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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 biological desktop analysis and the six wildlife and botanical surveys that were completed concurrently March 19 to 22, April 16, and May 14 to 16, 2024. Although the alignment of Route D was not defined at the time of the wildlife and botanical surveys, the addition of Route D does not affect the previous biological findings and recommendations. Therefore, no additional field surveys will be needed.

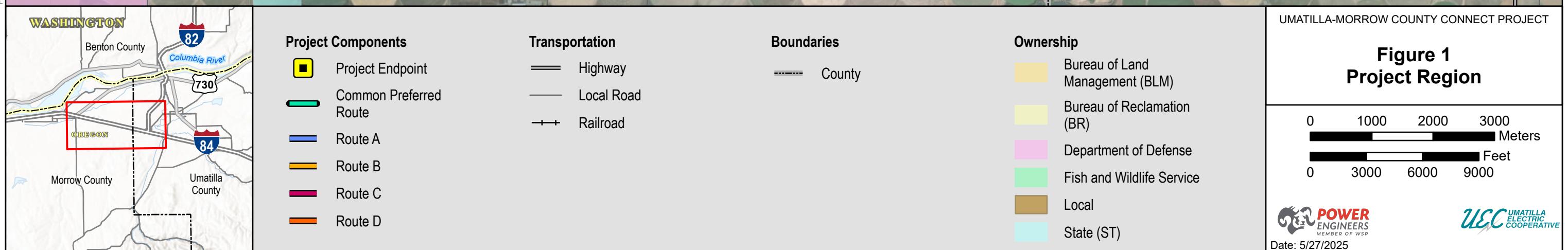
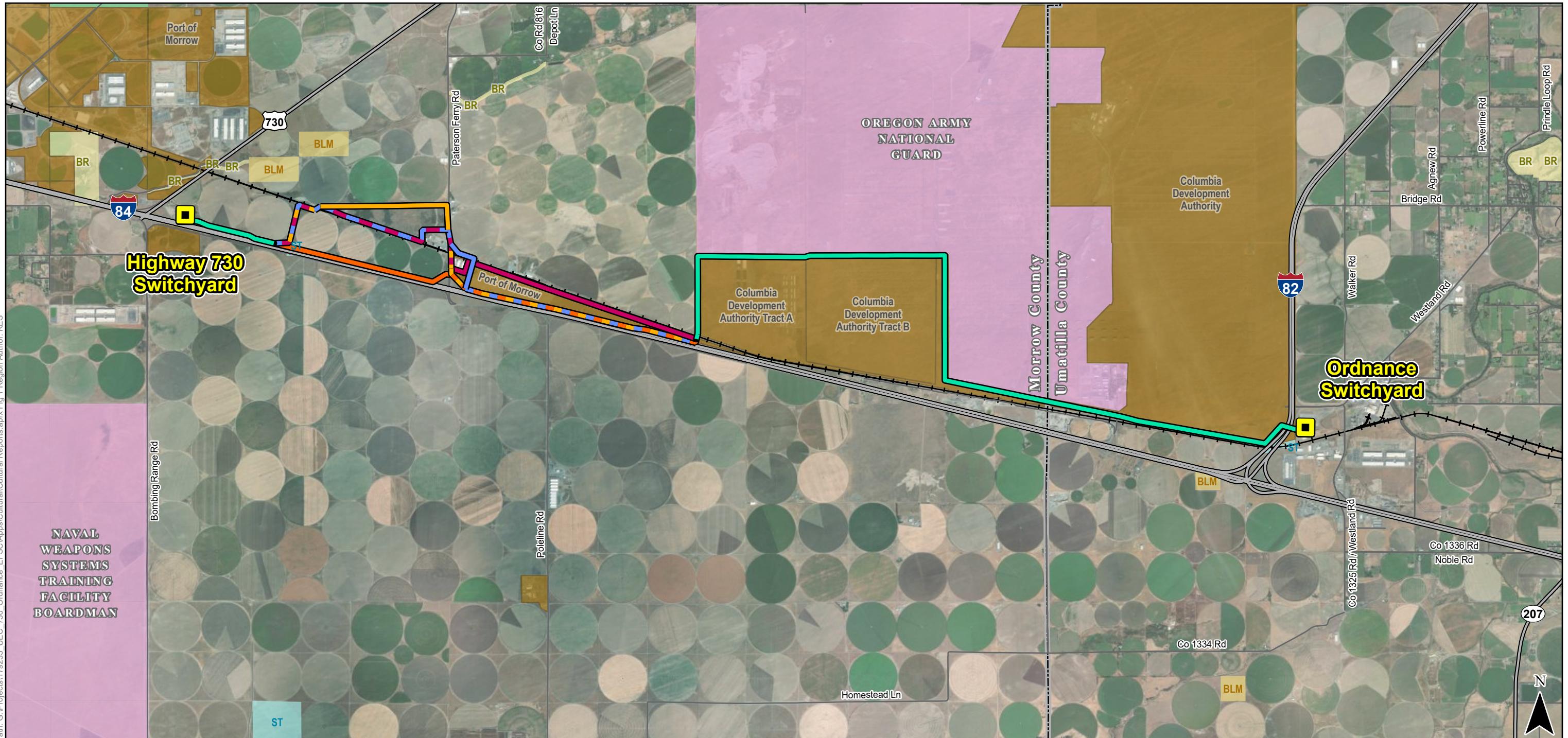


Exhibit P **Fish and Wildlife Habitat**

Umatilla-Morrow County Connect Project



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Application for Site Certificate

May 2025

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ACRONYMS AND ABBREVIATIONS

CDA	Columbia Development Authority
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
POWER	POWER Engineers, Inc.
Project	Umatilla-Morrow County Connect Project
Project Order	First Amended Project Order, <i>In the Matter of the Application for Site Certificate for the Umatilla-Morrow County Connect Project</i> (April 04, 2024)
UEC	Umatilla Electric Cooperative
USFWS	United States Fish and Wildlife Service

1.0 INTRODUCTION

Exhibit P provides information regarding potential impacts of the Umatilla-Morrow County Connect Project (Project) on fish and wildlife species (other than the endangered and threatened species addressed in Exhibit Q), and their habitats, as required by Oregon Administrative Rule (OAR) 345-021-0010(1)(p). Further, Exhibit P shows the Project will be consistent with the Oregon Department of Fish and Wildlife's (ODFW) fish and wildlife habitat mitigation goals and standards.

2.0 APPLICABLE RULES AND PROJECT ORDER PROVISIONS

Exhibit P provides information regarding fish and wildlife species and their habitats for the Umatilla-Morrow County Connect Project (Project).

2.1 Site Certificate Application Requirements

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

2.2 Project Order Provisions

The Project Order requires Exhibit P to include the following specific information:

Exhibit P must include Information about fish and wildlife habitat and the species that could be affected by the proposed facility, providing evidence to support a finding by the Council that the design, construction, and operation of the facility, taking into account mitigation, are consistent with the general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017.

The applicant must consult with ODFW in developing the resources and methods used to develop materials for Exhibit P. ODFW comments received on the NOI identified specific species to be included in surveys as part of the applicant's analysis in the pASC. These comments are included in Attachment 2 of this Order. Documentation of consultations, such as meeting notes, must be attached to Exhibit P. The applicant is also encouraged to consult with the U.S. Fish and Wildlife Service (USFWS) on the potential for vernal pools, wetlands for fish and wildlife habitat impacts.

1. Required Surveys

Under OAR 345-021-0010(1)(p)(A) through (E), Exhibit P must include a description of biological and botanical surveys performed or scheduled to support the habitat categorization and other information in Exhibit P. At a minimum, the timing, scope, methods, and sources for each survey must be discussed. Requirements for specific surveys are discussed in more detail below. Additional surveys may be required based on consultation with ODFW.

a) Habitat Surveys

Under OAR 345-021-0010(1)(p)(B), Exhibit P must include the results of habitat surveys identifying habitat type, vegetation and characteristics, habitat condition, and species use and presence. The habitat surveys must identify the following:

- *Terrestrial habitat within and extending one-half mile (analysis area) from the portions of the site boundary.*
- *Aquatic habitat within all potentially impacted portions of the analysis area.*
- *Riparian habitat adjacent to all potentially impacted areas within the analysis area.*

Applicant must consult with ODFW, and other appropriate authorities to determine the extent of potentially impacted streams and riparian areas prior to completion of surveys. Comments from ODFW on the NOI should be incorporated into study and survey design for species and habitat. ODFW comments to the Department on the NOI can be found in Attachment 3 of this order.

Based on the results of the habitat surveys, the applicant must categorize habitat within the analysis area as provided under OAR 635-415-0025. The habitat categorization is subject to review and approval by ODFW. The habitat categories and the mitigation goal associated with each are summarized in Table P-1 below.

TABLE P-1 HABITAT CATEGORIES UNDER OAR 635-415-0025

CATEGORY	DESCRIPTION	MITIGATION GOAL
1	Irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.	No loss of either habitat quantity or quality.
2	Essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population, or unique assemblage.	If impacts are unavoidable, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.
3	Essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population.	No net loss of either habitat quantity or quality.
4	Important habitat for fish and wildlife species.	No net loss in either existing habitat quantity or quality.
5	Habitat for fish and wildlife having high potential to become either essential or important habitat.	If impacts are unavoidable, is to provide a net benefit in habitat quantity or quality.
6	Habitat that has low potential to become essential or important habitat for fish and wildlife.	Minimize impacts.

Under OAR 345-021-0010(C), Exhibit P must include tabular data and maps depicting the areas of permanent and temporary disturbance (in acres) in each habitat category, type and subtype based on the results of the habitat survey.

b) Sensitive Species Surveys

Under OAR 345-021-0010(D), based on consultation with the ODFW and appropriate field study and literature review, Exhibit P must identify all state-sensitive species that might be present in the habitat survey areas and a discussion of any site-specific issues of concern

to ODFW. Exhibit P must include baseline surveys in appropriate habitats for these species, and any other identified state-sensitive species within the analysis area and must 1 provide a map showing the locations of the different species and habitats with respect to the proposed activities. If state-sensitive species, or suitable habitat for state-sensitive species, are identified within the analysis area that could be adversely affected as a result of the proposed facility, the applicant shall include a description of the nature, extent, and duration of potential adverse impacts and a description of any proposed mitigation measures, consistent with the Exhibit P requirements, the EFSC Fish and Wildlife Habitat standard, and the ODFW Habitat Mitigation Policy. If sensitive species surveys are required by other jurisdictions, the applicant is encouraged to provide a single survey report that identifies occurrences of all sensitive species. A list of known state-sensitive species to be included in field surveys was provided by ODFW in their comments on the NOI and is included in Attachment 3 of this order.

2. Assessment of Impacts to Habitat and Sensitive Species

Under OAR 345-021-0010(1)(p)(F), Exhibit P must describe the nature, extent and duration of potential adverse impacts on the habitat and species identified in surveys that could result from construction, operation and retirement of the proposed facility. This assessment must include, at a minimum, identification of temporary and permanent disturbance (during construction and maintenance) and assessment of potential impacts to wetlands and vernal pools and habitat for sensitive fish and wildlife from construction activities such as vegetation removal and disturbance of soils and sediments.

Proposed Monitoring and Mitigation

Under OAR 345-021-0010(1)(p)(G) and (H), Exhibit P must describe any monitoring and mitigation activities proposed by the applicant to ensure that the construction and operation of the facility will comply with the habitat mitigation goals and standards and to otherwise avoid, reduce, or otherwise mitigate adverse impacts to habitat and state-sensitive species. At a minimum, mitigation measures discussed must include avoidance areas and implementation measures; any proposed salvage & relocation of individuals impacted by construction activities, and in-kind/in proximity mitigation as required by ODFW regulations. This information must also be incorporated into a draft Revegetation and Noxious Weed Control Plan, a draft Habitat Mitigation Plan, and a draft Post Construction Monitoring Plan, which must be included as attachments to Exhibit P.

The draft Revegetation and Noxious Weed Control Plan and associated information in Exhibit P must describe how the areas that are temporarily disturbed during construction or operation of the facility will be rehabilitated and returned to their pre-construction functionality. The plan must clearly describe draft success criteria for revegetation activities and describe the monitoring program that will be used to ensure those criteria are met.

The draft Habitat Mitigation Plan and associated information in Exhibit P must clearly demonstrate how the applicant will provide mitigation for both short- and long-term habitat impacts in accordance with the ODFW Habitat Mitigation Policy. This includes identifying the location of a specific habitat mitigation area that could be used to 1 provide in-kind, in-proximity mitigation for any impacts to Category 2 to 4 Habitat, as well as ecological uplift mitigation actions that could be implemented at the habitat mitigation area to provide the appropriate mitigation. Exhibit P shall include evidence of the availability of the proposed habitat mitigation area, including lease-option agreement, landowner confirmation of intent to provide, or similar documentation.

The draft Habitat Mitigation Plan must include the results of a habitat assessment and must describe the legal mechanism or mechanisms proposed for acquiring the legal right to maintain and enhance the habitat mitigation area. The Habitat Mitigation Plan must include draft success criteria for the proposed ecological uplift actions determined suitable for the proposed habitat mitigation site and describe a process for evaluating monitoring and reference site locations, prior to construction.

3.0 METHODS

3.1 Analysis Area

The analysis area for Exhibit P is the area within the Project site boundary and 0.5 miles from the Project site boundary (First Amended Project Order [April 4, 2024]). The Project features are fully described in Exhibit B, and the Project site boundary is described and shown in Exhibit C.

3.2 Desktop Analysis

POWER, Engineers, Inc. (POWER) biologists conducted a desktop analysis to identify the state-sensitive or sensitive-critical species and wildlife habitats that may be present in the analysis area. The following data sources were reviewed:

- » Oregon Department of Wildlife (ODFW) Sensitive Species List (ODFW 2021)
- » Biotics Rare Species Database (ORBIC 2024)
- » Rare, Threatened and Endangered Species of Oregon (ORBIC 2019)
- » Land Cover (ONHP 2010)
- » Deer and Elk Winter Range for Eastern Oregon (ODFW 2012)
- » ODFW Oregon Fish Habitat and Distribution (ODFW 2023)
- » Esri World imagery (Esri 2023)

An initial list of state-sensitive and sensitive-critical species potentially occurring in the analysis area was identified by reviewing the ODFW Sensitive Species List for the Columbia Plateau ecoregion (ODFW 2021). POWER biologists reviewed species-specific habitat requirements and distributions for each sensitive species and publicly available Geographic Information System (GIS) data to identify the species with potential habitat or known occurrences in the analysis area.

3.3 Field Surveys

OAR 345-021-0010(1)(p): (A) A description of biological and botanical surveys performed that support the information in this exhibit, including a discussion of the timing and scope of each survey.

Six types of wildlife and botanical surveys were completed concurrently on properties where rights of entry were obtained: 1) Washington ground squirrel (*Urocitellus washingtoni*), 2)

western burrowing owl (*Athene cunicularia hypugaea*), 3) other wildlife species and raptor nests, 4) Oregon threatened and endangered plants, 5) wildlife habitats, and 6) noxious weeds. The analysis area and survey dates for each survey are summarized in Table P-2.

Survey methods for Washington ground squirrel and Oregon threatened and endangered plants are described in Exhibit Q and the attached Biological Resources Survey Report (Attachment P-1).

TABLE P-2. SURVEYS COMPLETED

SURVEY TYPE	ANALYSIS AREA	SURVEY DATE
Washington Ground Squirrel	1,000-foot buffer of the Project site boundary	March 19 to March 22, 2024 April 16, 2024 May 14 to May 16, 2024
Western Burrowing Owl	1,000-foot buffer of the Project site boundary	March 19 to March 22, 2024 April 16, 2024 May 14 to May 16, 2024
Other Wildlife Species and Raptor Nests	1,000-foot buffer of the Project site boundary	March 19 to March 22, 2024 April 16, 2024 May 14 to May 16, 2024
Oregon threatened and endangered plants	1,000-foot buffer of the Project site boundary	March 19 to March 22, 2024 April 16, 2024 May 14 to May 16, 2024
Wildlife Habitats	Project site boundary	March 19 to March 22, 2024 April 16, 2024 May 14 to May 16, 2024
Noxious Weeds	Project site boundary	March 19 to March 22, 2024 April 16, 2024 May 14 to May 16, 2024

3.3.1 Western Burrowing Owl

Western burrowing owl surveys were completed concurrently with the Washington ground squirrel surveys, and within the same analysis area (i.e., 1,000-foot buffer of Project disturbance areas located in suitable habitat). The survey consisted of searching for nesting burrows and checking the activity status of artificial nesting structures located on the Columbia Development Authority (CDA) property (former Umatilla Chemical Depot). Burrows and nesting structures were considered potentially active if signs of burrowing owls (e.g., whitewash, feathers, scat, pellets, or tracks) were observed.

3.3.2 Other Wildlife Species and Raptor Nests

All wildlife species encountered within and adjacent to the Washington ground squirrel analysis area were recorded. The biologists also scanned outside of the analysis area to look for and record the location of potential raptor nesting opportunities such as cliffs, rock outcrops, or trees. The location, species, and nest occupancy status of all raptor nests observed within or outside the analysis area were recorded.

3.3.3 Wildlife Habitats

Wildlife habitat types within the Project site boundary were recorded during the field surveys. Habitat types were subsequently digitized on a desktop computer using ArcMap geographic information system. Representative photos of each habitat type were taken.

3.3.4 Noxious Weeds

Noxious weed surveys were completed concurrently with the Washington ground squirrel surveys, but were limited to the portions of the Washington ground squirrel analysis area (1,000 foot-buffer of Project disturbance areas) located within the Project site boundary. Locations of plant species on the Oregon Department of Agriculture's Noxious Weed List (ODA 2022), the Umatilla County Noxious Weed List (Umatilla County Road Department 2024), and the Morrow County Noxious Weed List (Morrow County Weed Department 2024) were recorded. Data collected at each noxious weed infestation included species, abundance, cover, phenology, date, observation type, and a general description of the infestation. Representative photos were taken at each infestation.

4.0 RESULTS

4.1 General Standards

The Fish and Wildlife Habitat Standard set for by OAR (345-022-0060) states:

To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with:

- (1) *The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017, and*
- (2) *For energy facilities that impact sage-grouse habitat, the sage-grouse specific habitat mitigation requirements of the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-415-0025(7) and OAR 635-140-0000 through -0025 in effect as of February 24, 2017.*

4.2 Identification and Description of Fish and Wildlife Habitats

OAR 345-021-0010(1)(p): (B) Identification of all fish and wildlife habitat in the analysis area, classified by the habitat categories as set forth in OAR 635-415-0025 and the sage-grouse specific habitats described in the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-140-0000 through 635-140-0025 (core, low density, and general habitats), and a description of the characteristics and condition of that habitat in the analysis area, including a table of the areas of permanent disturbance and temporary disturbance (in acres) in each habitat category and subtype.

(C) A map showing the locations of the habitat identified in (B).

4.2.1 Habitat Categorization

POWER biologists used the Oregon Natural Heritage Program landcover dataset (ONHP 2010) to identify the habitat types within the analysis area. The habitat types and acres within the analysis area are shown in Table P-3 below and Appendix A of Attachment P-1.

TABLE P-3. HABITAT TYPES AND CATEGORIES IN THE ANALYSIS AREA

GENERAL HABITAT	ONHP HABITAT TYPE	ACRES
Agriculture	Cultivated Crops	4,861.7
	Pasture/Hay	185.1
Developed	Developed Open Space	66.0
	Rural Residential	723.2
	Suburban	372.2
	Urban	21.1
	Alkali and Desert Grasslands	73.4
Grassland	Columbia Basin Grasslands and Prairie	2.9
	Exotics	108.1
	Alpine and Subalpine Habitats	0.4
Shrubland	Deserts, Playas and Ash Beds	0.4
	Sagebrush Shrublands and Steppe	4,336.0
	Salt Desert Scrub	0.4
Water	Water (Lakes and Ponds, Rivers and Streams, Bays)	737.0
Wetland	Marshes, Bogs and Emergent Wetlands	56.0
Total		11,543.9

POWER biologists mapped the habitat types within the Project site boundary during the March to May 2024 field surveys (refer to Section 3.3). Each habitat type was assigned to one of the six habitat categories defined in the ODFW Fish and Wildlife Habitat Mitigation Policy as set forth in OAR 635-415-0025 and described in Section 2.2/ Table P-1. The habitat types, habitat category, and acres within the Project site boundary are shown in Table P-3 and Attachment P-2. Impacts to habitat, including a table of the areas of permanent disturbance and temporary disturbance in each habitat category and subtype, are described in Section 4.4.1.

TABLE P-4. HABITAT TYPES AND CATEGORIES IN THE PROJECT SITE BOUNDARY

GENERAL HABITAT	ONHP HABITAT TYPE	FIELD-MAPPED HABITAT TYPE	ODFW HABITAT CATEGORY	ACRES
Developed	Urban	Developed	6	241.8
Agriculture	Cultivated Crops	Agriculture	6	334.6
Grassland	Exotics	Annual grassland	5	407.6
Grassland	Columbia Basin Grasslands and Prairie	Mixed annual/perennial grassland	4	170.1
Shrubland	Sagebrush Shrublands and Steppe	Bitterbrush shrubland	3	54.4
Shrubland		Sagebrush steppe	3	11.9
Wetland	Marshes, Bogs, and Emergent Wetlands	Wetland	4	7.4
			Total	1,227.8

4.2.2 Description of Fish and Wildlife Habitat

Habitat types and categories with the Project site boundary area are described below and shown in Attachment P-2.

Category 1 Habitat

Category 1 habitat is an irreplaceable, essential wildlife habitat for a species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population, or unique assemblage. There were no Category 1 habitats identified in the Project site boundary.

Category 2 Habitat

Category 2 habitat is essential wildlife habitat for a species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population, or unique assemblage. There were no Category 2 habitats identified in the Project site boundary.

Category 3 Habitat

Category 3 habitat is essential wildlife habitat, or important wildlife habitat that is limited on either a physiographic province or site-specific basis, depending on the individual species or population. There were two types of Category 3 habitat identified in the Project site boundary- bitterbrush shrubland and sagebrush steppe.

Bitterbrush Shrubland

Bitterbrush shrublands primarily occurred on the CDA property. Antelope bitterbrush (*Purshia tridentata*) formed an overstory and annual and perennial grasses dominated the understory. The non-native annual grass cheatgrass (*Bromus tectorum*) and the native perennial grasses Sandberg bluegrass (*Poa secunda*) and needle and thread (*Hesperostipa comata*) were the most abundant grasses. Other common species included non-native forbs such as redstem stork's bill (*Erodium cicutarium*), spring draba (*Draba verna*), and yellow salsify (*Tragopogon dubius*), and the native perennial forbs hairy false goldenaster (*Heterotheca villosa*) and lemon scurfpea (*Psoralidium lanceolatum*). The non-native perennial bulbous bluegrass (*Poa bulbosa*) was often also present.

Bitterbrush shrublands provide important foraging and nesting habitat for state-sensitive species including Brewer's sparrow (*Spizella breweri breweri*), loggerhead shrike (*Lanius ludovicianus*), and sagebrush sparrow (*Artemisiospiza nevadensis*), and foraging habitat for ferruginous hawk (*Buteo regalis*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Sagebrush Steppe

Sagebrush steppe occurred in a small patch on the southeastern portion of the CDA property. Basin big sagebrush (*Artemisia tridentata*) formed an overstory and non-native annual grass cereal rye (*Secale cereale*) dominated the understory. Few other plant species were present due to the dense cover of cereal rye.

While higher quality sagebrush steppe provides important habitat to many state-sensitive species, the small patch size and dense cover of non-native grasses of sagebrush steppe in the Project site boundary may limit the ability of sagebrush-associated state-sensitive species, such as Brewer's sparrow, loggerhead shrike, and sagebrush sparrow from using these areas for nesting and foraging. Sagebrush steppe may provide foraging habitat for ferruginous hawk, pallid bat, and Townsend's big-eared bat.

Category 4 Habitat

Category 4 habitat is important but non-essential and non-limited wildlife habitat. There were two types of Category 4 habitat identified in the Project site boundary- Mixed Annual/Perennial Grassland and Wetland.

Mixed Annual/Perennial Grassland

Mixed annual/perennial grasslands were the dominant habitat type on the CDA property. Mixed annual/perennial grasslands were dominated by the non-native annual grass cheatgrass and the native perennial grasses Sandberg bluegrass and needle and thread. Other common species in mixed annual/perennial grasslands included non-native forbs such as redstem stork's bill, spring draba, and yellow salsify, and the native perennial forbs hairy false goldenaster and lemon scurfpea. Cheatgrass and non-native annual forbs averaged approximately 60 percent ground cover in this habitat type. Less common native perennial forbs included bigseed biscuitroot (*Lomatium macrocarpum*) and Columbia milkvetch (*Astragalus succumbens*). The non-native perennial bulbous bluegrass was often also present.

Mixed annual/perennial grasslands provide important foraging and nesting habitat for state-sensitive species including burrowing owl, grasshopper sparrow (*Ammodramus savannarum perpallidus*), long-billed curlew (*Numenius americanus*), and foraging habitat for loggerhead shrike, ferruginous hawk, Swainson's hawk (*Buteo swainsoni*), pallid bat, and Townsend's big-eared bat. Burrowing owls and long-billed curlews were observed in mixed annual/perennial grasslands on the CDA property during 2024 field surveys.

Wetlands

Six wetlands were delineated during the Aquatic Resources Delineation completed for the Project (refer to Exhibit J). Majority of the wetlands are located adjacent to center-pivot irrigated crop circles and isolated from other waterways. The northern-most delineated wetland is separated from the nearest center-pivot by the railroad. Dominant species included willows (*Salix spp.*), common reed (*Phragmites australis*), hardstem bulrush (*Schoenoplectus acutus*), and perennial pepperweed (*Lepidium latifolium*). Wetlands may provide suitable habitat for the state-sensitive western painted turtle (*Chrysemys picta bellii*).

Category 5 Habitat

Category 5 habitat is nonessential wildlife habitat with high potential to become either important or essential habitat. There is one type of Category 5 habitat in the Project site boundary- Annual Grassland.

Annual Grassland

Annual grasslands were prevalent along road shoulders, unpaved areas adjacent to developed areas, and the non-irrigated areas between irrigated crop circles. Large areas of annual grasslands are present on the non-agricultural portions of the Port of Morrow property and the eastern portion of the CDA property. Annual grasslands were dominated by the non-native annual grasses cheatgrass and cereal rye. Other common species in annual grasslands included non-native forbs such as redstem stork's bill, spring draba, and yellow salsify, and the native perennial forbs hairy false goldenaster and lemon scurfpea. Occasionally, the non-native perennial grass bulbous bluegrass and the native perennial grasses Sandberg bluegrass and needle and thread were present, but these species were a minor component of the vegetation, if present.

Annual grasslands provide important habitat to common wildlife species such as horned lark and lark sparrow, but the dense cover of non-native plant species and lack of native perennial grasses limits the ability of many wildlife species from using these areas for foraging or nesting.

Annual grasslands may provide foraging and nesting habitat for state-sensitive species including burrowing owl, grasshopper sparrow, long-billed curlew, and foraging habitat for loggerhead shrike, ferruginous hawk, Swainson's hawk, pallid bat, and Townsend's big-eared bat.

Category 6 Habitat

Category 6 habitat is nonessential wildlife habitat with low potential to become important or essential habitat. There are two types of Category 6 habitat in the Project site boundary- Developed and Agriculture.

Developed

Developed areas included roads, road shoulders, railroads, substations, parking lots, other paved areas, and buildings. Vegetation in developed areas was typically limited to weedy species (e.g., cheatgrass, rabbitbrush [*Ericameria nauseosa*]) growing in pavement cracks or unpaved edges of roads and railroads. While developed areas may provide foraging habitat for some avian species, developed areas are unlikely to provide significant value to state-sensitive wildlife species.

Agriculture

Agriculture in the Project site boundary largely consisted of center-pivot irrigated crop circles. One poplar plantation was present in the western portion of the Project site boundary and was partially fallow during the field surveys. While agricultural areas may be used as foraging habitat for some avian and bat species, cultivated agricultural areas are unlikely to provide significant value to state-sensitive wildlife species.

4.3 Identification of State-Sensitive Species

OAR 345-021-0010(1)(p): (D) Based on consultation with the Oregon Department of Fish and Wildlife (ODFW) and appropriate field study and literature review, identification of all State-Sensitive Species that might be present in the analysis area and a discussion of any site-specific issues of concern to ODFW.

(E) A baseline survey of the use of habitat in the analysis area by species identified in (D) performed according to a protocol approved by the Department and ODFW.

Based on the result of the desktop analysis and field surveys, 12 state-sensitive species are known to occur or have potential to occur in the analysis area and the Project site boundary. All state-sensitive wildlife species with potential to occur in the analysis area and Project site boundary are listed in Table P-4.

TABLE P-5. STATE-SENSITIVE SPECIES WITH POTENTIAL TO OCCUR IN THE ANALYSIS AREA

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN PROJECT SITE BOUNDARY ²
BIRDS				
Brewer's sparrow (<i>Spizella breweri breweri</i>)	S	Sagebrush	Yes- Suitable breeding and foraging habitat present.	Yes- Suitable breeding and foraging habitat present.
Common nighthawk (<i>Chordeiles minor</i>)	S	Nesting habitat consists of open landscapes with little ground cover such as gravel bars, sparse grasslands, or forest clearings.	Yes- Suitable breeding and foraging habitat present.	Yes- Suitable breeding and foraging habitat present.

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN PROJECT SITE BOUNDARY ²
Ferruginous hawk (<i>Buteo regalis</i>)	SC	Open, arid landscapes. Typically use grassy areas and shrub-steppe with scattered shrubs or trees for perching and nesting. Nests in scattered juniper trees, cottonwood trees near small streams, rocky sites, rimrock, and undisturbed ground.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Grasshopper sparrow (<i>Ammodramus savannarum perpallidus</i>)	S	Open grassland, pasture, hayland, Conservation Reserve Program fields, and reclaimed sites.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	S	Tall sagebrush for nesting and roosting. Require open areas with grasses and significant bare ground for foraging.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Long-billed curlew (<i>Numenius americanus</i>)	SC	Open habitat with relatively short grass and little woody vegetation.	Known to occur- Observed on the CDA property during 2024 field surveys.	Known to occur- Observed on the CDA property during 2024 field surveys.
Sagebrush sparrow (<i>Artemisiospiza nevadensis</i>)	SC	Shrub-steppe habitat, particularly big sagebrush communities. Require high shrub cover and low grass and litter cover in relatively large patches.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Swainson's hawk (<i>Buteo swainsoni</i>)	S	Expansive grassland habitat with scattered nest trees and small mammals for prey.	Known to occur- Has been documented nesting on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Western burrowing owl (<i>Athene cunicularia hypugaea</i>)	SC	Depend heavily upon burrows created by other species, especially badgers, for nesting. Prefer burrow sites with a high proportion of bare ground.	Known to occur- Observed on the CDA property during 2024 field surveys.	Known to occur- Observed on the CDA property during 2024 field surveys.
FISH				
Bull trout (<i>Salvelinus confluentus</i>)	SC; FT	Need cold, clean water to survive. Typically found in the headwaters of Oregon rivers.	No- Occurs year-round in the Umatilla River, and USFWS-designated critical habitat and migration habitat present in the Columbia River, both of which are outside the 0.5 mile analysis area	No- No perennial streams or other waterbodies are present that could potentially support bull trout.

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN PROJECT SITE BOUNDARY ²
			for state-sensitive species (ODFW 2023).	
Chinook salmon - Fall (<i>Oncorhynchus tshawytscha</i>)	S	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Spawning and rearing habitat present in the Umatilla River, and migration habitat present in the Columbia River, both of which are outside the 0.5 mile analysis area for state-sensitive species (ODFW 2023).	No- No perennial streams or other waterbodies are present that could potentially support Chinook salmon.
Chinook salmon - Spring (<i>Oncorhynchus tshawytscha</i>)	S	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Migration habitat present in the Columbia River, which is outside the 0.5 mile analysis area for state-sensitive species (ODFW 2023).	No- No perennial streams or other waterbodies are present that could potentially support Chinook salmon.
Pacific lamprey (<i>Entosphenus tridentata</i>)	S	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Habitat present in the Umatilla River, which is outside the 0.5 mile analysis area for state-sensitive species (ODFW 2023).	No- No perennial streams or other waterbodies are present that could potentially support Pacific lamprey.
Steelhead - Summe/ Columbia Basin rainbow trout (<i>Oncorhynchus mykiss / gairdneri</i>)	SC; FT	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Spawning and rearing habitat present in Butter Creek, rearing and migration habitat present in the Umatilla River, and migration habitat present in the Columbia River, all of which are outside the 0.5 mile analysis area for state-sensitive species (ODFW 2023).	No- No perennial streams or other waterbodies are present that could potentially support steelhead.
MAMMALS				
Pallid bat (<i>Antrozous pallidus</i>)	S	Dry, open habitats. Use crevices in cliffs, caves, mines, bridges, and buildings for day, night, or maternity roosts, or hibernacula. Prefer grassland, shrub-steppe, and dry forest ecotones for foraging.	Yes- Suitable roosting, foraging, and hibernating habitat present.	Yes- Suitable roosting, foraging, and hibernating habitat present.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	SC	Mesic habitats characterized by coniferous and deciduous forests, but occupy a broad range of habitats. Caves, mines, and buildings are used for day	Yes- Suitable roosting, foraging, and hibernating habitat present.	Yes- Suitable roosting, foraging, and hibernating habitat present.

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN PROJECT SITE BOUNDARY ²
		roosting, maternity roosts, and winter hibernation.		
REPTILES				
Western painted turtle (<i>Chrysemys picta bellii</i>)	SC	Streams, ponds, lakes, and permanent and ephemeral wetlands. Spend most of their lives in water, but also require terrestrial habitats for nesting.	Yes- Suitable habitat present in wetlands.	Yes- Suitable habitat present in wetlands.
NOTES:				
¹ Regulatory status is defined as Oregon Endangered Species Act endangered or threatened (SE, ST); Oregon sensitive or sensitive-critical (S, SC).				
² Potential to occurs determination is based on a POWER Engineers biologist's professional opinion following the desktop review of the species' habitat specifications and field surveys.				
³ The analysis area extends 0.5 mile from the Project site boundary for Oregon sensitive or sensitive-critical species.				

4.4 Potential Impacts to Fish and Wildlife

4.4.1 Potential Impacts to Habitat

OAR 345-021-0010(1)(p): (F) A description of the nature, extent and duration of potential adverse impacts on the habitat identified in (B) and species identified in (D) that could result from construction, operation and retirement of the proposed facility.

Construction of the Project would result in temporary and permanent impacts to wildlife habitat. Temporary impacts would result from vegetation clearing and ground disturbance in structure work areas, pulling and tensioning sites, construction yards, and staging areas. Permanent impacts would occur in the areas that would be occupied by the structure footprints and new and improved access roads. Refer to Exhibit B for a more detailed description of Project disturbance areas. A summary of impacts by habitat category and habitat type for each Alternative Route is provided in Table P-5. Locations of temporary and permanent disturbance in the Project site boundary are shown in Attachment P-2.

Most vegetation clearing and ground disturbance would be temporary (103 to 109 acres, depending on the route selected) and would primarily impact annual grassland and disturbed habitat types (Table P-5). All areas of temporary disturbance in non-agricultural and non-developed habitat types would be revegetated with a native seed mix per the Revegetation and Noxious Weed Plan (Attachment P-3). Agriculture and developed habitat types will be restored in conjunction with individual landowners. Revegetation would be expected to restore the habitat functionality lost by disturbance to all Category 3, 4, and 5 habitats in one to three years. While recolonization by shrub species in the bitterbrush shrubland and sagebrush steppe habitat types would take longer to reestablish, shrubs in these habitat types are widely spaced. Therefore, it is anticipated that few bitterbrush or sagebrush plants would need to be removed in temporary work areas.

Approximately 0.33 to 0.41 acres of vegetation would be permanently cleared during construction, depending on the route selected (Table P-5). Most of the permanent disturbance

would result from the construction of new or improved access roads and would occur primarily in annual grassland, mixed annual/perennial grassland, and developed habitat types.

TABLE P-6. TEMPORARY AND PERMANENT IMPACTS BY HABITAT CATEGORY AND TYPE

HABITAT CATEGORY	HABITAT TYPE	ACRES DISTURBED							
		ROUTE A		ROUTE B		ROUTE C		ROUTE D	
		TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	TEMPORARY	PERMANENT
3	Bitterbrush Shrubland	3.89	<0.01	3.89	<0.01	4.01	<0.01	3.89	<0.01
	Sagebrush Steppe	0.70	<0.01	0.70	<0.01	0.70	<0.01	0.70	<0.01
4	Mixed Annual/Perennial Grassland	10.42	0.02	10.42	0.02	10.42	0.02	10.42	0.02
	Wetland	-	-	-	-	-	-	-	-
5	Annual Grassland	61.87	0.05	63.67	0.05	60.25	0.05	58.21	0.04
6	Agriculture	12.65	0.01	7.79	0.01	11.21	0.01	3.43	<0.01
	Developed	63.81	0.02	63.30	0.02	65.28	0.02	62.52	0.02
Total		153.33	0.41	149.74	0.38	151.86	0.40	139.15	0.33

4.4.2 Potential Impacts to State-Sensitive Species

Birds

Nine species of state-sensitive birds have potential to occur in the analysis area (Table P-4). The primary impacts of the Project on state-sensitive birds would include temporary and permanent loss and modification to foraging and breeding habitat. Disturbance during construction and maintenance activities resulting from increased human presence, vehicles, and equipment, could disturb and displace foraging and nesting birds, and potentially result in decreased fitness, reproductive success, and/or increased mortality. There is potential for avian mortality or injury resulting from collisions with construction equipment or the transmission line, although foraging birds would likely avoid the right-of-way and use adjacent available habitats. However, these effects are expected to be temporary and minor, and would not be expected to adversely affect state-sensitive birds or their habitat. If construction occurs during the nesting season (March 1 through July 15), migratory bird nest clearance surveys would be conducted, and active nests would be avoided by a specified buffer determined in coordination with ODFW until the nest is no longer active. Active burrowing owl nests would be avoided by 0.25 mile to the extent possible given construction timing constraints. Impacts to habitat would be avoided, minimized, and mitigated for following the measures discussed in Section 8.0 and the Draft Habitat Mitigation Plan (see Attachment P-4).

Fish

There would be no adverse effects of the Project on state-sensitive fish species, as no streams that support fish would be crossed by the Project. Additionally, the Project would not require any in-water work. The closest stream that supports state-sensitive fish species is the Umatilla River, approximately 0.25 mile east of the Project. The Project would implement standard best management practices to avoid and minimize erosion and sedimentation, per the Erosion and Sediment Control Plan that will be developed in accordance with the Project's National Pollution Discharge Elimination System permit.

Mammals

Suitable roosting, foraging, and hibernating habitat for pallid bat and Townsend's big-eared bat is present in the analysis area and the Project site boundary. Construction of the Project would result in temporary and permanent loss of grassland and shrubland habitats, which provide suitable foraging habitats for these species (ODFW 2016). However, pallid and Townsend's big-eared bats may continue to forage within the Project site boundary during Project construction and operation, as the majority of the habitat in the Project site boundary would not be impacted. Suitable roosting and hibernating habitat in the Project site boundary includes abandoned buildings and other structures on the CDA property, which would not be impacted by the Project. There is potential for bat mortality or injury resulting from collisions with construction equipment or the transmission line, although bats would likely avoid the right-of-way and use adjacent available habitats. Disturbance during construction and maintenance activities resulting from increased human presence, vehicles, and equipment could disturb roosting bats and potentially result in decreased fitness, reproductive success, and/or increased mortality. However, these effects are expected to be temporary and minor, and would not be expected to adversely affect pallid or Townsend's big-eared bats (if present) or their habitat.

Reptiles

Western painted turtles have potential to occur in wetlands within the analysis area and Project site boundary. All wetlands would be spanned and avoided by the Project, and there would be no vegetation clearing or ground-disturbing activities in wetlands, other than the use of existing access roads. Vegetation clearing and ground disturbance in areas adjacent to wetlands could result in temporary and minor increases in erosion and sedimentation. Additionally, if tree trimming is required at wetland crossings to meet conductor-clearance requirements, this could result in minor and localized increases on wetland water temperatures. However, these effects would be avoided and/or minimized by the measures discussed in Section 7.0 and would not be expected to adversely affect Western painted turtles (if present) or their habitat.

5.0 MEASURES TO AVOID, REDUCE, OR MITIGATE ADVERSE IMPACTS

OAR 345-021-0010(1)(p): *(G) A description of any measures proposed by the applicant to avoid, reduce, or mitigate the potential adverse impacts described in (F) in accordance with the general fish and wildlife habitat mitigation goals and standards described in OAR 635-415-0025 and a description of any measures proposed by the applicant to avoid, minimize, and provide compensatory mitigation for the potential adverse impacts described in (F) in accordance with the sage-grouse specific habitat mitigation requirements described in the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-140-0000 through 635-140-0025, and a discussion of how the proposed measures would achieve those goals and requirements.*

5.1 General Avoidance and Minimization Measures

5.1.1 Avoidance

- » All wetlands and waterways will be avoided and/or spanned by Project features. No ground disturbance will occur in wetlands or other waterways, other than the use of existing access roads.
- » The Project is designed to be co-located within existing disturbance areas to the extent possible.

5.1.2 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 in accordance with the Project's National Pollutant Discharge Elimination System permit. 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 (Attachment P-3).

- » The establishment and spread of noxious weeds will be minimized in accordance with the Revegetation and Noxious Weed Control Plan (Attachment P-3).
- » The transmission line was designed to conform to avian-safe design standards, including Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006) and Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012).
- » If vegetation clearing or other ground-disturbance construction activities occur during the migratory bird nesting season (March 1 through July 15), nest clearance surveys for migratory birds will be conducted within seven days prior to construction. If active nests are identified, nests will be avoided by a specified buffer determined in coordination with ODFW until the nest is determined to no longer be active unless a biological monitor is on-site to ensure that nesting birds are not disturbed during construction.
- » Construction activities will be avoided to the extent possible within 0.25 mile of active burrowing owl nests during the burrowing owl nesting season (April 1 to August 15). If a known nest is unsuccessful by May 31, the spatial buffer would no longer be required.

5.2 Mitigation

After avoidance and mitigation measures have been implemented, some impacts to wildlife habitat and potential impacts to wildlife will remain. Temporary and permanent habitat loss will be mitigated according to ODFW standards as described in the Draft Habitat Mitigation Plan (Attachment P-4), which will be approved by the Oregon Department of Energy in consultation with ODFW before construction.

6.0 MONITORING PLAN

OAR 345-021-0010(1)(p): (H) A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G).

The Revegetation and Noxious Weed Plan (Attachment P-3) includes monitoring of revegetation areas and control of noxious weeds to ensure that temporarily disturbed areas are restored and stabilized. Umatilla Electric Cooperative (UEC) will also monitor compensatory mitigation actions, as required to meet the Fish and Wildlife Habitat Standard (OAR 345-022-0060), to determine if mitigation performance measures have been met at habitat mitigation sites. The Draft Habitat Mitigation Plan (Attachment P-4) discusses habitat mitigation actions and associated monitoring.

7.0 UEC PROPOSED SITE CERTIFICATE CONDITIONS

UEC will finalize and submit a Habitat Mitigation Plan to ODFW prior to construction. The Habitat Mitigation Plan will be consistent with the general fish and wildlife goals and standards of ODFW's Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0025(1) through (6)).

8.0 CONCLUSIONS

Exhibit P provides the information requested in OAR 345-021-0010(1)(p). Further, Exhibit P shows that the design, construction, and operation of the Project, taking into account the proposed mitigation measures, are consistent with the fish and wildlife mitigation goals and standards of OAR 635-415-0025(1) through (6) and complies with the Fish and Wildlife Habitat Standard at OAR 345-022-0060.

9.0 COMPLIANCE CROSS-REFERENCES

Table P-6 identifies the location within the application for site certificate of the information responsive to the application submittal requirements OAR 345-021-0010(1)(p), the Fish and Wildlife Habitat Standard at OAR 345-022-0060, and the relevant Project Order provisions.

TABLE P-7. COMPLIANCE REQUIREMENTS AND RELEVANT CROSS-REFERENCES

REQUIREMENT	LOCATION
OAR 345-021-0010(1)(p) requires Exhibit P to include the following:	
(A) <i>A description of biological and botanical surveys performed that support the information in this exhibit, including a discussion of the timing and scope of each survey.</i>	Exhibit P, Section 3.3
(B) <i>Identification of all fish and wildlife habitat in the analysis area, classified by the habitat categories as set forth in OAR 635-415-0025 and the sage-grouse specific habitats described in the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-140-0000 through 635-140-0025 (core, low density, and general habitats), and a description of the characteristics and condition of that habitat in the analysis area, including a table of the areas of permanent disturbance and temporary disturbance (in acres) in each habitat category and subtype.</i>	Exhibit P, Section 4.2 and 4.4.1
(C) <i>A map showing the locations of the habitat identified in (B).</i>	Exhibit P, Attachment P-2
(D) <i>Based on consultation with the Oregon Department of Fish and Wildlife (ODFW) and appropriate field study and literature review, identification of all State-sensitive Species that might be present in the analysis area and a discussion of any site-specific issues of concern to ODFW.</i>	Exhibit P, Section 4.3
(E) <i>A baseline survey of the use of habitat in the analysis area by species identified in (D) performed according to a protocol approved by the Department and ODFW.</i>	Exhibit P, Section 3.3 and 4.3
(F) <i>A description of the nature, extent and duration of potential adverse impacts on the habitat identified in (B) and species identified in (D) that could result from construction, operation and retirement of the proposed facility.</i>	Exhibit P, Section 4.4.2
(G) <i>A description of any measures proposed by the applicant to avoid, reduce, or mitigate the potential adverse impacts described in (F) in accordance with the general fish and wildlife habitat mitigation goals and standards described in OAR 635-415-0025 and a description of any measures proposed by the applicant to avoid, minimize, and provide compensatory mitigation for the potential adverse impacts described in (F) in accordance with the sage-grouse specific habitat mitigation requirements described in the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-140-0000 through 635-140-0025, and a discussion of how the proposed measures would achieve those goals and requirements.</i>	Exhibit P, Section 5.0 Exhibit P, Attachment P-4
(H) <i>A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G).</i>	Exhibit P, Section 6.0

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ATTACHMENT P-1 BIOLOGICAL RESOURCES SURVEY REPORT

March 2025

UMATILLA ELECTRIC COOPERATIVE

Umatilla to Morrow County Connect Project

Biological Resources Survey Report

PROJECT NUMBER:
179233

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Biological Resources Survey Report

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ACRONYMS AND ABBREVIATIONS

CDA	Columbia Basin Development Authority
EFSC	Energy Facility Siting Council
ESA	Endangered Species Act
Pac	Information for Planning and Consultation
IRHN	Intermountain Regional Herbarium Network
kV	Kilovolt
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
ONHP	Oregon Natural Heritage Program
ORBIC	Oregon Biodiversity Information Center
POWER	POWER Engineers, Inc.
Project	Umatilla-Morrow County Connect Project
UEC	Umatilla Electric Cooperative
USFWS	United States Fish and Wildlife Service
WGS	Washington Ground Squirrel

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). This line will be a 230-kilovolt (kV) nominal, double-circuit electrical transmission line supported by steel structures and will provide transmission system interconnection between the Boardman and Hermiston areas (Figure 1). This interconnection will expand UEC's 230-kV 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 (EFSC).

At the request of UEC, POWER Engineers, Inc. (POWER) conducted a desktop analysis to identify the special status species and habitats potentially occurring in the Project area.

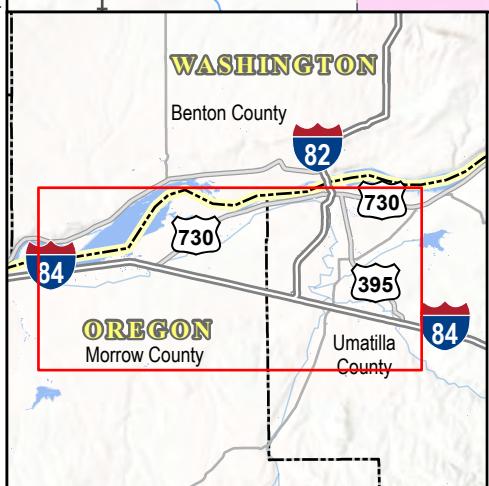
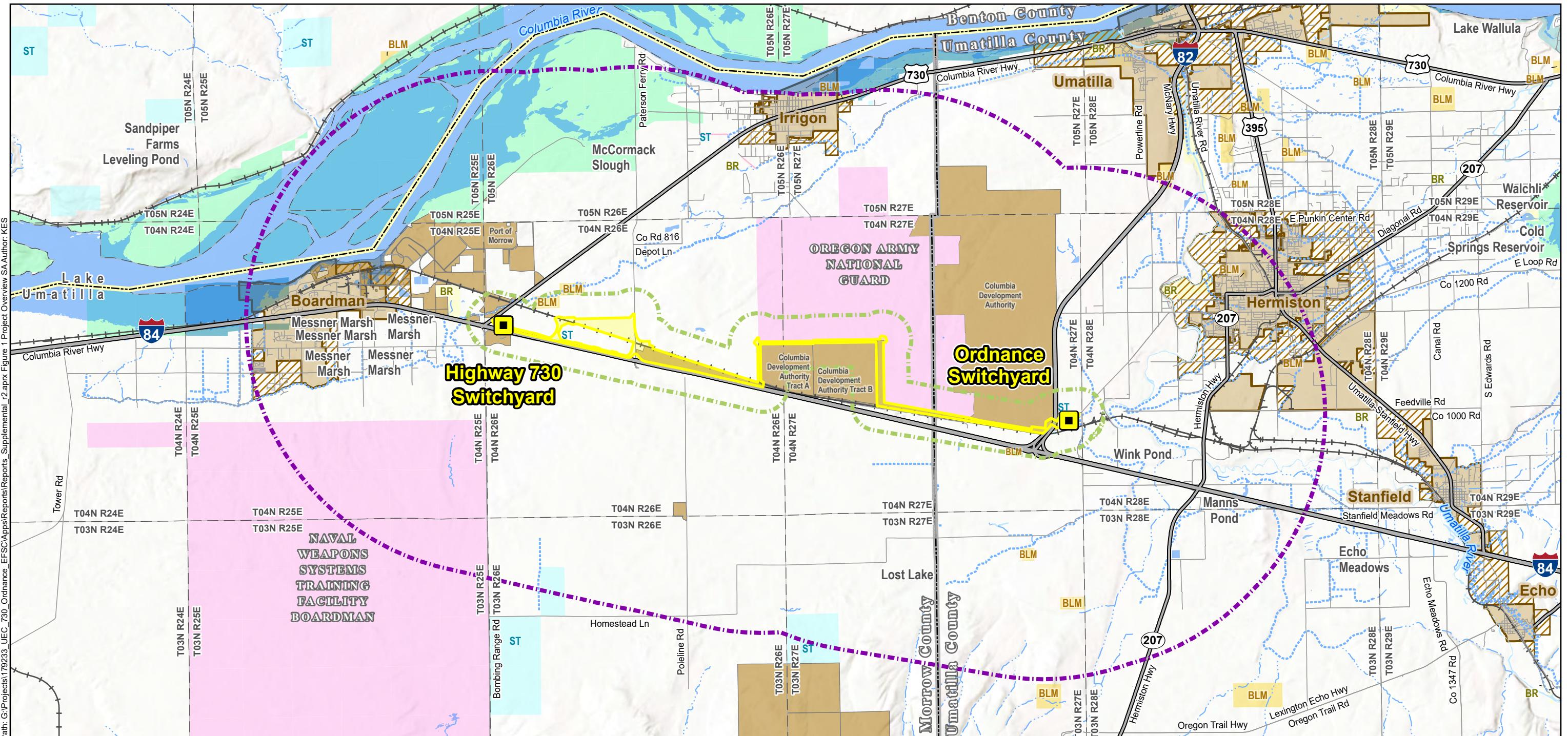
Following the desktop analysis, field surveys were completed in spring 2024 to determine the presence of special status species and their habitats in support of Exhibits P and Q of the Project's Application for Site Certificate through the Oregon EFSC.

2.0 ENVIRONMENTAL SETTING

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 is 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 Basin Development Authority (CDA). Large portions of the CDA property 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.

FIGURE 1 PROJECT OVERVIEW



Project Components

- Project Endpoint (Yellow square)
- Project Site Boundary (Yellow line)

Analysis Areas

- Fish and Wildlife Habitat (0.5 mile) (Green dashed circle)
- Threatened & Endangered Species (5 miles) (Purple dashed circle)

Transportation

- Highway (Solid black line)
- Local Road (Dashed black line)
- Railroad (Dash-dot black line)

Boundaries

- State (Yellow dashed line)
- County (Black dashed line)
- Township (Black dash-dot line)
- Town Boundary (Orange dashed line)
- Urban Growth Boundary (Orange dash-dot line)

Water Resources (NHD)

- Waterbody (Blue blob)

Ownership

- Bureau of Land Management (BLM) (Yellow)
- Bureau of Reclamation (BR) (Light Yellow)
- Department of Defense (Pink)
- Fish and Wildlife Service (Green)
- Local (Brown)
- State (ST) (Light Blue)
- State Park (Medium Blue)
- US Army Corps of Engineers (Dark Blue)

UMATILLA-MORROW COUNTY CONNECT PROJECT APPLICATION FOR SITE CERTIFICATE

Figure 1
Project Overview

0 1 2 3 4 Miles

N

POWER ENGINEERS
MEMBER OF WSP

UEC UMATILLA ELECTRIC COOPERATIVE

Date: 2/12/2025

3.0 METHODS

3.1 Desktop Analysis

POWER biologists conducted a desktop analysis to identify the special status species and habitats that may be present in the analysis area. The analysis area was the area within and extending 0.5 mile from the site boundary for Oregon sensitive or sensitive-critical species and the area within and extending 5 miles from the site boundary for federal endangered, threatened, candidate species and state endangered and threatened species, as specified by the Oregon Department of Energy in the Amended Project Order (ODOE 2024). The site boundary encompassed all potentially disturbed areas associated with each Project alternative route. The following data sources were reviewed:

- » U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation tool (USFWS 2024a)
- » USFWS Designated Critical Habitat (USFWS 2024b)
- » Oregon listed plants for Morrow and Umatilla counties (Oregon Department of Agriculture [ODA] 2023)
- » Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon (Oregon Department of Fish and Wildlife [ODFW] 2021a)
- » ODFW Sensitive Species List (ODFW 2021b)
- » Biotics Rare Species Database (Oregon Biodiversity Information Center [ORBIC] 2024)
- » Rare, Threatened and Endangered Species of Oregon (ORBIC 2019)
- » Intermountain Regional Herbarium Network herbarium records (IRHN 2024)
- » Pacific Northwest Herbarium Specimen Records (Consortium of Pacific Northwest Herbaria 2024)
- » Washington ground squirrel (WGS; *Urocitellus washingtoni*) habitat concentration areas (Washington Wildlife Habitat Connectivity Working Group 2012)
- » Land Cover (Oregon Natural Heritage Program [ONHP] 2010)
- » Deer and Elk Winter Range for Eastern Oregon (ODFW 2012)
- » ODFW Oregon Fish Habitat and Distribution (ODFW 2023a)
- » Esri World imagery (Esri 2023)

An initial list of special status species potentially occurring in the analysis areas was identified by reviewing the Information for Planning and Consultation (IPaC) list maintained by the United States Fish and Wildlife Service ([USFWS] 2024a), the state-listed threatened and endangered plant species list for Morrow and Umatilla counties (ODA 2023), the list of Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon (ODFW 2021), and the ODFW Sensitive Species List (ODFW 2021). Special status species included those that are: (1) candidates, proposed for listing, or listed under the federal Endangered Species Act (ESA), (2) listed as threatened or endangered under the Oregon ESA, and (3) designated by ODFW as sensitive or sensitive-critical for the Columbia Plateau ecoregion.

POWER biologists reviewed species-specific habitat requirements and distributions for each special status species and publicly available data to identify the species with potential habitat or known occurrences in the analysis area.

3.2 Field Surveys

3.2.1 Washington Ground Squirrel

WGS surveys were conducted in accordance with the survey methods described in Washington Ground Squirrel Protections and Survey Requirements (ODFW 2019) and Status and Habitat Use of the Washington Ground Squirrel on State of Oregon Lands (Morgan and Nugent 1999). Consistent with ODFW (2019), the WGS survey area consisted of the portions of a 1,000 foot buffer of Project disturbance areas located in suitable WGS habitat. ODFW defines suitable WGS habitat as any terrestrial habitat within the range of the WGS that has not been developed (i.e., active agricultural lands).

Prior to initiating the surveys, POWER biologists coordinated with ODFW about survey requirements and completed a field training session with ODFW biologists on March 19, 2024 at The Nature Conservancy's Lindsay Prairie Preserve to review the survey protocol and identification of WGS individuals, alarm calls, holes, scat, and trails.

Surveys consisted of three biologists walking meandering transects approximately 60 meters apart, listening for WGS alarm calls and searching for potential WGS sign (i.e., holes, scat, or trails). The survey area was surveyed twice, once in March (March 20 to March 22, 2024) and April (April 16, 2024) and once in May (May 14 to May 16, 2024 and May 23, 2024), to correspond with the highest WGS activity period when juveniles have emerged and alarm calls are most frequent. During the first survey, all areas of undeveloped land in the survey area where access permission was granted was surveyed. During the second survey, based on coordination with ODFW (L. Sommers, personal communication, May 9, 2024), the following areas were determined to be unsuitable for WGS and excluded from surveys:

- » Untilled areas between crop circles surrounded by paved 2-lane roads and railroads
- » Reclaimed paved lands (e.g. railroads and roads)
- » Wetlands
- » Fallow or active poplar plantations
- » Areas with cobbley soils

All other areas surveyed during the first survey were re-surveyed during the second survey. During the second survey, transects were walked perpendicularly to the first survey transects to maximize coverage of the habitat.

3.2.2 Western Burrowing Owl

Western burrowing owl (*Athene cunicularia hypugaea*) surveys were completed concurrently with the WGS surveys, and within the same survey area. The survey consisted of searching for nesting burrows and checking the activity status of artificial nesting structures located within the 1,000-foot Project buffer on the CDA property. Burrows and nesting structures were considered

potentially active if signs of burrowing owls (e.g., whitewash, feathers, scat, pellets, or tracks) were observed.

3.2.3 Other Wildlife Species and Raptor Nests

All wildlife species encountered within and adjacent to the WGS survey area were recorded. The biologists also scanned outside of the survey area to look for and record the location of potential raptor nesting opportunities such as cliffs, rock outcrops, or trees. The location, species, and nest occupancy status of all raptor nests observed within or outside the survey area were recorded.

3.2.4 Wildlife Habitats

Wildlife habitat types within the site boundary were recorded during the field surveys. Habitat types were subsequently digitized on a desktop computer using ArcMap geographic information system. Representative photos of each habitat type were taken.

3.2.5 Special Status Plants

Special status plant surveys were completed concurrently with the WGS surveys, and within the same survey area. The survey consisted of searching for the presence of the Oregon listed plant species with potential to occur in the analysis area (i.e., Lawrence's milkvetch [*Astragalus collinus* var. *laurentii*]).

3.2.6 Noxious Weeds

Noxious weed surveys were completed concurrently with the WGS surveys, but were limited to the portions of the WGS survey area located within the site boundary. Locations of plant species on the Oregon Department of Agriculture's Noxious Weed List (ODA 2022), the Umatilla County Noxious Weed List (Umatilla County Road Department 2024), and the Morrow County Noxious Weed List (Morrow County Weed Department 2024) were recorded. Data collected at each noxious weed infestation included species, abundance, cover, phenology, date, observation type, and a general description of the infestation. Representative photos were taken at each infestation.

4.0 RESULTS

4.1 Desktop Analysis

Based on the result of the desktop analysis, 18 special status species are known to occur or have potential to occur within the analysis areas. Fourteen of the species were determined to occur or have potential to occur within the site boundary. All special status species evaluated for potential to occur within the analysis areas and site boundary are listed in Table 2.

TABLE 1 SPECIAL STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE ANALYSIS AREAS AND SITE BOUNDARY

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN SITE BOUNDARY ²
PLANTS				
Lawrence's milkvetch (<i>Astragalus collinus</i> var. <i>laurentii</i>)	ST	Sandy or rocky soils overlaying basalt on dry slopes in bunchgrass-dominated plant communities, mostly from 2,000 to 3,400 feet.	Yes- Suitable habitat present.	Yes- Suitable habitat present.
Northern wormwood (<i>Artemisia campestris</i> var. <i>wormskioldii</i>)	SE	Basalt, compacted cobble, and sand on the banks of the Columbia River.	Yes- Suitable habitat may be present on the banks of the Columbia River; but species thought to be extirpated in Oregon.	No- No suitable habitat present.
BIRDS				
Brewer's sparrow (<i>Spizella breweri</i> <i>breweri</i>)	S	Sagebrush	Yes- Suitable breeding and foraging habitat present.	Yes- Suitable breeding and foraging habitat present.
Common nighthawk (<i>Chordeiles minor</i>)	S	Nesting habitat consists of open landscapes with little ground cover such as gravel bars, sparse grasslands, or forest clearings.	Yes- Suitable breeding and foraging habitat present.	Yes- Suitable breeding and foraging habitat present.
Ferruginous hawk (<i>Buteo regalis</i>)	SC	Open, arid landscapes. Typically use grassy areas and shrub-steppe with scattered shrubs or trees for perching and nesting. Nests in scattered juniper trees, cottonwood trees near small streams, rocky sites, rimrock, and undisturbed ground.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Grasshopper sparrow (<i>Ammodramus savannarum</i> <i>perpallidus</i>)	S	Open grassland, pasture, hayland, Conservation Reserve Program fields, and reclaimed sites.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	S	Tall sagebrush for nesting and roosting. Require open areas with grasses and significant bare ground for foraging.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Long-billed curlew (<i>Numenius americanus</i>)	SC	Open habitat with relatively short grass and little woody vegetation.	Known to occur- Observed on the CDA property during 2024 field surveys.	Known to occur- Observed on the CDA property during 2024 field surveys.

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN SITE BOUNDARY ²
Sagebrush sparrow (<i>Artemiospiza nevadensis</i>)	SC	Shrub-steppe habitat, particularly big sagebrush communities. Require high shrub cover and low grass and litter cover in relatively large patches.	Known to occur- Has been documented on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Swainson's hawk (<i>Buteo swainsoni</i>)	S	Expansive grassland habitat with scattered nest trees and small mammals for prey.	Known to occur- Has been documented nesting on the former Umatilla Chemical Depot (USFWS 2007).	Yes- Suitable breeding and foraging habitat present.
Western burrowing owl (<i>Athene cunicularia hypugaea</i>)	SC	Depend heavily upon burrows created by other species, especially badgers, for nesting. Prefer burrow sites with a high proportion of bare ground.	Known to occur- Observed on the CDA property during 2024 field surveys.	Known to occur- Observed on the CDA property during 2024 field surveys.
Yellow-billed cuckoo (Western DPS) (<i>Coccyzus americanus</i>)	FT	Large continuous riparian forest. Breed in riparian woodlands within wide floodplains that have relatively dense overstory and understory components, typically with native cottonwoods (<i>Populus</i> spp.) and willows (<i>Salix</i> spp).	Yes- Potential marginally suitable breeding habitat is present along the Umatilla River approximately 1.5 miles east of the Project, within the Umatilla National Wildlife Refuge approximately two miles northwest of the Project, and at Lost Lake approximately 3.5 miles south of the Project.	No- No suitable habitat.
FISH				
Bull trout (<i>Salvelinus confluentus</i>)	SC; FT	Need cold, clean water to survive. Typically found in the headwaters of Oregon rivers.	Yes- Occurs year-round in the Umatilla River; USFWS-designated critical habitat and migration habitat present in the Columbia River (ODFW 2023a), both of which are inside the 5-mile analysis area for T&E species (ODFW 2023a).	No- No perennial streams or other waterbodies are present that could potentially support bull trout.
Chinook salmon - Fall (<i>Oncorhynchus tshawytscha</i>)	S	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Spawning and rearing habitat present in the Umatilla River, and migration habitat present in the Columbia River, both of which are outside the 0.5-mile analysis area for	No- No perennial streams or other waterbodies are present that could potentially support Chinook salmon.

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN SITE BOUNDARY ²
			sensitive species (ODFW 2023a).	
Chinook salmon - Spring (<i>Oncorhynchus tshawytscha</i>)	S	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Migration habitat present in the Columbia River, which is outside the 0.5-mile analysis area for sensitive species (ODFW 2023a).	No- No perennial streams or other waterbodies are present that could potentially support Chinook salmon.
Pacific lamprey (<i>Entosphenus tridentata</i>)	S	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	No- Habitat present in the Umatilla River, which is outside the 0.5-mile analysis area for sensitive species (ODFW 2023a).	No- No perennial streams or other waterbodies are present that could potentially support Pacific lamprey.
Steelhead - Summer / Columbia Basin rainbow trout (<i>Oncorhynchus mykiss / gairdneri</i>)	SC; FT	Spawn and rear in freshwater streams, then migrate as juveniles to the ocean before returning as adults to freshwater streams to spawn.	Yes- Spawning and rearing habitat present in Butter Creek, rearing and migration habitat present in the Umatilla River, and migration habitat present in the Columbia River, all of which are inside the 5-mile analysis area for T&E species (ODFW 2023a).	No- No perennial streams or other waterbodies are present that could potentially support steelhead.
INVERTEBRATES				
Monarch butterfly (<i>Danaus plexippus</i>)	FC	Larval stage obligate to host plant—milkweeds (<i>Asclepias</i> spp.), growing in a variety of open habitats including agricultural areas, disturbed areas, grasslands, and meadows.	Yes- Suitable habitat present if milkweed is present.	Unlikely- No milkweed observed during field surveys.
MAMMALS				
Gray wolf (<i>Canis lupis</i>)	FE	Habitat generalists; historically were distributed state-wide.	Unlikely- No Areas of Known Wolf Activity occur in or near the analysis area (ODFW 2023b).	Unlikely- No Areas of Known Wolf Activity occur in or near the site boundary (ODFW 2023b).
Pallid bat (<i>Antrozous pallidus</i>)	S	Dry, open habitats. Use crevices in cliffs, caves, mines, bridges, and buildings for day, night, or maternity roosts, or hibernacula. Prefer grassland, shrub-steppe, and dry forest ecotones for foraging.	Yes- Suitable roosting, foraging, and hibernating habitat present.	Yes- Suitable roosting, foraging, and hibernating habitat present.
Townsend's big-eared bat	SC	Mesic habitats characterized by coniferous and deciduous	Yes- Suitable roosting, foraging, and	Yes- Suitable roosting, foraging,

SPECIES	REGULATORY STATUS ¹	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN ANALYSIS AREA ^{2,3}	POTENTIAL TO OCCUR IN SITE BOUNDARY ²
(<i>Corynorhinus townsendii</i>)		forests, but occupy a broad range of habitats. Caves, mines, and buildings are used for day roosting, maternity roosts, and winter hibernation.	hibernating habitat present.	and hibernating habitat present.
Washington ground squirrel (<i>Urocitellus washingtoni</i>)	SE	Shrub-steppe or grasslands with deep, loose, sandy loam soil suitable for burrows and with abundant forbs. Require sufficient patch size to maintain a colony and corridors that provide connectivity between colonies.	Yes- Known to occur on the Boardman Bombing Range and private lands south of the site boundary (ORBIC 2024).	Yes- Suitable habitat present on the CDA property and other undeveloped lands in the site boundary. Not detected during field surveys.
REPTILES				
Western painted turtle (<i>Chrysemys picta bellii</i>)	SC	Streams, ponds, lakes, and permanent and ephemeral wetlands. Spend most of their lives in water, but also require terrestrial habitats for nesting.	Yes- Suitable habitat present in wetlands.	Yes- Suitable habitat present in wetlands.
NOTES:				
¹ Regulatory status is defined as Federal Endangered Species Act endangered, threatened, candidate (FE, FT, FC); Oregon Endangered Species Act endangered or threatened (SE, ST); Oregon sensitive or sensitive-critical (S, SC).				
² Potential to occur determination is based on a POWER Engineers biologist's professional opinion following the desktop review of the species' habitat specifications and field surveys.				
³ The analysis area extends 0.5 mile from the site boundary for Oregon sensitive or sensitive-critical species and five miles from the site boundary for federal endangered, threatened, candidate species and state endangered and threatened species.				

4.2 Field Surveys

On-the-ground pedestrian transect surveys were completed on 1,294 acres, which included all portions of the WGS survey area where rights-of-entry (ROE) was obtained. Permission to survey was not granted on 821 acres (39%) of the 2,115-acre survey area. In areas where right-of-entry was not granted, habitats within the site boundary were mapped from publicly accessible vantage points or using aerial imagery. Areas where right-of-entry was not granted and thus WGS and other surveys were not completed, are shown as "Not Surveyed" on the maps in Appendix A. The following subsections describe the results of the 2024 biological resource field surveys.

4.2.1 Washington Ground Squirrel

No WGS detections (visual or auditory) were made during the surveys, and no WGS sign (holes, scat, or trails) was observed in the survey area. Signs of other small burrowing mammals observed included numerous pocket gopher (*Thomomys* sp.) mounds. Several small mammal burrow holes were observed, but none contained scat that would indicate the presence of WGS.

Table 3 provides a summary of the weather conditions during the surveys. Consistent with Morgan and Nugent (1999), surveys were halted when wind speeds approached 15mph.

TABLE 2 WEATHER CONDITIONS DURING WASHINGTON GROUND SQUIRREL SURVEYS

DATE	LOCATION	CLOUD COVER	PRECIPITATION	START			END		
				TIME	WIND SPEED (MPH)	TEMP (°F)	TIME	WIND SPEED (MPH)	TEMP (°F)
3-21-24	CDA; UEC	60	0	7:39am	6	45	11:25am	14	65
3-22-24	CDA; Port of Morrow	100	0	7:24am	2	34	2:35pm	5	63
4-16-24	UEC; Windy River; Columbia Basin Real Estate	45	0	6:30am	1	39	4:53pm	12	58
5-14-24	CDA	5	0	8:15am	2	60	5:30pm	8	80
5-15-24	CDA	50	0	8:00am	1	60	5:32pm	1	90
5-16-24	Port of Morrow	0	0	6:15am	10	60	8:00am	12	68
5-23-24	Windy River	0	0	12:30pm	7	75	3:45pm	9	81

4.2.2 Western Burrowing Owl

Six artificial nest structure complexes were present in the portions of the WGS survey area on the CDA property where access permission was granted. Each complex consisted of two artificial nest structures and a perch. Nesting structures within all six complexes were checked for activity status during the field surveys. With the exception of Complex 104, one or both nesting structures at each complex appeared to be active in 2024 or previous years (Table 3). The locations of the complexes in the survey area are shown in Appendix A. Refer to Photos 1 and 2 in Appendix B for representative photos of burrowing owl complexes.

TABLE 3 WESTERN BURROWING OWL ARTIFICIAL NEST STRUCTURE SURVEY RESULTS

COMPLEX #	DATE	ACTIVITY EVIDENCE	ACTIVITY STATUS	NOTES	LATITUDE	LONGITUDE
001	3-22-24	Whitewash, Scat, Pellets, Tracks	Active		45.827087	-119.501265
003	3-22-24	Whitewash, Feathers, Scat, Pellets, Tracks	Active	Owl flushed from complex	45.828046	-119.505814

COMPLEX #	DATE	ACTIVITY EVIDENCE	ACTIVITY STATUS	NOTES	LATITUDE	LONGITUDE
005	3-22-24 5-14-24	Whitewash, Feathers, Scat, Pellets, Tracks	Active	Owl flushed from complex during both visits	45.82746	-119.486179
007	5/14/24	Whitewash, Tracks	Active		45.825161	-119.482883
009	5/14/24	Whitewash, Feathers, Scat, Pellets, Tracks	Active		45.827889	-119.478694
104	3/20/24	None	Inactive	Nesting structures crushed	45.803445	-119.398818

4.2.3 Other Wildlife Species and Raptor Nests

Other than western burrowing owl, the only other species designated by ODFW as sensitive or sensitive-critical for the Columbia Plateau ecoregion observed during field surveys was long-billed curlew (*Numenius americanus*). Several long-billed curlews were observed on the western portion of the CDA property during both field surveys. All wildlife species observed during the field surveys are listed in Table 4.

TABLE 4 WILDLIFE SPECIES OBSERVED DURING FIELD SURVEYS

COMMON NAME	SCIENTIFIC NAME
Birds	
American Kestrel	<i>Falco sparverius</i>
Barn Swallow	<i>Hirundo rustica</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Common Raven	<i>Corvus corax</i>
Horned Lark	<i>Eremophila alpestris</i>
Killdeer	<i>Charadrius vociferus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Long-billed Curlew	<i>Numenius americanus</i>
Mourning Dove	<i>Zenaida macroura</i>
Northern Harrier	<i>Circus hudsonius</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Rock Pigeon	<i>Columba livia</i>
Say's Phoebe	<i>Sayornis saya</i>
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>
Western Kingbird	<i>Tyrannus verticalis</i>

COMMON NAME	SCIENTIFIC NAME
Western Meadowlark	<i>Sturnella neglecta</i>
Mammals	
Coyote	<i>Canis latrans</i>
Mule Deer	<i>Odocoileus hemionus</i>
Insects	
Boisduval's Blue	<i>Icaricia icarioides</i>
Painted Lady	<i>Vanessa cardui</i>

One inactive raptor nest was observed on the CDA property in a ponderosa pine (*Pinus ponderosa*) near the entrance to the Oregon Military Department's Camp Umatilla. The location of the nest is shown in Appendix A. A photo of the nest is available in Appendix B (Photo 3).

4.2.4 Wildlife Habitats

The ONHP landcover dataset (ONHP 2010) identified 15 habitat types in the wildlife habitat analysis area (0.5-mile buffer of the site boundary). These habitat types were refined into seven Project-specific habitat types that were mapped within the site boundary during the field surveys. Acres of each habitat type in the analysis area and acres of each field-mapped habitat type in the site boundary are summarized in Table 1. The distribution of each habitat type in the site boundary are shown on the maps in Appendix A.

TABLE 5 HABITAT TYPES IN THE ANALYSIS AREA AND SITE BOUNDARY

GENERAL HABITAT	ONHP HABITAT TYPE	ACRES IN ANALYSIS AREA	FIELD-MAPPED HABITAT TYPE	ACRES IN SITE BOUNDARY
Agriculture	Cultivated Crops	4,861.7	Agriculture	334.6
	Pasture/Hay	185.1	-	-
Developed	Developed Open Space	66.0	-	-
	Rural Residential	723.2	-	-
	Suburban	372.2	-	-
	Urban	21.1	Developed	241.8
	Alkali and Desert Grasslands	73.4	-	-
Grassland	Columbia Basin Grasslands and Prairie	2.9	Mixed Annual/Perennial Grassland	170.1
	Exotics	108.1	Annual Grassland	407.6
	Rock or Lava	0.4	-	-
Shrubland	Deserts, Playas and Ash Beds	0.4	-	-
	Sagebrush Shrublands and Steppe	4,336.0	Sagebrush Steppe	11.9
	Salt Desert Scrub		Bitterbrush Shrubland	54.4
	Water (Lakes and Ponds, Rivers and Streams, Bays)	737.0	-	-

GENERAL HABITAT	ONHP HABITAT TYPE	ACRES IN ANALYSIS AREA	FIELD-MAPPED HABITAT TYPE	ACRES IN SITE BOUNDARY
Wetland	Marshes, Bogs and Emergent Wetlands	56.0	Wetland	7.4
	Total	11,543.9		1,227.8

The subsections below describe the dominant plant species and distribution of each habitat type mapped in the site boundary.

Developed

Developed areas included roads, road shoulders, railroads, substations, parking lots, other paved areas, and buildings. Vegetation in developed areas was typically limited to weedy species (e.g., cheatgrass, rabbitbrush [*Ericameria nauseosa*]) growing in pavement cracks or unpaved edges of roads and railroads. Refer to Photos 4 and 5 in Appendix B for representative photos of developed areas in the site boundary.

Agriculture

Agriculture in the site boundary largely consisted of center-pivot irrigated crop circles. One poplar plantation was present in the western portion of the site boundary and was partially fallow during the field surveys. Refer to Photos 6 and 7 in Appendix B for representative photos of agricultural lands in the site boundary.

Annual Grassland

Annual grasslands were prevalent along road shoulders, unpaved areas adjacent to developed areas, and the non-irrigated areas between irrigated crop circles. Large areas of annual grasslands are present on the non-agricultural portions of the Port of Morrow property and the eastern portion of the CDA property. Annual grasslands were dominated by the non-native annual grasses cheatgrass and cereal rye (*Secale cereale*). Other common species in annual grasslands included non-native forbs such as redstem stork's bill (*Erodium cicutarium*), spring draba (*Draba verna*), and yellow salsify (*Tragopogon dubius*), and the native perennial forbs hairy false goldenaster (*Heterotheca villosa*) and lemon scurfpea (*Ladeania lanceolata*). Occasionally, the non-native perennial grass bulbous bluegrass (*Poa bulbosa*) and the native perennial grasses Sandberg bluegrass and needle and thread were present, but these species were a minor component of the vegetation, if present. Refer to Photos 8 and 9 in Appendix B for representative photos of annual grasslands in the site boundary.

Mixed Annual/Perennial Grassland

Mixed annual/perennial grasslands were the dominant habitat type on the CDA property. Mixed annual/perennial grasslands were dominated by the non-native annual grass cheatgrass and the native perennial grasses Sandberg bluegrass and needle and thread. Other common species in mixed annual/perennial grasslands included non-native forbs such as redstem stork's bill, spring draba, and yellow salsify, and the native perennial forbs hairy false goldenaster and lemon scurfpea. Less common native perennial forbs included bigseed biscuitroot (*Lomatium*

macrocarpum) and Columbia milkvetch (*Astragalus succumbens*). The non-native perennial bulbous bluegrass was often also present. Refer to Photos 10 and 11 in Appendix B for representative photos of mixed annual/perennial grasslands in the site boundary.

Bitterbrush Shrubland

Bitterbrush shrubland primarily occurred on the CDA property. Antelope bitterbrush (*Purshia tridentata*) formed an overstory and annual and perennial grasses dominated the understory. The non-native annual grass cheatgrass and the native perennial grasses Sandberg bluegrass and needle and thread were the most abundant grasses. Other common species included non-native forbs such as redstem stork's bill, spring draba, and yellow salsify, and the native perennial forbs hairy false goldenaster and lemon scurfpea. The non-native perennial bulbous bluegrass was often also present. Refer to Photos 12 and 13 in Appendix B for representative photos of bitterbrush shrubland in the site boundary.

Sagebrush Steppe

Sagebrush steppe occurred in a small patch on the southeastern portion of the CDA property. Basin big sagebrush formed an overstory and non-native annual grass cereal rye dominated the understory. Few other species were present due to the dense cover of cereal rye. Refer to Photo 14 in Appendix B for a representative photo of sagebrush steppe in the site boundary.

Wetlands

Six wetlands were delineated during the Aquatic Resources Delineation completed for the Project. All of the wetlands are located adjacent to center-pivot-irrigated crop circles and isolated from other waterways. Dominant species included willows (*Salix* spp.), common reed (*Phragmites australis*), hardstem bulrush (*Schoenoplectus acutus*), and perennial pepperweed (*Lepidium latifolium*). Refer to Photos 15 and 16 in Appendix B for representative photos of wetlands in the site boundary.

4.2.5 Special Status Plants

No Lawrence's milkvetch or any other Oregon-listed plant species were found during the surveys. Milkvetches observed during the surveys were woollypod milkvetch (*Astragalus purshii*), stalked-pod milkvetch (*Astragalus sclerocarpus*), and Columbia milkvetch (*Astragalus succumbens*). A total of 71 vascular plant species that included 44 native species, 26 introduced species, and one unknown species were recorded during the surveys. A complete list of plant species recorded is provided in Table C1 in Appendix C.

4.2.6 Noxious Weeds

POWER biologists observed four noxious weed species in the site boundary (Table 6). A total of 55 infestations were recorded, with the extent of the area infested totaling 31 acres. Diffuse knapweed (*Centaurea diffusa*) and rush skeletonweed (*Chondrilla juncea*) were common on roadsides on the CDA property. Cereal rye (was also common on roadsides, but also occurred in large, dense patches on the eastern portion of the CDA property. Scotch thistle (*Onopordum acanthium*) was found only on property owned by the Port of Morrow. Details regarding each noxious weed occurrence is provided in Table C2 in Appendix C.

The distribution and extent of noxious weeds in the site boundary are shown in Appendix A. Representative photographs of each species observed are included in Appendix B.

TABLE 6 NOXIOUS WEEDS OBSERVED DURING FIELD SURVEYS

SPECIES	ODA STATUS	UMATILLA COUNTY STATUS	MORROW COUNTY STATUS	NUMBER OF INFESTATIONS	EXTENT (ACRES) ¹
Cereal rye <i>Secale cereale</i>	None	B-listed	B-listed	12	25
Diffuse knapweed <i>Centaurea diffusa</i>	B-listed	B-listed	B-listed	16	1.8
Rush skeletonweed <i>Chondrilla juncea</i>	B-listed	A-listed	A-listed	25	3.7
Scotch thistle <i>Onopordum acanthium</i>	B-listed	B-listed	A-listed	2	0.6
			Total	55	31

Notes: ¹Calculated using the midpoint of infestation size classes. Additionally, the extent of infestations are reported separately by species, and may include overlapping species.

5.0 SUMMARY

POWER biologists completed a desktop analysis and biological resource surveys for the Project in spring 2024. The purpose of the surveys was to document the presence of special status species and their habitats in support of Exhibits P and Q of the Project's Application for Site Certificate through the Oregon EFSC.

POWER biologists determined that 18 special status species are known to occur or have potential to occur in the analysis areas, and 14 of these species were determined to occur or have potential to occur in the site boundary. Special status species observed during the field surveys included western burrowing owl and long-billed curlew. Potential impacts of the Project on special status species and habitats will be evaluated in Exhibits P and Q of the Application for Site Certificate. Exhibits P and Q will also include measures to avoid, reduce, and mitigate the potential adverse impacts on special status species and habitats in accordance with ODFW Habitat Mitigation Policy requirements.

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APPENDIX A SITE BOUNDARY HABITAT MAPS



Project Components

- Project Endpoint (Yellow square)
- Disturbance Area (White box)
- Project Site Boundary (Yellow line)
- Route B (Yellow line)
- Route C (Red line)
- Route D (Orange line)
- New Structure or Footing (Circle)
- Common Preferred Route (Green line)
- Reference Feature (Dashed box)
- Page Index (Dashed box)

Alternative Routes

- Route A (Blue line)

Survey Results

- Washington Ground Squirrel Survey
- Surveyed (Green line)
- No Access to Survey (Red line)

Reference Feature

- New Structure or Footing (Circle)
- Page Index (Dashed box)

Habitat within Site Boundary

- Category 4 - Wetland (Pink)
- Category 5 - Annual Grassland (Orange)
- Category 6 - Agriculture (Yellow)
- Category 6 - Developed (Dark Gray)

Survey Results

- Washington Ground Squirrel Survey
- Surveyed (Green line)
- No Access to Survey (Red line)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

**Figure A-1
Survey Results
Page 1 of 7**

0 500 1,000 1,500 2,000
Feet

N





Project Components

- Project Endpoint
- Disturbance Area
- Project Site Boundary
- New Structure or Footing
- Common Preferred Route
- Alternative Routes
- Route A
- Route B
- Route C
- Route D

Reference Feature

- Page Index

Survey Results

- Noxious Weed
- Rush skeletonweed
- Scotch thistle
- Cereal rye

Washington Ground Squirrel Survey

Surveyed

Habitat within Site Boundary

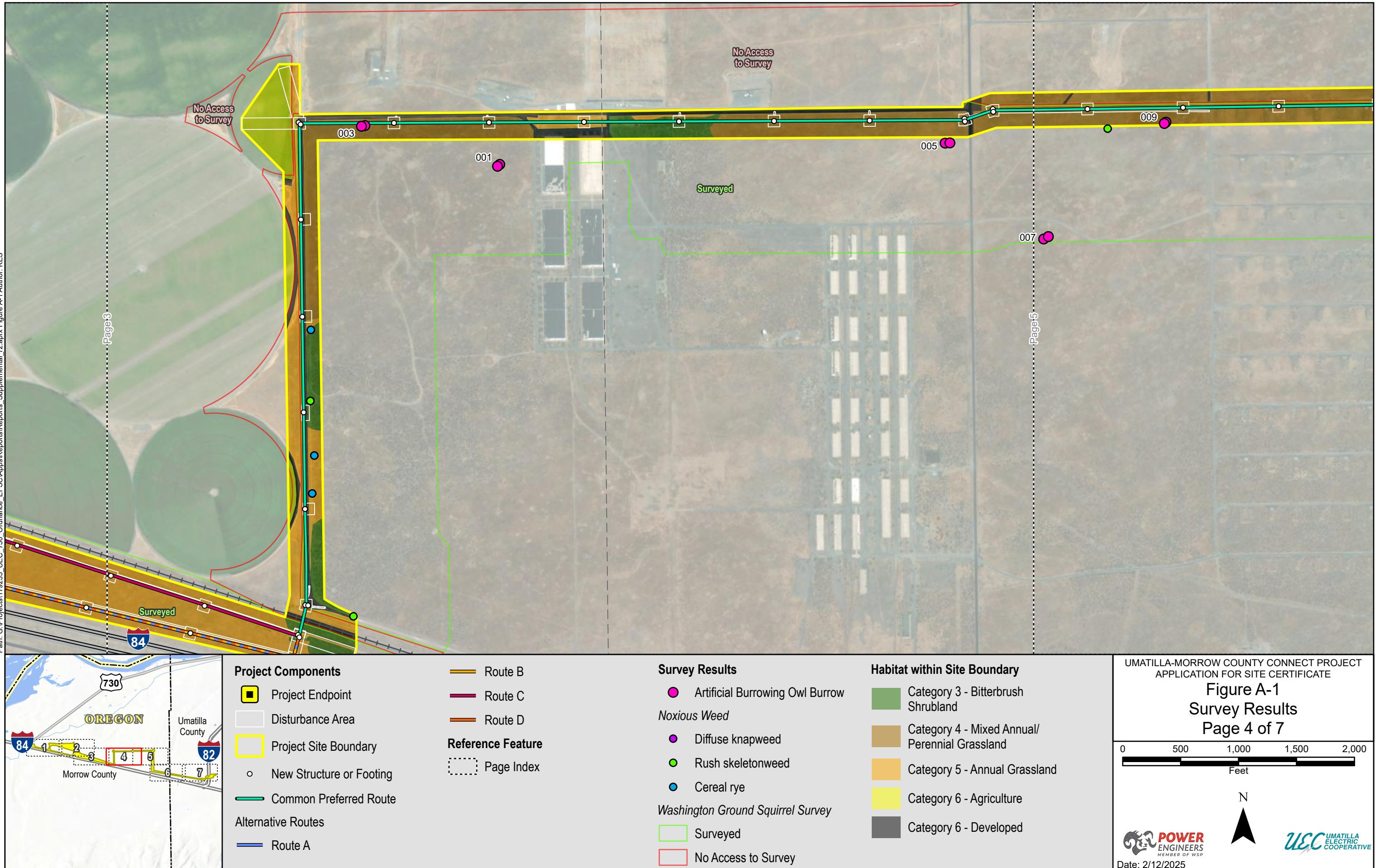
- Category 4 - Wetland
- Category 5 - Annual Grassland
- Category 6 - Agriculture
- Category 6 - Developed

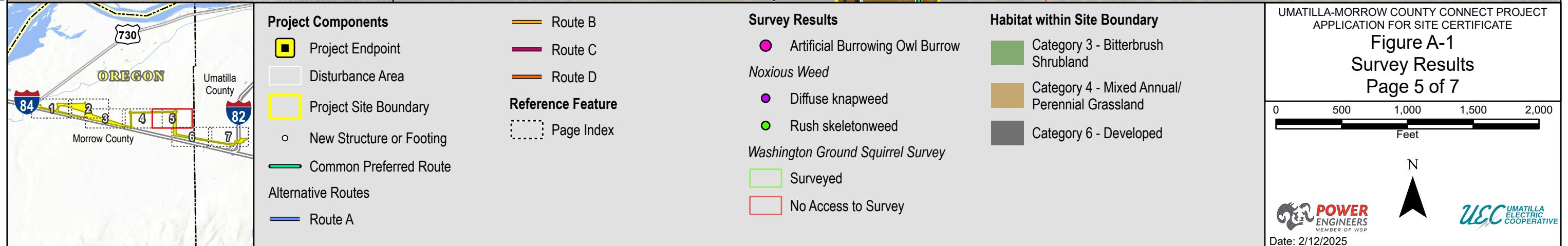
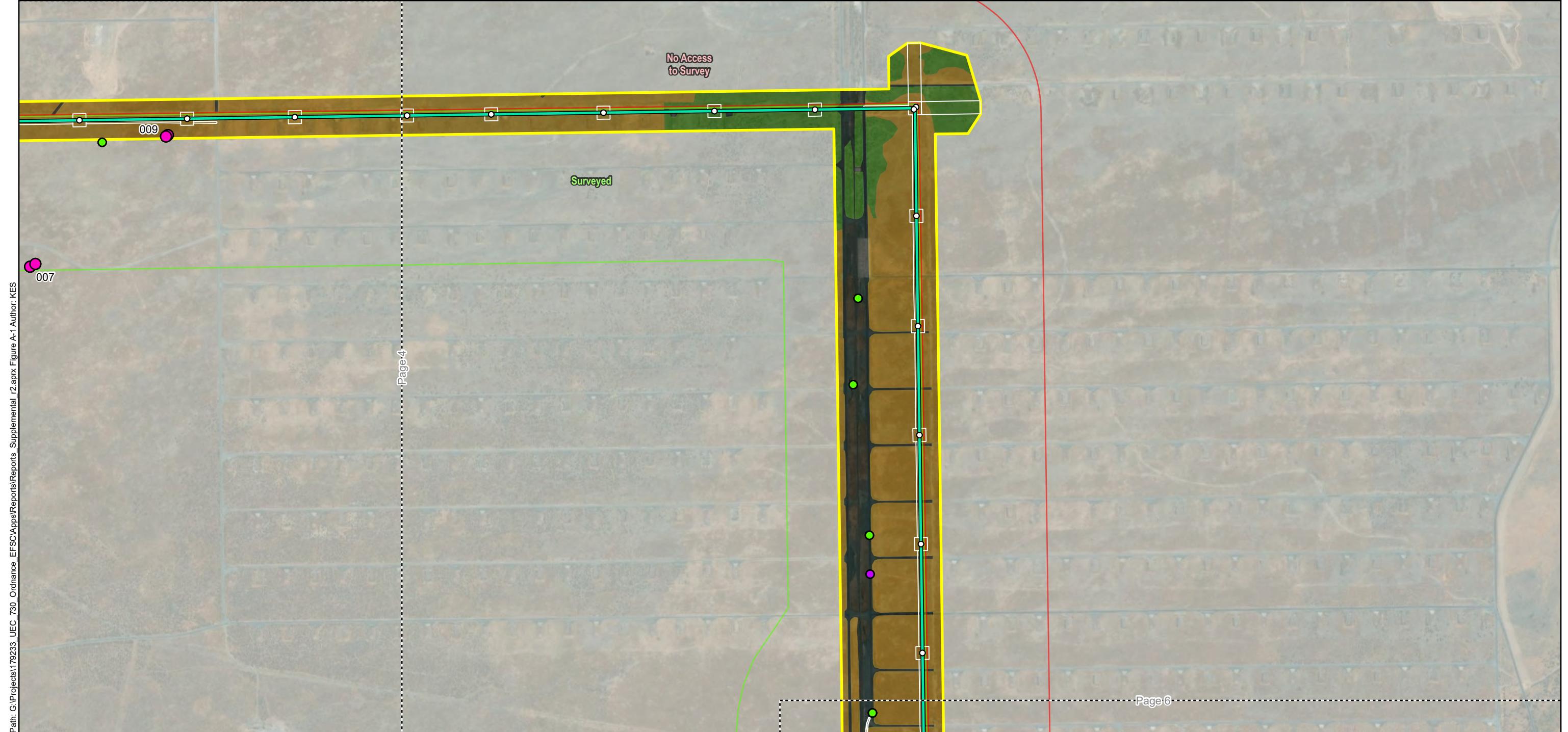
UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

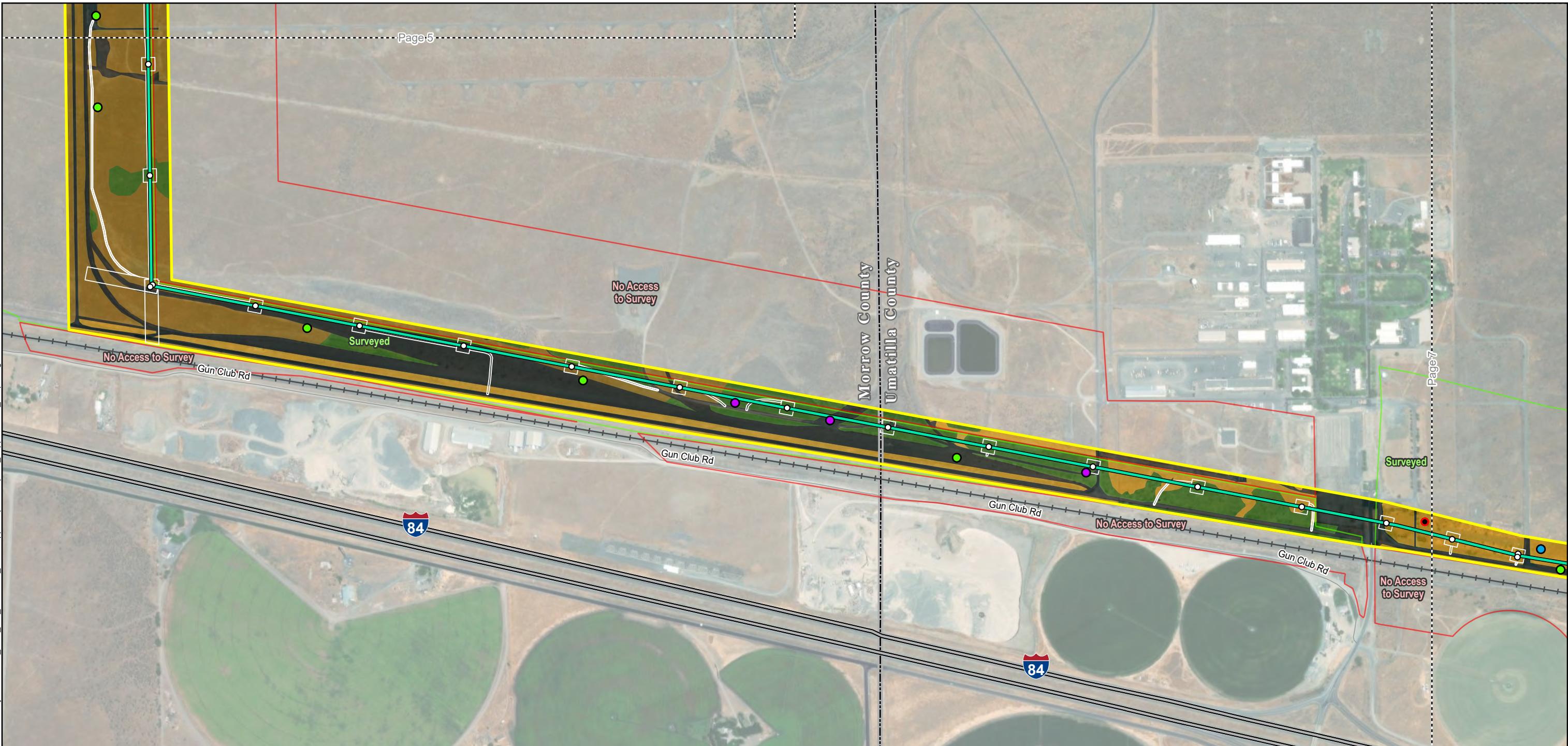
**Figure A-1
Survey Results
Page 3 of 7**

0 500 1,000 1,500 2,000
Feet

N







Project Components

- Project Endpoint
- Disturbance Area
- Project Site Boundary
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A

Route B

- Route C

Route D

Reference Feature

- New Structure or Footing

Page Index

Survey Results

- Inactive Raptor Nest

Noxious Weed

- Diffuse knapweed
- Rush skeletonweed
- Cereal rye

Washington Ground Squirrel Survey

- Surveyed

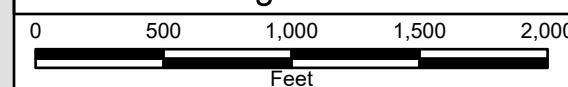
- No Access to Survey

Habitat within Site Boundary

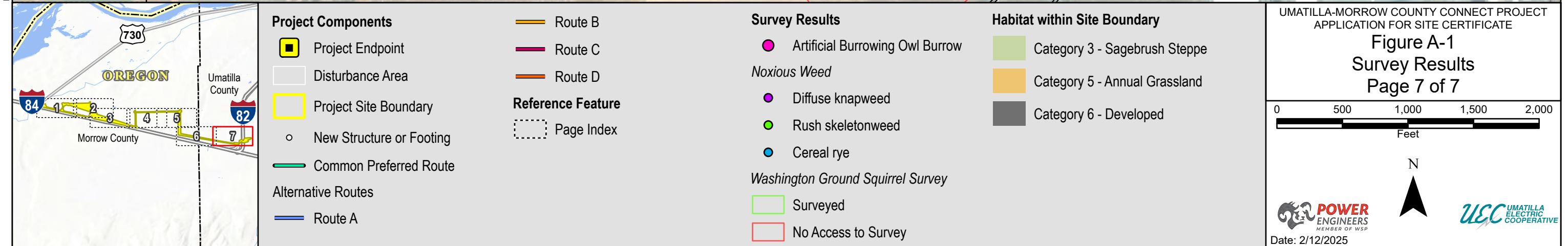
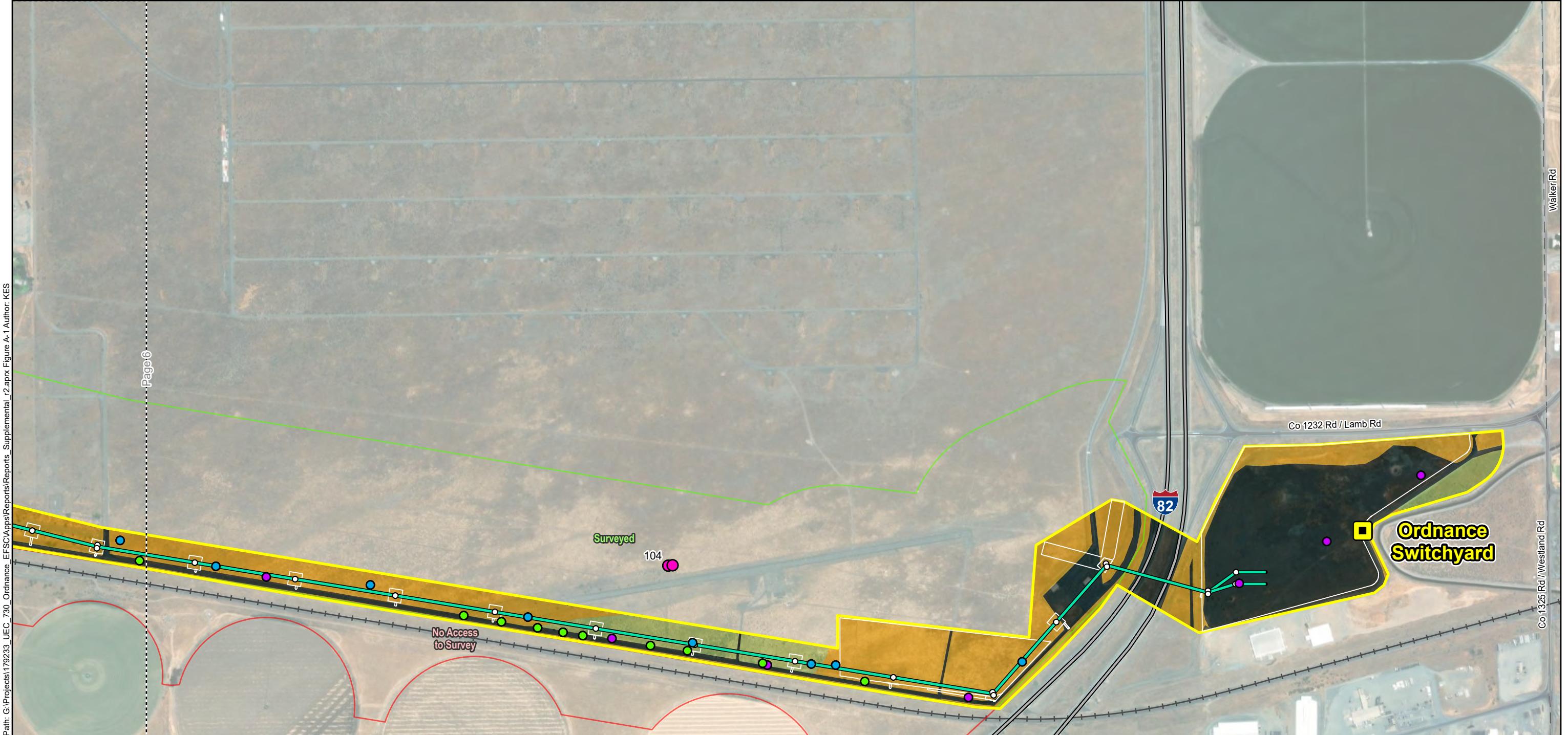
- Category 3 - Bitterbrush Shrubland
- Category 4 - Mixed Annual/ Perennial Grassland
- Category 5 - Annual Grassland
- Category 6 - Developed

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure A-1 Survey Results Page 6 of 7



N



APPENDIX B REPRESENTATIVE PHOTOS



Photo 1 Burrowing Owl artificial Nest Structure Complex 003; March 2024



Photo 2 Burrowing Owl artificial Nest Structure at Complex 009; May 2024



Photo 3 Inactive Raptor Nest on the CDA; March 2024



Photo 4 Developed Land on the CDA; March 2024



Photo 5

Developed Land At UEC's Ordnance Switchyard; March 2024



Photo 6

Irrigated Agriculture; May 2024



Photo 7 Poplar Plantation; April 2024



Photo 8 Annual Grassland on the CDA; dominated bY Cereal Rye; May 2024



Photo 9 Annual Grassland on the Port of Morrow; dominated by Cheatgrass; May 2024



Photo 10 Mixed Annual/perennial grassland on the CDA; dominated by cheatgrass and lemon scurfpea with scattered Sandberg Bluegrass and Needle and Thread; May 2024



Photo 11 Mixed Annual/perennial grassland on the CDA; dominated by cheatgrass with scattered Sandberg Bluegrass and Needle and Thread; March 2024



Photo 12 Bitterbrush Shrubland on the CDA; March 2024



Photo 13 Bitterbrush Shrubland on the CDA; March 2024



Photo 14 Sagebrush Steppe dominated by sagebrush and cereal rye; March 2024



Photo 15 Wetland dominated by Willows; March 2024



Photo 16 Wetland dominated by common reed; May 2024

APPENDIX C SURVEY RESULTS

TABLE C1 ALL VASCULAR PLANT SPECIES OBSERVED DURING SURVEYS

FAMILY	SCIENTIFIC NAME	COMMON NAME	NATIVITY
Amaranthaceae	<i>Bassia scoparia</i>	burningbush	Introduced
Amaranthaceae	<i>Chenopodium album</i>	common lambsquarters	Introduced
Amaranthaceae	<i>Salsola spp.</i>	Russian thistle	Introduced
Apiaceae	<i>Anthriscus caucalis</i>	Bur parsley	Introduced
Apiaceae	<i>Cymopterus terebinthinus</i>	turpentine cymopterus	Native
Apiaceae	<i>Lomatium macrocarpum</i>	big-seed biscuitroot	Native
Apiaceae	<i>Lomatium papilioniferum</i>	pungent desert parsley	Native
Asparagaceae	<i>Triteleia grandiflora</i>	large-flower triteleia	Native
Asteraceae	<i>Achillea millefolium</i>	yarrow	Native
Asteraceae	<i>Agoseris heterophylla</i>	annual agoseris	Native
Asteraceae	<i>Artemisia tridentata</i>	big sagebrush	Native
Asteraceae	<i>Balsamorhiza careyana</i>	Carey's balsamroot	Native
Asteraceae	<i>Centaurea diffusa</i>	diffuse knapweed	Introduced
Asteraceae	<i>Chondrilla juncea</i>	rush skeletonweed	Introduced
Asteraceae	<i>Chrysothamnus viscidiflorus</i>	yellow rabbitbrush	Native
Asteraceae	<i>Crepis atribarba</i>	slender hawksbeard	Native
Asteraceae	<i>Crocidium multicaule</i>	gold star	Native
Asteraceae	<i>Erigeron pumilus</i>	shaggy fleabane	Native
Asteraceae	<i>Heterotheca villosa</i>	hairy goldenaster	Native
Asteraceae	<i>Lactuca serriola</i>	prickly lettuce	Introduced
Asteraceae	<i>Lagophylla ramosissima</i>	branched hareleaf	Introduced
Asteraceae	<i>Onopordum acanthium</i>	scotch thistle	Introduced
Asteraceae	<i>Tragopogon dubius</i>	yellow salsify	Introduced
Boraginaceae	<i>Amsinckia lycopsoides</i>	bugloss fiddleneck	Native
Boraginaceae	<i>Cryptantha sp.</i>	cryptantha	Unknown
Boraginaceae	<i>Pectocarya penicillata</i>	sleeping comb seed	Native
Brassicaceae	<i>Draba verna</i>	spring whitlow-grass	Introduced
Brassicaceae	<i>Lepidium latifolium</i>	perennial pepperweed	Introduced
Brassicaceae	<i>Sisymbrium altissimum</i>	tall tumblemustard	Introduced
Cactaceae	<i>Opuntia X columbiana</i>	Columbia prickly pear	Native
Caryophyllaceae	<i>Cerastium arvense</i>	field chickweed	Native
Caryophyllaceae	<i>Holosteum umbellatum</i>	jagged chickweed	Introduced
Cyperaceae	<i>Schoenoplectus acutus</i>	hardstem bulrush	Native
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	Russian olive	Introduced
Fabaceae	<i>Astragalus purshii</i>	woollypod milkvetch	Native
Fabaceae	<i>Astragalus sclerocarpus</i>	stalked-pod milkvetch	Native
Fabaceae	<i>Astragalus succumbens</i>	Columbia milkvetch	Native
Fabaceae	<i>Dalea ornata</i>	Blue Mountain prairie-clover	Native

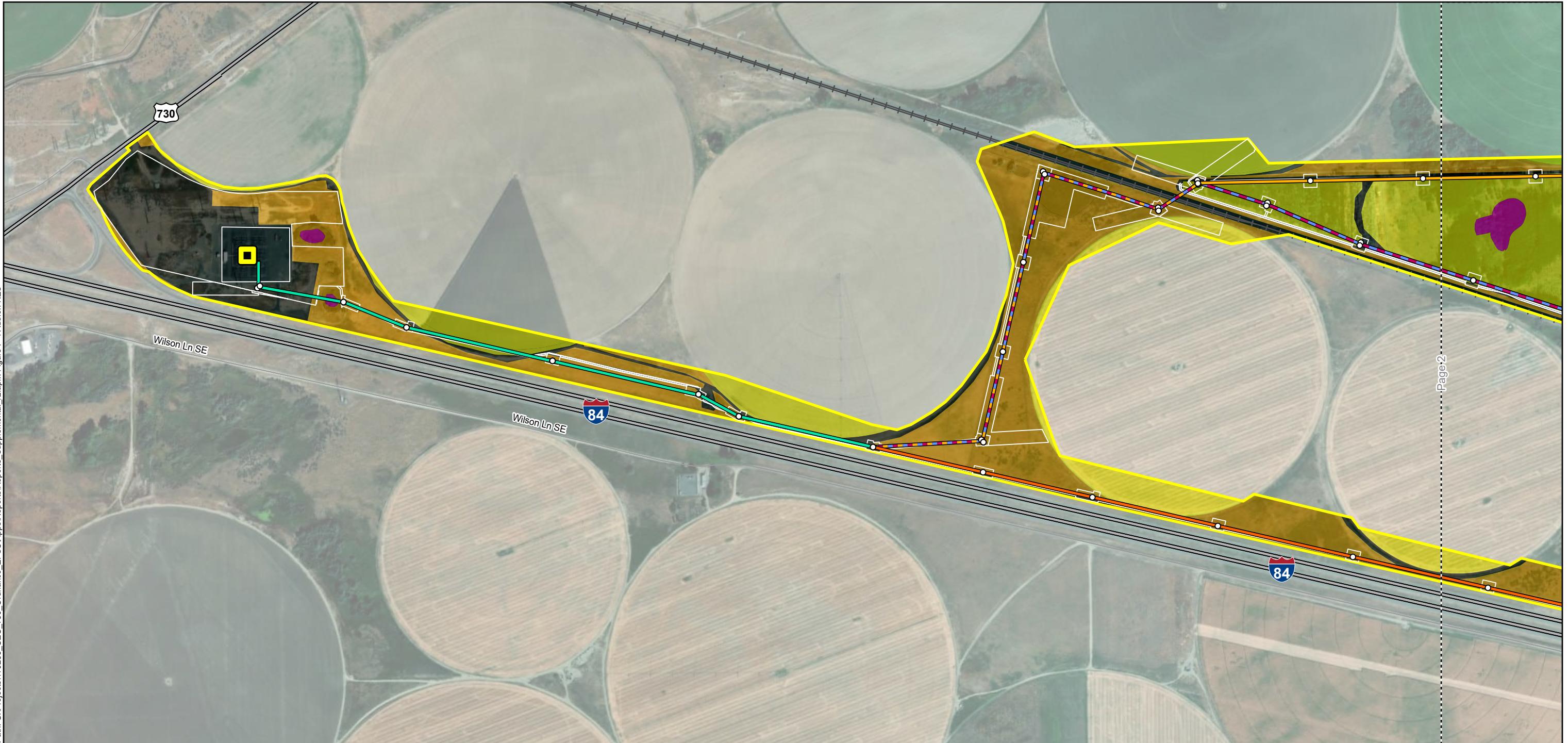
FAMILY	SCIENTIFIC NAME	COMMON NAME	NATIVITY
Fabaceae	<i>Ladeania lanceolata</i>	lemon scurfpea	Native
Fabaceae	<i>Lupinus sericeus</i>	silky lupine	Native
Fabaceae	<i>Medicago sativa</i>	alfalfa	Introduced
Fabaceae	<i>Melilotus officinalis</i>	yellow sweet-clover	Introduced
Geraniaceae	<i>Erodium cicutarium</i>	redstem storksbill	Introduced
Hydrophyllaceae	<i>Phacelia linearis</i>	thread-leaf phacelia	Native
Hydrophyllaceae	<i>Phacelia sericea</i>	silky phacelia	Native
Lamiaceae	<i>Lamium amplexicaule</i>	henbit deadnettle	Introduced
Lamiaceae	<i>Nepeta cataria</i>	catnip	Introduced
Liliaceae	<i>Fritillaria pudica</i>	yellow bells	Native
Onagraceae	<i>Epilobium brachycarpum</i>	autumn willowherb	Native
Onagraceae	<i>Oenothera pallida</i>	pale evening-primrose	Native
Plantaginaceae	<i>Plantago patagonica</i>	woolly plantain	Native
Plantaginaceae	<i>Veronica triphyllos</i>	fingered speedwell	Introduced
Poaceae	<i>Agropyron cristatum</i>	crested wheatgrass	Introduced
Poaceae	<i>Bromus tectorum</i>	cheatgrass	Introduced
Poaceae	<i>Elymus elymoides</i>	bottlebrush squirreltail	Native
Poaceae	<i>Hesperostipa comata</i>	needle and thread	Native
Poaceae	<i>Hordeum murinum</i>	mouse barley	Introduced
Poaceae	<i>Leymus condensatus</i>	giant wildrye	Native
Poaceae	<i>Poa bulbosa</i>	bulbous bluegrass	Introduced
Poaceae	<i>Poa secunda</i>	big bluegrass	Native
Poaceae	<i>Secale cereale</i>	cereal rye	Introduced
Polemoniaceae	<i>Microsteris gracilis</i>	slender phlox	Native
Polemoniaceae	<i>Phlox longifolia</i>	longleaf phlox	Native
Polygonaceae	<i>Eriogonum niveum</i>	snow wild buckwheat	Native
Polygonaceae	<i>Rumex venosus</i>	veiny dock	Native
Ranunculaceae	<i>Delphinium nuttallianum</i>	upland larkspur	Native
Roseaceae	<i>Purshia tridentata</i>	bitterbrush	Native
Rubiaceae	<i>Galium aparine</i>	bedstraw	Native
Salicaceae	<i>Populus sp.</i>	hybrid poplar	Native
Saxifragaceae	<i>Lithophragma glabrum</i>	bulbous woodland-star	Native
Urticaceae	<i>Urtica dioica</i>	great stinging nettle	Native

TABLE C2 NOXIOUS WEED SURVEY RESULTS

ID	SURVEY DATE	SPECIES	COVER CLASS	INFESTATION SIZE	QUANTITY ESTIMATED	QUANTITY TYPE	PHENOLOGY	GENERAL DESCRIPTION	LATITUDE	LONGITUDE
CEDE1	3/21/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	10	Per square meter	Rosette	Roadside	45.80584446	-119.42864320
CEDE2	3/20/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	3	Per square meter	Rosette	Roadside	45.80194184	-119.40054585
CEDE3	3/20/2024	Centaurea diffusa, Diffuse knapweed	5-25%	>0.1 acre	1	Per square meter	Rosette	Patch along both sides of road	45.80134183	-119.39591052
CEDE4	3/21/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	10	Per square meter	Rosette	Gravel area	45.80376793	-119.37912713
CEDE5	3/21/2024	Centaurea diffusa, Diffuse knapweed	5-25%	>0.1 acre	1	Per square meter	Rosette	Roadside	45.80738149	-119.43900050
CEDE6	3/20/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	3	Per square meter	Rosette	Small patch, roadside	45.80332713	-119.41085813
CEDE7	3/21/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	5	Per square meter	Rosette	Gravel area	45.80512424	-119.37628217
CEDE8	3/20/2024	Centaurea diffusa, Diffuse knapweed	5-25%	>0.1 acre	1	Per square meter	Rosette	Patch along both sides of road	45.80060668	-119.38990813
CEDE9	3/21/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	10	Per square meter	Rosette	Gravel area	45.80291486	-119.38176287
CEDE10	3/21/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	1	Per square meter	Rosette	Roadside	45.81848099	-119.45777734
CEDE11	3/21/2024	Centaurea diffusa, Diffuse knapweed	5-25%	>0.1 acre	2	Per square meter	Rosette	Roadside	45.80699398	-119.43619894
CEDE12	3/22/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	3	Per square meter	Rosette	Roadside	45.82154978	-119.50778936
CEDE13	5/15/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80218580	-119.40276613
CEDE14	5/15/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80232267	-119.40384545
CEDE16	5/15/2024	Centaurea diffusa, Diffuse knapweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80208499	-119.40200696
CEDE15	3/21/2024	Centaurea diffusa, Diffuse knapweed	>5%	0.1-0.5 acres	2	Per square meter	Rosette	Roadside	45.81556282	-119.45775962
CHJU1	3/22/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	3	Per square meter	Rosette	Annual grassland	45.82056013	-119.53350782
CHJU3	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	666	Per hectare	Bolt	Roadside	45.81643961	-119.50642010
CHJU4	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80201117	-119.40141834
CHJU5	3/21/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Rosette	Annual grassland	45.81366966	-119.45774653
CHJU6	3/20/2024	Chondrilla juncea, Rush skeletonweed	5-25%	>0.1 acre	3	Per square meter	Rosette	Patch along both sides of road	45.80138099	-119.39604935
CHJU7	3/21/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	2	Per square meter	Rosette	Roadside	45.81929733	-119.45778207
CHJU9	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	2	Per square meter	Pre-bud	Annual grassland; roadside	45.80370359	-119.41464297
CHJU11	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Rosette	Small patch	45.82776059	-119.48068398
CHJU12	3/20/2024	Chondrilla juncea, Rush skeletonweed	5-25%	>0.1 acre	3	Per square meter	Rosette	Roadside	45.80178261	-119.39939811
CHJU14	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Rosette	Small patch	45.80904453	-119.45163373
CHJU15	3/20/2024	Chondrilla juncea, Rush skeletonweed	5-25%	>0.1 acre	3	Per square meter	Rosette	Roadside	45.80166426	-119.39829448
CHJU16	3/22/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	2	Per square meter	Rosette	Annual grassland	45.82135309	-119.53419855
CHJU17	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	3	Per square meter	Bolt	Roadside	45.80246388	-119.40496891
CHJU19	3/20/2024	Chondrilla juncea, Rush skeletonweed	5-25%	>0.1 acre	3	Per square meter	Rosette	Patch along both sides of road	45.80097154	-119.39300197
CHJU20	3/22/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	2	Per square meter	Rosette	Annual grassland	45.82088551	-119.53453496
CHJU21	3/22/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	3	Per square meter	Rosette	Roadside	45.82154978	-119.50778936
CHJU22	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80218580	-119.40276613
CHJU23	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80232267	-119.40384545
CHJU25	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	>0.1 acre	1	Per square meter	Bolt	Roadside	45.80208499	-119.40200696
CHJU2	3/21/2024	Chondrilla juncea, Rush skeletonweed	>5%	0.1-0.5 acres	1	Per square meter	Rosette	Train tracks	45.80788747	-119.44349038
CHJU8	3/22/2024	Chondrilla juncea, Rush skeletonweed	>5%	0.1-0.5 acres	2	Per square meter	Rosette	Roadside	45.82246725	-119.45821177
CHJU10	5/15/2024	Chondrilla juncea, Rush skeletonweed	>5%	0.1-0.5 acres	1	Per square meter	Bolt	Along railroad tracks	45.82427949	-119.45803176
CHJU13	3/22/2024	Chondrilla juncea, Rush skeletonweed	>5%	0.1-0.5 acres	3	Per square meter	Rosette	Annual grassland	45.81899420	-119.52678930
CHJU18	3/21/2024	Chondrilla juncea, Rush skeletonweed	5-25%	0.1-0.5 acres	2	Per square meter	Rosette	All along train tracks	45.80618611	-119.43246332
CHJU24	3/21/2024	Chondrilla juncea, Rush skeletonweed	>5%	0.1-0.5 acres	2	Per square meter	Rosette	Roadside	45.81556282	-119.45775962

ID	SURVEY DATE	SPECIES	COVER CLASS	INFESTATION SIZE	QUANTITY ESTIMATED	QUANTITY TYPE	PHENOLOGY	GENERAL DESCRIPTION	LATITUDE	LONGITUDE
ONAC1	3/22/2024	Onopordum acanthium, Scotch thistle	>5%	0.1-0.5 acres	1	Per square meter	Rosette	Roadside	45.82202920	-119.53683497
ONAC2	3/22/2024	Onopordum acanthium, Scotch thistle	>5%	0.1-0.5 acres	1	Per square meter	Rosette	Annual grassland	45.82003685	-119.52718686
SECE1	5/21/2024	Secale cereale, Cereal rye	75-95%	>0.1 acre	2	Per square meter	Flower	Roadside	45.82643210	-119.55325391
SECE9	5/21/2024	Secale cereale, Cereal rye	75-95%	>0.1 acre	5	Per square meter	Flower	Roadside	45.82323218	-119.50774219
SECE4	5/21/2024	Secale cereale, Cereal rye	75-95%	0.1-0.5 acres	5	Per square meter	Flower	Roadside	45.81935914	-119.50776364
SECE5	5/21/2024	Secale cereale, Cereal rye	75-95%	0.1-0.5 acres	4	Per square meter	Flower	Roadside	45.82025640	-119.50767781
SECE1	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80132129	-119.39386632
SECE2	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80241330	-119.40305020
SECE3	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80356512	-119.41236283
SECE6	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80313132	-119.40774943
SECE7	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80135120	-119.39459588
SECE8	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80133624	-119.38828733
SECE10	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80182990	-119.39813640
SECE11	5/21/2024	Secale cereale, Cereal rye	75-95%	0.5-5 acres	10	Per square meter	Flower	Roadside	45.80413354	-119.41521670

ATTACHMENT P-2 HABITAT TYPES IN THE PROJECT SITE BOUNDARY



Project Components

- Project Endpoint
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B

Habitat within Site Boundary

- Category 4 - Wetland
- Category 5 - Annual Grassland
- Category 6 - Agriculture
- Category 6 - Developed
- Disturbance Area
- Project Site Boundary

Reference Feature

- Page Index

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure P-1
Habitat Types in the Site Boundary
Page 1 of 7

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Feet

N



Path: G:\Projects\119233_UEC_730_Ordnance_E-SCApps\Reports\Reports_Supplemental_2\appx Figure P-1 Author: KES



Project Components

- Project Endpoint (Yellow square)
- New Structure or Footing (White circle)
- Common Preferred Route (Green line)

Alternative Routes

- Route A (Blue line)
- Route B (Yellow line)

Habitat within Site Boundary

- Category 4 - Wetland (Pink)
- Category 5 - Annual Grassland (Orange)
- Category 6 - Agriculture (Yellow)
- Category 6 - Developed (Grey)

Reference Feature

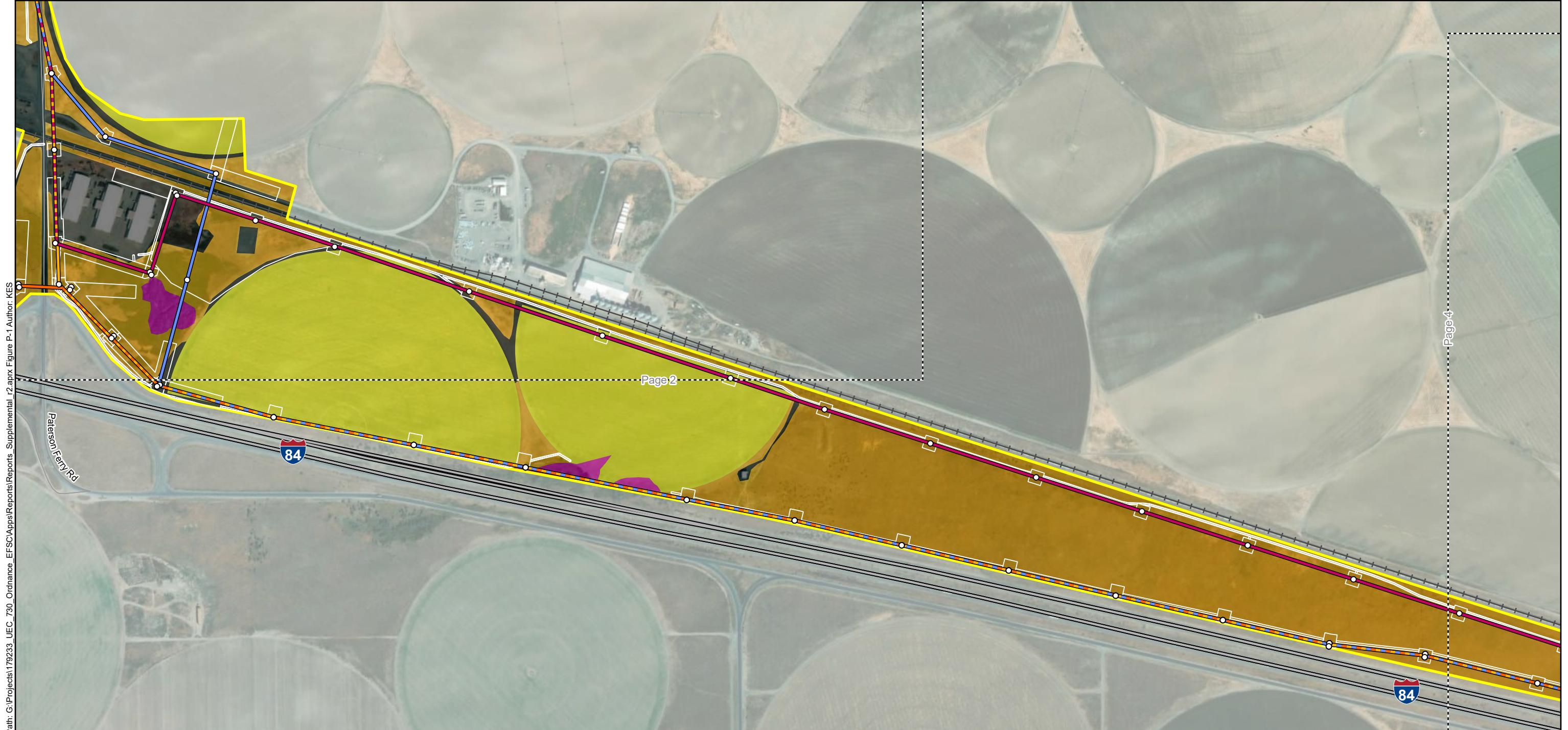
- Page Index (Dashed box)

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure P-1
Habitat Types in the Site Boundary
Page 2 of 7

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Feet

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Project Components

- Project Endpoint
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B

Habitat within Site Boundary

- Category 4 - Wetland
- Category 5 - Annual Grassland
- Category 6 - Agriculture
- Category 6 - Developed

Reference Feature

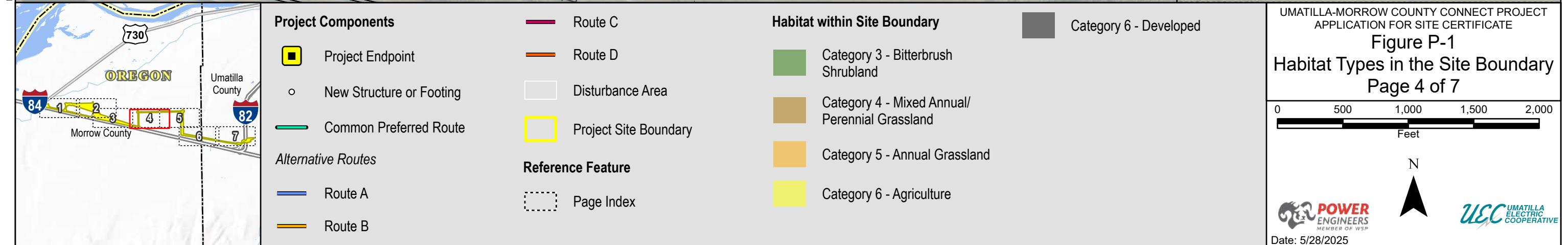
- Page Index

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure P-1
Habitat Types in the Site Boundary
Page 3 of 7

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Project Components

- Project Endpoint
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B

Reference Feature

- Page Index

Habitat within Site Boundary

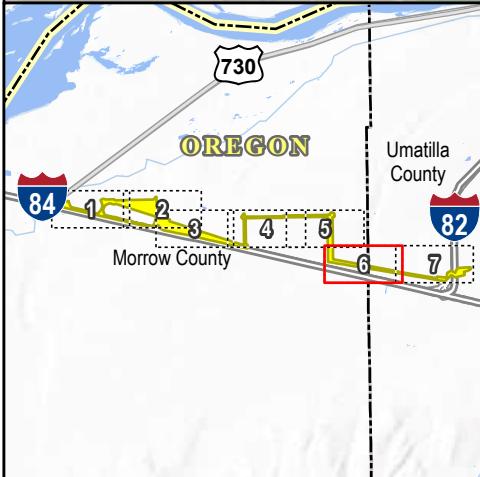
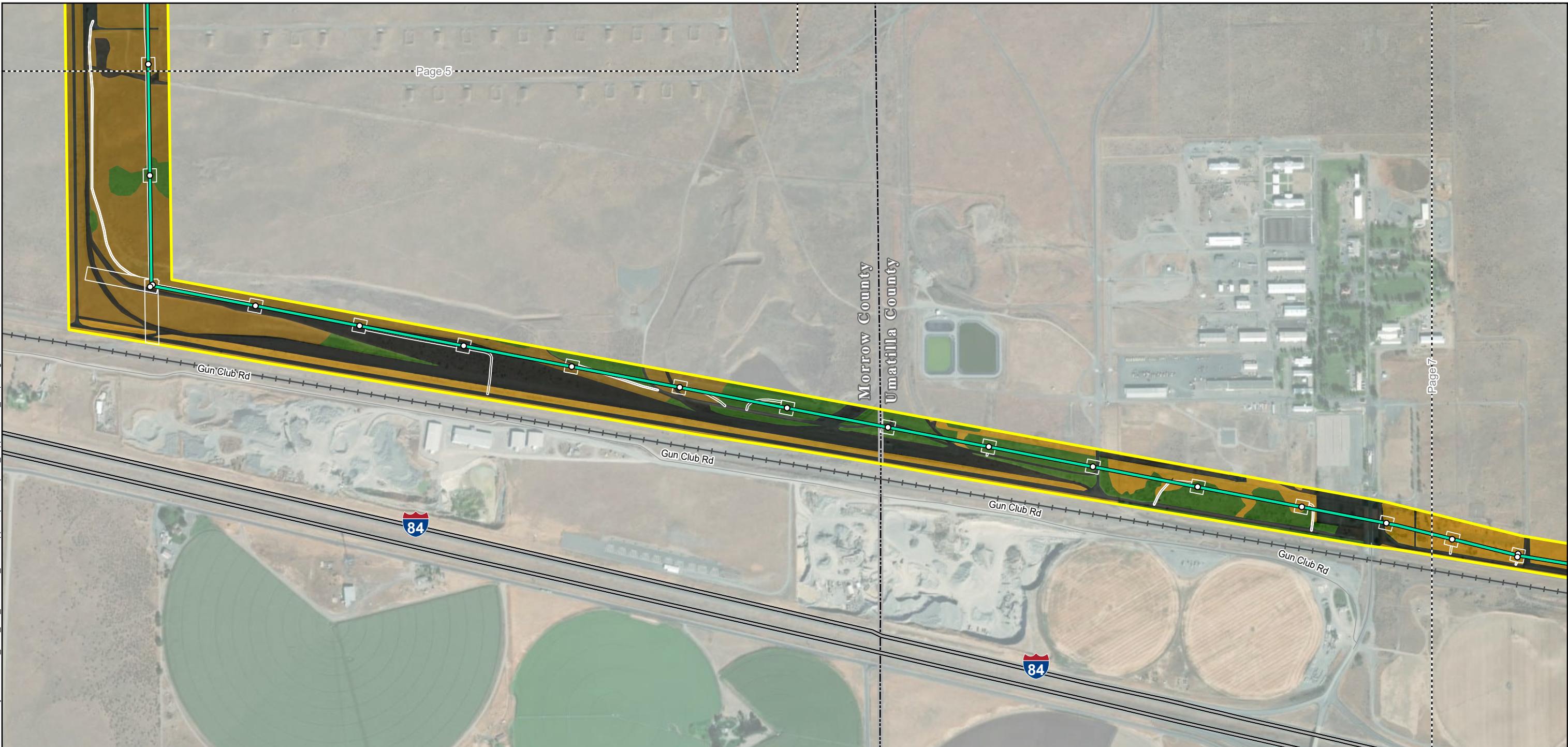
- Category 3 - Bitterbrush Shrubland
- Category 4 - Mixed Annual/ Perennial Grassland
- Category 6 - Developed

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure P-1
Habitat Types in the Site Boundary
Page 5 of 7

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Feet

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Project Components

- Project Endpoint
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B

Habitat within Site Boundary

- Category 3 - Bitterbrush Shrubland
- Category 4 - Mixed Annual/ Perennial Grassland
- Category 5 - Annual Grassland
- Category 6 - Developed
- Disturbance Area
- Project Site Boundary

Reference Feature

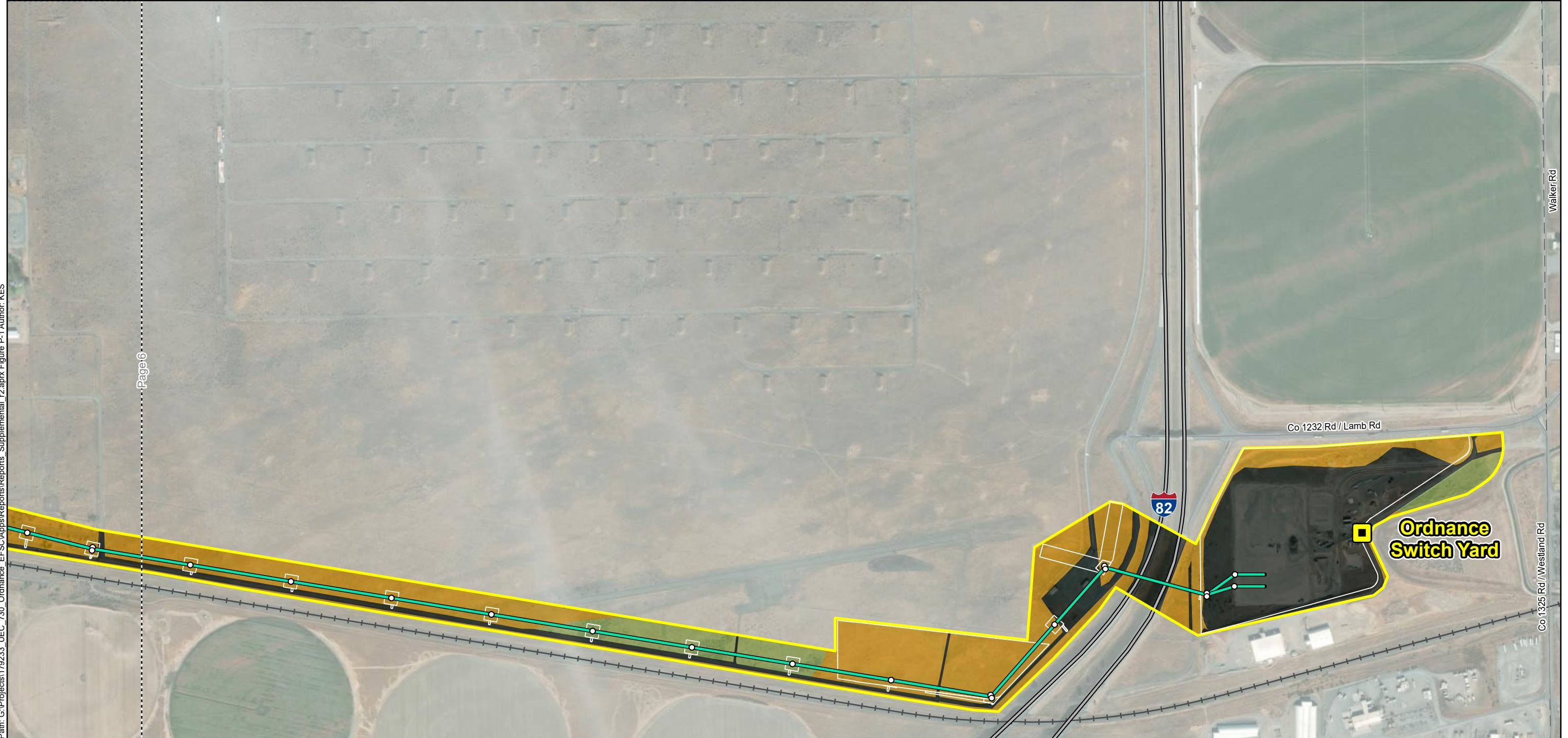
- Page Index

UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure P-1
Habitat Types in the Site Boundary
Page 6 of 7

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Feet

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Project Components

- Project Endpoint
- New Structure or Footing
- Common Preferred Route

Alternative Routes

- Route A
- Route B

Habitat within Site Boundary

- Category 3 - Sagebrush Steppe
- Category 5 - Annual Grassland
- Category 6 - Developed

Reference Feature

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UMATILLA-MORROW COUNTY CONNECT PROJECT
APPLICATION FOR SITE CERTIFICATE

Figure P-1
Habitat Types in the Site Boundary
Page 7 of 7

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Feet

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ATTACHMENT P-3 REVEGETATION AND NOXIOUS WEED PLAN

March 2025

UMATILLA ELECTRIC COOPERATIVE

Umatilla-Morrow County Connect Project

Revegetation and Noxious Weed Control Plan

PROJECT NUMBER:
179233

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Revegetation and Noxious Weed Control Plan

PREPARED FOR: UMATILLA ELECTRIC COOPERATIVE

PREPARED BY: ADRIEN ELSEROAD

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ACRONYMS AND ABBREVIATIONS

EFSC	Oregon Energy Facility Siting Council
GIS	Geographic information system
kV	Kilovolt
NOI	Notice of Intent
OAR	Oregon Administrative Rule
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
POWER	POWER Engineers, Inc.
Project	Umatilla to Morrow County Connect Project
UEC	Umatilla Electric Cooperative

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). This line will be a 230-kilovolt (kV) 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-kV 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 July 2027, pending issuance of a site certificate from the Oregon Energy Facility Siting Council (EFSC).

At the request of UEC, POWER Engineers, Inc. (POWER) prepared this Revegetation and Noxious Weed Control Plan in accordance with EFSC requirements. This plan describes the methods that UEC will implement to avoid and reduce the effects of temporary ground disturbance resulting from Project construction.

1.1 Environmental Setting

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 (*Artemesia 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 is 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 (CDA). Large portions of the CDA 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.

1.2 Types of Project Construction Disturbance

The two primary types of temporary soil and vegetation disturbance that will occur during Project construction include:

- Overland drive and crush: This disturbance type is caused by access to a work area or construction activities in a work area that does not significantly modify the landscape. Vegetation is crushed but not cut or removed (i.e., removed entirely or maintained by mowing, plowing, brush-hogging, or other applications). Soil compaction is negligible or low, and no surface soils are removed. Even though vegetation may be damaged or

destroyed, the surface soils and seedbanks remain relatively intact. It is expected that some crushed vegetation will re-sprout after disturbance ceases.

- Overland clear and cut: This disturbance type is caused by construction activities in a work area that requires the clearing of vegetation on an as-needed basis to improve or provide suitable access for equipment and vehicles. Vegetation will be crushed rather than cut where feasible. Soils are compacted, but no surface soils are removed. Mowing is the preferred method for clearing woody vegetation and will be used where practicable. This will be the primarily disturbance type in structure work areas and wire-pulling/tensioning sites.

Minor surface blading or grading may occur within work areas as needed, but in general, ground disturbance will be minimal.

1.2.1 Habitat Types Disturbed

POWER mapped the habitat types present in the site boundary during the wildlife and habitat surveys completed for the Project in 2024 (POWER 2024). The anticipated acres of temporary disturbance to each habitat type are summarized below in Table 2. Descriptions of each habitat type are provided in Exhibit P.

TABLE 1 TEMPORARY DISTURBANCE TO EACH HABITAT TYPE

HABITAT TYPE	TEMPORARY DISTURBANCE (ACRES)			
	ROUTE A	ROUTE B	ROUTE C	ROUTE D
Agriculture	12.65	7.79	11.21	3.43
Annual Grassland	61.87	63.67	60.25	58.21
Bitterbrush Shrubland	3.89	3.89	4.01	3.89
Developed	63.81	63.30	65.28	62.52
Mixed Annual/Perennial Grassland	10.42	10.42	10.42	10.42
Sagebrush Steppe	0.70	0.70	0.70	0.70
Wetland	-	-	-	-
Total	153.33	149.74	151.86	139.15

2.0 REVEGETATION PLAN

The purpose of this Revegetation Plan is to describe the methods that will be used to return temporarily disturbed non-agriculture and non-developed habitat types to conditions that approximate the pre-disturbance habitat quality. Agriculture and developed habitat types will be restored in conjunction with individual landowners. Requirements for revegetation on may differ from those contained in this Plan based on negotiations between UEC and the landowners.

2.1 Roles and Responsibilities

UEC will have the overall responsibility of ensuring this Plan is satisfactorily implemented and complied with during construction, operation, and maintenance while the Construction Contractor will be responsible for the implementation of this Plan on behalf of UEC during construction.

2.2 Methods

2.2.1 Site Preparation

Site preparation will consist of the following, as needed:

- Restoring the original contour of the land surface to approximate pre-disturbance topography to the extent practicable.
- Stabilizing disturbed soil surface areas to reduce erosion and runoff to or below naturally occurring levels.
- Installation of erosion control measures such as mulching, wattles, and jute netting, per the Project-specific Erosion and Sediment Control Plan.
- Removal of refuse and trash.
- Flagging and avoiding wetlands in accordance with mitigation measures outlined in Exhibits J and Q.
- Seedbed preparation.

Seedbed preparation, including decompaction and/or surface scarification, will occur prior to seeding in all areas where soils have been compacted by construction activities. Within overland drive and crush areas, or other areas with minimal vegetation and soil disturbance, little to no decompaction or seeding activities will be required and vegetation and soils will be left to recover naturally.

In areas with minimal soil compaction, raking and light tillage can be used to loosen the soil. Heavily compacted soils may require disking or ripping with tines. Following decompaction, the soil will be firmed, if needed, using a roller harrow or other equipment, to prepare a proper seedbed.

2.2.2 Reseeding

Once site preparation activities are complete, seed will be applied in all areas of temporary disturbance using the proposed seed mix listed in Table 2. Alternative species than those in the seed mixes may be used if requested by the landowner or if the species listed are not commercially available for purchase.

Drill seeding is the preferred seeding method, as it is more likely to result in successful seedling establishment. Other seeding methods, such as broadcast seeding, may require multiple seedings for seedlings to establish. If broadcast seeding is used, seed will be broadcast uniformly and may require the use of 50-100% more seed to achieve sufficient seedling establishment. After broadcasting, the seed will be lightly raked into the soil surface to ensure good seed contact with the soil.

TABLE 2 PROPOSED SEED MIX

SCIENTIFIC NAME	COMMON NAME	POUNDS PER ACRE (PURE LIVE SEED)
Grasses		
<i>Hesperostipa comata</i>	needle-and-thread grass	8
<i>Poa secunda</i>	Sandberg's bluegrass	3
<i>Elymus elymoides</i>	bottlebrush squirreltail	3
Forbs		
<i>Achillea millefolium</i>	Common yarrow	0.25
	Total	14.25

Seeding will follow these guidelines:

- Seed will be applied immediately after seedbed preparation while the soil is loose and moist.
- Seed will be applied to a depth of 0.25 to 0.5 inches; no greater than one inch under the soil.
- Seed will be applied in the spring or fall, depending on when seedbed preparation is completed.

3.0 NOXIOUS WEED PLAN

This Noxious Weed Plan describes the best management practices that will be employed before, during, and after construction to prevent the unabated introduction or spread of noxious weeds and other undesirable plant species in the Project area.

3.1 Roles and Responsibilities

UEC is responsible for ensuring that new noxious weeds are not introduced into the Project area, and that existing noxious weeds do not proliferate into new areas as a result of Project activities. The Construction Contractor will be responsible for implementation of this noxious weed plan on behalf of UEC.

UEC will not be responsible for:

- Treating noxious weeds introduced into the Project area by activities other than Project construction or operation and maintenance activities, such as other construction projects or natural occurrences.
- Treating noxious weeds outside of the Project area, unless Project-related activities cause noxious weeds populations to exceed their existing extents.
- Treating existing populations of noxious weeds in areas not subject to ground-disturbing activities.

3.2 Noxious Weed Species of Concern

Noxious weeds that are known to occur or have potential to occur in the Project area are listed in Table 3. The list of weeds in Table 3 was compiled using the 2024 field survey results (POWER 2024), the Umatilla County Noxious Weed List (Umatilla County Road Department 2024), and the Morrow County Noxious Weed List (Morrow County Weed Department 2024). Weeds listed in Table 3 include species found in the Project area during field surveys, and species with potential to occur, based on the habitat types present in the Project area.

TABLE 3 NOXIOUS WEEDS KNOWN OR WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

SPECIES	KNOWN TO OCCUR IN THE SITE BOUNDARY	POTENTIAL TO OCCUR IN THE SITE BOUNDARY	ODA STATUS	UMATILLA COUNTY STATUS	MORROW COUNTY STATUS
Cereal rye <i>Secale cereale</i>	Yes	Yes	None	B-listed	B-listed
Diffuse knapweed <i>Centaurea diffusa</i>	Yes	Yes	B-listed	B-listed	B-listed
Field bindweed <i>Convolvulus arvensis</i>	No	Yes	B-listed	None	B-listed
Kochia <i>Kochia scoparia</i>	No	Yes	B-listed	B-listed	B-listed
Medusahead rye <i>Taeniatherum caput-medusae</i>	No	Yes	B-listed	None	B-listed
Musk thistle <i>Carduus nutans</i>	No	Yes	B-listed	B-listed	A-listed
Puncturevine <i>Tribulus terrestris</i>	No	Yes	B-listed	B-listed	B-listed
Rush skeletonweed <i>Chondrilla juncea</i>	Yes	Yes	B-listed	A-listed	A-listed
Saltcedar <i>Tamarix ramosissima</i>	No	Yes	B-listed	None	None
Scotch thistle <i>Onopordum acanthium</i>	Yes	Yes	B-listed	B-listed	A-listed
Spikeweed <i>Hemizonia pungens</i>	No	Yes	B-listed	A-listed	A-listed
Spotted knapweed <i>Centaurea stoebe</i>	No	Yes	B-listed	A-listed	B-listed
Vetenata grass <i>Vetenata dubia</i>	No	Yes	B-listed	None	B-listed
Yellow starthistle <i>Centaurea solstitialis</i>	No	Yes	B-listed	B-listed	A-listed

Sources: POWER 2024, ODA 2022, Umatilla County Road Department 2024, And Morrow County Weed Department 2024

3.3 Noxious Weed Sources

Noxious weeds have potential to be introduced into the Project area from both anthropogenic and natural sources. Anthropogenic sources include seeds stuck to vehicles, boots, clothing, or in contaminated straw. Biological sources include seeds dropped by birds, seeds stuck to mammals, seed washed in by water, and wind dispersal from surrounding noxious weed populations. Undeveloped lands adjacent to the Project area likely contain noxious weed populations not currently known to occur in the Project area that could be introduced on-site through construction vehicles. The mitigation measures and noxious weed prevention and control measures described below are intended to reduce new noxious weeds from being

introduced into the Project area and effectively control the spread of noxious weeds that do get introduced.

3.4 Noxious Weed Prevention Measures

The following noxious weed preventive measures will be implemented to prevent the establishment and spread of noxious weed during construction, operation, and maintenance of the Project:

- Where feasible, construction will begin in noxious weed-free areas before operating in noxious weed-infested areas.
- All construction sites and access routes will be clearly marked or flagged at the outer limits of approved disturbance prior to the onset of any surface-disturbing activity. All personnel will be informed that their activities will be confined within the marked or flagged areas.
- Prior to arrival at the work site, all vehicles and equipment will be cleaned using high pressure water. The cleaning activities will concentrate on tracks, feet, or tires and the undercarriage with special emphasis on axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out.
- When moving from noxious weed contaminated areas to other areas within the Project area, all construction vehicles and equipment will be cleaned using pressurized water before proceeding to new locations.
- Construction personnel will inspect, remove, and appropriately dispose of noxious weed seed and plant parts found on their clothing and equipment. To appropriately dispose of noxious weed material, debris will be bagged by the construction personnel, disposed of in a trash receptacle, and removed from the Project to an approved disposal facility.
- Whenever possible, temporary disturbance will be avoided in areas with known noxious weed populations to reduce the risk of spread.
- In areas where temporary disturbance is necessary and where noxious weeds are identified, pre-disturbance treatment of noxious weeds will be implemented. Movement of stockpiled vegetation and salvaged topsoil will be limited to eliminate the transport of soil-borne noxious weed seeds, roots, or rhizomes to avoid mixing with noxious weed-free soil.
- During revegetation, topsoil and vegetative material containing noxious weeds will be returned to their original locations.
- All materials used for construction and erosion control, such as fill material, seed, and mulch, will be free of any noxious weeds or invasive vegetation. Only certified weed-free straw and hay bales used for sediment barrier installations.
- Preventing conditions favorable for noxious weed germination and spread by revegetating areas of temporary disturbance as soon as possible.

3.5 Noxious Weed Control Measures

The noxious weed control measures that will be implemented will be based on species-specific and site-specific conditions, including the size of infestation, the terrain, and the habitat. Standard treatment methods of noxious weeds can be found in the Pacific Northwest Weed Management Handbook (Peachey 2022) and Weed Control in Natural Areas in the Western United States (DiTomaso 2013). UEC will be responsible for hiring a qualified contractor to control noxious weeds. A description of each control method is provided in the subsections below.

3.5.1 Mechanical

Mechanical methods rely on cutting roots with a shovel, other hand tools, hand-pulling, or employing equipment that can be used to mow or disc invasive plant populations. This method is useful for smaller, isolated populations. Some rhizomatous invasive plants can spread by discing or tillage; therefore, implementation will be species specific. If such a method is used in areas to be reclaimed, subsequent seeding will be conducted to re-establish a desirable vegetative cover that will stabilize the soils and slow the potential re-invasion of invasive plants.

3.5.2 Cultural

Cultural control methods rely on prevention education of the construction, operation, and maintenance personnel. Cultural control of noxious weeds also can include the minimization of vehicular travel through areas of known populations. Noxious weed populations located adjacent to active construction sites and access, or active operations and maintenance sites and access will be cordoned off with flagging or fencing to avoid spreading seed or plant materials. Construction disturbance will be minimized in these areas until control measures have been implemented.

3.5.3 Biological

Biological control involves using living organisms (e.g., insects, diseases, livestock) to control invasive plants to achieve management objectives. Many noxious weeds have been introduced recently into North America and have few natural enemies to control their population. The biological control agent is typically adapted to a specific species and selected for their ability to attack critical areas of the plant that contribute to its persistence. Biological control methods are not expected to be used for the Project.

3.5.4 Chemical

Chemical control can effectively remove noxious weeds through the proper use of selective herbicides. Herbicide treatment can be temporarily effective for large populations of noxious weeds where other means of control may not be feasible. Requirements for herbicide use will include:

- Herbicides will be applied only by individuals with a Commercial or Public Pesticide Applicator License from ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator.

- All herbicides shall be used according to labeled instructions.
- No herbicide application is allowed when winds are greater than five miles per hour.

4.0 MONITORING

4.1.1 Monitoring Frequency

A qualified botanist or revegetation specialist will monitor reference and revegetation sites once annually each spring for five years, starting with the first growing season after seeding (Year 1).

4.1.2 Monitoring Sites

Reference sites will be established in areas of habitat quality similar to those found prior to disturbance at revegetation sites. Reference sites will represent the target conditions for evaluating the success criteria at revegetation sites. Paired reference and revegetation site monitoring plots will be established in each of the following habitat types addressed in the Revegetation Plan (Section 2.0):

- Annual Grassland
- Bitterbrush Shrubland
- Mixed Annual/Perennial Grassland
- Sagebrush Steppe

The location and number of reference and revegetation monitoring plots will be reviewed and approved by the Oregon Department of Fish and Wildlife (ODFW) prior to the initiation of the Year 1 monitoring effort. If an event such as wildfire, tilling, or intensive livestock grazing changes the condition of a reference site during the five years of monitoring such that it no longer represents the undisturbed conditions of the revegetation site, a new reference site will be selected in consultation with ODFW.

4.2 Monitoring Methods

The following data will be collected at each reference and revegetation monitoring plot:

- Native perennial grass, native perennial forb, and native shrub cover by species
- Total native annual grass and forb cover
- Total non-native annual forb cover
- Non-native annual grass cover by species
- Noxious weed cover by species

The relevé method will be used to sample the vegetation (California Native Plant Society 2000). The relevé is considered a semi-qualitative method and involves estimating plant cover in representative stands of vegetation within an area. Permanent photo points will also be established in each reference and revegetation monitoring plot. Four photos will be taken from the center of each plot, facing north, south, east, and west.

4.3 Success Criteria

Revegetation sites will be considered successfully revegetated when the follow indicators are met:

- Total plant cover at revegetation monitoring plots reaches at least 80% of the paired reference monitoring plot total plant cover.
- Native plant cover at revegetation monitoring plots reaches at least 70% of the paired reference monitoring plot native plant cover.
- Noxious weed plant cover at revegetation monitoring plots does not exceed the noxious weed plant cover at the paired reference monitoring plot.

When the success criteria at a revegetation site is met, as determined through monitoring, the revegetation site will be considered self-sustaining and no further management or monitoring will be required. If the landowner has converted an area to a use that is inconsistent with the success criteria, UEC will have no further obligation to restore the area.

4.4 Reporting

An annual revegetation monitoring report will be submitted to ODOE and ODFW within 60 days following the completion of monitoring. The annual reports will include the following:

- Description of the revegetation effort and baseline conditions in reference sites.
- Tables summarizing monitoring results in paired reference and revegetation monitoring plots.
- An assessment of whether each revegetation site is meeting the success criteria and a description of factors that may be preventing success.
- Recommendations for reseeding, noxious weed control, or other corrective measures for areas that are not showing progress toward achieving the revegetation success criteria.

4.5 Remedial Actions

If there are revegetation sites are not trending toward meeting the success criteria at Year 5, and the sites have not been converted by the landowner to an inconsistent use, ODOE may require remedial action and additional monitoring. Remedial actions may include reseeding or additional noxious weed control. As an alternative, UEC or ODOE may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the permanent loss of habitat quality and quantity.

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ATTACHMENT P-4 DRAFT HABITAT MITIGATION PLAN

March 2025

UMATILLA ELECTRIC COOPERATIVE

Umatilla-Morrow County Connect Project

Draft Habitat Mitigation Plan

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Draft Habitat Mitigation Plan

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ACRONYMS AND ABBREVIATIONS

EFSC	Oregon Energy Facility Siting Council
HMA	Habitat Mitigation Area
HMP	Habitat Mitigation Plan
kV	kilovolt
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
POWER	POWER Engineers, Inc.
Project	Umatilla to Morrow County Connect Project
UEC	Umatilla Electric Cooperative

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). This line will be a 230 kilovolt (kV) 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 kV 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 of 2027, pending issuance of a site certificate from the Oregon Energy Facility Siting Council (EFSC).

As part of Exhibit P in the Application for Site Certificate, UEC must demonstrate that the design, construction, and operation of the Project, taking into account mitigation, are consistent with the Oregon Department of Fish and Wildlife's (ODFW) Fish and Wildlife Habitat Mitigation Policy at Oregon Administrative Rule (OAR) 635-415-0025(1) through (6). At the request of UEC, POWER Engineers, Inc. (POWER) prepared this fish and wildlife habitat mitigation plan (HMP) to describe the mitigation measures that UEC will implement to achieve the goals and standards of ODFW's Habitat Mitigation Policy with respect to fish and wildlife habitat.

2.0 APPLICABLE RULES

The EFSC Fish and Wildlife Habitat Standard at OAR 345-022-0060 states:

To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with:

- (1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017, and*
- (2) For energy facilities that impact sage-grouse habitat, the sage-grouse specific habitat mitigation requirements of the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-415-0025(7) and OAR 635-140-0000 through -0025 in effect as of February 24, 2017.*

The Project is not within the range of the greater sage-grouse; therefore, OAR 345-022-0060(2) is not applicable to this HMP. Table 1 summarizes the general fish and wildlife habitat mitigation goals found in OAR 635-415-0025(1) through (6).

TABLE 1 HABITAT CATEGORIES UNDER OAR 635-415-0025

CATEGORY	DESCRIPTION	MITIGATION GOAL
1	Irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.	No loss of either habitat quantity or quality.

CATEGORY	DESCRIPTION	MITIGATION GOAL
2	Essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site specific basis depending on the individual species, population or unique assemblage.	If impacts are unavoidable, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.
3	Essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site specific basis, depending on the individual species or population.	No net loss of either habitat quantity or quality.
4	Important habitat for fish and wildlife species.	No net loss in either existing habitat quantity or quality.
5	Habitat for fish and wildlife having high potential to become either essential or important habitat.	If impacts are unavoidable, is to provide a net benefit in habitat quantity or quality.
6	Habitat that has low potential to become essential or important habitat for fish and wildlife.	Minimize impacts.

3.0 HABITAT IMPACTS

UEC mapped the habitat types present in the Project site boundary during the wildlife and habitat surveys completed for the Project in spring 2024 (POWER 2024). Locations of temporary and permanent disturbance in the site boundary are shown in Exhibit P, Attachment P-2.

Construction of the Project would result in temporary and permanent impacts to wildlife habitat. Temporary impacts would result from vegetation clearing and ground disturbance in structure work areas, pulling and tensioning sites, construction yards located in areas not previously disturbed, and staging areas. Permanent impacts would occur in the areas that would be occupied by the structure footprints. A summary of impacts by habitat category and habitat type for each route alternative is provided in Table 2.

Most vegetation clearing and ground disturbance would be temporary (139 to 153 acres, depending on the route selected) and would primarily impact annual grassland and developed habitat types (Table 2). All areas of temporarily disturbance in non-agricultural and non-developed habitat types would be revegetated with a native seed mix per the Revegetation and Noxious Weed Plan (Exhibit P, Attachment P-3). Agriculture and developed habitat types will be restored in coordination with individual landowners. Revegetation would be expected to restore the habitat functionality lost by disturbance to all Category 3, 4, and 5 habitats within one to three years. While recolonization by shrub species in the bitterbrush shrubland and sagebrush steppe habitat types may take longer to reestablish than three years, shrubs in these habitat types are widely spaced. Therefore, it is anticipated that few bitterbrush or sagebrush plants would need to be removed in temporary work areas.

Approximately 0.1 acre of vegetation would be permanently cleared during construction (Table 2). Permanent disturbance would be limited to the footprint of each structure.

TABLE 2 TEMPORARY AND PERMANENT IMPACTS BY HABITAT CATEGORY AND TYPE

HABITAT CATEGORY	HABITAT TYPE	ACRES DISTURBED							
		ROUTE A		ROUTE B		ROUTE C		ROUTE D	
		TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	TEMPORARY	PERMANENT
3	Bitterbrush Shrubland	3.89	<0.01	3.89	<0.01	4.01	<0.01	3.89	<0.01
	Sagebrush Steppe	0.70	<0.01	0.70	<0.01	0.70	<0.01	0.70	<0.01
4	Mixed Annual/Perennial Grassland	10.42	0.02	10.42	0.02	10.42	0.02	10.42	0.02
	Wetland	-	-	-	-	-	-	-	-
5	Annual Grassland	61.87	0.05	63.67	0.05	60.25	0.05	58.21	0.04
6	Agriculture	12.65	0.01	7.79	0.01	11.21	0.01	3.43	<0.01
	Developed	63.81	0.02	63.30	0.02	65.28	0.02	62.52	0.02
Total		153.33	0.41	149.74	0.38	151.86	0.40	139.15	0.33

4.0 MITIGATION CALCULATIONS

Table 3 shows the methods for calculating mitigation for temporary impacts and Table 4 shows the methods for calculating mitigation for permanent impacts. The mitigation ratios shown in Tables 3 and 4 were determined in coordination with ODFW (L. Sommers, personal communication, July 10, 2024). Consistent with ODFW guidance, UEC is not proposing compensatory mitigation for temporary or permanent impacts under the ODFW Fish and Wildlife Habitat Mitigation Policy for impacts to Category 6 habitat.

TABLE 3 CALCULATING MITIGATION FOR TEMPORARY IMPACTS

HABITAT CATEGORY	HABITAT TYPE	MITIGATION RATIO ¹	MITIGATION DESCRIPTION
3	Bitterbrush Shrubland	1:1	The mitigation goal for Category 3 and Category 4 habitat is no net loss in quantity or quality. Depending on the habitat type temporarily disturbed, the proposed mitigation ratio would result in an equal or lesser amount of acreage of mitigation than what is impacted by the project. Combined with restoration of temporary disturbance areas, the proposed mitigation ratio is intended to account for the temporary loss of habitat functionality and meet the no net loss goal. Temporary disturbance to Category 4 grasslands are not mitigated beyond revegetation.
	Sagebrush Steppe		
4	Mixed Annual/Perennial Grassland	0:1	
5	Annual Grassland	0:1	The mitigation goal, if impacts are unavoidable, is to provide a net benefit in habitat quantity or quality. Temporary disturbances to Category 5 grasslands are not mitigated beyond revegetation.
6	Agriculture	0:1	The mitigation goal for Category 6 habitat is minimization; no compensatory mitigation is required.
	Developed		

¹Acres of mitigation: acres of impact.

TABLE 4 CALCULATING MITIGATION FOR PERMANENT IMPACTS

HABITAT CATEGORY	HABITAT TYPE	MITIGATION RATIO ¹	MITIGATION DESCRIPTION
3	Bitterbrush Shrubland	1:1	The mitigation goal for Category 3 and Category 4 habitat is no net loss in quantity or quality.
	Sagebrush Steppe		
4	Mixed Annual/Perennial Grassland		
5	Annual Grassland	0.5:1	The mitigation goal, if impacts are unavoidable, is to provide a net benefit in habitat quantity or quality. The proposed ratio is to address the net benefit in habitat quality goal.
6	Agriculture	0:1	The mitigation goal for Category 6 habitat is minimization; no compensatory mitigation is required.
	Developed		

¹Acres of mitigation: acres of impact.

5.0 ESTIMATED MITIGATION FOR THE PROJECT

Table 5 applies the acres of temporary and permanent impacts shown in Table 2 with the mitigation ratios shown in Table 3 and Table 4 to estimate mitigation requirements for the Project. The total amount of mitigation required will be updated in the final HMP based on the temporary and permanent impacts of the alternative route selected.

TABLE 5 ESTIMATED MITIGATION BY HABITAT CATEGORY AND TYPE FOR THE PROJECT

HABITAT CATEGORY	HABITAT TYPE	IMPACT	ACRES ¹	MITIGATION RATIO	ESTIMATED MITIGATION (ACRES)	MITIGATION TOTAL BY HABITAT CATEGORY (ACRES)
3	Bitterbrush Shrubland	Temporary	4.01	1:1	4.01	4.73
		Permanent	<0.01	1:1	0.01	
	Sagebrush Steppe	Temporary	0.70	1:1	0.70	
		Permanent	<0.01	1:1	0.01	
4	Mixed Annual/Perennial Grassland	Temporary	10.42	0:1	0	0.02
		Permanent	0.02	1:1	0.02	
5	Annual Grassland	Temporary	63.67	0:1	0	0.02
		Permanent	0.05	0.5:1	0.02	
6	Agriculture	Temporary	12.65	0:1	0	0
		Permanent	0.01	0:1	0	
	Developed	Temporary	65.28	0:1	0	
		Permanent	0.02	0:1	0	
Total						4.77

¹Value assumes the alternative route with the greatest acres of disturbance is selected.

6.0 HABITAT MITIGATION AREA

Prior to the start of construction, UEC will identify the Habitat Mitigation Area (HMA) where UEC proposes to perform habitat enhancement actions to address the estimated mitigation required for the Project as shown in Table 5. Potential HMA sites include:

- » A portion of the Columbia Development Authority property (former Umatilla Chemical Depot) with high densities of burrowing owl (*Athene cunicularia*) burrows. Habitat enhancements surrounding burrows could be completed to benefit burrowing owls.
- » A portion of an existing nature preserve/conservation area or ODFW wildlife area located near the Project area. Habitat enhancement projects such as annual grass treatment, pollinator planting, or shrub planting could be completed to benefit habitat types similar to those impacted by the Project.

7.0 HMA HABITAT ASSESSMENT

Once the HMA is selected, UEC will complete a habitat assessment to identify the baseline conditions of the habitat types and habitat quality present in the HMA. This information will be used to develop the HMA success criteria, track the progress of the habitat enhancement actions implemented, and demonstrate whether the HMA meets or is demonstrating a trend towards the success criteria (refer to Section 10.0).

8.0 HABITAT ENHANCEMENT ACTIONS

As described in Section 5.0, habitat mitigation for Project impacts will be needed for approximately 4.73 acres of Category 3 Bitterbrush Shrubland and Sagebrush Steppe habitats (goal of no net loss), 0.02 acre of Category 4 Mixed Annual/Perennial Grassland habitat (goal of net benefit), and 0.02 acre of Category 5 Annual Grassland habitat (goal of net benefit). Due to the limited ecological benefit of implementing habitat enhancement actions for 0.04 acre of Category 4 and 5 grassland habitats, UEC proposes to apply all of the required habitat mitigation (4.77 acres) to Category 3 Bitterbrush Shrubland and Sagebrush Steppe habitats. The specific habitat enhancement actions that will be implemented will be identified in coordination with the HMA landowner and ODFW once the HMA is selected. Potential habitat enhancement actions may include:

- » Planting bitterbrush (*Purshia tridentata*) and/or sagebrush (*Artemisia tridentata*).
- » Reducing non-native annual grasses through herbicide application and/or increasing density of native perennial grasses through seeding.
- » Monitoring and controlling state- and county-designated noxious weeds impacting wildlife habitat quality.

9.0 HMA MONITORING AND REPORTING

A qualified, independent botanist or revegetation specialist will complete pre- and post-treatment vegetation monitoring in the HMA to determine the effectiveness of the habitat enhancement actions. A monitoring plan will be submitted to Oregon Department of Energy (ODOE) and ODFW for review and approval prior to finalizing this HMP. Depending on the habitat enhancement actions implemented, annual monitoring may include assessments of:

- » Survival and growth rate of planted shrubs.
- » Cover and composition of non-native annual grasses and native perennial grasses.
- » Noxious weed cover and density.

UEC will provide ODOE and ODFW an annual monitoring report within 60 days following the completion of monitoring. The annual reports will include the following:

- » Description of the habitat enhancement actions implemented and baseline conditions.
- » Tables summarizing monitoring results.
- » An assessment of whether the habitat enhancement efforts are meeting the success criteria and a description of factors that may be preventing success.

- » Recommendations for reseeding/planting, additional noxious weed control, or other corrective measures for actions that are not showing progress toward achieving the success criteria.

Annual monitoring will be considered complete in Year 5 if success criteria as described in Section 10.0 have been met.

10.0 HMA SUCCESS CRITERIA

The goal of the habitat mitigation is to protect or enhance a sufficient quantity of habitat to meet ODFW mitigation goals for impacts to Category 3, 4, and 5 habitats. HMA success criteria will be developed once the HMA and the specific habitat enhancement actions that will be implemented are selected. The HMA success criteria will be used to track the progress of the habitat enhancement actions and demonstrate that the HMA meets or is demonstrating a trend towards the success criteria for the life of the Project. If UEC cannot demonstrate that the HMA is trending towards the success criteria within five years of implementing the habitat enhancement actions, UEC will propose remedial actions such as supplemental planting, additional noxious weed control, or other corrective measures. The mitigation will be considered successful when all the habitat enhancement actions are implemented, and all of the success criteria are met.

11.0 AMENDMENT OF THE HMP

This HMP may be amended by agreement of UEC and EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this plan. ODOE shall notify EFSC of all amendments, and EFSC retains the authority to approve, reject, or modify any amendment of this plan agreed to by ODOE.

12.0 LEGAL INSTRUMENT

UEC will enter into an enforceable and recordable legal instrument, such as a memorandum of understanding or other similar conveyance, that demonstrates reliability and durability of the habitat mitigation and the HMP for the life of the Project. Prior to construction, UEC will provide a draft of the legal instrument to ODOE for review and approval, in consultation with ODFW.

13.0 REFERENCES

POWER Engineers, Inc. (POWER). 2024. Umatilla to Morrow County Connect Project Biological Resources Survey Report.