticipates buying concrete directly from licensed suppliers in the vicinity of the Solar Components. Thus, the water used for concrete mixing will be provided by the concrete suppliers from a lawful source. However, water for concrete production is included in this analysis to represent the maximum anticipated water needs for Solar Components construction. Approximately 70,200 gallons (0.07 Mgal) of water would be used for concrete mixing.
- **Equipment Washing.** Water will be used for washing concrete trucks after delivery of concrete loads (approximately 416,000 gallons). Concrete trucks and truck chutes will be washed down at each foundation site or at a centralized wash area to prevent the concrete from hardening within the chutes. Concrete wastewater will be handled using BMPs, which have been accepted by the Oregon Department of Environmental Quality (ODEQ). Concrete wash water will be put into a dedicated concrete washout area located at each foundation excavation.

Table O2-1. Water Use During Construction of the RFA 5 Solar Facility

Construction Use	Quantity (gallons)
Site dust control	30.6 Mgal
Road compaction	2.3 Mgal
Concrete mixing	0.07 Mgal
Equipment wash stations	0.4 Mgal
Fire prevention/suppression	0.06 Mgal
Total water for non-potable uses	33.5 Mgal
Drinking water/sanitation	Negligible
Total	33.5 Mgal

While water quantities have been conservatively estimated for purposes of analysis, water used for dust suppression, road compaction, and equipment washing will be applied at the minimum rate necessary to perform its function in an effort to conserve as much water as possible and make a sustainable use of the resource, and due to the cost and time involved in transporting water by tank truck to the RFA 5 Solar Facility. The construction of the Solar Components will be phased and will allow maximum water use efficiency to limit water use to the extent practical. Daily water use will vary depending on site conditions and construction activities. Weather will affect the amount of water needed for dust control and for specific construction activities each day. Total water demand is estimated over the course of phased construction using a conservative 6-day work week. Substantial construction is expected to last 18 months; therefore, the Certificate Holder assumes that all construction water will be used in an 18-month timeframe.

Drinking water, sanitation, and fire prevention/suppression together represents a minor water use. Fire prevention/suppression will include placing up to six 10,000-gallon water tanks around the site and stationing a water truck at the job site to keep the ground and vegetation moist at work areas during extreme fire risk conditions.

2.2 Water Use During Operations

Once constructed, the RFA 5 Solar Facility will have limited water requirements. Potable water will be used at the O&M building for drinking and sanitary purposes, including toilets and sinks. Additional water will be used for wind turbine blade washing and periodically for solar panel washing, with the water sources to be determined as needed. The BESS will not require water usage during operations.

Operational water use associated with the RFA 5 Solar Facility is estimated at up to approximately 340,254 gallons per year, consisting of up to 30,000 gallons per year of potable water for drinking and sanitary purposes, up to 250,254 gallons per year of non-potable water for panel washing, and up to 60,000 gallons per year as needed for fire suppression. Operational water use is described further below.

2.2.1 O&M Buildings

2.2.1.1 Solar Facility

The RFA 4 Solar Facility is currently under construction, with an expected Commercial Operation Date of December 2027. Potable water use at the approved Solar Facility O&M building will be limited to drinking and sanitary purposes. Staffing associated with RFA 4 is expected to include up to four full-time employees initially and is not expected to exceed seven full-time employees following full buildout of the Solar Micrositing Area. Based on an assumed potable water demand of up to 7,500 gallons per employee per year, potable water use at the Solar Component O&M building will not exceed approximately 52,500 gallons per year at full buildout, equivalent to an average of approximately 144 gallons per day.

RFA 5 proposes the addition of a separate O&M building that is distinct from the O&M building approved for RFA 4. Potable water use at the RFA 5 O&M building will similarly be limited to drinking and sanitary purposes. Staffing associated with RFA 5 is expected to include up to four full-time employees following full buildout of the Solar Siting Area. Based on an assumed potable water demand of up to 7,500 gallons per employee per year, potable water use at the O&M building will not exceed approximately 30,000 gallons per year at full buildout, equivalent to an average of approximately 82.2 gallons per day.

The RFA 4 and RFA 5 Solar Facilities will each have a separate O&M building serving their respective Solar Facilities. Accordingly, potable water demand associated with the two phases has been calculated separately. At full buildout, the two O&M buildings are anticipated to support up to 11 full-time employees collectively, with a combined potable water demand of up to approximately 82,500 gallons per year, equivalent to an average of approximately 226 gallons per day.

2.2.1.2 Wind Facility

Water used at the existing BCWF O&M buildings is supplied by the existing exempt well within the BCWF boundary. Typical operational water use at the existing BCWF O&M buildings is estimated at approximately 660 gallons per day. For purposes of evaluating compliance with the exempt well threshold, water use at the existing BCWF O&M buildings is estimated at up to 1,312 gallons per day, including approximately 652 gallons per day associated with filling the BCWF fire pond. A water meter is now tied to the supervisory control and data acquisition system, which allows collection of actual water use data at the BCWF O&M buildings.

2.2.1.3 BCWF Facility

At full buildout of the Solar Facility, combined operational water use at the RFA 4 and RFA 5 Solar Facility O&M buildings and the existing BCWF O&M buildings is estimated at approximately 886 gallons per day. This includes approximately 226 gallons per day associated with the two Solar Facility O&M buildings and approximately 660 gallons per day associated with the existing BCWF O&M buildings.

For purposes of evaluating compliance with the exempt well threshold, total water use from the existing exempt well is estimated at up to approximately 1,538 gallons per day, including approximately 652 gallons per day associated with filling the BCWF fire pond. This represents approximately 31 percent of the 5,000-gallon-per-day exempt well threshold established under Site Condition OPR-WR-01 of the Fourth Amended Site Certificate (Council 2026).

2.2.2 Panel Washing

The solar panels may require periodic washing to minimize the effects of dust and dirt on energy production (referred to as soiling) depending on weather conditions. Specifically, panel washing may be required during drought conditions due to potential dust impacts. For this analysis, it is conservatively assumed that the array panels at each Solar Facility (as approved under RFA 4 and as proposed under RFA 5) will be washed twice a year at a total estimated 500,508 gallons, or 1,001,016 gallons a year across both Solar Facilities. Water will be applied via tanker truck for cleaning and will not have added solvents or chemicals. Water usage frequency and consumption rates are based on standard commercial facility estimates.

2.2.3 Fire Mitigation

Fire suppression during operation of the RFA 4 Solar Facility will consist of four 10,000-gallon water tanks maintained onsite. The RFA 5 Solar Facility will include six 10,000-gallon water tanks maintained onsite for fire suppression. All tanks will be refilled from off-site sources as needed.

The BCWF fire pond fills with rainwater from approximately September to the end of March each year. In June through August each year, BCWF staff add water via a metered hose attached to the existing exempt well to compensate for evaporation and irrigation water drawn from the pond. The

pond is filled one to three times each month from June through August; each fill uses approximately 215 to 652 gallons, depending on water levels.

2.2.4 Total Water Use During Operations

Table O2-2 shows the total water use during operations of the BCWF and the RFA 4 and RFA 5 Solar Facilities over the course of the estimated 30-year life of the facility.

Table O2-2. Water Use During Operations Under RFA 4 and RFA 5 Combined

Operation Use	Quantity (gallons)
O&M building	9.7 Mgal
Panel washing	30 Mgal
Fire mitigation	3 Mgal
Total	42.7 Mgal

3.0 Water Sources – OAR 345-022-0160(1)(b)(B)(C)

(B) A description of each source of water and the applicant's estimate of the amount of water the facility will need during construction and during operation from each source under annual average and worst-case conditions;

(C) A description of each avenue of water loss or output from the facility site for the uses described in (A), the applicant's estimate of the amount of water in each avenue under annual average and worst-case conditions and the final disposition of all wastewater;

3.1 Water Sources During Construction

The Certificate Holder or the Certificate Holder's third-party construction contractor will obtain construction water from the City of Wasco (or another permitted source[s]) through the municipality's existing water rights and truck the water to the site and in accordance with Site Condition CON-PS-01 in the Fourth Amended Site Certificate (Council 2026). A letter from the City of Wasco indicating they can provide the requested amount of water for construction is included in Attachment O2-1. The Certificate Holder may also source some water from an on-site exempt well, provided such use of well water would not cause the rate of extraction to exceed 5,000 gallons in any one-day period, and/or from an on-site well in accordance with a water right granted by the Oregon Water Resources Department. Additional water sources for use during construction may be pursued prior to and during construction activities in accordance with Site Certificate Condition CON-PS-01. Purchased bottled water may also be used during construction as a potable water source. In total, up to 33.5 Mgal will be used during the construction of the Solar Facility as amended, at approximately 106,931 gallons per day assuming a 6-day work week. Table O2-3 lists the potential water suppliers during construction and relevant information.

Table 02-3. Potential Water Suppliers During Construction

Supplier Name	Contact	Quantity Available (gallons)
City of Wasco	[Name]	4.5 Mgal per month
Total		4.5 Mgal per month

3.2 Water Sources During Operations

During operation, the Certificate Holder and its contractors shall obtain all water required for solar panel-washing activities from off-site sources previously permitted for such uses or from a new or existing on-site well, provided such use of well water would not cause the rate of extraction to exceed 5,000 gallons in any one-day period in accordance with Site Condition OPR-PS-01 in the Fourth Amended Site Certificate (Council 2026). The Certificate Holder may also use a separate on-site well authorized for industrial and commercial use within the limits of a water right granted by the Oregon Water Resources Department.

During operation, purchased bottled water will be used in the O&M building as a potable water source.

The sum of anticipated maximum daily water usage at the proposed and approved Solar Facility O&M buildings and the existing BCWF O&M buildings is below the exempt well threshold of 5,000 gallons per day. This use is considered an exempt, and would not require a new water right to be obtained under Oregon Revised Statutes (ORS) 537.545. The Certificate Holder anticipates that a new exempt well would be drilled for the purpose of supplying water to the O&M building, in which case, it will be constructed in compliance with Site Condition CON-WR-01 in the Fourth Amended Site Certificate (Council 2026). The kitchen, toilets, and shower will drain into a county-approved on-site septic system. In addition, solar modules will be washed up to two times per year, with water procured from the City of Wasco and/or from an on-site exempt well. Sources of water for use during construction will be identified prior to operation of the Solar Facility proposed under RFA 5.

3.3 Water Loss

3.3.1 During Construction

Water use for dust control and concrete production will result in water loss primarily through evaporation and infiltration from wetted construction surfaces and from curing concrete. No water used on the site will be discharged into wetlands, streams, and other waterways. Due to the dry conditions at the Solar Facility and the relatively low rates of water use and application, it is expected that any excess water used during construction will be lost within or near the Amended Site Boundary, primarily through evaporation and infiltration.

Stormwater runoff from construction activities will be managed in compliance with an NPDES 1200-C permit, adhering to the ODEQ regulations for construction stormwater management.

Additionally, the Certificate Holder will comply with ODEQ guidelines for the disposal of sanitary wastewater and the use of portable toilets.

3.3.2 During Operations

Minimal water loss will occur during operations of the proposed and approved Solar Facility. Wastewater from domestic and incidental uses at the O&M building will be discharged to a county-approved septic system located near the O&M buildings. During periodic washing of solar panels (approximately twice per year), wash water will evaporate or infiltrate into the ground. Water from this activity will not be discharged into wetlands, streams, or waterways.

4.0 Thermal Power Plants – OAR 345-022-0160(1)(b)(D)

(D) For thermal power plants, a water balance diagram, including the source of cooling water and the estimated consumptive use of cooling water during operation, based on annual average conditions;

The RFA 5 Solar Facility is not a thermal power plant. Thus, OAR 345-022-0160(1)(b)(D) is not applicable.

5.0 Groundwater Permit Information – OAR 345-022-0160(1)(b)(E)(F)

(E) If the proposed facility would not need a groundwater permit, a surface water permit or a water right transfer, an explanation of why no such permit or transfer is required for the construction and operation of the proposed facility;

(F) If the proposed facility would need a groundwater permit, a surface water permit or a water right transfer, information to support a determination by the Council that the Water Resources Department should issue the permit or transfer of a water use, including information in the form required by the Water Resources Department under OAR Chapter 690, Divisions 310 and 380; and

Construction water will be obtained from the City of Wasco (or other permitted source[s]) under an existing municipal water right and may be supplemented by water from on an-site exempt well, provided such use of well water would not cause the rate of extraction to exceed 5,000 gallons in any one-day period; bottled water may also be purchased during both construction and operations as a potable water source. With respect to operations, the Certificate Holder anticipates relying on a new or existing exempt groundwater well (under ORS 537.545). In total, all operational water usage from any or all exempt groundwater wells for the Facility and proposed Solar Facility would not exceed 5,000 gallons per day. Exempt water uses for operations purposes include drinking, flushing toilets, using sinks, and other general industrial uses, as well as washing solar panels up to two times per year. Water will be used for panel washing, using water from City of Wasco under an

existing municipal water right and/or water from a new or existing on-site exempt well, provided such use of well water would not cause the rate of extraction to exceed 5,000 gallons in any one-day period.

There is one irrigation water right within the Solar Micrositing Area for the RFA 4 Solar Facility (Oregon Certificate 57620) and one irrigation water right within the RFA 4 analysis area but outside the RFA 5 Site Boundary or analysis area (Oregon Permit G 16704). None of the land within the RFA 5 Site Boundary or analysis area is included within the boundaries of an irrigation or diking district. The existing water right within the Solar Micrositing Area for the RFA 4 Solar Facility, the Oregon Certificate 57620, is held by a participating landowner for the RFA 4 Solar Facility (Scharf Water Right) and allows for irrigation on up to 325.70 acres. The date of water right priority for this certificate is February 17, 1976. The water comes from “Scharf Well #1 in the John Day River basin,” which was drilled in 1975 to a depth of 130 feet and has an authorized limit of 0.660 cubic foot per second measured at the well. While the Scharf Water Right authorizes about 325 acres of irrigation, aerial photographs confirm that about 25 acres are, and have historically been, irrigated within the Solar Micrositing Area for the RFA 4 Solar Facility approved. The Certificate Holder is working with the participating landowner and exploring transferring the Scharf Water Right to industrial use for the life of the RFA 4 Solar Facility. If successful, the transfer would allow the Certificate Holder to use the available water for construction and operation activities for the RFA 4 Solar Facility as well as the RFA 5 Solar Facility, in an amount consistent with current irrigation practices of the 25 acres, including fire suppression and panel washing. Upon Facility retirement, the water could be transferred back to irrigation use. While the transfer of the Scharf Water Right would allow greater flexibility, it is not required to operate the approved or proposed Solar Facilities given the existing supply from the City of Wasco.

6.0 Water Use Mitigation – OAR 345-022-0160(1)(b)(G)

(G) A description of proposed actions to mitigate the adverse impacts of water use on affected resources.

No adverse impacts are expected to result from the Solar Components’ water use during construction or operation; therefore, no mitigation measures are proposed.

7.0 References

Council (Oregon Energy Facility Siting Council). 2026. Fourth Amended Site Certificate for the Biglow Canyon Wind Farm. Energy Facility Siting Council, Salem, Oregon. March 2026.

8.0 Approval Standards and Submittal Requirements

Table 02-4. Approval Standards and Submittal Requirements Matrix

Requirements	Location
OAR 345-022-0160 State and Local Laws and Regulations	–
Submittal Requirements	
To assist the Council in determining compliance with all state and local laws and regulations applicable to EFSC and the siting process, submit the following, as directed by the project order described in OAR 345-015-0160:	–
(b) Information about anticipated water use during construction and operation of the proposed facility. The applicant must include:	Section 2.0
(A) A description of the use of water during construction and operation of the proposed facility;	Section 2.0
(B) A description of each source of water and the applicant's estimate of the amount of water the facility will need during construction and during operation from each source under annual average and worst-case conditions;	Section 3.0
(C) A description of each avenue of water loss or output from the facility site for the uses described in (A), the applicant's estimate of the amount of water in each avenue under annual average and worst-case conditions and the final disposition of all wastewater;	Section 3.3
(D) For thermal power plants, a water balance diagram, including the source of cooling water and the estimated consumptive use of cooling water during operation, based on annual average conditions;	Section 4.0
(E) If the proposed facility would not need a groundwater permit, a surface water permit or a water right transfer, an explanation of why no such permit or transfer is required for the construction and operation of the proposed facility;	Section 5.0
(F) If the proposed facility would need a groundwater permit, a surface water permit or a water right transfer, information to support a determination by the Council that the Water Resources Department should issue the permit or transfer of a water use, including information in the form required by the Water Resources Department under OAR Chapter 690, Divisions 310 and 380; and	Section 5.0
(G) A description of proposed actions to mitigate the adverse impacts of water use on affected resources.	Section 6.0

Attachment 02-1. Water Source Letters



City of Wasco

PO Box 26, 1017 Clark Street, Wasco, OR 97065

Phone: 541-442-5515 Fax: 541-442-5001

wascocity@gmail.com

August 12th, 2024

To Whom It May Concern:

This letter is to confirm that the City of Wasco currently estimates that the City has the capacity to provide the requested 81 million gallons of water during the 30-month construction period, at a maximum daily rate of 200,000 gallons, for the proposed PGE/BrightNight LLC electrical generation expansion project at Biglow Canyon Wind Farm. The City also estimates that it has the capacity during the operations phase for the annual 3 acre-feet (977,554 gallons) of water for washing panels after construction completion. These estimates are based on current conditions and operational capabilities of the City water system. This is not a guarantee to provide any specific quantity or quality of water; however, it may be considered a non-binding letter of intent to supply water in accordance with a water purchase agreement to be negotiated in the future.

Sincerely,

A handwritten signature in blue ink that reads "Ian Melzer". The signature is written in a cursive, flowing style.

Ian Melzer
City Clerk/Recorder
Wasco City Hall