

NT FIG

2018-2019
REGIONAL TRANSMISSION PLAN



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NTTG MISSION

To ensure efficient, effective, coordinated use and expansion of the members' transmission systems in the Western Interconnection to best meet the needs of customers and stakeholders.

Northern Tier Transmission Group

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FRONT
COVER

Photo by kiwi
thompson on
Unsplash.



Line workers install new poles on a 100-kV line near Butte, Mont.
Photo courtesy NorthWestern Energy.

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EXECUTIVE SUMMARY

Transmission investment decisions that affect a region may be better informed by a regional perspective. That is the overarching idea that drives the Northern Tier Transmission Group's (NTTG's) Regional Transmission Plan (RTP).

NTTG conducts regional reliability and economic studies of the local transmission plans, rolled up, to determine if there are regionally significant alternatives that may meet the transmission needs of the region more efficiently. The idea is that a Regional Transmission Plan may produce a more efficient or cost-effective plan than a rollup of the local plans.¹

The NTTG 2018–2019 RTP is developed in accord with NTTG Transmission Providers' Attachment K, which includes FERC Order Nos. 890 and 1000 regional and interregional transmission planning requirements. Specifically, the plan analyzes whether NTTG's transmission needs in 2028 would best be satisfied with projects of a regional or interregional scope.

To arrive at a conclusion, NTTG used a two-year process of identifying transmission requirements and performing reliability and economic analyses on several collections of transmission projects, or Change Cases:² the prior (2016–2017) RTP,

an Initial RTP made up of projects from the prior RTP and projects included in the Full Funders' Local Transmission Plans, and Change Cases that included Non-Committed regional projects and Interregional Transmission Projects.

Through a reliability study process, NTTG narrowed the number of potential RTP cases to two: the Initial RTP and the prior RTP.³

During Quarter 5, NTTG received data updates and incorporated stakeholder comments into the report. The new data did not contain material changes that would have caused NTTG to alter the RTP. Stakeholders also submitted one Economic Study Request.

After completing its reliability analysis, NTTG did an economic analysis of the initial RTP and the prior RTP. The economic analysis compared the annualized incremental costs of the two potential RTP cases.

The annual incremental cost of the prior RTP was computed and found to be more than \$100 million less expensive than the cost of the Initial RTP.

Based on the reliability and economic considerations for the transfers studied, the more efficient or cost-effective draft plan that emerged was the prior RTP. This plan includes four regionally significant projects:

BOARDMAN TO HEMINGWAY (B2H) in Oregon and Idaho

GATEWAY WEST with six subsections in Idaho and Wyoming

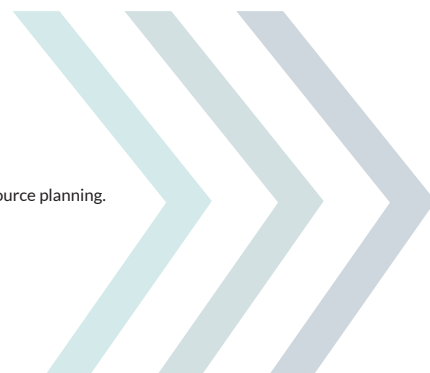
GATEWAY SOUTH in Wyoming, Colorado and Utah

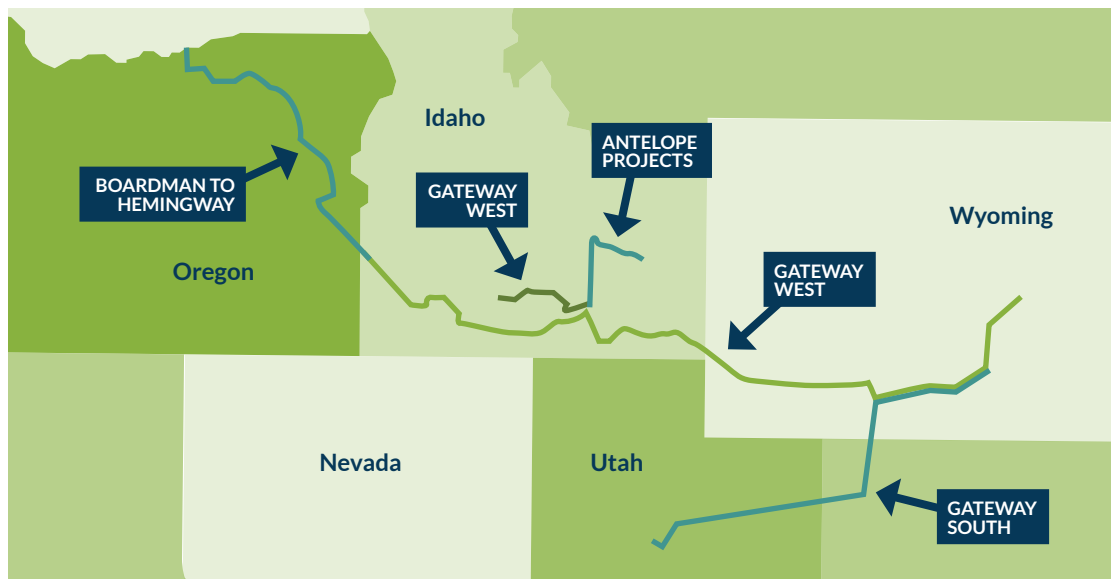
ANTELOPE PROJECTS with two subsections in Idaho

¹ NTTG's regional transmission planning process is not intended to be a replacement for local transmission or resource planning.

² Terms are capitalized to be consistent with the Attachment K. Capitalized terms are defined in the glossary.

³ NTTG's 2016–2017 RTP.





➤ **FIGURE 1**
Transmission projects comprising 2018-2019 NTTG RTP

Stakeholder input on the RTP was accepted and evaluated throughout the biennial planning cycle. NTTG posted the Draft RTP in December 2018 (Quarter 4) for stakeholder comment and the Draft Final RTP in Quarter 6 for public comment. The revised Draft Final RTP was made available for public comment in Quarter 7. The Planning Committee recommended submittal of the RTP to the NTTG

Steering Committee in Quarter 8. The Steering Committee approved the RTP in Quarter 8.

To download a copy of the Draft Final RTP, go to the NTTG member's OASIS site. >>>

PLAN ASSUMPTIONS AND CAVEATS

The NTTG 2018-2019 RTP informs local transmission projects but does not serve as a construction plan. To develop the RTP, NTTG relies on the load and resource data submitted by members. It does not consider the re-dispatch or re-optimization of resource assumptions. NTTG conducts the RTP studies in line with the NTTG Transmission Providers' Attachment K.

NTTG's Transmission Plan assumes that its members' submissions are reasonable and cost-effective. The transmission plan does not attempt to design an optimal portfolio of resources to meet the expected demand of the region's consumers. Instead, it aims to identify a reliable and

cost-effective portfolio of transmission around the inputs of NTTG members. The 2018-2019 RTP represents a lower-cost transmission plan than one represented by a rollup of the combined Transmission Providers' plans.

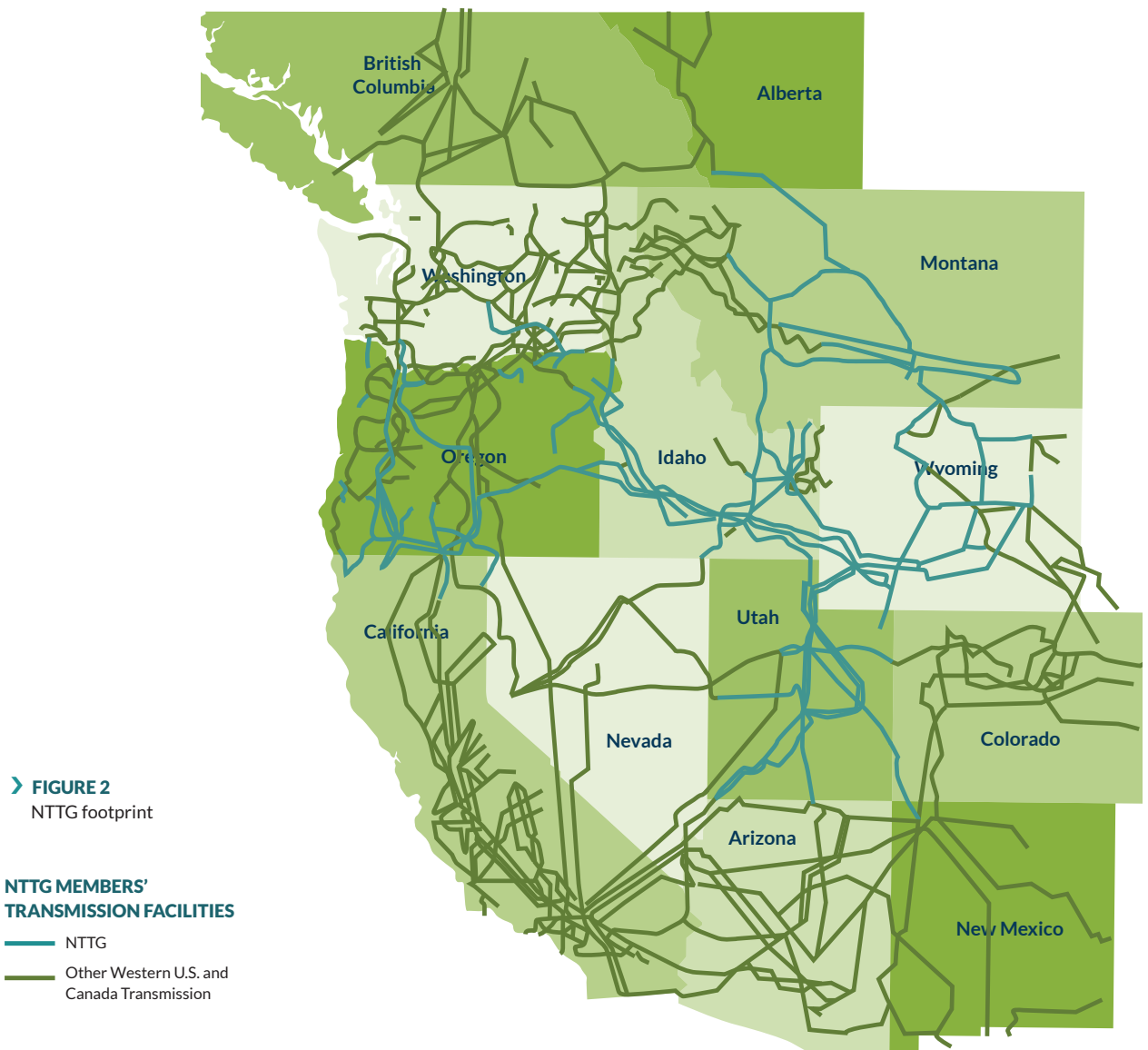
To the degree that those NTTG Transmission Providers' inputs are not realistic or cost-effective, the resulting NTTG Transmission Plan will likely be affected. However, NTTG regards correcting such potential errors as work to be undertaken in the context of integrated resource plans conducted by individual load-serving entities in their respective states.



THE NORTHERN TIER TRANSMISSION GROUP

NTTG formed in 2007 to provide a forum where all interested stakeholders, including Transmission Providers, customers and state regulators, can participate in an open, transparent, coordinated regional transmission planning

process. The process is intended to promote effective planning and use of the multi-state electric transmission system within the NTTG footprint spanning from the Pacific Northwest to the desert Southwest.



Idaho Power journeyman
lineman operates a distribution
switch on a 138-kV line in
Valley County, Idaho.

Photo courtesy Idaho Power.

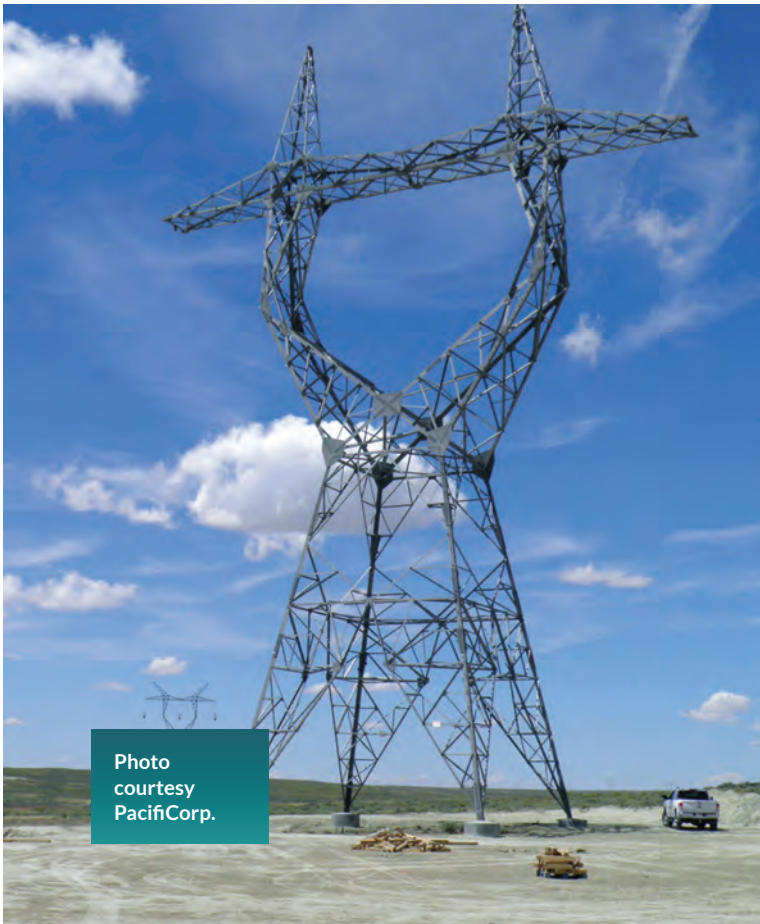


Photo
courtesy
PacifiCorp.

NTTG fulfills requirements of the Federal Energy Regulatory Commission (FERC) Order No. 1000 for each public utility transmission provider to participate in a regional transmission planning process that produces a Regional Transmission Plan and, if appropriate, includes a regional cost-allocation method.

NTTG evaluates transmission projects that move power across the regional bulk electric transmission system, serving load in its footprint and wheeling electricity to external markets. The Transmission Providers belonging to Northern Tier serve more than 4.3 million retail customers with more than 29,000 miles of high-voltage transmission lines. These members provide service across much of Utah, Wyoming, Montana, Idaho and Oregon, and parts of Washington and California.

NTTG works with other entities—the Western Electricity Coordinating Council (WECC) for reliability data and neighboring Planning Regions (e.g., ColumbiaGrid, WestConnect and California Independent System Operator (CAISO)) for interregional project coordination.

NORTHERN TIER MEMBERS

Deseret Power Electric Cooperative
Idaho Power Company
Idaho Public Utilities Commission
MATL LLP
Montana Consumer Counsel
Montana Public Service Commission
NorthWestern Energy
Oregon Public Utility Commission
PacifiCorp
Portland General Electric
Utah Associated Municipal Power Systems (UAMPS)
Utah Office of Consumer Services
Utah Public Service Commission
Wyoming Office of Consumer Advocates
Wyoming Public Service Commission



PURPOSE OF THE PLAN

The NTTG RTP aims to produce, if possible, a more efficient or cost-effective regional plan to meet the needs of the region compared with a plan that rolls up the local Transmission Providers' transmission plans and other Change Case transmission plans studied.

This study process complies with FERC Order No. 1000, Attachment K—Regional Planning Process. FERC Order No. 1000 mandates that public utility transmission providers participate in a regional transmission planning process that produces a Regional Transmission Plan. The order also requires that local and regional transmission planning processes consider transmission needs driven by state or federal public policy requirements and that members include cost allocation and non-incumbent developer reforms. Lastly, it requires public utility transmission providers in neighboring transmission planning regions to coordinate in finding more efficient or cost-effective solutions to their transmission needs.





PLAN DEVELOPMENT PROCESS



The RTP is developed through a two-year, five-step process:

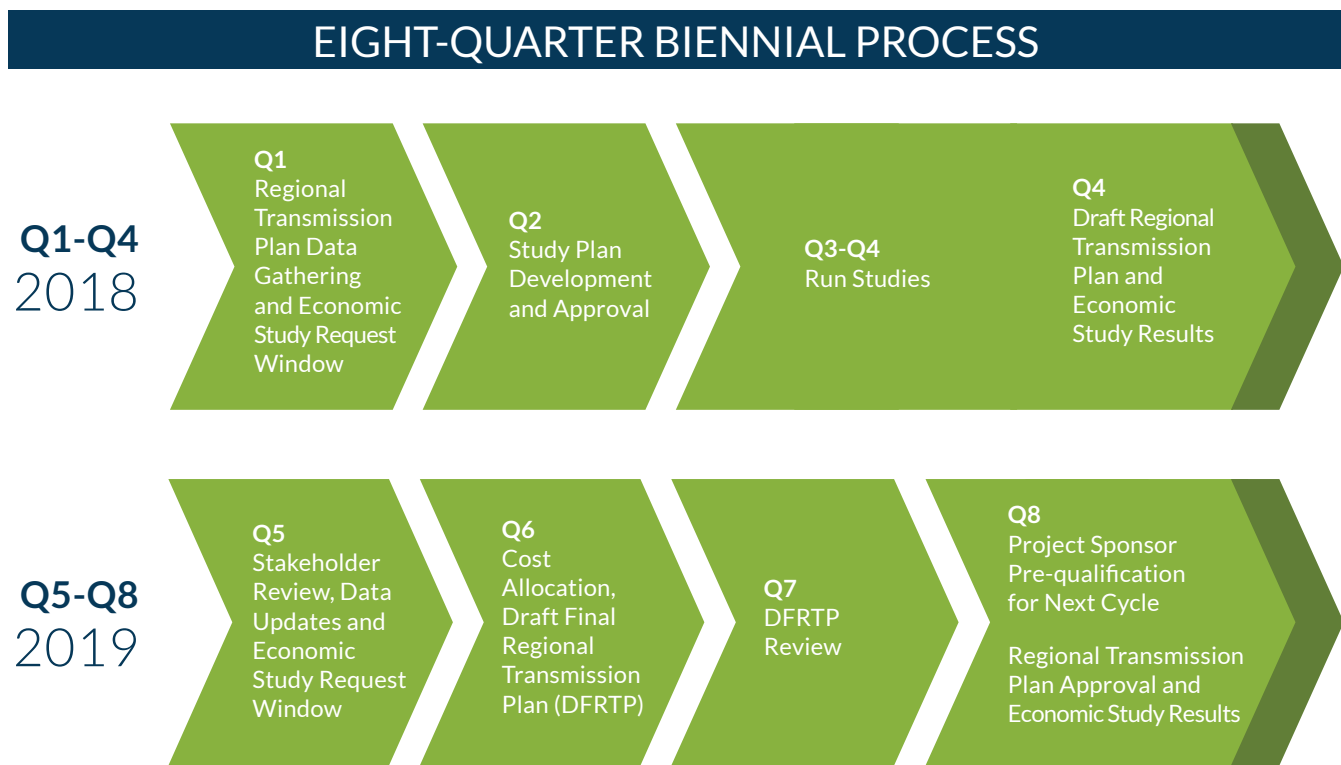
- 1. Identification of the transmission requirement for the NTTG footprint, derived from the data submissions from the local Transmission Providers**
- 2. Reliability analysis and evaluation of the Initial RTP and Alternative Projects (including interregional projects) through Change Cases**
- 3. Economic analysis and evaluation comparing the annualized incremental costs of the Initial RTP and the Change Cases that perform acceptably**
- 4. Selection of the projects that yield a Regional Transmission Plan that is more efficient or cost-effective than a rollup of the local providers' plans**
- 5. Cost allocation for any projects submitted for the purposes of cost allocation and selected into the RTP if they are deemed to be eligible for cost allocation**

Hanging out on the job—
PacifiCorp's 500-kV Aeolus to
Bridger/Anticline subsegment
of the Gateway West Project.
Photo courtesy PacifiCorp.

BIENNIAL CYCLE

NTTG follows an eight-quarter planning cycle to produce the 10-year RTP. In the first step, the Planning and Cost Allocation Committees pre-qualify⁴ Transmission Developers who properly submit their transmission project to be considered for regional cost allocation (should the sponsor's

project be selected in the RTP for cost allocation). The biennial cycle includes steps to collect, evaluate and analyze transmission and non-transmission data, produce and publish a draft plan, gather stakeholder and public input, update the plan and complete the cycle with the publishing of an RTP.



➤ **FIGURE 3**
Eight-quarter
planning
process

⁴ Pursuant to Attachment K, Section Pre-qualify for Cost Allocation, a Project Sponsor that intends to submit a project for cost allocation must be pre-qualified before the beginning of the 2018–2019 biennial planning cycle (i.e., the last quarter of the prior planning cycle).

BIENNIAL STUDY PLAN

The Biennial Study Plan outlines the process that NTTG follows to develop its 10-year RTP. It provides the framework to guide plan development. It also describes NTTG's process to determine if a properly submitted Interregional Transmission Project (ITP) would yield a transmission plan that is a more efficient or cost-effective solution to NTTG's regional transmission needs.

The NTTG Planning Committee manages the Study Plan. The Planning Committee establishes the Technical Work Group (TWG) subcommittee to develop the Study Plan. The TWG also performs the necessary technical evaluations for the RTP and assesses any projects, including ITPs, submitted to NTTG. TWG members are NTTG Planning Committee members or their designated technical representatives. They have access to and expertise in power-flow analysis for power systems or production-cost modeling, or both.

Developed during Quarter 2 of the biennial planning cycle, the Study Plan establishes the:

- › **Study methodology and criteria**
- › **Study assumptions based on the loads, resources, point-to-point transmission requests, desired flows, constraints and other technical data submitted in Quarter 1 and updated in Quarter 5 of the regional planning cycle**
- › **Software analysis tools**
- › **2028 production cost-model database and hours to be selected for reliability analysis**
- › **Evaluation criteria for reliability and transmission service obligations**
- › **Capital cost, energy losses and reserve-sharing metric calculations**
- › **Public Policy Requirements and Public Policy Considerations**

The Study Plan is posted for stakeholder comment, recommended for approval by the Planning Committee and approved by the Steering Committee during Quarter 2 of the biennial cycle. Data submission updates are provided in Quarter 5, leading to any Study Plan revisions in Quarter 6, if needed. For any differences between what is stated in the Study Plan and the process stated in the NTTG Transmission Providers' FERC Order 1000 Attachment K, the Attachment K will take precedence.



Double circuit 230-kV line in Baker County, Ore.
Photo courtesy Idaho Power Co.

STUDY METHODOLOGY

To determine the more efficient or cost-effective transmission plan, the TWG subcommittee conducted reliability and economic studies in accordance with the 2018–2019 Study Plan. The Study Plan and ultimately the RTP reflect the NTTG Transmission Providers’ Attachment K requirements to satisfy its transmission needs.

NTTG’s regional transmission planning does not investigate local transmission planning or generation decisions related to integrated resource planning. Rather, NTTG’s methodology uses a regional perspective to question the Initial RTP’s roll-up of Non-Committed regional transmission projects. The goal is to identify, if possible, a Regional Transmission Plan that is more efficient or cost-effective than the aggregated Full Funder’s transmission plans.

In conducting its regional studies, NTTG uses regional transmission and non-transmission alternatives, if any, to honor the local transmission needs. NTTG’s reliability studies assume existing generation and proposed future generation have similar firm transmission rights. Re-dispatch of either existing or future generation to relieve transmission congestion is not considered in long-term planning analysis to meet the NTTG firm transmission requirements.

The reliability studies used production-cost modeling and power-flow studies. The production-cost model results

were used to identify nine stressed hours. After review of the cases, eight were subjected to reliability analysis using a power-flow model. The input and output data for these selected hours were transferred, using the round-trip process, from the production-cost model (i.e., GridView) to a power-flow model (i.e., PowerWorld) to perform the technical reliability analysis.

Next, economic studies employed the Attachment K’s three metrics—capital related costs, energy losses and reserves—to analyze those Change Case plans that were deemed reliable to further determine the cost-effectiveness of the NTTG Transmission Plan.

Production-Cost Modeling

The TWG examined 8,760 hours of data using GridView⁵ production-cost software to determine stressed conditions within the NTTG footprint. The production-cost dataset representing the year 2028 was obtained from the 2028 ADS case of the WECC. This case included a representation of the load, generation and transmission topology of the WECC interconnection-wide transmission system 10 years into the future.

After a review that resulted in updates and corrections to load, resource and

transmission data, the TWG used a modified ADS case to simulate the entire year and used those results to select and create stressed conditions that affect the NTTG area for study. For a more detailed discussion of the conditions and hours, see the section on stress-conditioned case study results.

Power-Flow Cases

For the next step in the process, the TWG used PowerWorld⁶ simulation software to convert the production-cost model for the eight stressed hours into power-flow cases. Each of the stressed cases was then reviewed by the TWG to ensure that the case met steady-state system performance criteria (no voltage issues or thermal overloads). To better reflect possible highly stressed conditions for the selected peak loads within the NTTG footprint, the balancing area loads in the power-flow model were adjusted for the summer and winter peak power-flow cases.

Bubble diagrams showing the inter-area flows for each of the stressed cases are included in the Draft Final RTP in Section IV, Stress-Conditioned Case Study Results. >>>

⁵ GridView is a registered product of ABB.

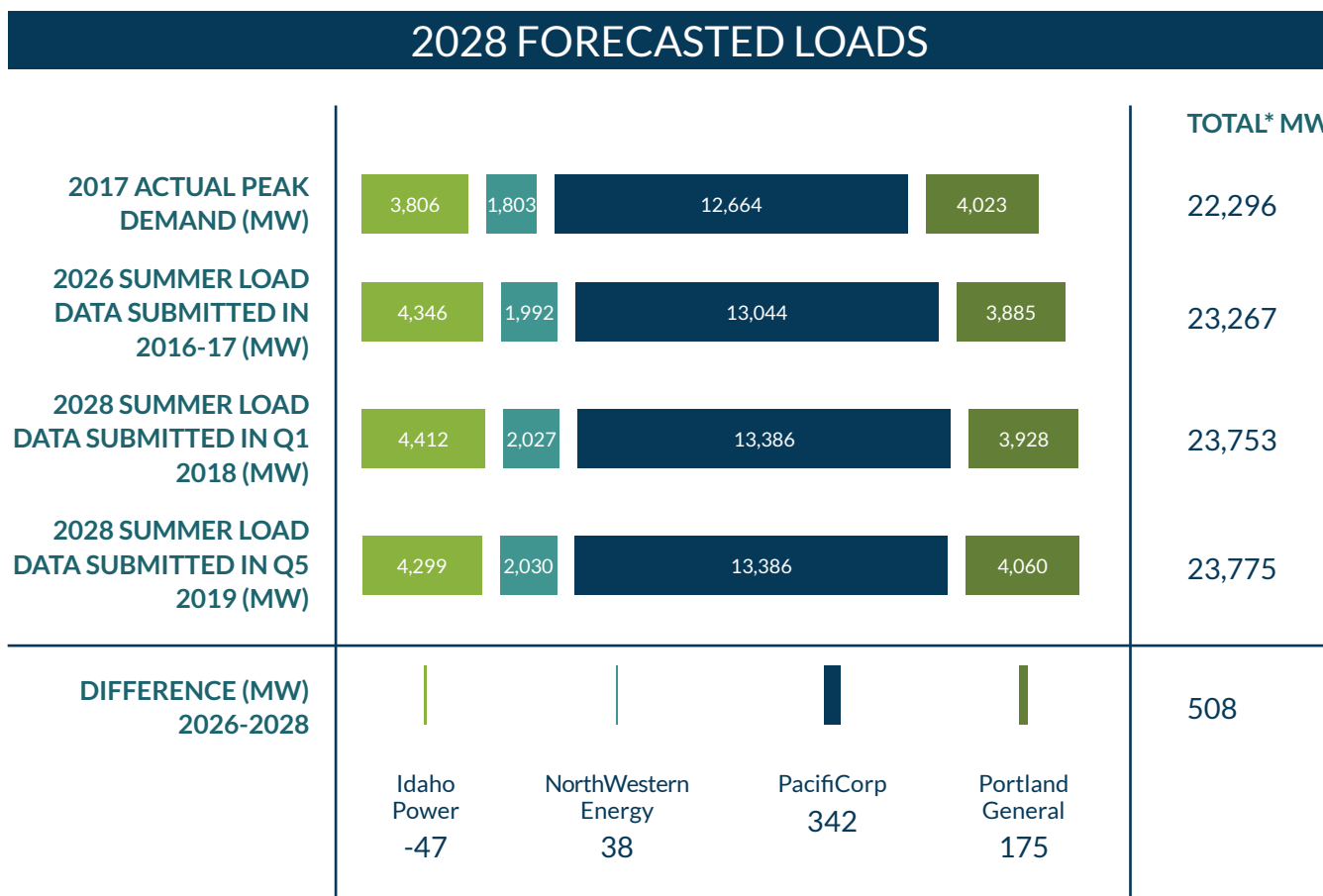
⁶ PowerWorld is a registered trademark of PowerWorld Corp.

DATA SUBMISSION

Information flows into NTTG during Quarter 1 and is updated in Quarter 5 of the biennial cycle. Transmission Providers and stakeholders may supply data on forecasted firm-energy obligations and commitments required to support the transmission system within the NTTG footprint. The data may include load forecasts, resources, transmission topology, transmission service and Public Policy Requirements submissions. Regional transmission projects submitted in Quarter 1 are shown in Table 1 and include those from the prior RTP, Transmission Provider Local Transmission Plans (LTP), Sponsored Projects, unsponsored projects and Merchant Transmission Developer Projects.

Forecasted Loads

Participating load-serving entities provide load forecasts for balancing authority areas internal to the NTTG footprint. These loads represent an average expected peak⁷ and are generally the same as those found in the participants' official load forecasts (such as those in integrated resource plans) and are similar to those provided to the Load and Resource Subcommittee of the WECC Planning Coordination Committee. Transmission Providers and Stakeholders can update their Quarter 1 submissions in Quarter 5, if there have been material changes. Overall average loads increased by more than 500 MW in the two years since the prior planning period. Figure 4 summarizes the load forecast used in the 2018–2019 planning cycle.



*Loads for Deseret G&T and UAMPS are included in PacifiCorp East

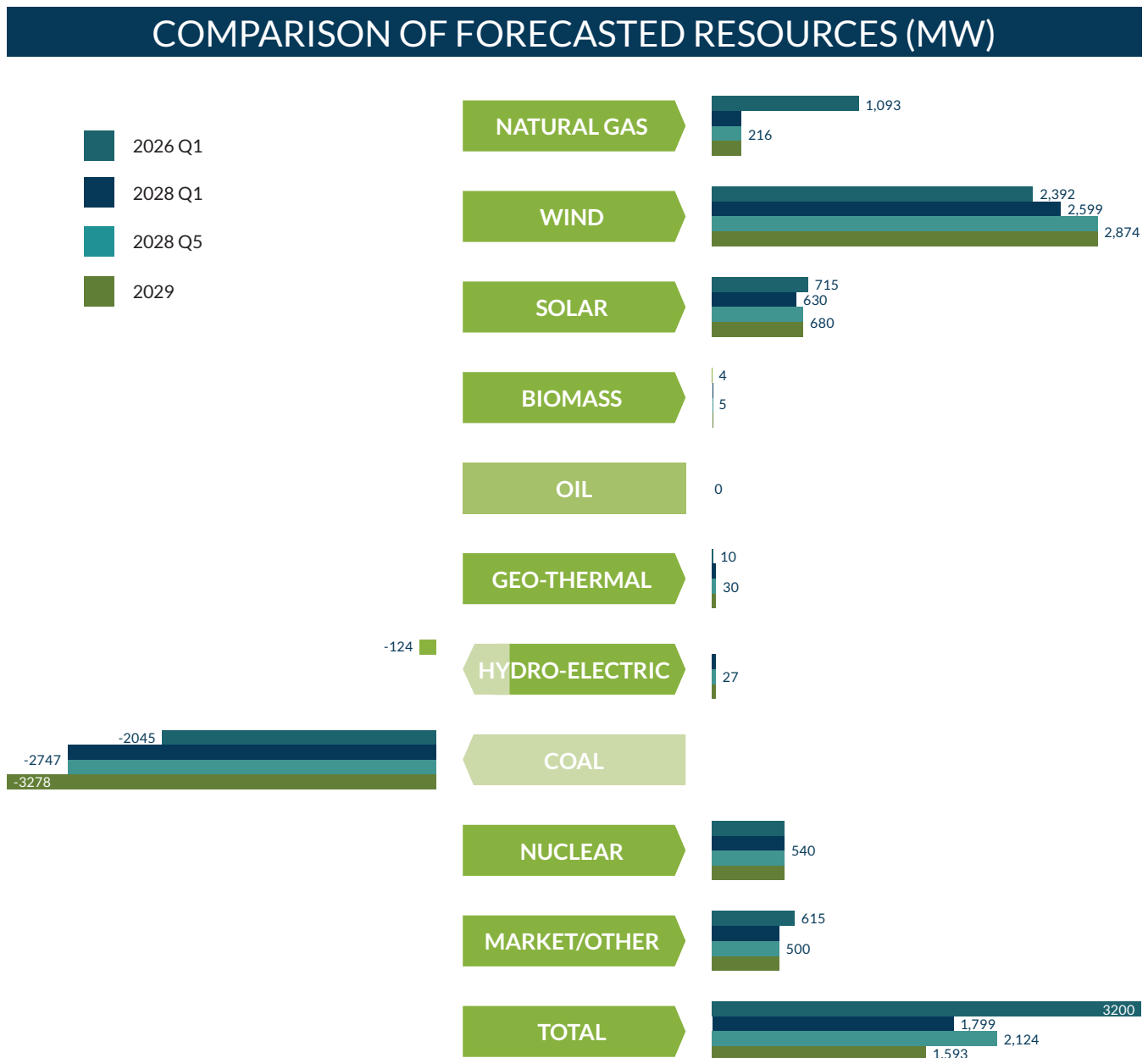
⁷ A peak condition that has an equal probability to occur or not in a given year, sometimes referred to as a 50 percent exceedance level or a 1 in 2 peak. A 1 in 5 peak would have a 20 percent chance of exceedance.

➤ **FIGURE 4**
2028 NTTG
forecasted
loads

Forecasted Resources

NTTG received 1,799 MW of proposed new generation resources from its funding Transmission Providers for consideration in the RTP. Figure 5 shows these incremental resources within the NTTG footprint and compares submissions from the prior RTP with submissions for Quarters 1 and 5 of the current cycle. The total resources forecasted in Quarter 5 for 2028 represent a reduction of 1,401 MW, or 44 percent, from the 3,200 MW forecast in the same period of 2016 for 2026.

FIGURE 5
Comparison
of forecasted
NTTG resources



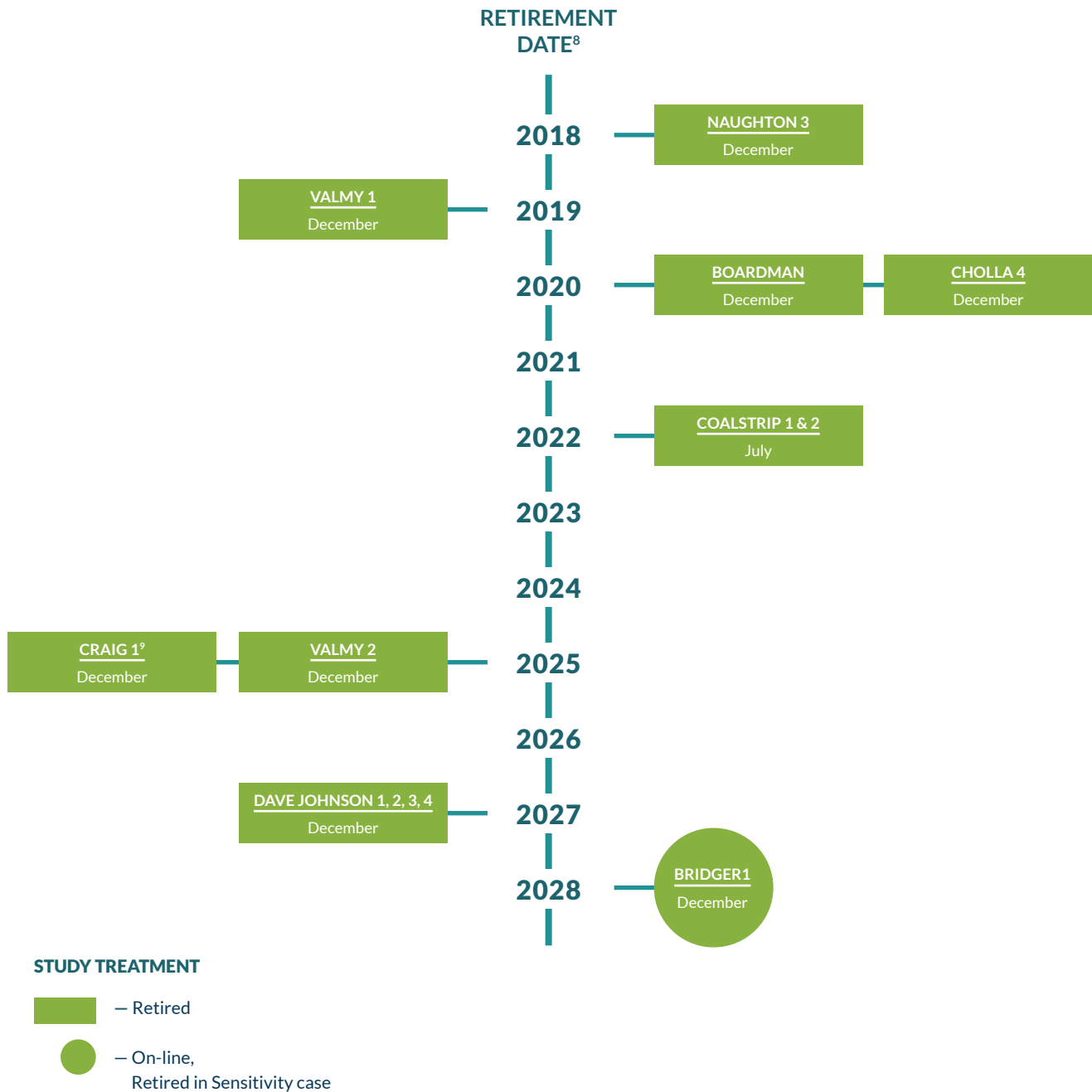
As shown in Figure 6, a significant number of coal-fired generating plants are scheduled for retirement during the planning horizon. The Cholla 4 and Craig Unit 1 coal plants lie outside the NTTG footprint, in Arizona and Colorado, respectively,

but are reflected in Figure 5 (Forecasted Resources). Additionally, PacifiCorp plans to retire the Naughton 1 and 2 coal plants after 2029. Those retirements will be considered in the next biennial planning cycle.

Figure 5 also reflects PacifiCorp's Energy Vision 2020 wind resource acquisition plan.

FIGURE 6
Planned coal retirements

PLANNED COAL RETIREMENTS



⁸ Units are assumed to retire at the end of the stated month.

⁹ Reflects PacifiCorp's retirement of coal retirements outside the NTTG footprint.

Transmission Facilities and Service Submissions

Table 1 shows the regional transmission projects submitted in Quarter 1. Project types include those submitted through the prior RTP and Full Funders' Local Transmission Plans (LTPs), as well as Sponsored, Un-sponsored or Merchant Transmission Developer Projects. NTTG also received two firm transmission-service obligation submissions from Idaho Power. The Initial RTP was derived from projects included in the prior RTP and projects included in the Full Funders' LTPs.

Photo courtesy
Idaho Power Co.



Line workers install new
poles on 100-kV line near
Butte, Mont.

Photo courtesy
NorthWestern Energy.



MARCH 2018 DATA SUBMITTAL – TRANSMISSION ADDITIONS BY 2028

SPONSOR	FROM	TO	VOLTAGE	CIRCUIT	TYPE	REGIONALLY SIGNIFICANT ¹⁰	COMMITTED	PROJECTS
IDAHO POWER	Hemingway	Longhorn	500 kV	1	LTP & pRTP	Yes	No	B2H Project (2026)
	Hemingway	Bowmont	230 kV	2	LTP	Yes	No	New Line–associated with Boardman to Hemingway (2026)
	Bowmont	Hubbard	230 kV	1	LTP	Yes	No	New Line–associated with Boardman to Hemingway (2026)
	Hubbard	Cloverdale	230 kV	1	LTP	No	No	New Line (2021)
	Midpoint	Hemingway	500 kV	2	LTP	Yes	No	Gateway West Segment #8 (joint with PacifiCorp East) (2024)
	Cedar Hill	Hemingway	500 kV	1	LTP & pRTP	Yes	No	Gateway West Segment #9 (joint with PacifiCorp East) (2024)
	Cedar Hill	Midpoint	500 kV	1	LTP	Yes	No	Gateway West Segment #10 (2024)
	Midpoint	Borah	500 kV	1	LTP & pRTP	Yes	No	(convert existing from 345 kV operation) (2024)
	Ketchum	Wood River	138 kV	2	LTP	No	No	New Line (2020)
	Willis	Star	138 kV	1	LTP	No	No	New Line (2019)
ENBRIDGE	SE Alberta		DC	1	LTP	Yes	No	MATL 600 MW Back to Back DC Converter (2024)
PACIFICORP EAST	Aeolus	Clover	500 kV	1	LTP & pRTP	Yes	No	Gateway South Project–Segment #2 (2024)
	Aeolus	Anticline	500 kV	1	LTP & pRTP	Yes	No	Gateway West Segments 2&3 (2020)
	Anticline	Jim Bridger	500 kV	1	LTP & pRTP	Yes	No	345/500 kV Tie (2020)
	Anticline	Populus	500 kV	1	LTP & pRTP	Yes	No	Gateway West Segment #4 (2024)
	Populus	Borah	500 kV	1	LTP	Yes	No	Gateway West Segment #5 (2024)
	Populus	Cedar Hill	500 kV	1	LTP & pRTP	Yes	No	Gateway West Segment #7 (2024)
	Antelope	Goshen	345 kV	1	LTP	Yes	No	Nuclear Resource Integration (2026)
	Antelope	Borah	345 kV	1	LTP	Yes	No	Nuclear Resource Integration (2026)
	Windstar	Aeolus	230 kV	1	LTP & pRTP	Yes	No	Gateway West Segment #1W (2024)
	Oquirrh	Terminal	345 kV	2	LTP	Yes	Yes	Gateway Central
	Cedar Hill	Hemingway	500 kV	1	LTP	Yes	No	Gateway West Segment #9 (joint with Idaho Power) (2024)
	Shirley Basin	Standpipe	230 kV	1	LTP	Yes	No	Local Wind Integration (2020)
PACIFICORP WEST	Wallula	McNary	230 kV	2	LTP	Yes	Yes	Gateway West Segment A (2020)
PORTLAND GENERAL	Blue Lake	Gresham	230 kV	1	LTP	No	Yes	New Line (2018)
	Blue Lake	Troutdale	230 kV	1	LTP	No	Yes	Rebuild (2018)
	Blue Lake	Troutdale	230 kV	2	LTP	No	Yes	New Line (2018)
	Horizon	Springville Jct	230 kV	1	LTP	No	Yes	New Line (Trojan–St Marys–Horizon) (2020)
	Horizon	Harborton	230 kV	1	LTP	No	Yes	New Line (re-terminates Horizon Line) (2020)
	Trojan	Harborton	230 kV	1	LTP	No	Yes	Re-termination to Harborton (2020)
	St Marys	Harborton	230 kV	1	LTP	No	Yes	Re-termination to Harborton (2020)
	Rivergate	Harborton	230 kV	1	LTP	No	Yes	Re-termination to Harborton (2020)
	Trojan	Harborton	230 kV	2	LTP	No	Yes	Re-termination to Harborton (2020)
				115 kV	1	LTP	No	Yes

¹⁰ Regionally significant transmission projects are generally those that affect transfer capability between areas of NTTG. Projects that are mainly for local load service are not regionally significant. Projects that are not regionally significant will be placed into all Change Cases and not tested for impact on the RTP. The facilities submitted in the LTPs will be removed in the Null Case.

➤ **TABLE 1**
Proposed NTTG transmission additions by 2028



INTERREGIONAL PROJECT COORDINATION

As part of interregional coordination, NTTG and the other regional entities in the Western Interconnection collaborate during their transmission planning processes to coordinate their interregional transmission planning data. These coordination efforts inform each planning region’s transmission plans.

A properly submitted ITP is evaluated as an Alternative Project in NTTG’s regional planning process. ITPs are analyzed to determine whether an ITP alone or in combination with other ITPs or other Non-Committed Projects could, from a regional perspective, satisfy NTTG’s transmission needs on a regional or interregional basis more efficiently or cost effectively than through local planning processes. The set of Non-Committed Projects (regional, interregional or both) that result in the more efficient or cost-effective plan forms the RTP.

► **TABLE 2**
Interregional Transmission Projects
submitted to NTTG (Q1 2018)

PROJECT NAME	COMPANY	RELEVANT PLANNING REGION(S)	TERMINATION FROM	TERMINATION TO	STATUS	IN SERVICE DATE
Cross-Tie Transmission Project	TransCanyon, LLC	NTTG, WestConnect	Clover, UT	Robinson Summit, NV	Conceptual	2024
SWIP-North ¹¹	Great Basin Transmission LLC	CAISO ¹² , NTTG, WestConnect	Midpoint, ID	Robinson Summit, NV	Permitted	2021
TransWest Express Transmission DC/AC Project 18	TransWest Express, LLC	CAISO ¹² , NTTG, WestConnect	Rawlins, WY	Boulder City, NV	Conceptual	2022
TransWest Express Transmission DC Project ¹³	TransWest Express, LLC	CAISO ¹² , NTTG, WestConnect	Rawlins, WY	Boulder City, NV	Conceptual	2022

¹¹ The SWIP-North project submitted by Great Basin Transmission (GBT) requires a new physical connection at Robinson Summit, at the southern end of the Project. To transmit power beyond the Project, about 1,000 MW of capacity rights on the already in-service ON Line Project from Robinson Summit to Harry Allen 500 kV, as well as completion of CAISO’s Harry Allen to Eldorado Project in 2020, those GBT capacity rights will provide a CAISO access to SWIP-North.

¹² CAISO has volunteered to participate in the studies and accept cost allocation.

¹³ Two Alternatives were submitted by TransWest Express, 1) a DC Line the entire Length, and 2) a DC line from Wyoming to the Intermountain Power Project area then an AC line to Nevada.

STRESS-CONDITIONED CASE STUDY RESULTS

The TWG performed a rigorous contingency analysis on eight of the nine stress-conditioned cases.¹⁴ This contingency analysis consisted of over 445 single contingencies and 36 credible double contingencies, to determine if each contingency met the system performance criteria. For reliability violations reported by the power-flow program, TWG determined what additional transmission capacity would be needed to meet the criteria and adjust the Initial RTP to include the additional equipment. If no violations were found, then the facilities in the

Initial RTP were deemed adequate for serving NTTG loads and resources in the year 2028. The Eight Stressed Cases section provides a graphic summary of the NTTG footprint loads and resources balance for each of the conditions studied.

The analysis found that system performance would be inadequate for four cases (E, F, G and I) to meet NTTG's requirements without transmission system additions by 2028.

STRESSED CONDITION	DATE	HOUR	TWG LABEL
NTTG SUMMER PEAK	JULY 19, 2028	16:00	A
NTTG WINTER PEAK	DEC. 5, 2028	19:00	B
HIGH EASTBOUND IDAHO-NW	JUNE 3, 2028	02:00	C
HIGH WESTBOUND IDAHO-NW ¹⁵	OCT. 11, 2028	11:00	D
HIGH TOT2/COI/PDCI	MAY 16, 2028	19:00	E
HIGH WYOMING WIND	FEB. 24, 2028	MIDNIGHT	F
HIGH BORAH WEST	DEC. 11, 2028	02:00	G
HIGH NTTG FOOTPRINT IMPORT	JULY 27, 2028	14:00	H
HIGH AELOUS WEST AND SOUTH	JUNE 3, 2028	18:00	I

TABLE 3
Hours selected to represent NTTG system stresses

^{14, 15} TWG dropped further study of Case D since the case did not achieve the desired case objectives.



EIGHT STRESSED CASES

NTTG SUMMER PEAK (A)	NTTG WINTER PEAK (B)	HIGH EASTBOUND IDAHO-NW (C)	HIGH TOT2/COI/PDCI (E)
4PM, 07/19/2028	5PM, 12/05/2028	2AM, 06/03/2028	7PM, 05/16/2028
23,542 MW	21,149 MW	11,586 MW	15,214 MW
19,331 MW	18,050 MW	9,408 MW	15,789 MW
735 MW	633 MW	484 MW	766 MW
4,946 MW	3,733 MW	2,662 MW	191 MW
<p>This case showed a need to import energy during the summer peak. Both the Prior RTP and Initial RTP performed reasonably well in this scenario.</p>	<p>The region would need to import energy during the winter peak. Only a few local system violations occurred in the Prior RTP case.</p>	<p>Energy flowing eastbound on the Idaho-Northwest Path was 1,970 MW in this case. But the existing Idaho-Northwest import capability is 1,200 MW. The path had 128 hours that exceeded that level, mostly from May through July. NTTG would need to import a total of approximately 2,662 MW to make up the imbalance.</p>	<p>This case evaluated the performance of the ITPs in supporting interregional transfers. Loads and resources nearly balanced in this scenario, with a slight import of 191 MW required after line losses.</p>

Time	Demand	Supply	Loss	Import	Export
HIGH WYOMING WIND (F)	HIGH BORAH WEST (G)	HIGH NTTG FOOTPRINT IMPORT (H)	HIGH AEOLUS WEST AND SOUTH (I)		
12AM, 02/24/2028	2AM, 12/11/2028	2PM, 07/27/2028	6PM, 06/03/2028		
12,218 MW	12,482 MW	20,872 MW	14,287 MW		
15,292 MW	14,150 MW	15,135 MW	13,300 MW		
731 MW	696 MW	530 MW	637 MW		
2,344 MW	972 MW	6,267 MW	1,624 MW		
<p>This case studied power produced by wind-propelled turbines in Wyoming. The actual extracted-case wind production was 2,707 MW. At a targeted level of 2,655 MW, which is 90 percent of the capacity factor of the wind turbines, generation from the wind turbines would exceed the target for 1,020 hours in an average year, usually from mid-September through May.</p>	<p>The Borah West path is currently rated at 2,557 MW. Any firm transfers above this level would require upgrades. In the analysis, the 2,557 MW net flow level was exceeded 11 times. A second version of the case was able to bring loads and resources nearly in balance by reconfiguring flows from generating resources.</p>	<p>No current operating procedures would restrict operation in this dispatch region. One notable condition of this dispatch hour is that the Wyoming wind production was near zero.</p>	<p>In reviewing the flows of the other extracted hours, the TWG noted that few hours fully stressed the Gateway South project. This hour was selected for that purpose. In this case, electricity flows on the Gateway South project are 1,018 MW. The wind level in this case, 2,855 MW, is likely to be exceeded 513 hours per year.</p>		

Photo courtesy Idaho Power Co.

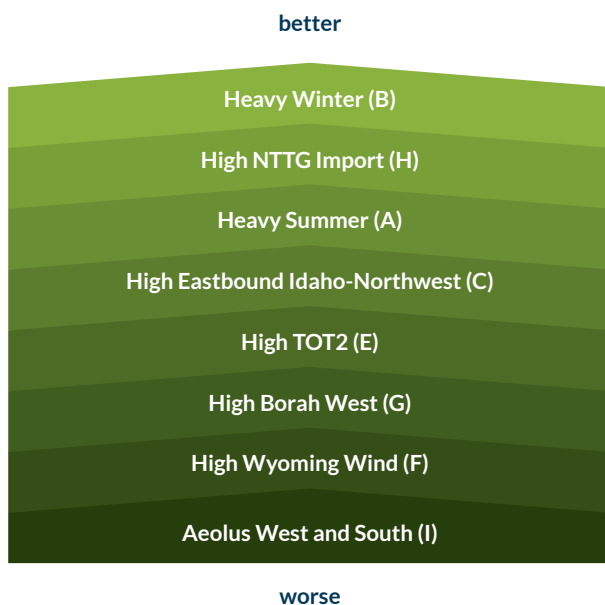
Photo courtesy
Idaho Power Co.

DEVELOPMENT OF CHANGE CASES

For each of the eight stress-conditioned cases, the TWG prepared a Null Change Case and analyzed reliability results. The Null Case tests today's topology against the expected load and resource mix of 2028.

CHANGE CASE RESULTS

For all Null Cases, the Antelope resource addition resulted in poor performance without the associated Antelope projects. Generally, cases can be ranked from better to worse performance in the following order:



To study the wide range of potential combinations of Non-Committed Projects, the TWG developed a Change Case matrix (Figure 7). Once the stressed power-flow cases were selected and developed, the TWG modified the matrix to better reflect the recommended analysis. During August 2018, stakeholder comments were solicited on the draft set of projects selected for analysis in the Change Case matrix. No comments were submitted. The matrix was also presented to the Planning Committee at its October and November 2018 meetings.

CHANGE CASE MATRIX

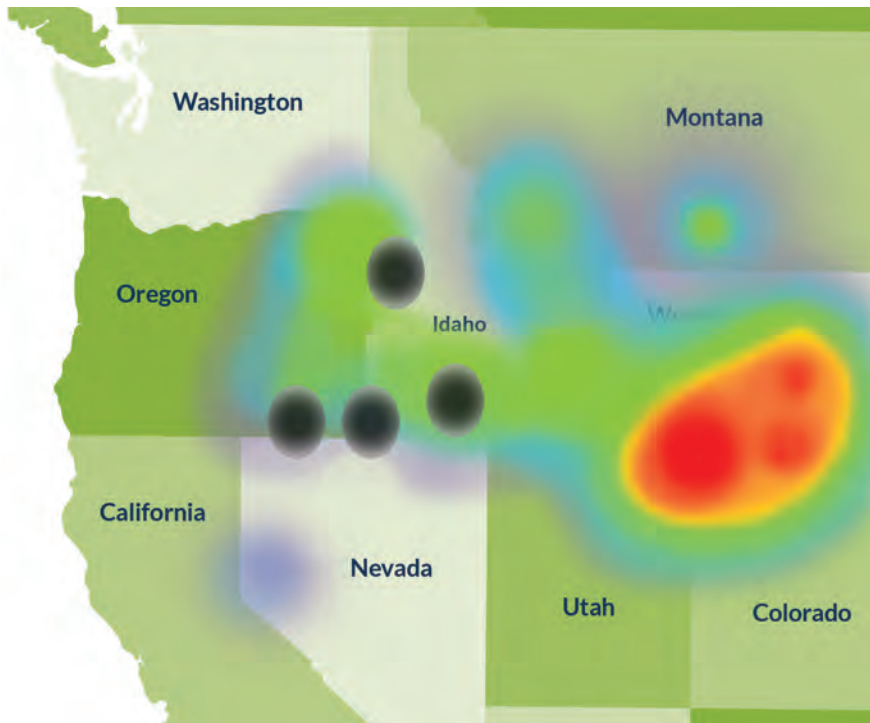
CASE	B2H	GATEWAY S	GATEWAY W	ANTELOPE PROJECTS	SWIP N	CROSS-TIE	TWE DC	TWE DC/AC	STRESSED CONDITIONS
null									ABCFGHI
pRTP	X	C	a	X					ABCEFGHI
iRTP	X	X	X	X					ABCEFGHI
CC1	X								ABCFGI
CC2		X		X					ACEFI
CC3		X	a						ACEFI
CC4	X		a	X					ACEFI
CC5	X	X		X					ACEFI
CC6	X	X	a						ABCEFGHI
CC7								X	ABCEFI
CC8							X		ABCEFI
CC9						X			ABC FI
CC10					X				ABC F
CC11				X				X	(E)+RPS@1500
CC12		X		X				X	(E)+RPS@1500
CC13			a	X				X	(E)+RPS@1500
CC14		X	a	X				X	(E I)+RPS@1500
CC15				X			X		(E)+RPS@1500
CC16		X		X			X		(E)+RPS@1500
CC17			a	X			X		(E)+RPS@1500
CC18		X	a	X			X		(E)+RPS@1500
CC19				X		X			(E)+RPS@1500
CC20		X		X		X			(E)+RPS@1500
CC21		X	a	X		X			(E I)+RPS@1500
CC22			a	X	X				(E)+RPS@1500
CC23		X	a	X	X				(E I)+RPS@1500
CC24		X	a	X	X				(E I)+RPS@3000
CC25			a	X	X			X	(E)+RPS@3000
CC26		X		X		X		X	(E)+RPS@3000
CC27		X	a	X	X	X		X	(E)+RPS@4500
CC28			a	X	X		X		(E)+RPS@3000
CC29		X		X		X	X		(E)+RPS@3000
CC30		X	a	X	X	X	X		(E)+RPS@4500
CC31	X	X	b	X					EFGI
CC32	X	X	c	X					FGI
CC33	X	X	d	X					EFI

- The Change Case does not include the non-Committed Project
- X The Change Case includes the non-Committed Project
- a Gateway West without Midpoint–Hemingway #2, Cedar Hill–Midpoint and Populus–Borah
- b pRTP less Populus–Cedar Hill–Hemingway
- c pRTP less Populus–Cedar Hill–Hemingway plus Populus–Borah
- d pRTP less Populus–Cedar Hill–Hemingway and Anticline–Populus
- The Change Case was run with and without B2H

FIGURE 7
Change Case matrix used in development of NTTG RTP

More than 150 reliability studies were performed against more than 480 contingencies. To better communicate the results of these studies, the TWG created heat maps, which present a weighted¹⁶ graphical performance of a Change Case on a specific flow condition.

➤ **FIGURE 8**
Heat map for
the F-Null Case

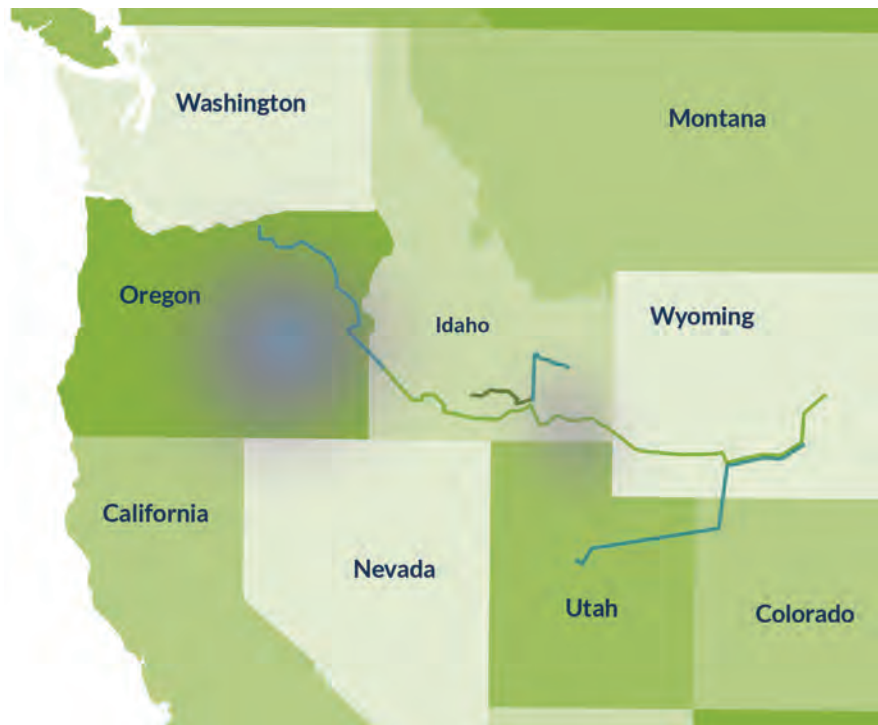


A complete heat map analysis of the Change Cases is included in Section V of the Draft Final RTP. >>>

Figure 8, for example, shows where performance issues (e.g., an overloaded transmission line) occurred for contingencies. The accumulation of overloads and voltage issues are represented by the color spectrum from blue through red, or “cooler” through “hotter.” These violations occur when transmission systems cannot handle anticipated transfers across that area’s transmission lines.

In particular, in Figure 8, the heat map for the F-Null Case, three general areas of reliability violations show up: northwest Wyoming/southeast Montana, southern Idaho and southeast Washington/central Oregon. These violations occur because the transmission systems are incapable of handling anticipated transfers across that area’s transmission system.

¹⁶ High-voltage conditions had a weighting of 1; low-voltage conditions had a weighting of 2; overloads of branches had a weighting of 5. For example, a zone in which 10 contingencies caused an overload of one branch in that zone received a total weight of 50 (i.e., 10 x 5), which would then be translated into a color on the map. Blue represents a weighted total of about 10, green is a count up to 30, yellow is a count up to 50 and red is for a weighted count exceeding about 70. Unsolvable contingencies indicate that a particular portion of the system was stressed well beyond its capabilities for reliable operation. In those cases, black circles were added to the figures to indicate the approximate location of violations that would have occurred had stresses been reduced to permit a solution.



> FIGURE 9
Heat map for the Prior RTP

Contrasting Figure 8 with Figure 9, the same map for the Prior RTP looks much different. In this case, the map points to an overload in Oregon on the Burns Series capacitor that is likely to be replaced before 2028. The rating of the bank will be re-evaluated to avoid it becoming a bottleneck to system performance. This map shows the dramatic improvement of the Prior RTP when compared with the Null Case.

Heavy Summer Case

In the Heavy Summer Null Case, the most significant issue was related to the integration of the new Antelope Project resources. The prior RTP showed local load-service issues when stressed in a 1 in 5 peak condition (20 percent probability of occurring).

Heavy Winter Case

In the Heavy Winter Null Case, similar to the Heavy Summer Null Case, the most significant issue was again related to the integration of the new Antelope Project resources. The remaining issues in the prior RTP case were a very slight overload near Billings and an overload issue at Bridger resulting in the loss of two system elements (N-2 contingency).

High Eastbound Idaho-Northwest Case

In the High Import Null Case, stresses across the Idaho-Northwest and Montana-Idaho paths were relieved with the addition of the Boardman to Hemingway project. But heat maps show that the Boardman to Hemingway project would do little to relieve violations caused by integrating the Antelope resource. Including the other Non-Committed Projects of the prior RTP with the Boardman to Hemingway projects eliminated those violations. Change Case CC3 tested to see if the Gateway West and/or Gateway South projects could replace or be comparable to the Boardman to Hemingway or the Antelope projects. Neither of those Gateway projects resolved the Northwest-to-Idaho issues and thus would be inadequate

to replace Boardman to Hemingway. Boardman to Hemingway resolved performance issues between the Northwest and Idaho under summer import conditions.

High Tot2/COI/PDCI Case

The E-Null Case showed significant high- and low-voltage violations and overloads centered in Wyoming. The addition of the prior RTP projects largely cleared those issues, with some remaining local overloads in the Bonneville Dam area and a transformer overload at the Jim Bridger Power Plant in Wyoming. Without Gateway South in Change Case 4 or Gateway West in Change Case 5, the configuration performed poorly.

High Wyoming Wind Case

The Null Case results here, with wind production at 2,707 MW, showed worse performance than the heavy southern Idaho export case. The 2,707 MW mark represented a condition that exceeds the original target level of 2,655 MW by almost 12 percent. Adding the prior RTP facilities solved most of the stresses. The only remaining problem lay with the rating of a series capacitor bank in Burns, Ore. This bank has reached the end of its useful life and is due for replacement. The parties will consider these studies in establishing its new rating.

High Borah West Case

Similar to the High TOT2/COI/PDCI and High Wyoming Wind cases, the High Borah West case showed significant stresses in Wyoming and Idaho without the addition of new transmission capacity. These stresses were relieved for the most part by the addition of the prior RTP projects. Removing the Populus-Cedar Hill-Hemingway segment, as depicted in Change Case 31, triggered violations. Connecting Populus to Borah, as depicted in Change Case 32, helped slightly, but the Populus-Cedar Hill-Hemingway segment was still needed. Subtracting NTTG footprint energy exports did not avert the need for the Populus-Cedar Hill-Hemingway line.

High NTTG Footprint Import Case

The High NTTG footprint import case exposed a transmission gap related to the integration of the new Antelope Project resources. Adding the prior RTP projects solved most of those issues, with some minor issues remaining with a slight overload near Vernal, Utah, and low voltages in the Three Mile Knoll area near Soda Springs, Ida.

High Aeolus West and South Case

This case could not be solved without some Wyoming transmission facility additions. Change Cases 4 and 5 found that neither Gateway West nor Gateway South could perform adequately without the other. In Change Case 33, the western portions of Gateway West (west of the Bridger Power Plant) were excluded and replaced with the Gateway

South project. This case performed satisfactorily; however, the Bridger dispatch level (885 MW) was low.

2029 Bridger Retirement Sensitivity Case

The TWG performed robustness sensitivity cases to test the planned retirements at the Jim Bridger Power Plant. The cases looked at hours when all four units of the Bridger plant were dispatched above 1,500 MW. This covered the Heavy Summer, Heavy Winter, TOT2/COI/PDCI and High Wyoming Wind cases. The other four cases were not affected by a Bridger unit replacement, since the Bridger plant was dispatched below 1,500 MW.

The four covered cases were adjusted to remove the 608-MW Bridger Unit 1 from service. In the Heavy Summer and Heavy Winter conditions, the unit's output was replaced by additional dispatch from the Grand Coulee Dam. In all four cases, adjustments between the 345-kV system and the 500-kV system at Bridger unloaded the 500-kV system.

The removal of Bridger 1 did not materially change the RTP configuration.

Interregional Transmission Projects

The TWG analyzed the Interregional Transmission Projects to determine whether an ITP alone or in combination with the other ITPs or Non-Committed Projects, or both, could satisfy NTTG's transmission needs on a regional or interregional basis more efficiently or cost effectively than through local planning processes.

The ITPs were added to the Null Cases without any additional transmission resources to serve NTTG load beyond those resources identified in the Quarter 1 data submittals. The ITPs were tested against five different Change Cases. The analysis found that the ITPs did not provide the NTTG footprint with regional benefits by either significantly reducing performance issues or displacing NTTG Non-Committed Projects.

RELIABILITY CONCLUSIONS

Based on the study results, the TWG concluded that the transmission projects represented by both the Prior RTP and the Initial RTP satisfied the NTTG reliability criteria. The ITPs were evaluated to determine whether one or more ITP would defer or replace NTTG's Non-Committed Projects. The TWG determined that none of the ITPs solved NTTG's reliability performance issues and, as such, have not been included in the RTP.

The NTTG area would be reliably served in 2028 only by including the following Non-Committed regional projects:

Boardman to Hemingway (B2H)

Antelope Transmission Project, including:

- › Antelope–Borah 345 kV
- › Antelope–Goshen 345 kV
- › Antelope 345/230 kV transformers and interconnection facilities

The Energy Gateway projects, including segments:

- › Windstar–Aeolus 230 kV
- › Aeolus–Clover 500 kV
- › Aeolus–Anticline 500 kV
- › Anticline–Populus 500 kV
- › Populus–Cedar Hill–Hemingway 500 kV
- › Borah–Midpoint 345 kV to 500 kV conversion

Helicopter lends a hand on the 500-kV Aeolus to Bridger/Anticline subsegment of the Gateway West Project.
Photo courtesy PacifiCorp.



ECONOMIC EVALUATIONS

To determine which of the Change Cases is the more efficient or cost-effective plan, the TWG uses three economic metrics, as determined in the Biennial Study Plan. Once the more efficient or cost-effective projects are identified, they are included in the RTP. The three metrics—capital-related costs, power-flow losses and reserves—and results are discussed below.

Capital-Related Cost Metric

Development of the capital-related cost metric requires three steps. The first step validates the capital cost of the Project Sponsor's Q1 submitted project. The second step uses those results to estimate the annual capital-related costs over the assumed transmission life (40 years). The third step is to levelize the net present value of the annual capital-related costs for the prior RTP and the Initial RTP.

Energy-Loss Metric

The energy-loss metric captures the change in energy generated, based on system topology, to serve a given amount of load. A reduction in losses for a Change Case would represent a benefit, since less energy would be required to serve the same load. The analysis found that the Prior RTP case had more energy losses than the Initial RTP.

Reserve Metric

The reserve metric evaluates the opportunities for two or more parties to save money by sharing a generating resource that would be enabled by transmission. The metric is a year 10 look at the increased load and generation additions in the NTTG footprint and the transmission additions that may be included in the RTP. The analysis found no appreciable difference between the Prior RTP and the Initial RTP.

In the study cycle, the TWG analyzed the Gateway West, Gateway South and Boardman to Hemingway projects. A preliminary calculation of the reserve metric found that none of the reserve benefits exceeded \$750,000 per year over the reserve-sharing ability of the existing transmission system.



Journeyman linemen performing maintenance on insulator string on double-circuit 230-kV line.
Photo courtesy Idaho Power Co.

More importantly, both the Prior and Initial RTPs shared the same benefit value. Thus, the change in reserve metric did not factor into selecting the RTP.

Economic metric analysis conclusion

The sum of the annual capital-related cost metric, loss metric (monetized) and reserve metric (monetized) yielded the incremental cost for the Prior RTP and the Initial RTP. The calculation (Table 4) found that the prior RTP yielded the lowest incremental cost, after adjustment by the plan’s effects on neighboring regions. Thus, the Prior RTP was incorporated into the RTP.

11/16/2018	iRTP	pRTP	pRTP LESS iRTP
Capital Related Cost	\$903,531,849	\$802,814,981	(\$100,716,868)
Loss-Monetized	477,520,138	\$77,608,982	\$88,814
Reserve-Monetized	(\$750,000)	(\$750,000)	\$0
Incremental Cost	\$980,301,987	\$879,673,933	(\$100,628,054)

➤ **TABLE 4**
Annual incremental cost comparison

PUBLIC POLICY CONSIDERATION SCENARIO REQUESTS

Stakeholders may ask NTTG to consider factors relevant to public policy but not required by local, state or federal laws or regulations. This is known as a Public Policy Consideration (PPC) scenario request. The results of PPC analysis may inform the RTP but do not result in the inclusion of additional projects in the RTP. Public policy requirements are included in the Transmission Providers’ submissions and in the Initial RTP.

During Quarter 1 of the NTTG 2018–2019 regional planning cycle, Deseret Power, Utah Association of Energy Users, Utah Associated Municipal Power Systems, Utah Department of Commerce Office of

Consumer Services, Utah Municipal Power Agency, and Wyoming Industrial Energy Consumers jointly submitted a PPC request, defined in the NTTG Funders’ Attachment K, for a scenario analysis. The request asked to gauge the impacts and implications on transmission and reliability of closing Jim Bridger Unit 1 and Naughton Units 1 and 2. All three retirements lie outside the 2028 study period.

The TWG conducted power-flow analyses on four Change Cases and made a number of observations.

A full report of the study can be found in Appendix D of the NTTG 2018–2019 Draft Final RTP. >>>

REGIONAL ECONOMIC STUDY REQUESTS

Stakeholders may ask NTTG to model how specific upgrades or other investments to the transmission system or demand resources—not otherwise considered in the Local Transmission Plans of the NTTG Transmission Providers—could make it cheaper to reliably serve the forecasted needs of the NTTG footprint.

In Quarter 5 of the NTTG 2018–2019 study cycle, Deseret Power, on behalf of itself and four other Utah stakeholders, requested an economic study to evaluate up to two 345-kV transmission lines as a lower-cost alternative to the 500-kV Gateway West and Gateway South lines.

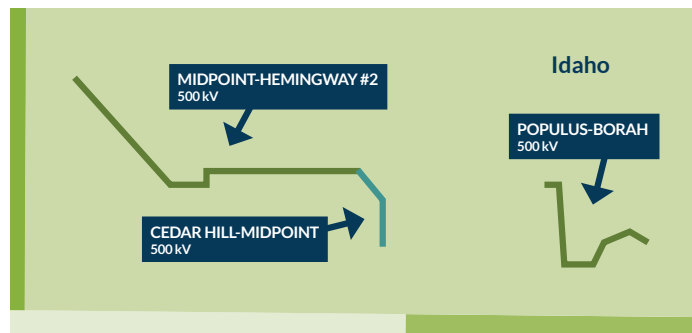
A TWG economic study demonstrated acceptable system performance for the proposed 345-kV lines. However, additional production cost model (PCM) simulations indicated that the 345-kV lines would have lower overall

transmission capacity than the planned 500-kV transmission. This capacity limitation would result in increased flows on transmission exiting Wyoming. And it would force generation to increase in Utah in the PCM simulations, dispatching it without consideration of economics.

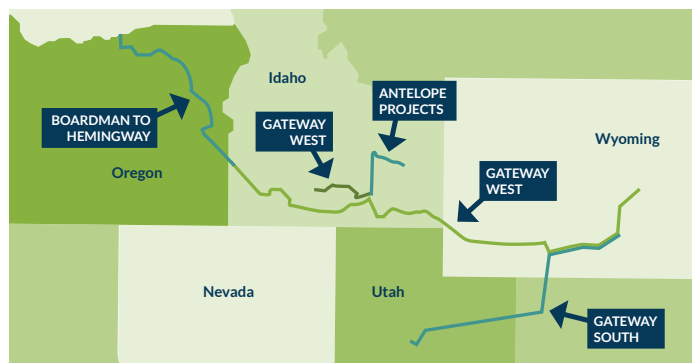
In addition to the economic and capacity limitations, securing permits and rights-of-way for the two proposed 345-kV lines could require an additional 12 to 15 years. PacifiCorp already has secured all rights and is building the Aeolus-to-Anticline 500-kV transmission system in Wyoming, scheduled for energization in 2020. The proposed 345-kV option has no sponsor.

For more information regarding the assumptions and results see Appendix E of the NTTG 2018–2019 Draft Final RTP. >>>

> **FIGURE 10**
Initial RTP segments not included in Final RTP



> **FIGURE 11**
Transmission projects comprising 2018–2019 NTTG RTP



FINAL REGIONAL TRANSMISSION PLAN

Based on the reliability and economic conclusions discussed above, the more efficient or cost-effective plan, based on the studies in this report, is the Prior RTP. The Prior RTP is a staged variant of the Initial RTP.

NTTG’s Final RTP, as shown in Figure 11, emerged after a rigorous reliability analysis of the NTTG Transmission Providers’ rollup of their local area plans and assumption of Non-Committed regional transmission projects, augmented with stakeholder Interregional Transmission Projects. This technical analysis was followed by an economic metric analysis that selected NTTG’s more efficient or cost-effective RTP.

COST ALLOCATION

None of the projects selected in the RTP requested cost allocation.

NEXT STEPS

Publication of the NTTG RTP completes the two-year planning process begun with pre-qualification of Project Sponsors in Quarter 8 of 2017 and continued with project data submittal in Quarter 1 of 2018. The NTTG 2018–2019 RTP identified a need for new transmission capacity to serve forecasted load in 10 years. The plan also identified a set of transmission projects, known in this report collectively as the prior RTP, as the more efficient or cost-effective transmission plan to meet that need.

While the RTP is not a construction plan, it provides valuable regional insight and information for all stakeholders (including developers) to consider and use in their respective decision-making processes.

This report marks the last RTP produced by NTTG. NTTG and ColumbiaGrid are forming a single transmission planning region that will enhance the reliability and efficiency of the regional system encompassing the greater Pacific Northwest and northern Rocky Mountain region. NorthernGrid, as the new entity will be called, will bring the two groups' regional transmission planning under one association. NTTG's funders anticipate launching NorthernGrid in early 2020.

GLOSSARY

Note: This Glossary is for the benefit of readers and neither supplements nor modifies any defined terms contained in any entity's filed Open Access Transmission Tariff (OATT), including the Attachment K to that tariff. To the extent that a term diverges from any entity's OATT, the OATT takes precedence.

Alternative Project Alternative Project refers to Sponsored Projects, projects submitted by stakeholders, projects submitted by Merchant Transmission Developers and unsponsored projects identified by the Planning Committee (if any).

Change Case A Change Case is a scenario where one or more of the Alternative Projects is added to or replaces one or more Non-Committed Projects in the Initial RTP. The deletion or deferral of a Non-Committed Project in the Initial RTP without including an Alternative Project can also be a Change Case.

Committed Project A Committed Project is a project that has all permits and rights of way required for construction, as identified in the submitted development schedule, by the end of Quarter 1 of the current regional planning cycle.

Draft Regional Transmission Plan Draft Regional Transmission Plan refers to the version of the Regional Transmission Plan that is produced by the end of Quarter 4 and presented to stakeholders for comment in Quarter 5.

Draft Final Regional Transmission Plan Draft Final Regional Transmission Plan refers to the version of the Regional Transmission Plan that is produced by the end of Quarter 6, presented to stakeholders for comment in Quarter 7 and presented, with any necessary modifications, to the Steering Committee for adoption in Quarter 8.

Initial Regional Transmission Plan Initial Regional Transmission Plan comprises projects included in the prior Regional Transmission Plan and projects included in the Full Funders Local Transmission Plans and accounts for future generation additions and deletions (e.g., announced coal retirements).

Interregional Transmission Project

An Interregional Transmission Project is a proposed new transmission project that would directly interconnect electrically to existing or planned transmission facilities in two or more planning regions and that is submitted into the regional transmission planning processes of all such planning regions.

Merchant Transmission Developer

Merchant Transmission Developer refers to an entity that assumes all financial risk for developing and constructing its transmission project. A Merchant Transmission Developer recovers the costs of constructing the proposed transmission project through negotiated rates instead of cost-based rates.

Non-Committed Project

This is a project that does not have all of its required construction permits and rights of way, as identified in the submitted development schedule, by the end of Quarter 1 of the current regional planning cycle.

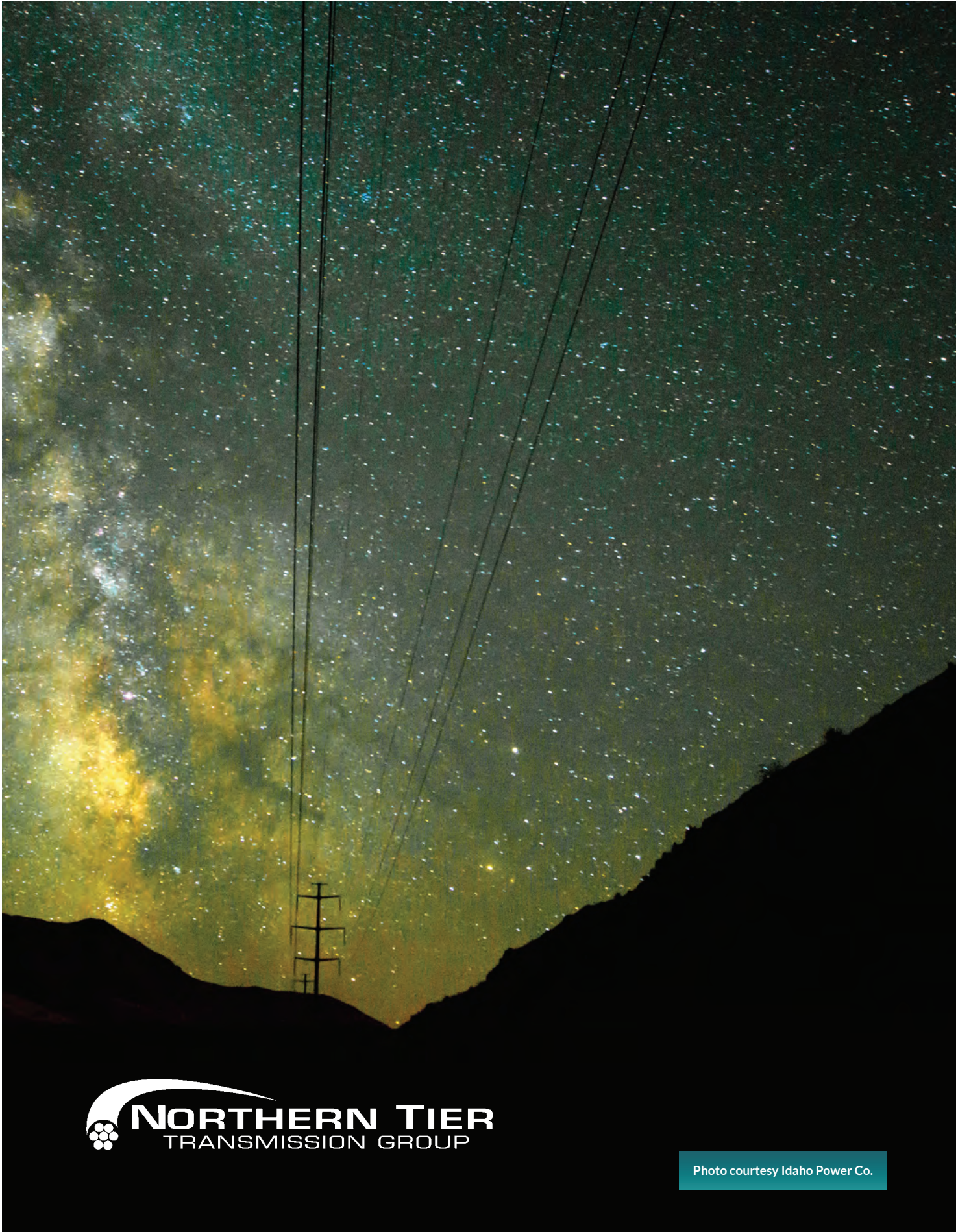
Null Case A Null Case tests how the current topology of the transmission grid would perform with loads and resources in the future.

Project Sponsor A Project Sponsor is a Non-incumbent Transmission Provider or Incumbent Transmission Provider intending to develop the project that is submitted into the planning process.

Public Policy Consideration Those public policy considerations that are not established by local, state, or federal laws or regulations.

Public Policy Requirements Those public policy requirements that are established by local, state or federal laws or regulations, meaning enacted statutes (i.e., passed by the legislature and signed by the executive) and regulations promulgated by a relevant jurisdiction.

Sponsored Project A Sponsored Project is a project proposed by a Project Sponsor.



 **NORTHERN TIER**
TRANSMISSION GROUP

Photo courtesy Idaho Power Co.



Regional Transmission Plan
for the 2020-2021
NorthernGrid Planning Cycle

*NorthernGrid Member Planning Committee (MPC)
Approval Date: December 8, 2021*



Acknowledgements:

NorthernGrid Members & Participants

Avista Corporation

BHE U.S. Transmission (MATL)

Bonneville Power Administration

Chelan County PUD

Grant County PUD

Idaho Power Company

NorthWestern Energy

PacifiCorp

Portland General Electric

Puget Sound Energy

Seattle City Light

Snohomish County PUD

Tacoma Power

Interregional or non-Incumbent Transmission Project Sponsors

PowerBridge, Cascade Renewable Project

Absaroka, Loco Falls

TransCanyon, LLC, Cross-Tie

TransWest, TransWest Express

Great Basin Transmission, LLC, Southwest Intertie Project North

Neighboring Regional Entities

CAISO

WestConnect



State Representatives

Idaho PUC

Idaho OER

Montana PSC

Montana Consumer Counsel

Oregon PUC

Utah Department of Commerce

Utah Office of Energy Development

Washington UTC

Washington EFSEC

Wyoming PSC

Consultants and Other Contributors

Northwest Power Pool

Power Systems Consulting (PSC)

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Harris PCM



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Executive Summary

The NorthernGrid 2020-2021 Regional Transmission Plan was developed per the Study Scope that outlines the NorthernGrid 2020-2021 regional planning process, as required under Federal Energy Regulatory Commission (FERC) Orders No. 890 and 1000, in accordance with each Enrolled Party's¹ Open Access Transmission Tariff (OATT) Attachment K – Regional Planning Process and NorthernGrid Planning Agreement, and the results are presented in this report. The objective of the planning process is to identify the projects that either cost-effectively or efficiently meet the needs of the NorthernGrid members in a 10-year future.

The process started with a data submittal of needs from each of the Members. For a 10-year future, each Member submitted their forecasted load, expected resource additions or retirements, public policy requirements, and expected transmission topology. All this information was then assimilated into the 2030 WECC Anchor Data Set (ADS). From that base case, a production cost model (PCM) analysis was performed to identify the stress conditions of interest for the NorthernGrid footprint. The stress conditions were selected to represent typical or expected operating conditions for the NorthernGrid footprint. Weather conditions have a large impact on system load. More megawatts are consumed on a hot summer day than on a cool autumn day due to things like industrial cooling loads. Similarly, more megawatts are consumed on a cold winter day than on a warm spring day due to keeping homes and businesses warm. Both summer and winter loading conditions were selected to capture these seasonal loading conditions. There is enough proposed wind generation in Wyoming to have a potential impact on the reliability of the NorthernGrid footprint; because of this, an hour representing high output from Wyoming wind resources was selected. Needs were also identified across southern Idaho, so a high Idaho to Northwest Path (west to east) case and Borah West (east to west) case were developed. Altogether, eight stress conditions for the NorthernGrid footprint were identified.

The results of the contingency analyses from those eight respective base cases formed the foundation for the selection of projects in the Regional Transmission Plan. Contingencies were submitted by the Members and focused on 230 kV and above electrical facilities. In general, the outage of facilities 100 kV and below do not significantly impact the reliability of the NorthernGrid transmission system. The NorthernGrid footprint along with adjacent neighboring regions were monitored.

The base cases contained all planned regional member projects. To identify the set of projects for the Regional Transmission Plan, portions of the planned regional projects were removed from the base cases to ascertain if a subset of the proposed regional projects would meet the needs of the transmission system more cost-effectively or efficiently than the entire set.

¹ Definition of Enrolled Party from the NorthWestern Energy OATT: Enrolled Party means a Person that has satisfied the eligibility requirements set forth in Section 4.2.1 of this Attachment K and completed the process set forth in Section 4.2.2 of this Attachment K to become enrolled in NorthernGrid. Enrolled Parties is a collective reference to each Enrolled Party.



Consideration was also given to the interregional and non-incumbent regional projects that were submitted. The interregional projects and non-incumbent regional projects were first analyzed to determine if, without the addition of the proposed regional projects, they would meet the needs of the NorthernGrid footprint reliably. Further scrutiny was given to the interregional and non-incumbent regional projects to analyze their interplay with select regional projects if the interregional or non-incumbent regional project alone resulted in reliability violations.

Three developers, TransCanyon LLC, Great Basin Transmission, LLC, and PowerBridge met the criteria to be classified as Qualified Developers for this planning cycle. Ultimately, cost allocation analysis was not required as none of the interregional or non-incumbent regional projects were selected into the Regional Transmission Plan.

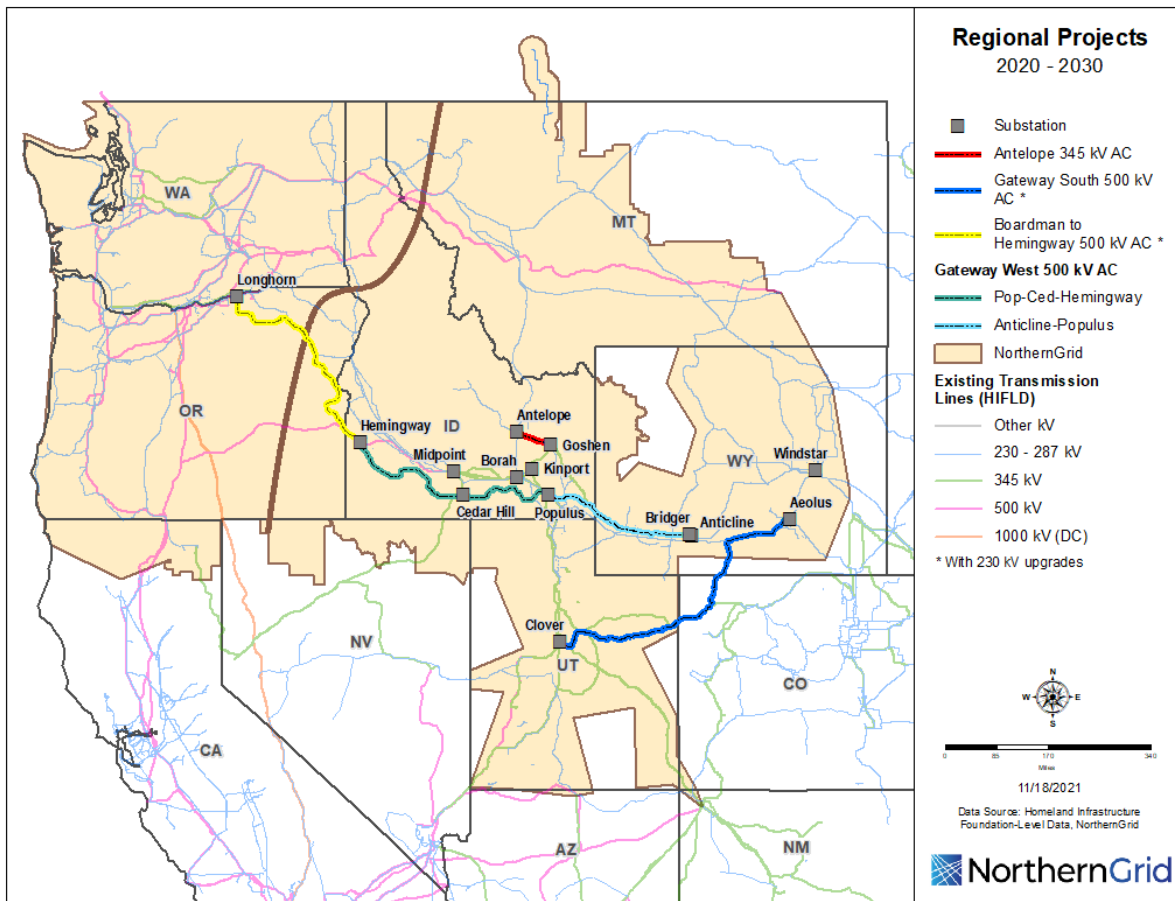


Figure 1: Regional Transmission Plan, regional combination {03}²

Figure 1 above provides a simplistic depiction of the regional projects that make up the Regional Transmission Plan. The Regional Transmission Plan projects were determined to be the most efficient solution to the NorthernGrid region given the parameters that were analyzed. The upgrades through the Cedar Hill bus increase the capacity of the transmission system between Populus and Hemingway and were determined to be the most-efficient solution for the transmission system as they resulted in the fewest violations. The addition of the non-incumbent regional projects did reduce the reliability violations in the immediate vicinity of the respective projects. While this finding is promising, the cost of the projects did not justify adding them into the Regional Transmission Plan. Similarly, the interregional projects did not result in sufficient improvement of the transmission system to warrant including them in the Regional Transmission Plan.

² This report adopts the common industry nomenclature that refers to facilities built to 525 kV specifications as “500 kV”.



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Regional Planning Development

The Regional Transmission Plan is the result of the work performed as outlined in the study scope for the NorthernGrid 2020-2021 regional transmission planning process. Regional Planning is required under FERC Orders No. 890 and 1000 and was executed in accordance with each Enrolled Party's Open Access Tariff Attachment K – Regional Planning Process and NorthernGrid Planning Agreement. The production of a Regional Transmission Plan satisfies FERC Order 1000 requirements for each region to produce a plan. To develop the Plan, the NorthernGrid members established the Baseline Projects which were then evaluated for inclusion in the final Regional Transmission Plan. NorthernGrid used power flow contingency analysis to assess which projects could best meet system reliability performance requirements and transmission needs for the NorthernGrid footprint in a 10-year future. Enrolled Parties submitted updated Load and Resource information which was incorporated into the study effort. There were no Material Adverse Impacts noted for any of the solutions considered.

The regional planning process is designed to be a “bottom up” approach in that it begins with a compilation of the Members’ local area plans which allows the planning emphasis to shift from the local to the regional footprint. The Transmission Providers, in conjunction with participation from stakeholders, public service commissions, and interested parties have developed local area plans that meet the regulatory requirements for their respective areas. The projects that have been identified in the local area planning process are assumed to be in service for the regional planning effort.

This regional planning process is intended to focus on those projects that are of “regional significance”. “Regional significance” is not a defined term; rather, it is used to describe those projects whose presence, or lack thereof, would influence the overall reliability of the NorthernGrid footprint. A local project may improve the ability to serve native load or decrease the number of unplanned outages for a specified subsystem but typically is not going to influence larger transmission paths. However, a project that is more regional in nature may both increase the ability to serve native load as well as influence a larger transmission path.

NorthernGrid Overview

The NorthernGrid is composed of Avista (AVA), Bonneville Power Administration (BPA), Chelan PUD (CHPD), Grant County PUD (GCPD), Idaho Power Company (IPC), BHE U.S. Transmission as the owner of the Montana Alberta Tie Line (MATL), NorthWestern Energy (NWMt), PacifiCorp East and West (PACE and PACW), Portland General Electric (PGE), Puget Sound Energy (PSE), Seattle City Light (SCL), Snohomish PUD (SNPD), Tacoma Power (TPWR). The member Balancing Authority Areas are illustrated in Figure 2 below.

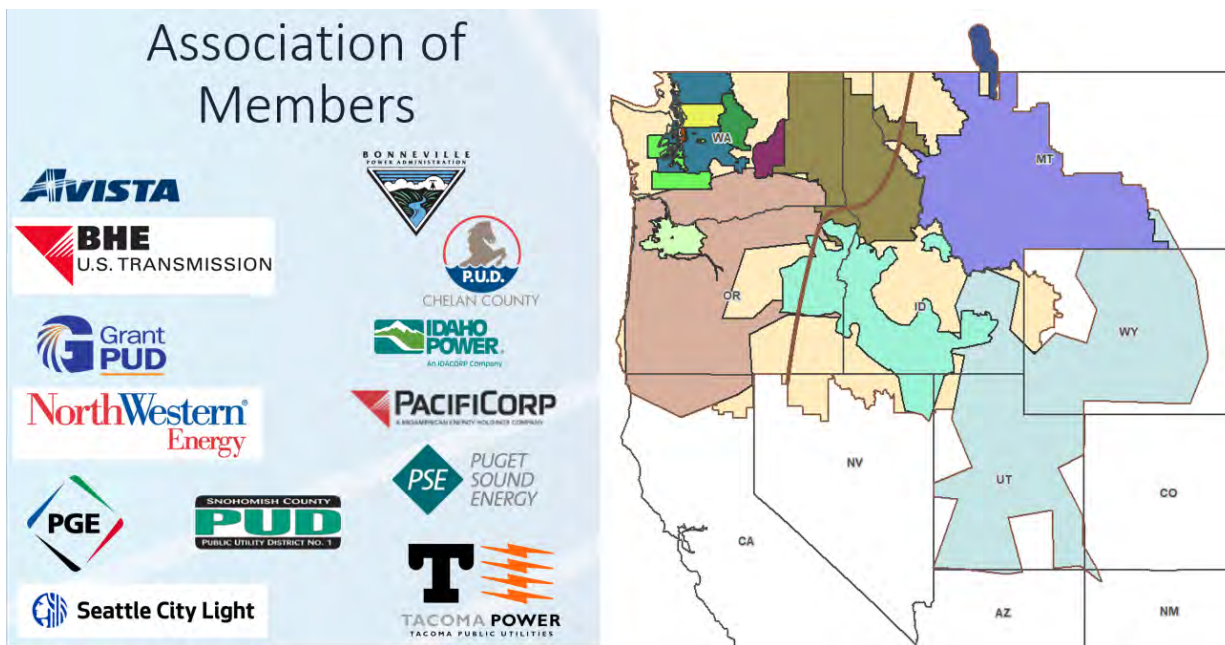


Figure 2: NorthernGrid footprint

Figure 2 shows the NorthernGrid footprint. For the purposes of the regional transmission plan data analysis and study case development, the NorthernGrid MPC divided the study area into the Pacific Northwest (NG-PNW) and Intermountain states (NG-IM) areas as shown by the brown line in Figure 2 above. The NorthernGrid footprint is a large, geographically diverse region that combines the needs of two previously separate regions. Some portions of the region may experience peak loading in the summer whereas other portions may experience peak loading in the winter. The Study Scope was developed to incorporate the ability to keep the region separated, should the results indicate that a separation is indeed useful. During the analysis, it was found that the separation of the NorthernGrid footprint was not needed. The brown line has been kept in this figure to help maintain consistency with the Study Scope and will not be specifically referenced hereafter.

Planning Development

The intent of FERC Order No. 1000 is to improve the regional planning process and identify opportunities for any transmission developer, incumbent or non-incumbent, to coordinate and develop solutions that are both beneficial to the developer as well as the region to which that developer interconnects. Given proper coordination and communication, only the necessary facilities would get identified, and those facilities become the RTP. The RTP is not a construction plan and the Members have no obligation to build the facilities identified in the RTP.

There are many factors that get considered in a long-term planning process. Utilities are charged with maintaining the reliability of the transmission system as well as ensuring there are sufficient resources and/or transmission service arrangements to serve their respective loads. FERC No. 890 and No. 1000 mandate long-term, coordinated planning at both the local and regional levels. North American Electric

Reliability Corporation (NERC) planning standard TPL-001-4 provides criteria for performing contingency analysis on facilities 100 kV and above and is used in the FERC planning process.

Integrated resource planning is a complex process that each utility undertakes to identify and meet its respective generation portfolio needs. Resource planning may contemplate market-driven transmission sales, public policy requirements and/or considerations, environmental impacts, corporate business goals, resource adequacy, and/or any other slew of topics that consider or influence the relationship between the consumer and the utility.

The timelines for resource and reliability planning are not one and the same; each follows its own cycle according to its respective requirements. The timeline for reliability planning is prescribed, cyclical, and regular: in January of every even-numbered year, a twenty-four-month cycle is initiated for the purposes of producing a regional transmission plan by the end of December in every odd-numbered year. This twenty-four-month cycle is listed in the open access transmission tariffs of all the FERC-jurisdictional utilities and is specified in the Member Planning Committee agreement for those non-FERC-jurisdictional utilities that are members of the NorthernGrid planning process.

The cycle for resource planning is not necessarily “universal” in that all utilities adhere to the same schedule; the timelines for resource planning are not as prescribed or regular and may be dependent on external factors such as changes to public policy. Resource planning cycles that initiate at or near the beginning of a transmission planning cycle or make a shift during the two-year transmission planning cycle may not necessarily get reflected in the current transmission planning cycle. Once a new resource need is identified, utilities not only need to identify the public policy-driven resource need for their system, they also have to start an open and transparent bidding process to notify all of their need for resources. There are many mechanisms that drive the need for resource procurement; a change to public policy requirements is a simple example that illustrates the inherent complexity in any given resource procurement process.

There is a relationship between resource planning and reliability planning. Once the results of the resource bid are known, the reliability analysis needed to incorporate the results of the resource bid can begin. Transmission models can then be updated to analyze the impacts of the resources identified in the resource procurement process.

Because of all the intricacies involved in a resource procurement process, from the identification of the resource through to the identification of the transmission facilities needed to support the output of the selected resource, there is the opportunity that resources that are identified in a resource procurement process are not necessarily reflected in the current regional planning study.

Annually, the member utilities each compile their collective needs into the form of a Loads and Resources data submittal which gets submitted to Western Electric Coordinating Council (WECC) as part of WECC’s base case building process. NorthernGrid uses those WECC base cases in the planning process.

Study Process

Study Scope

The objective of the transmission planning study is to produce the NorthernGrid Regional Transmission Plan, through the evaluation and selection of regional and interregional projects that effectively satisfies all the transmission needs within the NorthernGrid region. The regional needs were sourced from member data submissions, including load forecasts, resource additions and retirements, projected transmission, and public policy requirements. The Study Scope in its entirety is provided in Appendix B: Study Scope.

Study Methodology and Criteria

To assess the 2030 loads and resources anticipated for the NorthernGrid footprint, a combination of power flow and production cost model techniques were used. A WECC base case was then put through a production cost modeling effort to identify stressed conditions on the NorthernGrid footprint based on the economic dispatch of planned resources. The stressed conditions were translated into base cases which became the basis for the analysis effort. The selected base cases were run through a contingency analysis using member-supplied contingencies. All contingencies were categorized per the NERC transmission planning criteria document, "TPL-001-4". The NorthernGrid footprint as well as immediate neighboring regions were monitored. The analysis of the contingency results accounted for any area-specific member utility criteria, otherwise, NERC TPL-001-4 criteria was used.

Loads and Resources

Members submitted Loads and Resources data along with their current transmission plans in the first quarter; this data was consolidated and used to develop the Study Scope. The needs of the NorthernGrid footprint were identified through these submittals. No Loads and Resources data updates were submitted in the fifth quarter. All loads and resources characteristics are captured in the Study Scope which is available in Appendix B: Study Scope.

Base Case Development

The WECC 2030 Anchor Data Set (ADS) seed case was used as the starting point to produce the base cases used in the reliability analysis. The Anchor Data Set seed case was put through a production cost modeling effort to identify the stressed conditions of interest for the NorthernGrid footprint from 8760 potential hourly conditions. These operating conditions were created through modeling the economic dispatch of the resources combined with the expected loading conditions for the time of year and for each of the 8760 hours in a year. These models account for seasonal variations in load and resource availability. For example, base cases representing spring conditions will reflect more availability of hydro generation than do the base cases that represent fall conditions. The NorthernGrid Planning Committee discussed the conditions of interest and ultimately selected eight hours to model and study the regional transmission system. These eight hours were selected to represent known or expected



operating conditions for the NorthernGrid footprint and are identified in Table 1. Members reviewed these cases and provided additional tuning and adjustments as appropriate for each scenario.

In the process of developing and selecting the stressed dispatch conditions, it was found that there are opportunities for improving the ADS. NorthernGrid worked closely with WECC to provide a list of topics where the ADS could be improved and WECC is actively working through those issues. An example of where the ADS could be improved is in the weather data that is being used: the data is based on years-old data and does not necessarily reflect current weather data. Another example is that of a resource being placed on a bus with insufficient capacity in which case that resource may cause violations in the base case. WECC is considering how to improve the model building process for the ADS with consideration given to those provided topics. All topics are provided in Appendix H: Complete list of all ADS opportunities supplied to WECC.

The hours were selected for known or expected “stresses” on the NorthernGrid footprint. The NorthernGrid footprint spans a wide geographic area; because of this, heavy conditions for both summer and winter were selected. There is enough proposed wind generation in Wyoming to have a potential impact on the reliability of the NorthernGrid footprint; because of this, an hour representing high output from Wyoming wind resources was selected. Needs were also identified across southern Idaho, so a high Idaho to Northwest (west to east) case and Borah West (east to west) case were developed. The NorthernGrid Planning Committee voted on, and approved, the study hours identified in Table 1.

Table 1: Base Case Stress Conditions; Appendix G also shows the Path Flows

Condition	Date	Hour Ending, Pacific time	NorthernGrid Generation (MW)	NorthernGrid Load (MW)
NorthernGrid region summer peak load	July 30	16:00	45781	42111
NorthernGrid region winter peak load	December 10	19:00	45981	43603
High Wyoming Wind	February 1	1:00	34174	30261
High Idaho to Northwest path [west to east]	July 20	17:00	45175	38256
High Borah West path [east to west]	September 29	1:00	27760	21634
High COI path [south to north]	March 10	15:00	26046	28812
High West of Cascades paths [east to west]	April 3	11:00	36812	34705
High COI and PDCI paths with high hydro [north to south]	June 4	18:00	45447	34855

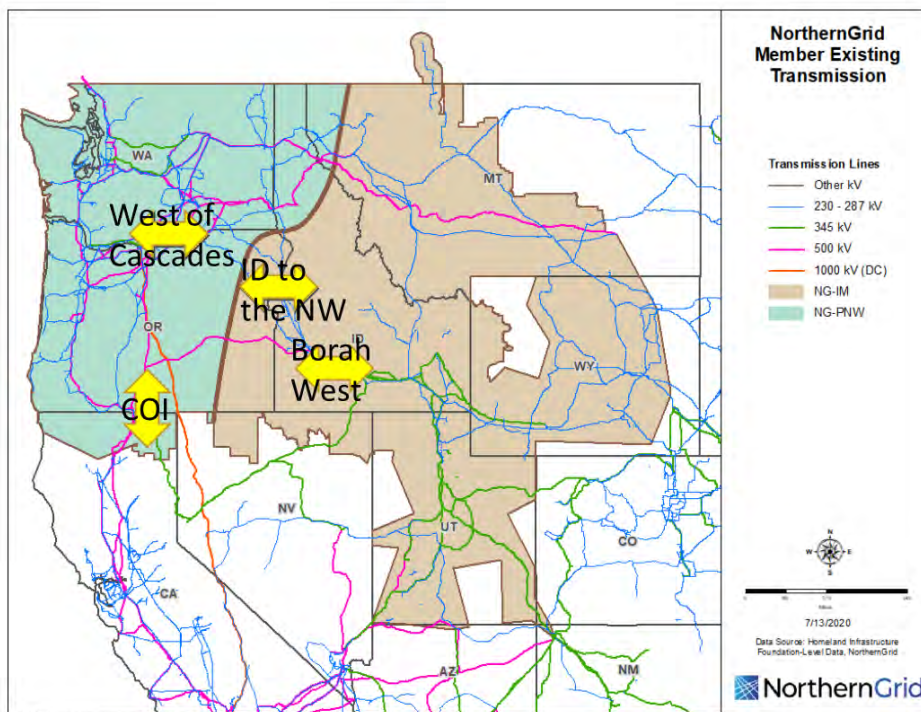


Figure 3: Paths of interest to the NorthernGrid footprint

Figure 3 above is a visual complement to Table 1 and allows for identification of the four WECC paths of most interest to the NorthernGrid footprint for purposes of stressing the transmission system. Not all WECC paths relating to NorthernGrid are displayed, only those that are particularly useful in describing the flow patterns on the NorthernGrid transmission system for the different stressed conditions. The California-Oregon Intertie (COI) is needed for interregional transfers between the California Independent System Operator (CAISO) and NorthernGrid. West of Cascades, Idaho to the Northwest, and Borah West are all crucial to the reliability of the NorthernGrid footprint.

Contingencies and Criteria

Contingency analysis is the modeling of systematically removing specified pieces of equipment from service and measuring the resulting impact to the transmission system.

Thermal overloads occur when the power flowing through a piece of equipment exceeds the capability of the equipment which causes heat to build up; excess heat occurs which can then damage the equipment. Typically, a thermal overload results from the loss of a transmission line or transformer. Operationally, there are multiple ways to mitigate thermal overloads. For example, remedial action schemes are designed to respond to specific events on the transmission system to help preserve reliability and load service; these actions are programmed and the outcomes to the transmission are expected. Generators may be programmed to reduce their output in response to specific changes on the transmission system. These operational mitigation actions decrease the loading on the overloaded

equipment by either reducing the power or redirecting the power to pieces of equipment with larger capabilities.

Voltage excursions occur when the reactive support of the transmission system changes, as can happen during the loss of a piece of equipment. Voltage excursions can be high or low, either of which causes undue stress on the equipment experiencing the excursion. Due to the interplay of all the pieces of equipment in a transmission system, the loss of any piece of equipment has the potential to cause a voltage excursion on the transmission system. Voltage excursions can be mitigated automatically through switching schemes on capacitor and/or reactor banks. Inserting capacitor banks acts to increase the voltage and inserting reactor banks acts to reduce the voltage. These switching sequences do not add further stress or burden to the transmission system as they compensate for the reactive need on the transmission system.

NorthernGrid Members submitted regionally significant contingencies used in the analysis for the development of the Plan. Contingencies on major WECC Paths relevant to the NorthernGrid footprint as well as contingencies on pieces of equipment in the 200 kV and above voltage classes were the primary focus. These regionally significant contingencies were selected for their criticality to the NorthernGrid footprint. The contingencies were categorized using Table 1 from NERC TPL-001-4. The post-contingency system analysis was performed using applicable NERC and WECC criteria while accounting for any member provided thermal or voltage criteria.

The NorthernGrid footprint as well as neighboring regions were monitored during the contingency analysis to determine if any negative impacts occur to the reliability of the transmission system due to the introduction of the regional projects. If negative impacts to the transmission system of neighboring regions could not be mitigated through operational changes for any regional combination, coordination would have to occur to identify the appropriate mitigation and the costs of that mitigation would be added to the cost of the regional project. No negative contingency results were observed in the neighboring regions and as such no Material Adverse Impacts were identified for any of the combinations considered.

Selection of Projects

The objective of the regional transmission analysis is to identify a set of transmission projects that cost-effectively or efficiently meet the transmission service and reliability needs of the NorthernGrid footprint ten years in the future. To accomplish this goal, NorthernGrid started with base cases that include member planned future regional projects modeled as “in-service”, as displayed below in Figure 4. Planned future regional projects is an undefined term that generally refers to transmission projects that have been identified and possibly funded, but are typically not yet in construction. Collectively, these regional projects comprise the Baseline Member Projects, or the “BLMP”. Sensitivity cases based on combinations of various regional project components being systematically removed from the BLMP cases created a set of Regional Combination cases to test against the performance of the BLMP cases. While the BLMP includes the highest number of regional projects, the analysis will evaluate whether a subset of the BLMP may cost-effectively or efficiently meet the needs of the NorthernGrid footprint while maintaining system reliability.



2020-2021 Regional Transmission Plan

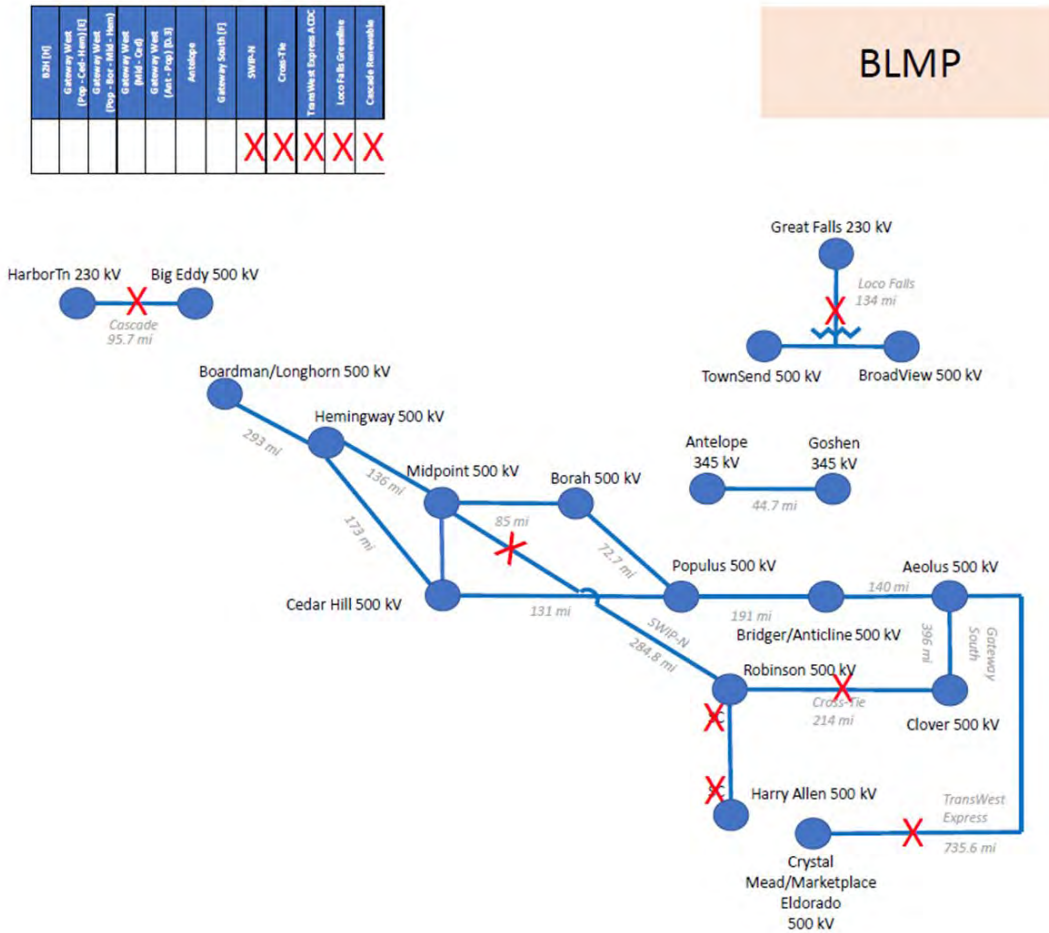


Figure 4: "Stick figure" representation of the BLMP, a red "X" denotes an element that is NOT a part of the BLMP

The displayed connection between Roberson 500 kV and Harry Allen 500 kV is related to the SWIP North project and not indicative of existing facilities.

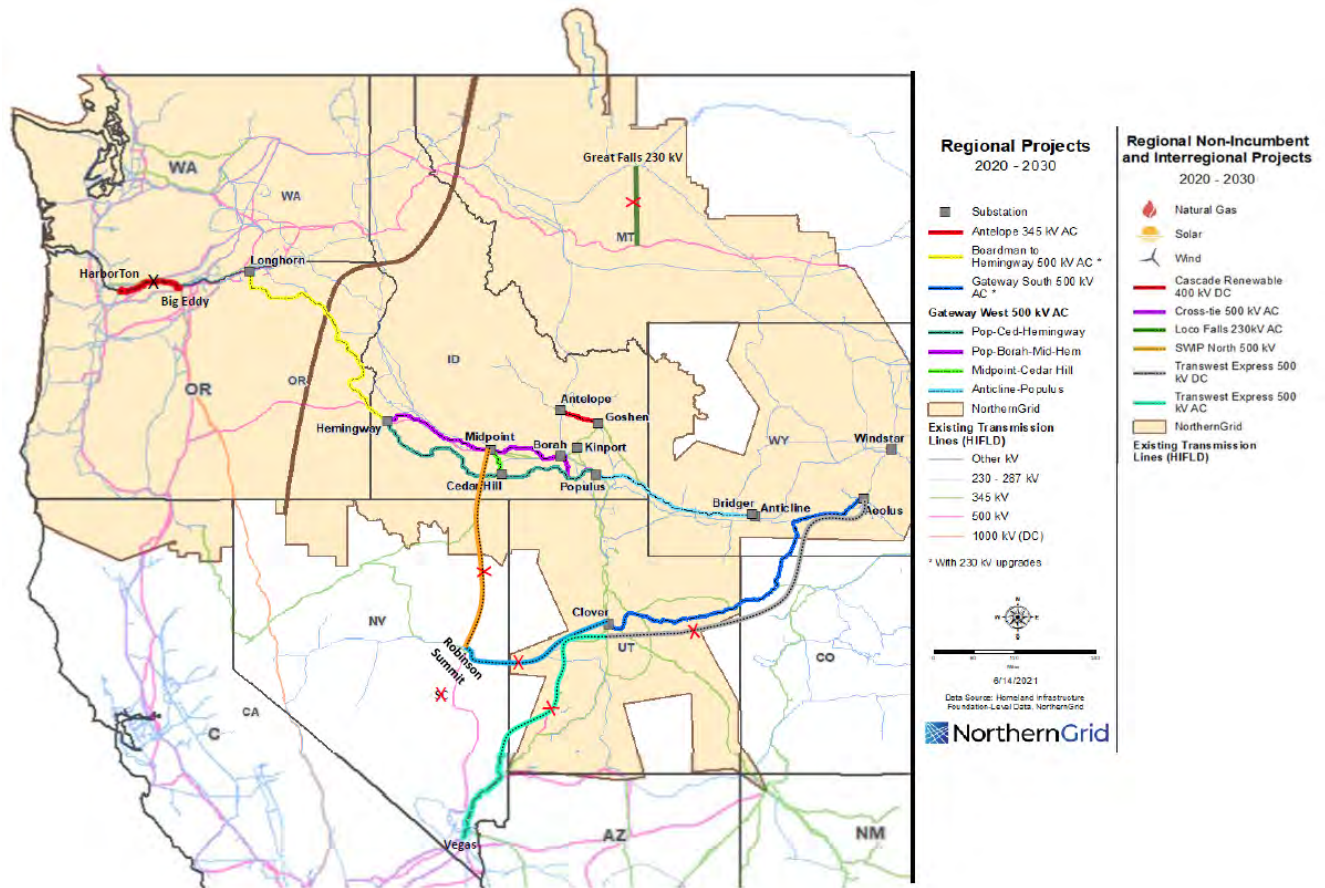


Figure 5: NorthernGrid geographical overlay with all Regional, Interregional, and Non-Incumbent Regional projects displayed

Figure 4 and Figure 5 provide a visual demonstration of all of the projects that have been submitted for consideration in the Regional Transmission Plan. In the top left-hand corner of Figure 4, a table is displayed to show which projects are included in the BLMP. The blue “stick figure” diagram on the left is the visual representation of the projects and each segment has a corresponding geographically aligned element depicted on Figure 5. This figure is not demonstrative of the entire set of upgrades associated with any main portion of the regional combinations, rather it is intended to help the reader understand in general the topology of interest. Boardman is listed as the terminating point of the Boardman to Hemingway project to help preserve continuity with the naming convention; in actuality, the project terminates at Longhorn. Visual Aides for all the combinations can be found in Appendix E.

After the contingencies were run, the raw counts of violations were ranked using weighting criteria developed by the NorthernGrid Member Planning Committee. The rankings give less weight to those contingency categories that either have system adjustments available, can be addressed locally – such as reconfiguring a station to avoid a breaker failure issue, or have been determined to be less likely to occur. The results were further ranked by voltage class and severity of the violation; Appendix C: Rankings lists the full complement of ranking factors used.

The selection of the regional projects in the Plan is determined by the combination of projects that results in a transmission system that most cost-effectively or efficiently exceeds the reliability performance of the other possible combinations of submitted projects.

Regional Projects

The following projects were submitted by the Members and are identified as having the potential to impact the reliability of the NorthernGrid region.

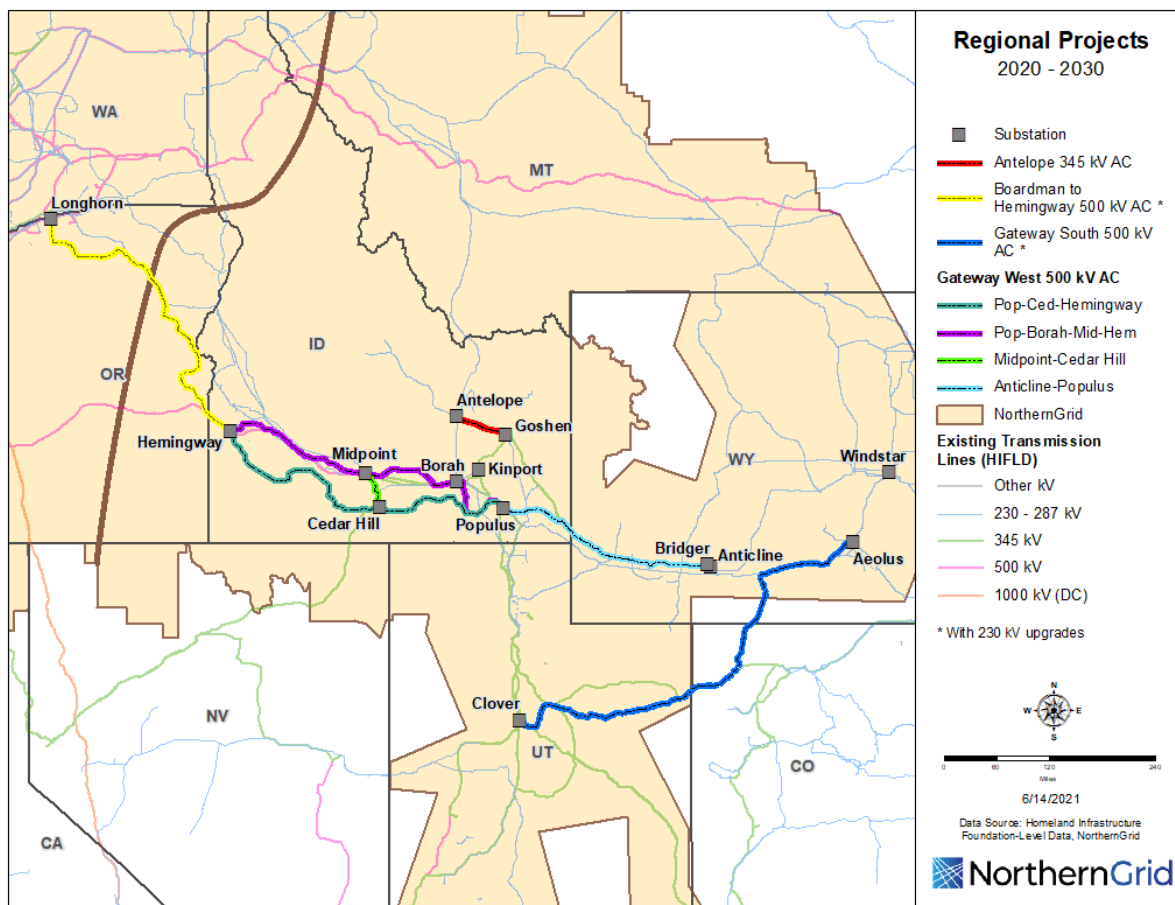


Figure 6: NorthernGrid footprint with regional project overlay. Proposed 345 kV and 500 kV facilities are displayed.

Antelope to Goshen 345 kV Transmission Line

The transmission facilities submitted to NorthernGrid for modeling the UAMPS generation addition near Antelope substation are preliminary in nature as detailed technical studies have not been completed. One of the keys assumptions to the single 345 kV line addition between Antelope and Goshen is that UAMPS has indicated that the proposed generation can be tripped for outage of the Antelope – Goshen 345 kV line. The Antelope to Goshen 345 kV line was selected into the Northern Tier transmission plan

for the 2018-2019 cycle. The Technical Subcommittee determined that the Antelope to Goshen line should be included in all models as “in-service”.

Boardman to Hemingway Transmission Line Project (B2H)

Boardman to Hemingway 500 kV line, Hemingway to Bowmont and Bowmont to Hubbard 230 kV lines. This includes two sections of series compensation. The Oregon end of the line was terminated at the Longhorn station, which is near the town of Boardman, Oregon. While Figure 5 does not visually display the 230 kV facilities associated with the B2H project, the 230 kV facilities are included in the model for B2H as they are needed to integrate B2H into Idaho Power’s system. The B2H project was selected into the Northern Tier Transmission Plan for the 2018-2019 cycle.

Gateway South Transmission Project

Aeolus to Clover 500 kV Line. Based on guidance from PacifiCorp, the Windstar-Shirley Basin 230 kV line (part of Gateway West) has the same in-service date as the Aeolus-Clover project for simplicity. The Gateway South transmission project was selected into the Northern Tier Transmission Plan for the 2018-2019 cycle.

Gateway West Transmission Project

A suite of four project segments were evaluated for Gateway West. These are:

1. Populus-Cedar Hill-Hemingway 500 kV
2. Populus-Borah-Midpoint-Hemingway 500 kV
3. Midpoint-Cedar Hills 500 kV
4. Anticline-Populus 500 kV

Of the Gateway West projects, only the Populus-Cedar Hill-Hemingway and Anticline-Populus 500 kV lines were selected into the 2018-2019 Northern Tier Transmission Group Plan.

Interregional and Non-Incumbent Regional Projects

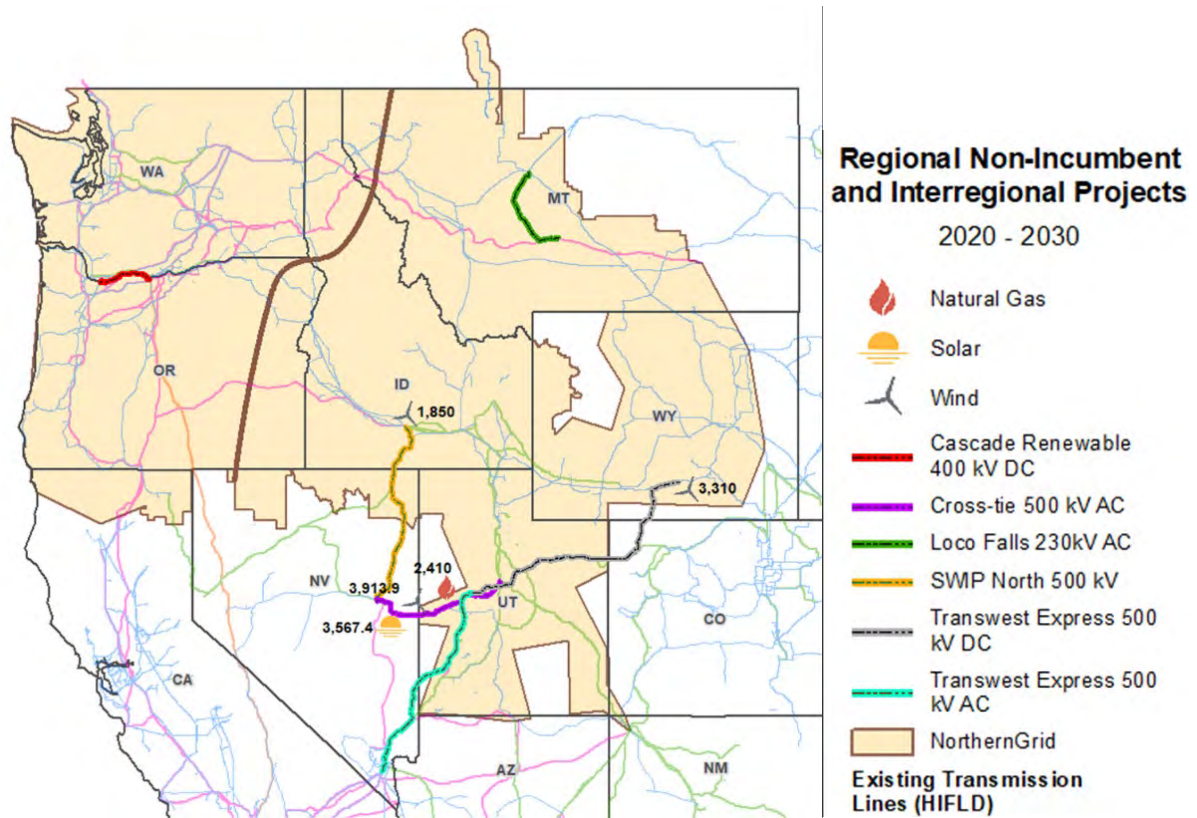


Figure 7: Regional Non-Incumbent and Interregional Projects

All interregional projects considered in this planning cycle have been submitted by Non-Incumbent Transmission Developers.

Cross-Tie Transmission Project

Interregional Evaluation Plan: <https://www.northerngrid.net/resources/cross-tie-itp-evaluation-plan-2020-21>

TransCanyon LLC is proposing the Cross-Tie Project, a 1,500 MW, 500 kV single circuit transmission project that will be constructed between central Utah and east-central Nevada. The project connects PacifiCorp’s planned 500 kV Clover substation (in the NorthernGrid planning region) with NV Energy’s existing 500 kV Robinson Summit substation (in the WestConnect planning region).

Cross-Tie has proposed 9,891 MW of total cumulative resource additions (3,567 MW Solar, 3,914 MW Wind, and 3,410 MW Natural Gas) as a result of the proposed transmission line. These resources are located in the states of Wyoming and Utah. Please see the appendix for a data table of proposed generation associated with the Cross-Tie project.

Southwest Intertie Project North (SWIP)

Interregional Evaluation Plan: <https://www.northerngrid.net/resources/swip-north-itp-evaluation-plan>



Great Basin Transmission, LLC (“GBT”), an affiliate of LS Power, submitted the 275-mile northern portion of the Southwest Intertie Project (SWIP) to the California ISO and NorthernGrid. SWIP-North was also submitted into WestConnect’s planning process by the Western Energy Connection (WEC), LLC, a subsidiary of LS Power. The SWIP-North Project connects the Midpoint 500 kV substation (in NorthernGrid) to the Robinson Summit 500 kV substation (in WestConnect) with a 500 kV single circuit AC transmission line. The SWIP is expected to have a bi-directional WECC-approved path rating of approximately 2000 MW.

SWIP North has proposed 1,850 MW of new wind generation resources located in Idaho as a result of the transmission line. Please see the appendix for a data table of proposed generation associated with the SWIP North project.

TransWest Express

Interregional Evaluation Plan: <https://www.northerngrid.net/resources/transwest-express-itp-evaluation-plan>

TransWest Express is a 500 kV DC and 500 kV AC transmission project proposed by TransWest. The TransWest Express (TWE) Transmission Project consists of three discrete interconnected transmission segments that, when considered together, will interconnect transmission infrastructure in Wyoming, Utah, and southern Nevada. TransWest has submitted each of the following TWE Project segments as separate ITP submittals:

A 405-mile, bi-directional 3,000 MW, \pm 500 kV, high voltage direct current (HVDC) transmission system with terminals in south-central Wyoming and central Utah (the WY-IPP DC Project).

A 278-mile 1,500 MW 500 kV alternating current (AC) transmission line with terminals in central Utah and southeastern Nevada (the IPP-Crystal 500 kV AC Project).

A 50-mile, 1,680 MW 500 kV AC transmission line with terminals in southeastern Nevada, and southwestern Nevada (the Crystal-Eldorado 500 kV AC Project).

Transwest Express has proposed 3,310 MW of wind generation as a result of the transmission line. Please see the appendix for a data table of proposed generation associated with the transmission project.

Cascade Renewable Transmission System

PowerBridge is proposing to construct the Cascade Renewable Transmission System Project. This Project is an 80-mile, 1,100 MW transfer capacity \pm 440 kV HVDC underground cable (95 percent installed underwater) interconnecting with the grid through two \pm 1100 MW AC/DC converter stations interconnecting with the AC grid at Big Eddy and Harborton substation. There is no proposed generation resource associated with the transmission line.

Loco Falls Greenline

Absaroka is proposing a merchant transmission project connecting Great Falls 230 kV substation to the Colstrip 500 kV Transmission System. The project consists of two 230 kV transmission circuits and a new Loco Mountain Substation with 230 to 500 kV transformation. There are no proposed generation resources associated with the transmission line.

Analysis Results

Once the base cases were created to reflect the topology and loading conditions of interest, they were run through contingency analysis. When running contingency analyses, both the type of the contingency and the impact of the contingency are vital to ascertaining the reliability of the transmission system. The type and the impact of the contingency are considered in conjunction with the voltage class of the equipment. In general, losses of higher voltage equipment have more of an impact on the transmission system than do the losses of lower voltage equipment. From a NorthernGrid perspective, the contingencies that result in the loss of large amounts of load or the inability to honor transmission arrangements are those that are regionally significant and warrant further scrutiny.

Initially, the results were compiled and the total number of violations from each contingency summed together, regardless of the voltage level of the piece of equipment lost, the voltage of the piece of equipment impacted, or the extremity of the event. Appendix C: Rankings shows a figure of the unranked results of the contingency analysis.

To help identify regionally significant contingencies, each contingency result was multiplied by ranking factors: voltage class, type of the contingency, and impact of the contingency, to produce an overall ranking for that contingency. The larger the resulting ranking, the more regionally significant the contingency. Voltage class refers to the kV rating of the equipment: the larger the rating, the larger the ranking factor. Type of the contingency refers to the NERC TPL-001-4 criteria which is the guiding document used to classify all contingencies analyzed. The contingencies in NERC TPL-001-4 contain scenarios that range from outages of single pieces of equipment to severe outages that impact multiple pieces of equipment. It is quite common for a transmission system to have a single piece of equipment out of service, either planned or unplanned, and it is less common for a transmission system to experience events that result in the loss of multiple pieces of equipment. Because of this, single outage contingencies were given a larger ranking factor than multi-outage contingencies. The impact of a contingency refers to what happens to the transmission system when a contingency occurs. Contingencies that caused minor violations were given a smaller ranking factor than those that led to major violations. From a NorthernGrid perspective, a minor violation is one that can be readily mitigated operationally with no anticipated damage to equipment. A major violation may cause cascading outages or equipment damage. Each contingency from each base case was ranked per the ranking factors; all contingency results displayed in this report are ranked contingency results. Ranked contingency results have no known unit. An example calculation of ranking a contingency as well as a comparison of the ranked versus the un-ranked results is provided in Appendix C: Rankings.



Base Cases

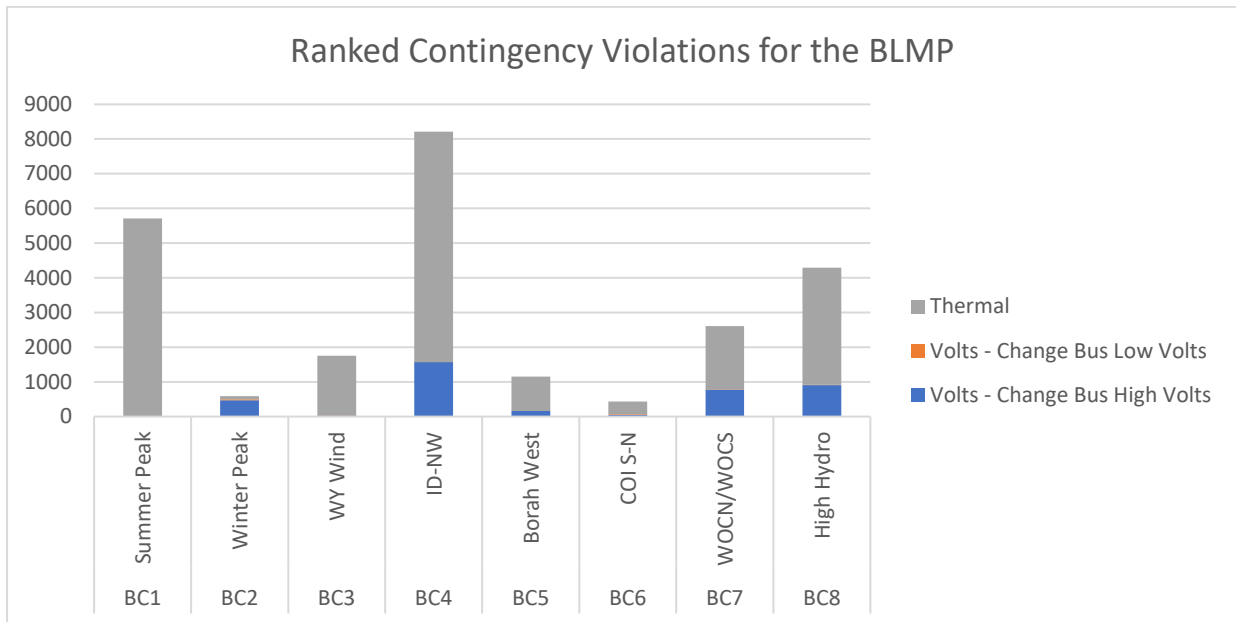


Figure 8: Ranked contingency results for the eight BLMP base cases

Figure 8 displays the ranked contingency violations for the eight base cases developed to represent the different stress conditions of interest. All eight base cases are derived from the BLMP and their only differences stem from the varying load and resource combinations that resulted from the production cost model analysis. Thermal overloads identify the portions of the system that may need infrastructure improvement to support the movement of power whereas voltage changes identify the portions of the transmission system that may need reactive equipment (capacitors or reactors) to support the overall voltage. By emphasizing the change in volts, either high or low, the analysis effort is well situated to identify those contingencies that led to changes in the transmission system and to put less emphasis on voltage excursions that may be present in the BLMP due to the initial conditions of the case selected through the PCM process.

A few observations about the results from the BLMP analysis:

1. There are fewer thermal overloads in the winter case than the rest of the loading conditions. Many entities allow for extra loading on transmission elements in the winter due to the cooling effect of the lower temperatures associated with winter conditions. The cooling effect of the temperature allows for an increase of power flow through equipment without causing damage.
2. Northbound flow conditions on the California-Oregon Intertie (COI) resulted in the fewest violations of the 8 cases.
3. The Summer Peak operating condition resulted in many thermal overloads.

The projects in the BLMP have been identified to resolve the reliability concerns and meet the transmission obligations of the entities on an individual level and do not necessarily resolve all the



potential operating conditions or stressed conditions that may occur in the larger NorthernGrid footprint.

Regional Combinations

After the initial analysis was performed on the BLMP, the contingency analysis was then extended to looking into different subsets of the BLMP. The Technical Subcommittee of the Member Planning Committee convened to determine the subsets, or regional combinations, of the BLMP to analyze.

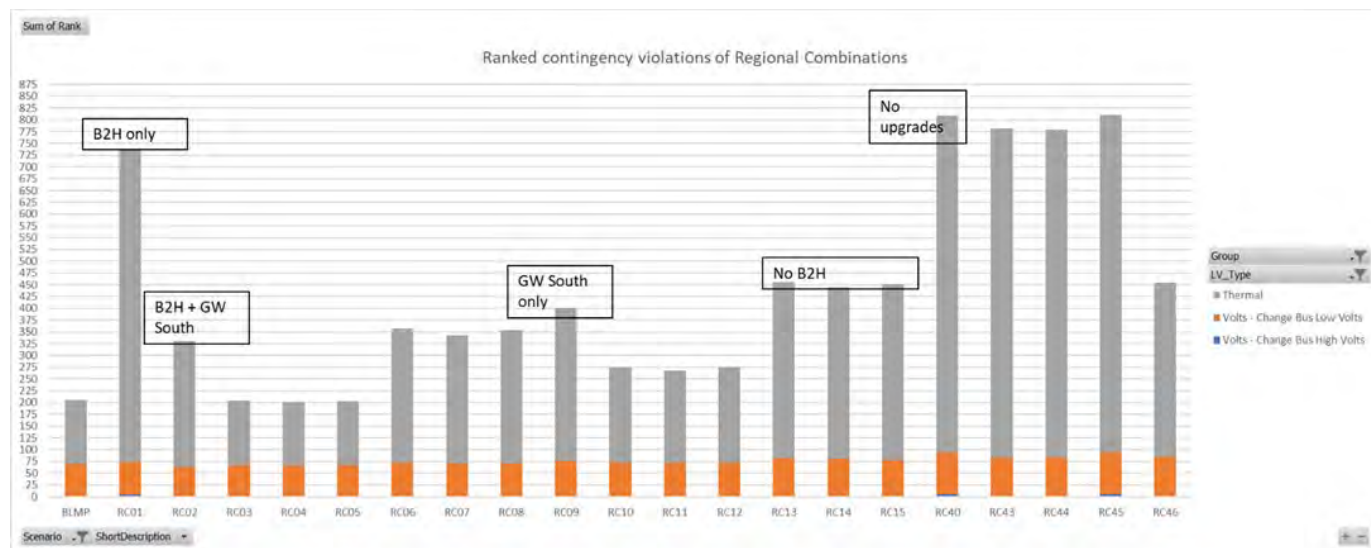


Figure 9: Ranked contingency results, all regional combinations with all cases

Figure 9 above displays the ranked contingency results for the regional combinations of projects. The BLMP case represents the case that has all the regional projects modeled as “in-service”. The rest of the combinations are composed of subsets of the entire set of possible regional projects. The Boardman to Hemingway , Gateway West and Gateway South projects upgrade the transmission system by adding transmission facilities to enhance the system between Oregon, Idaho, Wyoming, and Utah, with a parallel path across Idaho between Hemingway and Populus. The subsets are intended to help determine if all of the Gateway projects (Segment E) are needed or if a subset will suffice to meet the needs of the NorthernGrid footprint. Appendix E displays all the combinations considered.

A few notable observations on the ranked contingency results:

1. The BLMP case has fewer violations than most of the other regional combinations. This result is expected as the BLMP case has the largest number of transmission upgrades compared to the regional combinations.
2. Regional combination {01} has only the Boardman to Hemingway upgrade, and in general, no upgrades between Hemingway and Populus.
3. Regional combinations {03, 04, 05} form a group and result in the fewest ranked violations. These three regional combinations all have the Boardman to Hemingway, Gateway South, and the Anticline to Populus branch of the Gateway West projects.

4. The only difference between regional combinations {03} and {04} is the presence of Midpoint to Cedar Hill.
5. Regional combinations {06, 07, 08} are a subset of regional combinations {03, 04, 05} in that they do not have the Gateway South project and they yield a larger number of violations.
6. Regional combination {09} has only the Gateway South and no other regional project.
7. Regional combinations {10, 11, 12} are a subset of regional combinations {03, 04, 05} in that they do not have the Boardman to Hemingway project and they yield a larger number of violations.
8. Regional combinations {13, 14, 15} do not have the Boardman to Hemingway project, but they do have subsets of the Gateway projects.
9. Regional combination {40} has no upgrades beyond the Antelope project and resulted in the most ranked violations. This regional combination tests the current NorthernGrid transmission system against a ten-year future and the results suggest that upgrades of some form are needed to support the needs of the NorthernGrid region.
10. Regional combinations {43, 44, 45, 46} systematically tested individual sections of the Gateway projects.

In summary, regional combinations {03, 04, 05} resulted in the fewest violations and warrant further scrutiny.

Figure 10 shows the details of the contingency analysis for regional combinations {03, 04, 05}.

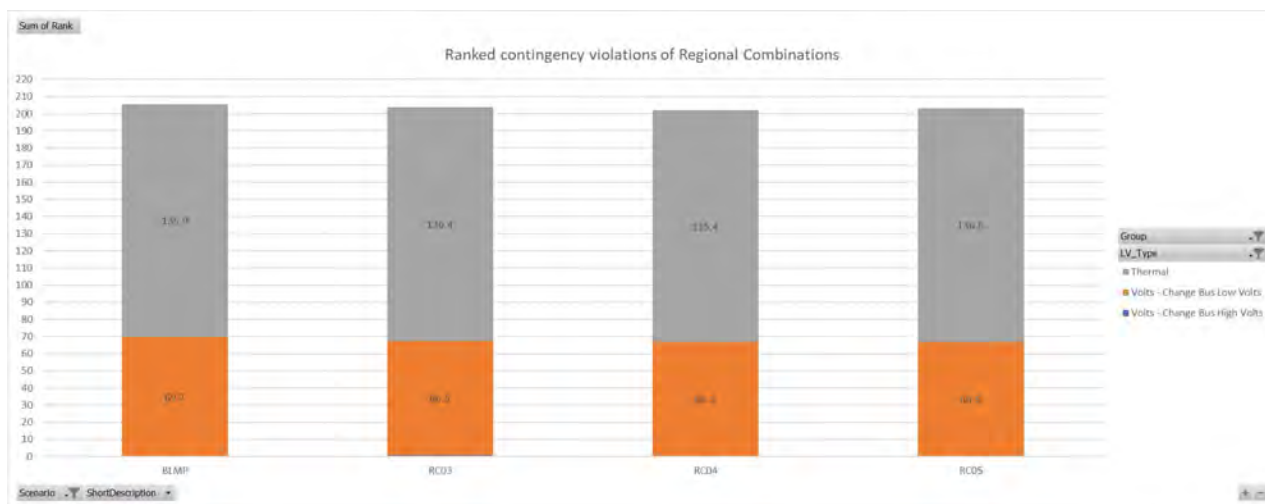


Figure 10: Ranked contingency results for regional combinations {03, 04, 05}



NorthernGrid

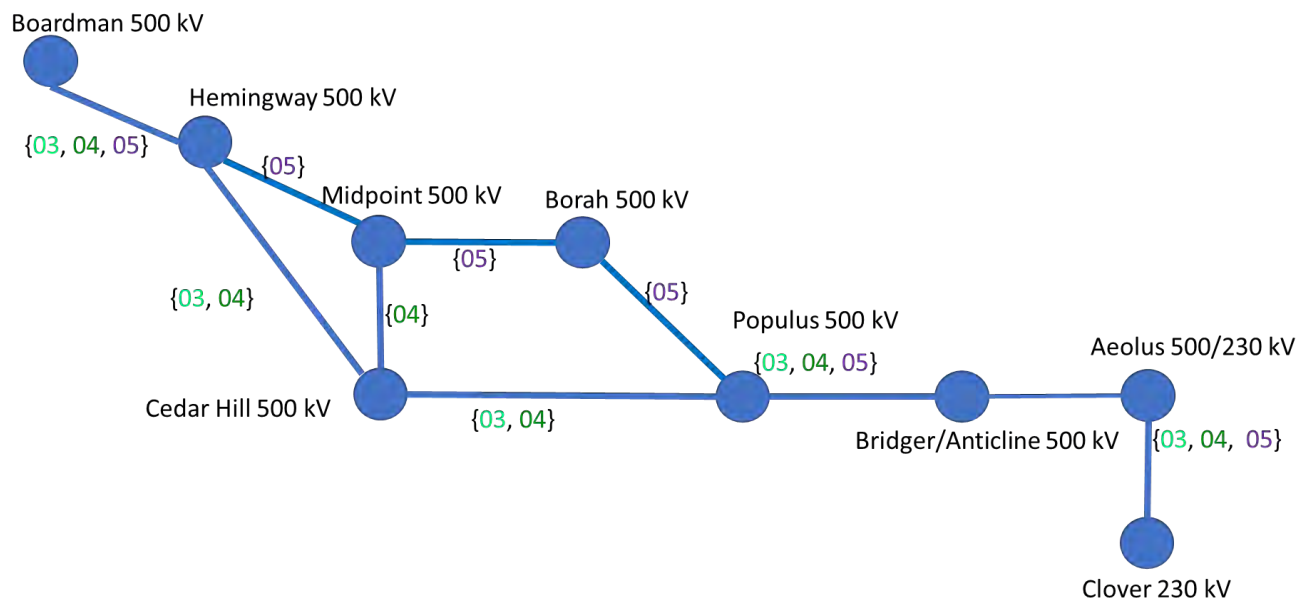


Figure 11: Regional combinations {03, 04, 05}

In all regional combinations of interest, the upgrade from Bridger/Anticline to Aeolus will not be specifically mentioned as construction is already complete.

As can be seen in Figure 11, there are multiple subsets of the BLMP that perform similarly to the BLMP, and further considerations are warranted. The following section provides more discussion and introduces some of the merits and demerits of each of these five regional combinations.

Regional combination {03} is a new line that connects Hemingway to Populus via Cedar Hill. Regional combination {03} increases the west-bound capacity from Populus to Hemingway because it adds a new, independent path for power to flow. Regional combination {03} also mitigates the limiting contingency; currently, the limiting contingency for power transfers between Populus and Hemingway is a loss on the Hemingway-Midpoint-Borah-Populus line.

Regional combination {04} takes regional combination {03} and adds in the Midpoint to Cedar Hill segment. The Midpoint to Cedar Hill segment does not appear to fundamentally improve the reliability results over regional combination {03} as can be seen in the results in Figure 11; therefore, regional combination {04} will be removed from further scrutiny.

Regional combination {05} rebuilds existing facilities and does not create a new path for power to flow. the loss of any of the line segments: Hemingway to Midpoint, Midpoint to Borah, Borah to Populus, could lead to the reduction of west-bound schedules; regional combination {05} does not ameliorate this situation. Regional combination {05}, however, re-builds existing facilities and the monetary

efficiency gained by re-building facilities instead of building “greenfield” facilities should not be dismissed and regional combination {05} will be further scrutinized.

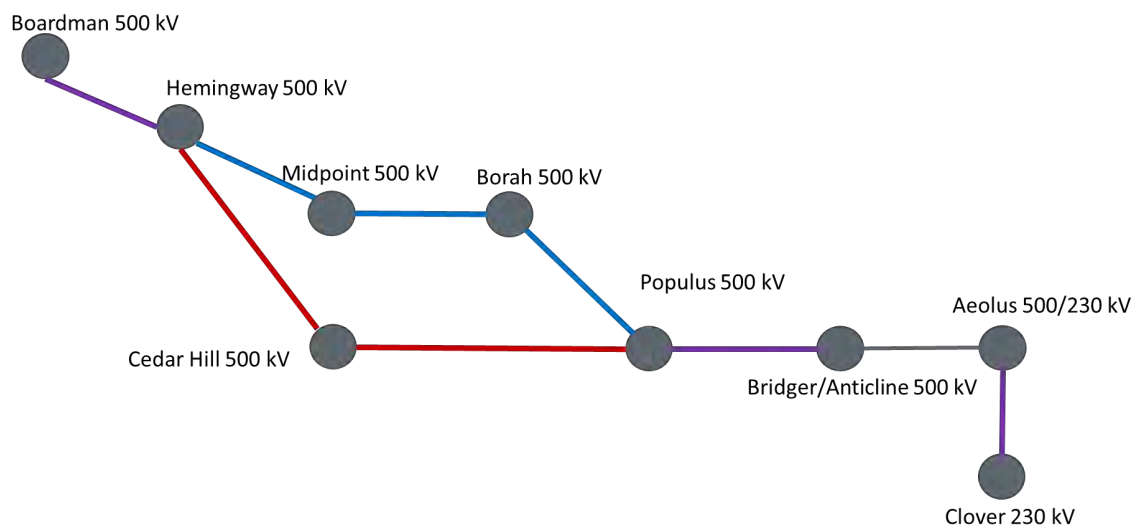


Figure 12: Regional Projects {03} and {05}

Figure 12 depicts major segments of the regional projects and does not constitute their entirety. Red segments belong to regional combination {03}, blue segments belong to regional combination {05}, and purple segments belong to both. As can be seen in Figure 16, not all the portions of the Gateway West (Segment E) project are needed to support the reliability of the NorthernGrid footprint in the 10-year planning horizon. Only a single upgraded path is required between Populus and Hemingway; either south through Cedar Hill or north through Borah.

The Populus-Cedar Hill-Hemingway route increases the capacity on the transmission system between Populus and Hemingway. The segments associated with the Populus-Cedar Hill-Hemingway line are new whereas for the Populus-Borah-Midpoint-Hemingway line, only the Populus-Borah and Midpoint-Hemingway segments are new. The Borah-Midpoint segment is an upgrade to an existing facility. The main contingency for the Populus-Borah-Midpoint-Hemingway segment is the loss of the line that is getting upgraded, which results in a lesser system capacity upgrade. The Populus-Cedar Hill-Hemingway facilities provide an alternate route for power to flow, which increases the capacity of the system. Conservative estimates suggest that upwards of 850 MW of transmission capacity can be gained through the addition of the Populus-Cedar Hill-Hemingway facilities over the Populus-Borah-Midpoint-Hemingway upgrades.

Interregional and Non-Incumbent Regional Projects

Interregional projects connect two planning regions and non-incumbent regional projects are projects that fall within a planning region. Interregional projects are sponsored by Interregional Transmission Project Proponents and are typically designed to take generation from one region and transmit it to a load pocket in another region. Non-incumbent regional projects are projects that have been sponsored by either a transmission developer that does not have a retail distribution service or a utility that is



proposing a project outside their retail distribution service. For this cycle, both non-incumbent regional projects have been submitted by Merchant Transmission Developers.

Three interregional and two non-incumbent regional projects were evaluated to determine if their inclusion in the plan would create a more cost-effective or efficient NorthernGrid transmission system.

The first stage of the analysis was designed to ascertain if the interregional or non-incumbent regional project would meet the needs of the NorthernGrid region alone, without the presence of the other planned projects. The second stage of the interregional and non-incumbent regional analysis was to determine if there was any benefit in adding the interregional or non-incumbent regional project to subsets of the BLMP. The third phase of the interregional and non-incumbent regional analysis allowed for increased flows on the interregional or non-incumbent projects and the opportunity to determine if the interregional or non-incumbent project with megawatts flowing on them was better for the NorthernGrid footprint than just the projects alone.

Figure 13 below shows the ranked contingency results for the first stage of the interregional and non-incumbent regional analysis. Each interregional or non-incumbent regional project was first modeled alone with no regional upgrades.

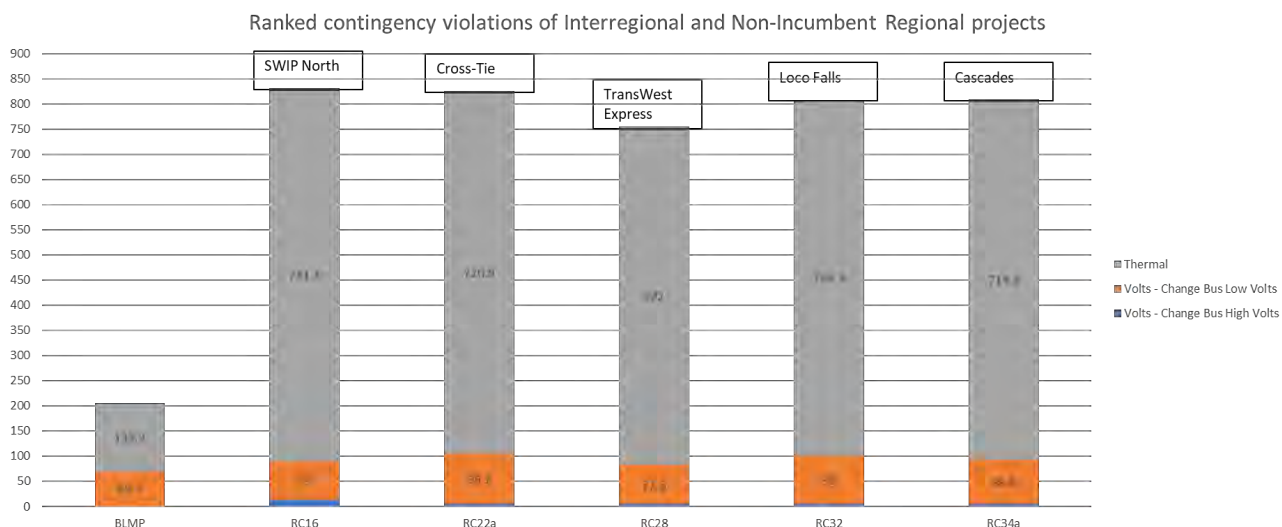


Figure 13: Each interregional or non-incumbent regional project with no regional upgrades

Each interregional or non-incumbent regional project alone results in significantly more ranked contingency violations than the BLMP.

The second stage of the analysis explored the interaction of the interregional and non-incumbent projects with various regional projects.



Ranked contingency violations of Interregional and Non-Incumbent Regional in conjunction with various subsets of the BLMP

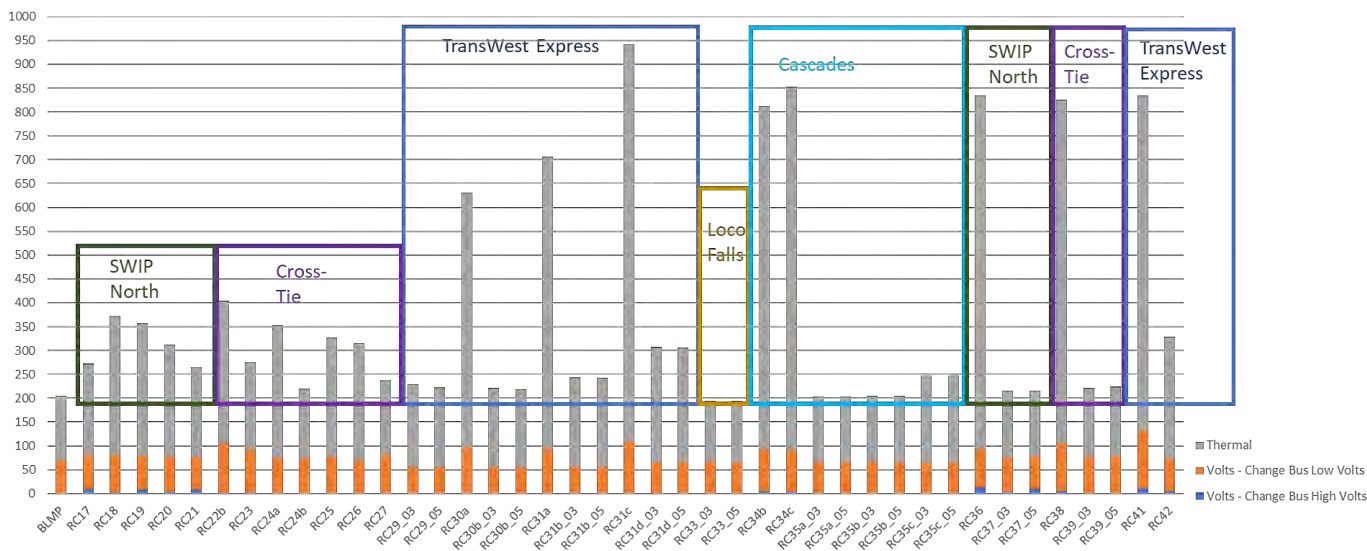


Figure 14: Second stage of interregional and non-incumbent regional analysis; the colors are only to help visualize the groupings

Any project that ends with an “_03” or “_05” is that interregional or non-incumbent regional project in conjunction with the leading regional combination {03} or {05}.

The last stage of the interregional analysis examined how changes to the AC portion of the interregional and non-incumbent regional projects impacted how those projects interplayed with the NorthernGrid footprint. The generation associated with these interregional and non-incumbent projects was not identified in the Loads and Resources data submitted by the Members and so consequently, was not included in the production cost modeling run used to create the base cases of interest. Changes to the generation dispatch of the NorthernGrid footprint subsequently changed the inherent loading conditions in the base cases and so the generation portion of this interregional and non-incumbent regional analysis is more informational than instructional to the Plan.

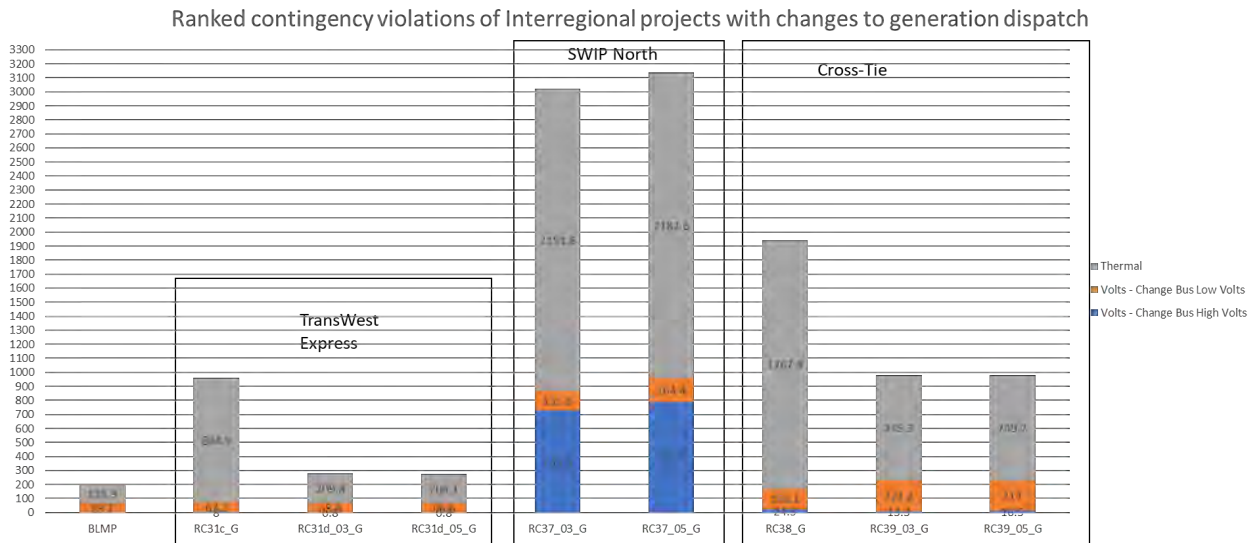


Figure 15: Interregional and Non-Incumbent with generation changes

SWIP North by itself and with generation changes yielded a ranked contingency result near 25,000 and is not depicted in Figure 14 due to scaling issues.

Consistent with previously seen results, when interregional and non-incumbent projects are coupled with the leading regional combinations, the combined set has performance comparable to the leading regional combinations without the interregional or non-incumbent project. Therefore, the interregional and non-incumbent projects are unnecessary to meet NorthernGrid’s needs, and will not be included in the NorthernGrid Plan.

Interregional Coordination Process

NorthernGrid met with WestConnect and CAISO to coordinate base cases, assumptions, and methodologies at the Annual Interregional Information Exchange. None of the interregional projects were selected into regional plans for the neighboring regions.

Cost Allocation

The interregional projects submitted for consideration in the NorthernGrid footprint were not selected into the Plans of the other regions. For this cycle, there are no projects that meet the criteria for cost allocation. The Study scope in Appendix B: Study Scope provides the complete list of developers who pre-qualified through the Northern Tier Transmission Group 2018-2019 planning process.

Regional Transmission Plan

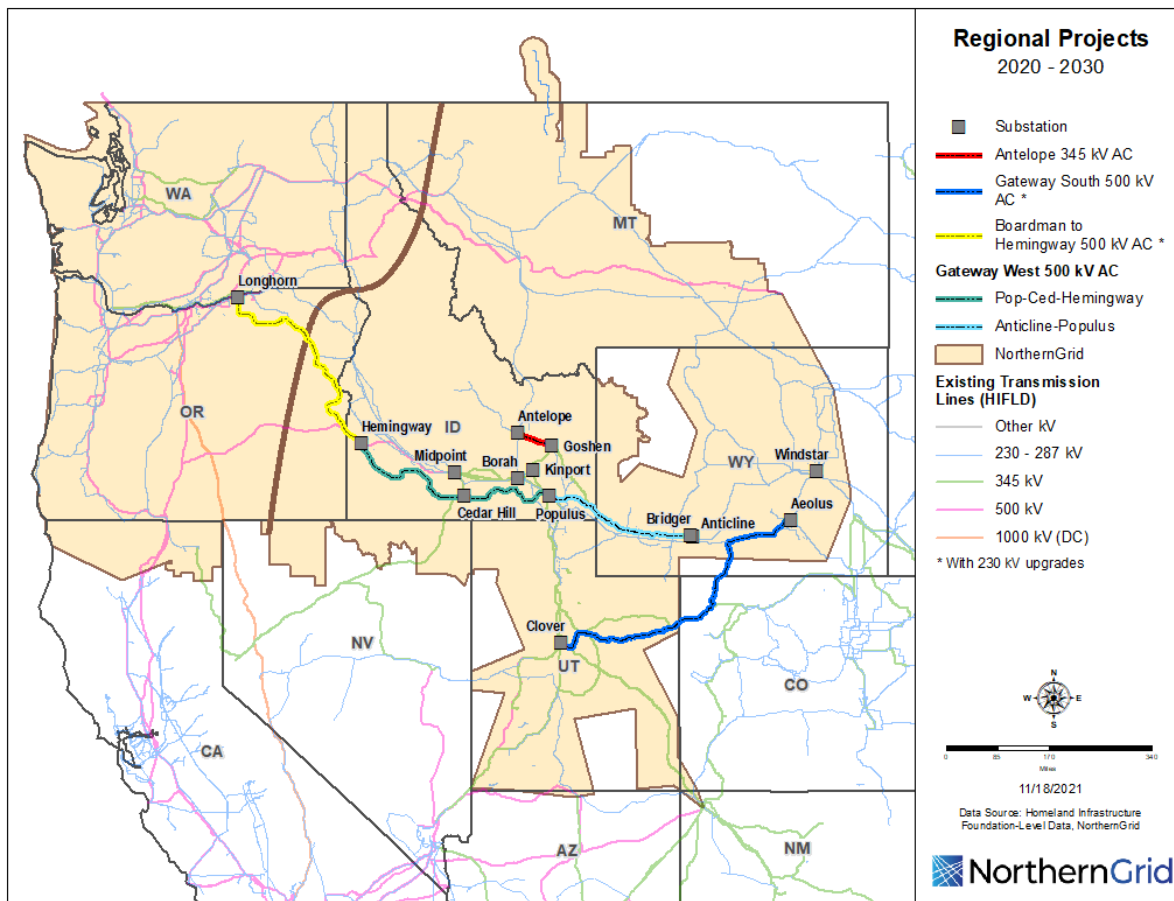


Figure 16: The Regional Transmission Plan for the 2020-2021 NorthernGrid cycle

Regional combination {03} forms the basis of the Regional Transmission Plan. This selection of projects supports the NorthernGrid system for a 10-year future and is more efficient to build than the entire set of projects that comprise the BLMP.

Conclusion

The NorthernGrid planning effort for the 2020-2021 cycle culminated in the identification of a regional plan that is more efficient than a plan composed of a simple concatenation of all the Members' proposed projects. The transmission needs of the NorthernGrid transmission system: loads, resources, regional, and interregional projects including expected transmission arrangements, were provided by the members which collectively formed the basis for the Study Scope. For the 2020-2021 planning cycle, the base cases stemmed from the Anchor Data Set produced and maintained by WECC. The Anchor Data Set is relatively new and subject for improvement; NorthernGrid provided a list of specific improvement opportunities for WECC to consider. There were no economic studies requested in the



2020-2021 cycle and the projects submitted for cost allocation consideration were not selected into the Regional Transmission Plan. NorthernGrid analyzed well over 600 different base cases where each base case represented a selected hour combined with a selected set of transmission projects. Altogether, the set of transmission projects that resulted in a more efficient transmission system is that identified as regional combination {03}.

Appendix A: Definitions and Terms

Attachment K from NorthWestern Energy is provided here for reference to the process or definitions and can be accessed by double-clicking on the icon.



Appendix B: Study Scope

The entire study scope for the 2020-2021 cycle can be accessed by double-clicking the icon below.





Appendix C: Rankings

Table 2: Voltage Class for Ranking

From	To	Rank
0 kV	50 kV	0.1
50 kV	100 kV	0.1
100 kV	200 kV	0.3
200 kV	300 kV	0.5
300 kV	400 kV	0.8
400 kV	1000 kV	1

Table 3: NERC TPL Category for Ranking

Category	Rank	Description
P0	1	All lines in service
P1	0.5	Single element loss results in single element outage
P2	0.1	Single element loss results in multiple element outage
P3	0.075	Loss of generator followed by system adjustments
P4	0.1	Stuck breaker results in multiple element outage
P5	0.1	Delayed fault clearing results in multiple element outage
P6	0.075	Loss of single element followed by system adjustments
P7	0.1	Multiple element loss results in multiple element outage

Table 4: Violations for Ranking

LV_Type	Rank	Description
Interface MW	0.5	Mild overload of path rating.
Interface MW	1	Heavy overload of path - potential stability problems.
Branch Amp	0.5	Mild overload of line.
Branch Amp	1	Heavy overload of line. Possibility of automated tripping.
Branch MVA	0.5	Mild overload.
Branch MVA	1	Heavy overload.



Example: The ranking factor for a Heavy Overload on a 230 kV piece of equipment resulting from a P1 event is:

$$(1) * (0.5) * (0.5) = 0.25$$

The rankings did not fundamentally change the results, rather, they help emphasize them. Figure 20 below shows the raw contingency violations for the BLMP. Consistent with the results from Figure 21, the Summer Peak, ID-NW, and High Hydro stressed conditions prevail with ID-NW leading in number of thermal excursions. As mentioned in the body of the report, the ranking process gives a larger rank to thermal excursions than voltage violations, and that can be seen in the comparison below. The contingencies from the Winter Peak and WY Wind conditions resulted in primarily voltage violations, which is why the bars for Winter Peak and WY Wind are significantly shorter in the ranked results.

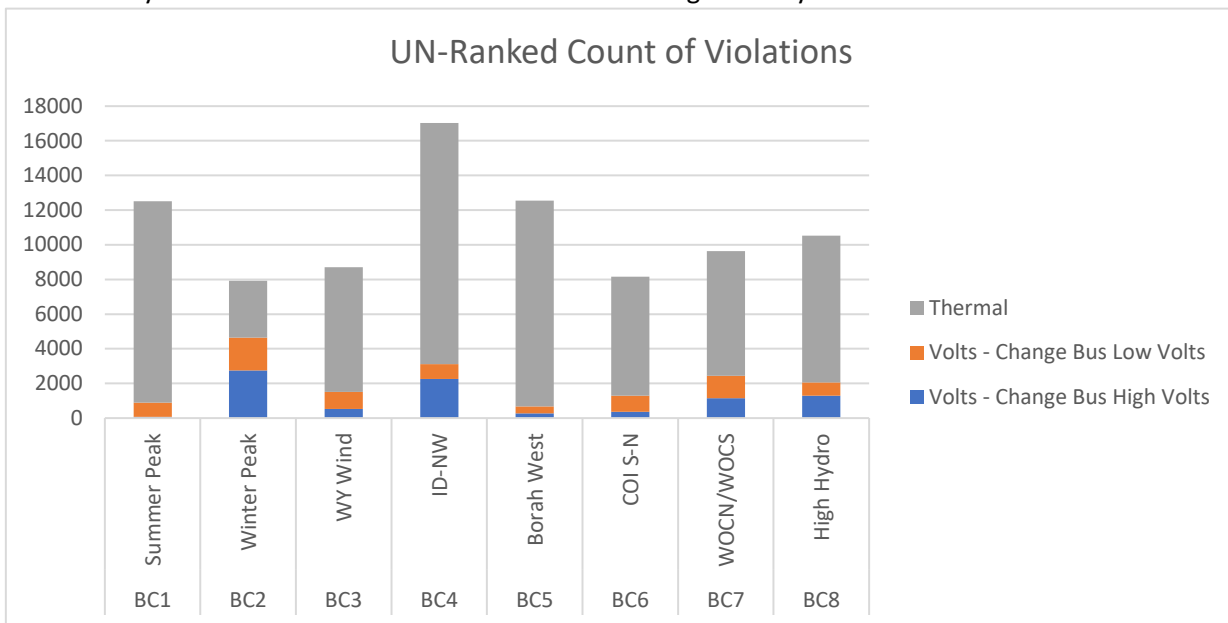


Figure 17: Un-Ranked contingency results for the BLMP

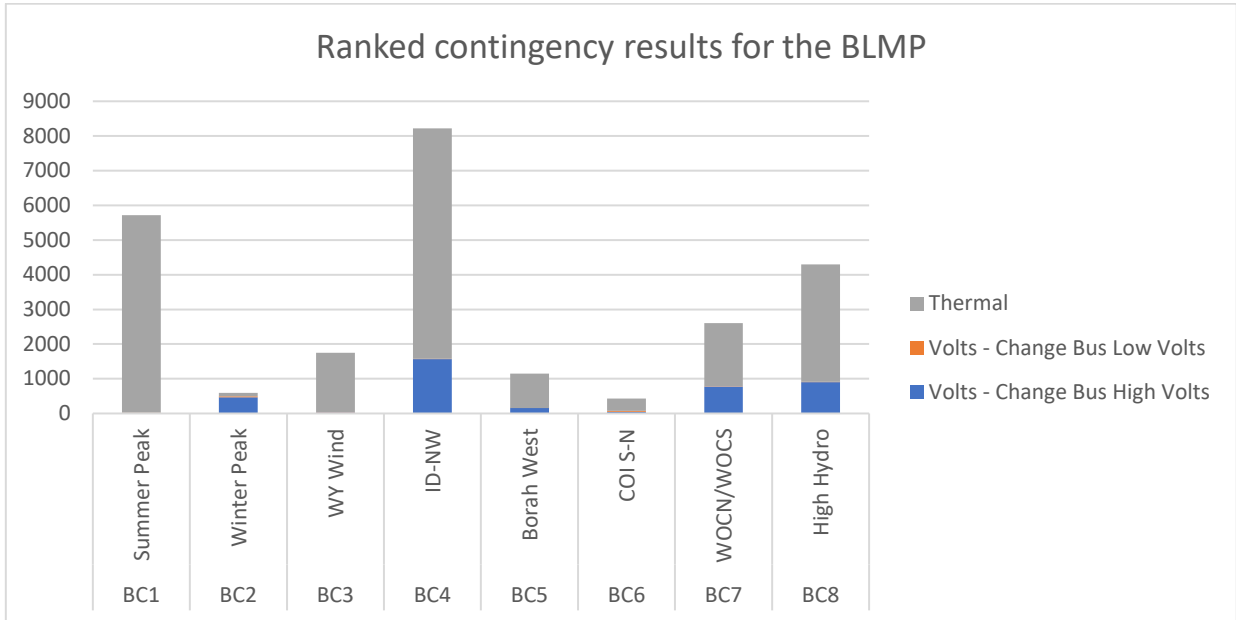


Figure 18: Ranked contingency results for the BLMP



Appendix D: Complete list of all RC combos

Table 5: Working version of the Regional Combinations Table

Modeled Projects	Filter	B2H [H]	Gateway West (Pop - Ced - Hem) [E]	Gateway West (Pop - Bor - Mid - Hem)	Gateway West (Mid - Ced)	Gateway West (Ant - Pop) [D.3]	Antelope	Gateway South [F]	SWIP-N	Cross-Tie	TransWest Express ACDC	TransWest Express DC0 MW Schedule	TransWest Express DC 500 MW Schedule	TransWest Express DC 1100 MW Schedule	TransWest Express DC 1500 MW Schedule	Loco Falls Greenline	Cascade Renewable	Cascade Renewable DC0 MW Schedule	Cascade Renewable DC 500 MW Schedule	Cascade Renewable DC 1100 MW Schedule	SWIP-N Gen	Cross-Tie Gen	TWE 1500 MW Gen
BLMP		X	X	X	X	X	X	X															
RC01		X	X	X	X	X	X	X															
RC02		X	X	X	X	X	X	X															
RC03		X	X	X	X	X	X	X															
RC04		X	X	X	X	X	X	X															
RC05		X	X	X	X	X	X	X															
RC06		X	X	X	X	X	X	X															
RC07		X	X	X	X	X	X	X															
RC08		X	X	X	X	X	X	X															
RC09		X	X	X	X	X	X	X															
RC10		X	X	X	X	X	X	X															
RC11		X	X	X	X	X	X	X															
RC12		X	X	X	X	X	X	X															
RC13		X	X	X	X	X	X	X															
RC14		X	X	X	X	X	X	X															
RC15		X	X	X	X	X	X	X															
RC16		X	X	X	X	X	X	X															
RC17		X	X	X	X	X	X	X															
RC18		X	X	X	X	X	X	X															
RC19		X	X	X	X	X	X	X															
RC20		X	X	X	X	X	X	X															
RC21		X	X	X	X	X	X	X															
RC22a		X	X	X	X	X	X	X															
RC22b		X	X	X	X	X	X	X															
RC23		X	X	X	X	X	X	X															
RC24a		X	X	X	X	X	X	X															
RC24b		X	X	X	X	X	X	X															
RC25		X	X	X	X	X	X	X															
RC26		X	X	X	X	X	X	X															
RC27		X	X	X	X	X	X	X															
RC28		X	X	X	X	X	X	X															
RC29 03		X	X	X	X	X	X	X															
RC29 05		X	X	X	X	X	X	X															
RC30a		X	X	X	X	X	X	X															
RC30b 03		X	X	X	X	X	X	X															
RC30b 05		X	X	X	X	X	X	X															
RC31a		X	X	X	X	X	X	X															
RC31b 03		X	X	X	X	X	X	X															
RC31b 05		X	X	X	X	X	X	X															
RC31c		X	X	X	X	X	X	X															
RC31d 03		X	X	X	X	X	X	X															
RC31d 05		X	X	X	X	X	X	X															
RC32		X	X	X	X	X	X	X															
RC33 03		X	X	X	X	X	X	X															
RC33 05		X	X	X	X	X	X	X															
RC34a		X	X	X	X	X	X	X															
RC34b		X	X	X	X	X	X	X															
RC34c		X	X	X	X	X	X	X															
RC35a 03		X	X	X	X	X	X	X															
RC35a 05		X	X	X	X	X	X	X															
RC35b 03		X	X	X	X	X	X	X															
RC35b 05		X	X	X	X	X	X	X															
RC35c 03		X	X	X	X	X	X	X															
RC35c 05		X	X	X	X	X	X	X															
RC36		X	X	X	X	X	X	X															
RC37 03		X	X	X	X	X	X	X															
RC37 05		X	X	X	X	X	X	X															
RC38		X	X	X	X	X	X	X															
RC39 03		X	X	X	X	X	X	X															
RC39 05		X	X	X	X	X	X	X															
RC40		X	X	X	X	X	X	X															
RC41		X	X	X	X	X	X	X															
RC42		X	X	X	X	X	X	X															
RC43		X	X	X	X	X	X	X															
RC44		X	X	X	X	X	X	X															
RC45		X	X	X	X	X	X	X															
RC46		X	X	X	X	X	X	X															
RC31c G	//	X	X	X	X	X	X	X															
RC31d 03 G	//	X	X	X	X	X	X	X															
RC31d 05 G	//	X	X	X	X	X	X	X															
RC36 G	//	X	X	X	X	X	X	X															
RC37 03 G	//	X	X	X	X	X	X	X															
RC37 05 G	//	X	X	X	X	X	X	X															
RC38 G	//	X	X	X	X	X	X	X															
RC39 03 G	//	X	X	X	X	X	X	X															
RC39 05 G	//	X	X	X	X	X	X	X															

Appendix E: Visual Aides for the Regional Combinations

Each combination is visually depicted in the document which can be accessed by double-clicking the icon below.



Appendix F: NorthernGrid Contingencies

The entire list of contingencies analyzed can be accessed by double-clicking the icon below.



Appendix G: Base Case Summary

Base Case Name	Base Case Description	Generation (MW)	Load (MW)	West of Cascades-North, Path 4 (MW)	West of Cascades-South, Path 5 (MW)	Idaho-to-Northwest, Path 14 (MW)	Borah West, Path 17 (MW)	Pacific DC Intertie (PDCI), Path 65 (MW)	California-Oregon Intertie (COI), Path 66 (MW)
BC1	Summer Peak	45781	42111	3600	4141	-327	-43	147	3640
BC2	Winter Peak	45981	43603	5949	4512	1145	1771	1	1779
BC3	WY Wind	34174	30261	3973	3236	1470	2244	1	1794
BC4	ID-NW	45175	38256	3664	3691	-2431	-788	1309	4709
BC5	Borah West	27760	21634	2434	2490	2245	2616	627	3458
BC6	COI S-N	26046	28812	6251	4294	324	794	-2689	-3257
BC7	WOCN/WOCS	36812	34705	7693	5260	-1726	-1600	2800	484
BC8	High Hydro	45447	34855	6096	4011	-1334	-375	2151	4682

Appendix H: Complete list of all ADS opportunities supplied to WECC

Document is accessible by double-clicking the image below.



Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

IDAHO POWER COMPANY'S STANDARD DATA REQUEST NO. 12:

Please provide the status of all regulatory permits and land use approvals necessary for construction of the transmission line. For each permit or land use approval identified in your response that has not been issued or approved, please provide an explanation as to why the Company has not yet obtained that permit or approval.

RESPONSE TO IDAHO POWER COMPANY'S STANDARD DATA REQUEST NO. 12:

The federal, state, and local permits needed for construction and operation of the B2H project in Oregon are identified in the chart below and in Exhibit E to Idaho Power's Application for Site Certificate Boardman to Hemingway Transmission Line Project ("EFSC Application") before Oregon's Energy Facility Siting Council ("EFSC").¹ Additionally, in Idaho, the Company will need a conditional use permit from Owyhee County.

Idaho Power obtained the necessary right-of-way authorizations to cross federal lands administered by the United States Bureau of Land Management in 2017, the Forest Service in 2018, and the Department of Navy in 2020.

In 2018, Idaho Power submitted its complete application for an EFSC site certificate to construct the portions of the B2H project located in Oregon. As part of that application, the Company has requested that the site certificate include and govern the local land use approvals related to siting. In July 2020, the Oregon Department of Energy issued its proposed order, proposing approval of the B2H project subject to certain conditions. Certain members of the public objected to aspects of the proposed order, and EFSC initiated a contested case hearing process to consider the issues raised. On May 31, 2022, at the conclusion of the contested case, the hearing officer issued a proposed contested case order, proposing approval of the B2H project subject to certain conditions.² The matter is now pending before EFSC, which will make the final decision on the site certificate. Idaho Power expects EFSC to issue its final decision and site certificate before the end of October. In accordance with ORS 469.401(3), following issuance of the site certificate, the state and local agencies will issue the permits and land use approvals governed by the site certificate without further hearings or other proceedings.

The permits and approvals beyond those discussed above are in various stages of their respective application and approval processes, the status of which is presented in the chart below, and Idaho Power expects they will be issued prior to the start of construction in 2023.

Idaho Power is submitting its Petition for a CPCN prior to obtaining the outstanding permits and approvals due to scheduling constraints. The B2H project is intended, in part, to serve the 2026 resource deficit identified in Idaho Power's 2021 Integrated Resource Plan. In order to complete the B2H project by 2026, construction must begin in summer 2023. And to begin construction in

¹ [Exhibit E \(Permits for Construction and Operation\)](#) to Idaho Power's Application for Site Certificate (Sept. 28, 2018). See Attachment 1.

² See [Administrative Law Judge's Proposed Contested Case Order](#), page 296 of 337 (May 31, 2022) ("I propose the Oregon Department of Energy, Energy Facility Siting Council, issue a Final Order granting the requested site certificate consistent with the Department's Proposed Order dated July 2, 2020, including the recommended site certificate conditions, and incorporating the following amendments to recommended conditions: . . ."). See Attachment 2.

Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

2023, the Company will need access to the affected parcels. Idaho Power anticipates it will need to initiate condemnation proceedings to gain access to certain parcels along the B2H project but cannot initiate those condemnation proceedings without first obtaining a CPCN. In order to obtain the CPCN in time to start construction in 2023, Idaho Power must initiate the CPCN proceedings in September 2022. Therefore, if Idaho Power waits until the outstanding permits and approvals are issued to submit the Company's Petition for a CPCN, Idaho Power likely will not be able to meet the B2H project's 2026 in-service date.

Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

Permit or Approval	Regulatory Authority	Federal /State/ Local	Included in EFSC Site Certificate	Status	Date Issued or Expected
Bureau of Land Management ROW Grant	U.S. Bureau of Land Management	Federal	No	Issued	January 2018
Cultural Resource Use Permit and Site-Specific Authorizations	U.S. Bureau of Land Management	Federal	No	Issued	June 2022
Permit for Archaeological Investigations	U.S. Bureau of Land Management	Federal	No	Issued	Contractor-held ³
Paleontological Resources Use Permit	U.S. Bureau of Land Management	Federal	No	Issued	Contractor-held
Navy Easement	U.S. Department of Navy	Federal	No	Issued	March 2020
Forest Service Easement	U.S. Forest Service	Federal	No	Issued	May 2019
Special Use Authorization for Archaeological Investigations	U.S. Forest Service	Federal	No	Issued	July 2022
Archaeological Excavation Permit	Oregon State Historic Preservation Office	State	No	Issued	August 2022
Energy Facility Site Certificate	Oregon Energy Facility Siting Council	State	Yes	Pending	October 2022
Fish Passage Plan Approval	Oregon Department of Fish and Wildlife	State	Yes	Pending	October 2022
Removal-Fill Permit	Oregon Department of State Lands	State	Yes	Pending	October 2022
Baker County Land Use Permits	Baker County	Local	Yes	Pending	October 2022
City of Huntington Land Use Permits	City of Huntington	Local	Yes	Pending	October 2022
City of North Powder Land Use Permits	City of North Powder	Local	Yes	Pending	October 2022
Malheur County Land Use Permits	Malheur County	Local	Yes	Pending	October 2022
Morrow County Land Use Permits	Morrow County	Local	Yes	Pending	October 2022

³ Contractor-held permits are held by Idaho Power's contractors as part of their ordinary course of business rather than being obtained specifically for B2H.

Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

Permit or Approval	Regulatory Authority	Federal /State/ Local	Included in EFSC Site Certificate	Status	Date Issued or Expected
Umatilla County Land Use Permits	Umatilla County	Local	Yes	Pending	October 2022
Union County Land Use Permits	Union County	Local	Yes	Pending	October 2022
Federal Notice of Proposed Construction or Alteration	Federal Aviation Administration	Federal	No	Pending	Prior to Construction
Clean Water Act Section 404, Nationwide Permit 57 ⁴	U.S. Army Corps of Engineers	Federal	No	Pending	Prior to Construction
Special Use Permit for Logging Activities	U.S. Forest Service	Federal	No	Pending	Prior to Construction
Oregon Notice of Proposed Construction or Alteration	Oregon Department of Aviation	State	No	Pending	Prior to Construction
National Pollutant Discharge Elimination System Permit 1200-C	Oregon Department of Environmental Quality	State	No	Pending	Prior to Construction
National Pollutant Discharge Elimination System Permit 1200-A	Oregon Department of Environmental Quality	State	No	Pending	Prior to Construction
Air Contaminant Discharge Permit	Oregon Department of Environmental Quality	State	No	Pending	Prior to Construction
Permit to Operate Power Driven Machinery	Oregon Department of Forestry	State	No	Pending	Prior to Construction
Burn Permit	Oregon Department of Forestry	State	No	Pending	Prior to Construction
Plan for Alternate Practice	Oregon Department of Forestry	State	No	Pending	Prior to Construction
Permit to Construct a State Highway Approach	Oregon Department of Transportation	State	No	Pending	Prior to Construction

⁴ Nationwide Permit 57 was formerly known as Nationwide Permit 12 prior to being renumbered in 2021.

Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

Permit or Approval	Regulatory Authority	Federal /State/ Local	Included in EFSC Site Certificate	Status	Date Issued or Expected
Oversize Load Movement Permit/Load Registration	Oregon Department of Transportation	State	No	Pending	Prior to Construction
Permit to Occupy or Perform Operations Upon a State Highway	Oregon Department of Transportation	State	No	Pending	Prior to Construction
Road Approach Permit	Baker County	Local	No	Pending	Prior to Construction
Work in County Right-of-Way Permit	Baker County	Local	No	Pending	Prior to Construction
Flood Plain Development Permit	Baker County	Local	No	Pending	Prior to Construction
Permit to Occupy or Perform Operations upon Public Roads	Malheur County	Local	No	Pending	Prior to Construction
Flood Plain Development Permit	Malheur County	Local	No	Pending	Prior to Construction
Utility Crossing Permit	Morrow County	Local	No	Pending	Prior to Construction
Access Approach Site Permit	Morrow County	Local	No	Pending	Prior to Construction
Construction Permit to Build on Right-of-Way	Morrow County	Local	No	Pending	Prior to Construction
Flood Plain Development Permit	Morrow County	Local	No	Pending	Prior to Construction
Installation of Utilities on County and Public Roads Permit	Umatilla County	Local	No	Pending	Prior to Construction
Road Approach and Crossing Permit	Umatilla County	Local	No	Pending	Prior to Construction
Flood Plain Development Permit	Umatilla County	Local	No	Pending	Prior to Construction
Road Approach Permit	Union County	Local	No	Pending	Prior to Construction
Work in County Right-of-Way Permit	Union County	Local	No	Pending	Prior to Construction
Flood Plain Development Permit	Union County	Local	No	Pending	Prior to Construction
Conditional Use Permit	Owyhee County (Idaho)	Local	No	Pending	Prior to Construction

**BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF OREGON
for the
OREGON DEPARTMENT OF ENERGY**

IN THE MATTER OF:) **PROPOSED CONTESTED**
) **CASE ORDER**
THE APPLICATION FOR SITE)
CERTIFICATE FOR THE) OAH Case No. 2019-ABC-02833
BOARDMAN TO HEMINGWAY)
TRANSMISSION LINE)

HISTORY OF THE CASE

This matter involves the Application for a Site Certificate (ASC) for the Boardman to Hemingway Transmission Line (Project or proposed facility) submitted by Idaho Power Company (Idaho Power or Applicant) to the Energy Facility Siting Council (Council or EFSC). The Oregon Department of Energy (Department or ODOE) determined the ASC was complete on September 21, 2018. On May 16, 2019, the Council appointed Senior Administrative Law Judge (ALJ) Alison Greene Webster of the Office of Administrative Hearings (OAH) as the hearing officer in this matter.

On May 22, 2019, the Department issued a Draft Proposed Order (DPO), public notice of a comment period on the DPO, and notice of public hearings on the DPO. On June 13, 2019, the Department referred this matter to the OAH for the ALJ to facilitate the public hearings and conduct the contested case proceedings. Thereafter, on June 18, 19, 20, 26, and 27, 2019, ALJ Webster held public hearings on the DPO.¹ Members of the public had the opportunity to provide oral and written comments at the public hearings. At the June 26, 2019 hearing in Pendleton, Oregon, the Council extended the public comment period to August 22, 2019, and extended Idaho Power's deadline to respond to the DPO comments to September 23, 2019.

On July 2, 2020, the Department issued a Proposed Order on Application for Site Certificate. The Department set August 27, 2020 at 5:00 p.m. Pacific Time as the filing deadline for submitting petitions for party or limited party status in the above-captioned matter.

On September 8, 2020, the ALJ issued an *Amended Notice of Petitions to Request Party Status; Order Scheduling Pre-Hearing Conference*, notifying the Department and Idaho Power of the petitions for party status or limited party status received in this matter. On September 16, 2020, in response to the Department's Request for Clarification, the ALJ issued a *Second Amended Notice of Petitions to Request Party Status; Order Scheduling Pre-Hearing Conference*.

¹ The June 18, 2019 public hearing was held in Ontario, Oregon; the June 19, 2019 hearing was held in Baker City, Oregon; the June 20, 2019 hearing was held in La Grande, Oregon; the June 26, 2019 hearing was held in Pendleton, Oregon; and the June 27, 2019 hearing was held in Boardman, Oregon.

First Prehearing Conference: On September 25, 2020, the ALJ convened a prehearing conference by telephone to address the petitions for party or limited party status and the Department and Idaho Power's responses to the petitions. The ALJ continued the prehearing conference to October 1, 2020 to complete the agenda. At the September 25, 2020 prehearing conference, the ALJ provided petitioners for party status an opportunity to address whether they had satisfied the eligibility requirements for party or limited party status. The ALJ provided Idaho Power and the Department the opportunity to respond.

At the October 1, 2020 continued telephone prehearing conference, the ALJ provided petitioners for party status the opportunity to clarify their interests in the outcome of the proceeding and the issues identified in their respective petitions. Likewise, the ALJ provided Idaho Power and the Department the opportunity to respond. The ALJ granted the petitioners leave to file supplemental written arguments, and granted the Department and Idaho Power leave to file amended responses to the petitions for party and limited party status.

Order on Party Status: On October 29, 2020, the ALJ issued an *Order on Petitions for Party Status, Authorized Representatives and Issues for Contested Case (Order on Party Status)*. The *Order on Party Status* addressed the applicable law to establish standing in a contested case proceeding on an application for site certificate and the limitations on party status. In addition, the *Order on Party Status* granted limited party status to 35 petitioners, denied limited or full party status to 18 petitioners, identified 70 properly raised discrete contested case issues and denied 47 issues.

On October 30, 2020, the Council notified the parties and petitioners for party status that the Council would review any properly filed appeals of the ALJ's *Order on Party Status* during its November 19-20, 2020 Council Meeting.

On November 9, 2020, the ALJ issued a *Notice to Council of Appeals Pursuant to OAR 345-015-0016(6) and Corrected Table of Identified Issues (Notice to Council)*. The *Notice to Council* identified the 26 petitioners that timely filed appeals on the *Order on Party Status*.

On November 20, 2020, the Council held a hearing on the appeals. The Council continued the hearing to November 25, 2020 through a Special Council Meeting. Following the hearing on November 25, 2020, the Council issued an *Order on Appeals of Hearing Officer Order on Party Status, Authorized Representatives and Issues (Order on Appeals)*. In the *Order on Appeals*, the Council directed the ALJ to grant one additional petitioner limited party status; clarify three issues; and grant eight additional issues as properly raised issues in the contested case. The Council directed the ALJ to issue an amended *Order on Party Status* based on the final list of parties with standing on issues and the list of identified issues set out in the *Order on Appeals*.

Amended Order on Party Status: On December 4, 2020, in accordance with the Council's *Order on Appeals*, the ALJ issued an *Amended Order on Party Status*. Concurrently with the *Amended Order on Party Status*, the ALJ issued the *Notice of Pre-Hearing Conference; Pre-Hearing Conference Agenda on Case Management Matters; Proposed Contested Case*

Schedule and Revised Service List. That notice set the prehearing conference for January 7, 2021.

On December 22, 2020, in response to queries from limited party Irene Gilbert, the ALJ issued a *Response to Request for Clarification Regarding OAR 345-015-0022, Petitions for Indigent Status*. The response set out the definition of indigent and the eligibility standard for purposes of OAR 345-015-0022.

On January 4, 2021, in response to a question from limited party Charles Gillis, the ALJ issued a *Response to Question Regarding Attendance at Pre-Hearing Conference on Contested Case Matters*. The response clarified that once the parties, limited parties and issues for the contested case are identified, a party or limited party does not lose standing to participate in the contested case under OAR 345-015-0083 by failing to attend a prehearing conference on case management or scheduling matters.

Prehearing Conference on Case Management Matters and Case Management Order:
On January 7, 2021, the ALJ convened a telephone Prehearing Conference on Case Management Matters with the parties and limited parties. Thereafter, on January 14, 2021, the ALJ issued an *Order on Case Management Matters and Contested Case Schedule (Case Management Order)*, setting out the following: the parties and limited parties; the identified issues in the contested case and parties/limited parties with standing on the issue(s); the manner for joint presentation of public issues where more than one limited party has standing; guidelines for filing and serving documents; naming conventions; the contested case process; and the contested case schedule.

In addition, the ALJ, in her discretion, authorized motions for summary determination. In the *Case Management Order*, the ALJ established the deadlines for filing such motions, the responses to the motions, and any reply briefs.

On February 3, 2021, in response to motions from limited party Irene Gilbert, the ALJ issued a *Response to Motions for Clarification Regarding Informal Discovery Requests*. The response explained that it was not appropriate for the ALJ to rule on objections to informal discovery requests or to provide legal advice or direction to the parties and/or limited parties regarding the informal exchange of information.

Discovery Phase: As of February 19, 2021, the ALJ received 36 requests for discovery orders. The ALJ received requests from Idaho Power and limited parties K. Andrew, Badger-Jones, Lois Barry (2 requests), Peter Barry, Cooper (3 requests), Eastern Oregon University (EOU), Geer (2 requests), Gillis, Mammen (4 requests), March (2 requests), Marlette, McAllister (2 requests), STOP B2H, Webster (12 requests) and Williams. Ms. Gilbert requested and received an extension of the filing deadline and subsequently submitted four motions seeking discovery from the Union County Planning Department and the Oregon Department of Fish and Wildlife (ODFW) and additional discovery from Idaho Power and the Department. Limited parties Anne and Kevin March later withdrew their request for discovery from ODFW.

On March 4 and 5, 2021, the ALJ issued 24 separate rulings denying limited parties' requests for discovery (interrogatories and requests for production of documents) from non-

parties to the contested case.² In the rulings, the ALJ explained that she had no authority to compel a non-party to the contested case to respond to written questions and/or to produce requested documents. The ALJ granted the limited parties leave, until April 2, 2021, to file a written request to take the deposition of a material witness in accordance with ORS 183.425 and OAR 137-003-0025.

Between March 16 and 26, 2021, the ALJ issued an additional 15 separate rulings on requests for discovery. The ALJ partially granted Idaho Power's motion, ordering limited parties Miller, Myers, and Proesch to respond to Idaho Power's discovery requests by April 16, 2021. In addition, the ALJ granted Idaho Power's request for an order establishing a September 3, 2021 deadline for parties and limited parties to identify expert witnesses and hearing exhibits for direct testimony.

The ALJ denied Lois Barry's requests for discovery orders to Idaho Power and the Department, sustaining the objections and finding that Idaho Power and the Department sufficiently responded to the discovery requests. The ALJ denied Peter Barry's request for a discovery order to Idaho Power, sustaining Idaho Power's objections and finding that Idaho Power sufficiently responded to the discovery requests. The ALJ denied EOU's request for a discovery order to Idaho Power, sustaining Idaho Power's objections and finding that the company sufficiently responded to the discovery requests. The ALJ denied Susan Geer's request for a discovery order to Idaho Power, sustaining Idaho Power's objections and finding that Idaho Power sufficiently responded to the discovery requests. The ALJ denied Irene Gilbert's requests for discovery orders to Idaho Power and the Department, sustaining the objections and finding that the parties sufficiently responded to the discovery requests. The ALJ denied Charles Gillis' request for an order compelling Idaho Power to respond further or produce additional discovery. The ALJ denied the Marches' request for an order to Idaho Power, sustaining objections and finding that Idaho Power sufficiently responded to the discovery requests.

In addition, the ALJ denied JoAnne Marlette's request for a discovery order compelling Idaho Power to provide a further response. The ALJ denied Michael McAllister's requests for discovery orders to Idaho Power and the Department, sustaining the objections and finding that the parties sufficiently responded to the discovery requests. The ALJ denied the STOP B2H Coalition's request for discovery from ODFW based on lack of jurisdiction and the request for further discovery from Idaho Power, finding that Idaho Power sufficiently responded to the requests. The ALJ denied Stacia Webster's request for further discovery from the Department, sustaining the Department's objections and finding that the Department provided responsive answers to the questions posed. Finally, the ALJ denied John Williams' request for additional discovery from Idaho Power, finding that Idaho Power provided adequate responses.

² This included the Union County Planning Department; Union County Public Works Department; Union County Emergency Services Department; Union County Weed Supervisor; the City of La Grande; La Grande Rural Fire Department; Avista; Grande Ronde Hospital; Terra Firma; US Forest Service; Adrian Rural Fire Protection District; Baker City Rural Fire Department; Bureau of Land Management-Baker Field Office; Boardman Fire Department; Huntington Fire Department; Ione Fire Department; North Powder Rural Fire Department; ODFW; and the Oregon Department of Forestry.

Material Witness Depositions: On April 2, 2021, the ALJ received three petitions for depositions of material witnesses: (1) Matt Cooper and Stacia Webster's Petition for Deposition of Craig Kretschmer of La Grande Rural Fire Protection District; Issues PS-4 and PS-10; (2) Susan Geer's Petition for Deposition of Brian Clapp, Union County Weed Supervisor, Issues FW-3, FW-6 and SR-5; and (3) Irene Gilbert's and Kathryn Andrew's Petition for Deposition of Scott Hartell of Union County Planning, with request for subpoena *duces tecum*, Issues LU-3, LU-5, LU-7 and LU-8. On April 15, 2021, the ALJ signed and issued the deposition subpoenas. The depositions of Mr. Kretschmer and Mr. Clapp took place in May 2021 and the deposition of Mr. Hartell took place in June 2021.

Notice of Ex Parte Communication: On May 7, 2021, the ALJ received notice from Council that, on April 22, 2021, in advance of the April 2021 Council meeting, Idaho Power submitted a letter to the Council outlining its concerns regarding potential rulemaking revisions and updates to the siting standards related to Protected Areas, Scenic Resources, and Recreation Resources. The Council requested that the ALJ provide notice to all parties of the substance of Idaho Power's April 22, 2021 letter to the Council pursuant to OAR 137-003-0055.

On May 11, 2021, the ALJ issued a *Notice of Ex Parte Communication Pursuant to OAR 137-003-0055(2)*, attaching a copy of Idaho Power's April 22, 2021 letter to the Council, and providing any party/limited party the opportunity to rebut the substance of the ex parte communication. Limited parties STOP B2H, Lois Barry, Lyons, Geer, Gilbert, McAllister and Eastern Oregon University filed timely rebuttals to Idaho Power's April 22, 2021 letter.

B2H Project Record Admitted into the Contested Case Hearing Record: On May 26, 2021, in response to an inquiry from the Department, the ALJ issued a *Response to ODOE's Inquiry Re: Marking and Submitting Exhibits*. In that response, for the convenience of the parties and limited parties in the contested case, the ALJ admitted the entirety of the Decision-Making and Administrative Project Record for the Boardman to Hemingway Transmission Line (the B2H Project Record) into the contested case hearing record.

Summary Determination Phase: On May 28, 2021, in accordance with the established Contested Case Schedule, Idaho Power timely filed 13 motions for summary determination.³ Also on May 28, 2021, the Department timely filed eight motions for summary determination.⁴

³ Idaho Power filed motions for summary determination on the following issues:

- (1) Issues SR-1, SR-4, SR-5, and SR-6 (Lois Barry; Moyal/D. White; Geer; STOP B2H);
- (2) Issues FW-1, FW-2, and FW-12 (STOP B2H/Squire; EOU; A. March);
- (3) Issues M-1, M-2, M-3, M-4, M-5, and M-7 (Badger-Jones; Gilbert; Cooper; Howell; Proesch);
- (4) Issue SS-4 (Mammen);
- (5) Issues LU-1, LU-2, LU-3, LU-5, and LU-6 (EOU; K. Andrew; Gilbert; Gilbert);
- (6) Issues HCA-2 and HCA-5 (Carbiener; Miller);
- (7) Issues N-1, N-2, and N-3 (STOP B2H);
- (8) Issue R-2 (Lois Barry and McAllister);
- (9) Issue SP-2 and FW-13 (McAllister);
- (10) Issue NC-5 (Gilbert);
- (11) Issue RFA-3 (Gillis);
- (12) Issue FW-9, FW-10, FW-11, and LU-10 (Applicant); and

On June 1, 2021, limited party Gilbert filed a request for clarification regarding the summary determination process and the procedures for responding to such motions. On June 2, 2021, the ALJ issued a *Response to Irene Gilbert's Request for Clarification Re Responses to Motions for Summary Determination* providing the requested clarification.

On June 1, 2021, Ms. Gilbert also filed a Motion to Dismiss All Motions for Summary Determination. On June 4, 2021, Idaho Power filed a response to the motion, and on June 8, 2021, Ms. Gilbert filed a reply. On June 9, 2021, the ALJ issued a *Ruling on Limited Party Irene Gilbert's Request to Dismiss All Motions for Summary Determination*, denying Ms. Gilbert's Motion to Dismiss.

On June 9, 2021, limited party McAllister filed a Motion to Amend Contested Case Schedule. On June 11, 2021, Idaho Power filed a response to the motion. On June 15, 2021, the ALJ issued a *Ruling on Limited Party McAllister's Motion to Amend Contested Case Schedule*, denying Mr. McAllister's request to adjust and extend the contested case hearing schedule.

On June 10, 2021, limited party Carbiener filed a Request for Consideration as Limited Party for Issue HCA-5 and to Respond by June 25, 2021 to Motion for Summary Determination. On June 16, 2021, the Department filed an Objection to Mr. Carbiener's Request and on June 17, 2021, Idaho Power filed its Response to Mr. Carbiener's Request. On June 21, 2021, the ALJ issued a *Ruling on Limited Party Gail Carbiener's Motion for Standing to Respond on Contested Case Issue HCA-5*, denying the request based upon OAR 345-015-0016 and OAR 137-003-0040(3)(b).

On June 16, 2021, limited party Kevin March filed a request for clarification regarding document naming in the B2H Project Record and a request to extend the June 25, 2021 deadline to respond to motions for summary determination. On June 21, 2021, the ALJ issued a *Response to Limited Party Kevin March's Request for Clarification and Ruling on Motion to Extend Summary Determination Response Deadline*. The ALJ declined to extend the response deadline for all parties and limited parties subject to motions for summary determination.

On June 17, 2021, Mr. McAllister filed a Second Motion to Amend Deadline for Responding to Motions for Summary Determination for Good Cause. Mr. McAllister described circumstances, personal to him, preventing him from filing timely responses to the motions for

(13) Issue TE-1 (Geer).

⁴ The Department filed the following motions:

- (1) Issue FW-4 (Gilbert);
- (2) Issue FW-13 (McAllister);
- (3) Issue LU-1 (EOU);
- (4) Issue N-2 (STOP B2H);
- (5) Issue SP-2 (McAllister);
- (6) Issue SR-1 (Lois Barry);
- (7) Issue SR-4 (Moyal/D. White); and
- (8) Issue TE-1 (Geer).

summary determination on Issues FW-13 and SP-2. On June 23, 2021, the ALJ issued a *Ruling on Limited Party McAllister's Second Motion to Extend Deadline for Responding to Motions for Summary Determination for Good Cause*, finding good cause to extend the deadline for Mr. McAllister's responses to July 9, 2021.

On June 23, 2021, Ms. Gilbert filed a request for an extension of time to submit responses to motions for summary determination, seeking a two-week extension of the June 25, 2021 deadline to file her responses to Idaho Power's and the Department's motions. On June 24, 2021, the ALJ issued a *Ruling on Limited Party Irene Gilbert's Request to Extend Deadline for Responding to Motions for Summary Determination*, finding that Ms. Gilbert had not shown good cause to extend her deadline and denying the request.

On June 25, 2021, the ALJ received the parties/limited parties' responses to the motions for summary determination.⁵ The ALJ did not receive responses from limited parties on the following issues subject to summary determination motions: Issue M-1 (Badger-Jones), Issue M-3 (Cooper), Issues M-4 and M-5 (the Howells), Issue M-7 (Proesch), Issue HCA-5 (Miller); Issue NC-5 (Gilbert); Issue SR-1 (L. Barry); and Issue SR-4 (Moyal and D. White).

On July 9, 2021, the ALJ received additional replies from Mr. McAllister in response to the Department and Idaho Power's motions for summary determination.⁶ Also on July 9, 2021, the ALJ received replies from Idaho Power⁷ and the Department.⁸ On July 23, 2021, Idaho

⁵ The ALJ received the following: (a) Idaho Power's Response to the Department's Motions for Summary Determination; (b) The Department's Responses to Applicant's Motions for Summary Determination of Limited Party Issues; (c) SSTOP B2H Coalition's Opposition to Motion on Issue FW-1; Stop B2H's Opposition to Motions on Issues N-1, N-2, and N-3; STOP B2H's Opposition to Motion on Issue SR-6; (d) Kathryn Andrew's Response to Motion on Issue LU-3; (e) Lois Barry's Responses on Issues R-2 and SR-6; (f) Gail Carbiener's Response on Issue HCA-2; (g) Susan Geer's Responses on Issues SR-5 and TE-1; (h) Irene Gilbert's Responses on Issues M-2, FW-4; and LU-5; (i) Charles Gillis' Response on Issue RFA-3; (j) Anne March's Response on Issue FW-12; (k) Michael McAllister's Response on Issue R-2; and (l) Louise Squire's Response on Issue FW-1.

⁶ The ALJ received the following: (1) Mr. McAllister's Opposition to Idaho Power's Motion on Issues FW-13 and SP-2; (2) Mr. McAllister's Opposition to the Department's Motion on Issue FW-13; and (3) Mr. McAllister's Opposition to the Department's Motion on Issue SP-2.

⁷ The ALJ received the following reply briefs from Idaho Power: (1) Reply to STOP B2H's Response to Motion on Issues N-1, N-2, and N3; (2) Reply to Susan Geer's Response to Motion on Issue TE-1; (3) Reply to ODOE's and Irene Gilbert's Responses to Motions on Issues FW-9, FW-10, FW-11 and LU-10; (4) Reply to Limited Parties' Responses to Motions on Issues SR-1, SR-4, SR-5 and SR-6; (5) Reply to Limited Parties' Responses to Motion on Issues HCA-2 and HCA-5; (6) Reply to Limited Parties' Responses to Motion on Issues M-1, M-2, M-3, M-4, M-5, and M-7; (7) Reply to Limited Parties' Responses to Motion on Issues FW-1 and FW-12; (8) Reply to Limited Parties' Responses to Motion on Issue R-2; (9) Reply to Limited Parties' Responses to Motion on Issues LU-2, LU-3, LU-5, and LU-6; (10) Reply to Irene Gilbert's Response to Motion on Issue NC-5; (11) Reply to Dale and Virginia Mammen Response to Motion on Issue SS-4; and (12) Reply to Charles Gillis' Response to Motion on Issue RFA-3.

Power and the Department filed Replies to Mr. McAllister's oppositions to the respective motions on Issues FW-13 and SP-2.

Between July 14, 2021 and August 17, 2021, the ALJ issued the following Rulings and Orders on Motions for Summary Determination:

- (1) July 14, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue M-7*, granting Idaho Power's motion and dismissing Issue M-7 and limited party Tim Proesch from the contested case.
- (2) July 14, 2021, *Rulings and Order on Motion for Summary Determination of Contested Case Issues M-1, M-2, M-3, M-4, and M-5*, granting Idaho Power's motion(s) and dismissing Issues M-1, M-2, M-3, M-4, and M-5 from the contested case.
- (3) July 14, 2021, *Rulings and Order on Motions for Summary Determination of Contested Case Issue SR-4, Limited Parties David Moyal and Daniel White*, granting Idaho Power's motion, granting the Department's motion, dismissing Issue SR-4 and limited parties David Moyal and Daniel White from the contested case.
- (4) July 14, 2021, *Ruling and Order on Motions for Summary Determination on Contested Case Issue SR-1*, granting Idaho Power's motion, granting the Department's motion and dismissing Issue SR-1 from the contested case.
- (5) July 20, 2021, *Ruling and Order on Motions for Summary Determination of Contested Case Issue TE-1*, granting Idaho Power's motion, granting the Department's motion and dismissing Issue TE-1 from the contested case.
- (6) July 20, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue RFA-3*, granting Idaho Power's motion, dismissing Issue RFA-3 and limited party Charles Gillis from the contested case.
- (7) July 21, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issues LU-2, LU-3, LU-5, and LU-6*, granting Idaho Power's motion(s) and dismissing Issues LU-2, LU-3, LU-5, and LU-6 from the contested case.
- (8) July 21, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue SR-5*, granting Idaho Power's motion and dismissing Issue SR-5 from the contested case.

⁸ The ALJ received the following reply briefs from the Department: (1) Reply to Limited Party Response on Issue TE-1; (2) Response to Limited Party Response on Issue N-2; and (3) Response to Limited Party Response on Issue FW-4.

(9) July 23, 2021, *Ruling and Order on Motion for Summary Determination on Contested Case Issue SS-4*, granting Idaho Power's motion and dismissing Issue SS-4 from the contested case.

(10) July 26, 2021, *Ruling and Order on Motion for Summary Determination on Contested Case Issue SR-6*, granting Idaho Power's motion and dismissing Issue SR-6 from the contested case.

(11) July 29, 2021, *Ruling and Order on Motions for Summary Determination of Contested Case Issues N-1, N-2, and N-3*, granting Idaho Power's motions on Issues N-1, N-2, and N-3, granting the Department's motion on Issue N-2, and dismissing Issues N-1, N-2, and N-3 from the contested case.

(12) August 3, 2021, *Ruling and Order on Motions for Summary Determination of Contested Case Issues FW-13, R-2, and SP-2*, granting Idaho Power's motions on Issues FW-13, R-2, and SP-2; granting the Department's motions on Issues FW-13 and SP-2; dismissing Issues FW-13, R-2, and SP-2 from the contested case; and dismissing limited party Michael McAllister from the contested case.

(13) August 5, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue FW-1*, granting Idaho Power's motion on Issue FW-1; dismissing Issue FW-1 from the contested case; and dismissing limited party Louise Squire from the contested case.

(14) August 9, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue NC-5*, granting Idaho Power's motion and dismissing Issue NC-5 from the contested case.

(15) August 10, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issues HCA-2 and HCA-5*, granting Idaho Power's motion and dismissing Issues HCA-2 and HCA-5 from the contested case.

(16) August 12, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue FW-4*, granting the Department's motion and dismissing Issue FW-4 from the contested case.

(17) August 13, 2021, *Ruling and Order on Motion for Summary Determination of Contested Case Issue FW-12*, granting Idaho Power's motion and dismissing Issue FW-12 from the contested case.

(18) August 17, 2021, *Ruling and Order on Idaho Power Company's Motion for Summary Determination of Contested Case Issues FW-9, FW-10, FW-11, and LU-10*, granting Idaho Power's motion.

On July 28, 2021, Ms. Gilbert filed a Petition for Reconsideration of the Decision Allowing Summary Determination Denying My Contested Case [Issue] LU-5 (Petition for

Reconsideration). On July 29, 2021, Ms. Gilbert filed supplemental material in support of her Petition for Reconsideration. On August 24, 2021, the ALJ issued a *Ruling Denying Limited Party Irene Gilbert's Petition for Reconsideration of the Ruling and Order on Motion for Summary Determination of Contested Case Issue LU-5*.

On August 10, 2021, Mr. McAllister filed an interlocutory appeal to the Council of the ALJ's August 3, 2021 *Ruling and Order on Motions for Summary Determination of Contested Case Issues FW-13, R-2, and SP-2*. The Department and Idaho Power filed responses to the appeal.

At its August 27, 2021 Council meeting, the Council conducted a hearing on the interlocutory appeal. In an *Order on Interlocutory Appeal for Administrative Law Judge's Ruling on Motion for Summary Determination for Limited Party McAllister's Issues FW-13, SP-2 and R-2*, issued September 17, 2021, the Council affirmed the ALJ's Ruling dismissing Issues FW-13 and SP-2, and reversed the dismissal of Issue R-2. The Council reinstated Mr. McAllister as a limited party with standing on Issue R-2.

Motion to Remove Hearing Officer: On July 26, 2021, Ms. Gilbert filed with the Council a Motion for Removal of Ms. Webster as Hearings Officer for B2H. On August 2, 2021, Idaho Power filed a Response to Ms. Gilbert's Motion to Remove Hearing Officer. The Council addressed the motion and response its August 27, 2021 meeting. On September 21, 2021, the Council issued an *Order on Limited Party Gilbert's Motion to Remove Hearing Officer*, denying the motion and concluding that Ms. Gilbert did not present substantial evidence to prove bias, incompetence, or both for the actions or category of actions identified in the motion.

Limited Party Withdrawals: On February 17, 2021, during the discovery phase, limited party John Milbert submitted a notice of withdrawal from the contested case. Thereafter, on February 22, 2021, the ALJ issued an Acknowledgement of Withdrawal of Limited Party and Contested Case Issue FW-8, acknowledging Mr. Milbert's withdrawal from the case and dismissing Issue FW-8 from the contested case.

On June 24, 2021, during the summary determination phase, limited party Eastern Oregon University/Dr. Karen Antell submitted a notice of withdrawal from the contested case. On June 29, 2021, the ALJ issued an Acknowledgement of Withdrawal of Limited Party Eastern Oregon University and Contested Case Issues LU-1 and FW-2, acknowledging the withdrawal and dismissing Issues LU-1 and FW-2 from the contested case.

On July 25, 2021, limited party Ryan Browne submitted a notice of withdrawal from the contested case. On July 27, 2021, the ALJ issued an Acknowledgement of Withdrawal of Limited Party Ryan Browne and Contested Case Issue HCA-1 acknowledging the withdrawal and dismissing Issue HCA-1 from the contested case.

On August 3, 2021, limited parties Jane and Jim Howell submitted their notice of withdrawal from the contested case. That same date, the ALJ issued an Acknowledgement of

Withdrawal of Limited Parties Jane and Jim Howell and Contested Case Issue PS-7, acknowledging the withdrawal and dismissing Issue PS-7 from the contested case.

Second Prehearing Conference/Second Case Management Order: On August 26, 2021, the ALJ convened a second telephone prehearing conference to address requests from the limited parties for clarification on procedural matters pertaining to naming conventions and the filing and service of documents, including written direct testimony and written rebuttal testimony.

On August 30, 2021, the ALJ issued a *Second Order on Case Management Matters and Contested Case Schedule*, with clarifications of procedural matters, a revised list of parties and limited parties, and a revised table of identified issues and parties with standing on the issues.

Direct Testimony: As of the September 17, 2021 deadline for filing direct testimony and evidence pursuant to OAR 345-015-0043 and proposed site certificate conditions pursuant to OAR 345-015-0085, the ALJ received written direct testimony and/or exhibits on 33 issues⁹ along with proposed site certificate conditions from limited parties Carbiener, Cooper, Fouty, Geer, Gilbert, March, STOP B2H and Webster.

The ALJ did not receive written direct testimony or exhibits for Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2.

Motion to Dismiss Issues: On September 29, 2021, Idaho Power filed a Motion to Dismiss Contested Case Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2, requesting dismissal of those issues for which the limited parties did not file testimony or evidence. The Department filed a Response to the Motion. Limited parties Matthew Cooper, Irene Gilbert, and Stacia Webster filed objections to the Motion.

On October 8, 2021, the ALJ issued a *Ruling on Idaho Power Company's Motion to Dismiss Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2*, granting the motion.

On October 15, 2021, the Department filed a Motion to Reconsider Dismissal of Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2. On October 19, 2021, limited party STOP B2H filed an Amicus Memorandum in support of the Department's Motion to Reconsider and, on October 20, 2021, limited party Irene Gilbert similarly filed an Amicus Memorandum. On October 22, 2021, Idaho Power filed its Response to the Department's Motion to Reconsider.

On October 25, 2021, the ALJ issued an *Order Granting Reconsideration and Withdrawing Ruling on Idaho Power Company's Motion to Dismiss Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2*.

⁹ The ALJ received written direct testimony and/or exhibits for the following issues: M-6, FW-3, FW-6, FW-7, HCA-3, HCA-4, HCA-7, LU-9, LU-11, NC-1, NC-2, NC-3, NC-4, NC-6, PS-2, PS-3, PS-4, PS-6, PS-8, PS-9, PS-10, R-1, R-2, R-3, R-4, RFA-1, RFA-2, SR-1, SR-3, SR-7, SP-1, SS-3, and SS-5.

Thereafter, on November 2, 2021, the ALJ issued a *Ruling on Idaho Power Company's Motion to Dismiss Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2 (Ruling on Motion to Dismiss)*, declining to dismiss these issues. The ALJ found that because Idaho Power retains the burden under OAR 345-021-0100(2) to prove the proposed facility complies with applicable statutes and siting standards, it was not appropriate to dismiss these issues from the contested case despite the limited parties' failure to submit written direct testimony or exhibits in support of these issues. The ALJ further found that by failing to present any written direct testimony and supporting exhibits by the September 17, 2021 deadline, the limited parties with standing on Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1, and SS-2 waived their opportunity to present any testimony or new evidence in support of their claims.

Rulings on Objections to Direct Testimony and Exhibits: On October 1, 2021, both Idaho Power and the Department filed Objections to the Limited Parties' Direct Testimony and Exhibits. The following limited parties filed responses to the Department's and Idaho Power's objections: STOP B2H, Cooper, Deschner, Geer, Gilbert, Lyons, Mammen, March, Myers, and Webster.

On October 15, 2021, the ALJ issued *Rulings on Objections to Direct Testimony and Exhibits*, determining the admissibility of evidence to which the Department and/or Idaho Power objected.

On October 21, 2021, the ALJ issued a *List of Direct Testimony and Exhibits Admitted into the Contested Case Record*, identifying, by issue code and number, the written direct testimony and new evidence admitted into the contested case hearing record as of October 15, 2021.

Limited parties STOP B2H, Gilbert, March, and Marlette filed motions seeking reconsideration of the ALJ's rulings sustaining Idaho Power's objections and excluding certain direct testimony and exhibits.

On November 2, 2021, the ALJ issued a *Ruling on Anne and Kevin March's Motion to Reconsider Rulings on Objections to Direct Testimony and Exhibits – Issue FW-7*, declining to reconsider the rulings and denying the Motion to Reconsider. Also on November 2, 2021, the ALJ issued a *Ruling on Irene Gilbert's Motion to Reconsider Rulings on Objections to Direct Testimony and Exhibits – Issues NC-2 and LU-11*, denying the Motion to Reconsider.

On November 5, 2021, the ALJ issued a *Ruling on STOP B2H Coalition's Motion to Reconsider Ruling on Objections to Direct Testimony and Exhibits – Issues NC-2 and SR-7*, denying the Motion to Reconsider. On November 9, 2021, the ALJ issued a *Ruling on JoAnn Marlette's Motion to Reconsider Ruling on Objections to Exhibit 7 – Issue HCA-3*, denying the Motion to Reconsider.

Status Conference/Third Case Management Order: On November 4, 2021, the ALJ convened a status conference by telephone to discuss logistics for the cross-examination hearing. The ALJ notified the parties and participants that, due to the ongoing COVID-19 pandemic and

restrictions on in-person gatherings, she would be holding the cross-examination hearing virtually, via the Cisco WebEx platform.

On November 9, 2021, the ALJ issued a *Third Order on Case Management Matters and Guidelines for the Virtual Cross-Examination Hearing*.

On November 22, 2021, in follow up to the *Third Order on Case Management*, the ALJ issued a *Response to Idaho Power Company's Request for Clarification Regarding Procedures for Responding to Surrebuttal Evidence and New Proposed Site Certificate Conditions*. That same date, the ALJ issued an *Amended Response* to correct an omission in the original Response.

Rebuttal Evidence: The deadline for submitting rebuttal testimony and evidence, and responses to proposed site certificate conditions was November 12, 2021. Idaho Power and the Department timely submitted rebuttal evidence on that date.

On November 17, 2021, limited party STOP B2H filed a Motion to Strike Portions of ODOE Rebuttal to Direct Testimony and Evidence. On November 18, 2021, Ms. Gilbert filed a Motion to Strike Portions of the Department's Rebuttal to Direct Testimony and Evidence and Response to Proposed Site Certificate Conditions.

On November 22, 2021, Ms. Gilbert filed a Motion to Exclude testimony and exhibits offered by Idaho Power in connection with Issues FW-3, FW-6 and LU-11 (Motion to Exclude).

On November 23, 2021, the ALJ issued a *Ruling on STOP B2H Coalition's Motion to Strike Portions of ODOE Rebuttal to Direct Testimony and Evidence*, denying STOP B2H's Motion to Strike. The ALJ accepted the Department's submission as an opening brief/hearing memorandum responsive to legal arguments in the direct testimony and to the limited parties' proposed site certificate conditions.

Also on November 23, 2021, the ALJ issued a *Ruling on Irene Gilbert's Motion to Strike Portions of ODOE Rebuttal to Direct Testimony and Evidence*, denying Ms. Gilbert's Motion to Strike on the same basis.

On November 30, 2021, the ALJ issued a *Ruling on Limited Party Irene Gilbert's Motion to Exclude Idaho Power's Testimony and Exhibits – Witness Jessica Taylor*, denying Ms. Gilbert's Motion to Exclude testimony and exhibits.

Surrebuttal Evidence: The deadline for submitting sur-rebuttal testimony and evidence was December 3, 2021.

On November 22, 2021, limited party Anne March requested that the December 3, 2021 deadline be extended to midnight on Sunday, December 5, 2021. Also on November 22, 2021, limited party Stacia Webster requested adjustments to the filing deadline. Idaho Power objected to the limited parties' requests to extend the surrebuttal deadline. Idaho Power also provided the limited parties with alternate means to access the referenced data files.

On November 24, 2021, the ALJ issued a *Ruling Denying Limited Parties' Requests to Adjust Contested Case Schedule Filing Deadlines*.

On November 22, 2021, Ms. Gilbert requested that her deadline to submit sur-rebuttal evidence and cross-examination requests be extended nine days, to December 12, 2021. On November 23, 2021, Idaho Power objected to Ms. Gilbert's request to extend the sur-rebuttal deadline. On November 24, 2021, the ALJ issued a *Ruling on Limited Party Irene Gilbert's Request to Extend Deadline for Filing Sur-rebuttal and Cross-Examination Requests*, denying the request to extend the deadline.

On November 30, 2021, Ms. Gilbert requested reconsideration of the Ruling denying her request for a deadline extension. On December 1, 2021, the ALJ issued a *Ruling on Limited Party Irene Gilbert's Motion to Reconsider Denial of Request to Extend Deadline for Filing Sur-rebuttal and Cross-Examination Requests* adhering to her November 24, 2021 ruling.

On December 3, 2021, the ALJ received sur-rebuttal evidence from the following limited parties: Cooper (Issue PS-4), Fouty (Issue SP-1), Geer (Issues FW-3 and FW-6), Gilbert (Issues FW-3 and LU-11), March (Issue FW-7), STOP B2H (Issues NC-2, NC-3, NC-4 and SP-1), and Williams (Issue HCA-7).

On December 10, 2021, Idaho Power filed its Objections to Limited Parties' Sur-rebuttal Testimony and Exhibits. Limited parties STOP B2H, Fouty, Geer, Gilbert, March, and Williams filed responses to Idaho Power's objections.

On January 3, 2022, the ALJ issued *Rulings on Idaho Power's Objections to Limited Parties' Surrebuttal Testimony and Exhibits*.

Court Reporter for Cross-Examination Hearing: On December 2, 2021, the ALJ issued an *Acknowledgement of Court Reporter for Cross-Examination Hearing*, approving Idaho Power's request to use Buell Realtime Reporting to produce transcripts of the cross-examination hearing.

Cross-Examination Requests: On December 3, 2021, the ALJ also received requests for cross-examination of witness(es) from the following parties/limited parties:

- Idaho Power, requesting cross-examination of Greg Larkin (Issues NC-2, NC-3, NC-4);¹⁰ Kerri Standlee (Issue NC-2); Isobel Lingenfelter (Issue SR-2); Lois Barry (Issue SR-7).
- Lois Barry, requesting cross-examination of Louise Kling (Issues R-2, R-3, and R-4).
- Gail Carbiener, requesting cross-examination of Louise Kling and Dennis Johnson (Issue SR-2).

¹⁰ On December 15, 2021, Idaho Power withdrew its request to cross-examine Mr. Larkin.

- Matt Cooper, requesting cross-examination of Douglas Dockter, Dennis Johnson and Chris Lautenberger (Issue PS-4).
- Suzanne Fouty, requesting cross-examination of Mark Madison (Issue SP-1).
- Irene Gilbert, requesting cross-examination of Tim Butler and Jessica Taylor (Issues FW-3 and LU-11).
- Anne and Kevin March, requesting cross-examination of Chris James, Greg Apke, Sara Reif, and “an Oregon Department of Energy representative.” (Issue FW-7).
- STOP B2H, requesting cross-examination of Mark Bastasch and Ken Kosky (Issues NC-1, NC-2, NC-3, and NC-4), Mark Madison (Issue SP-1), and Louise Kling (Issue SR-7).

The Department timely objected to the Marches’ request to cross-examine “an Oregon Department of Energy representative,” as no Oregon Department of Energy representative provided testimony on Issue FW-7.

Certified Questions to Council: On December 14, 2021, the ALJ sent *Certified Questions to Council Regarding Interpretation of OAR 345-015-0085(1) and (2)*, asking the Council for guidance in harmonizing apparently conflicting provisions in the procedures governing site certificate contested case proceedings and interpreting OAR 345-015-0085(1) and (2).

On December 23, 2021, the Council notified the ALJ that the Council added the certified questions to the agenda of its regularly scheduled meeting on December 16 and 17, 2021. During the meeting, the Council considered several motions on the questions, but none of the motions passed. By email dated December 23, 2021, the Council notified the ALJ that it declined to provide answers to the certified questions.

Status Conference/Cross-Examination Hearing Schedule: On December 15, 2021, the ALJ convened a status conference, by WebEx, with the parties/limited parties to address the schedule and logistics for the cross-examination hearing. During the conference, the ALJ sustained the Department’s objection to the Marches’ request to cross-examine an Oregon Department of Energy representative.

On December 16, 2021, the ALJ issued a *Notice of Virtual Cross-Examination Hearing; Cross-Examination Hearing Schedule*, providing notice of the Webex hearing set for January 10, 11, 13, 14, 18, and 19, 2022, the schedule for witnesses, and document filing deadlines.

Cross-Examination Hearing: The cross-examination hearing convened via WebEx over the course of seven days, January 10, 11, 13, 14, 18, 19, and 21, 2022. Attorneys Lisa Rackner, Jocelyn Pease, and David Stanish appeared on behalf of Applicant. Assistant Attorney General (AAG) Patrick Rowe appeared on behalf of the Department, with Sarah Esterson, Senior Policy

Advisor and Kellen Tardaewether, Senior Siting Analyst.¹¹ Attorneys Karl Anuta and Mike Sargetakis appeared on behalf of limited party STOP B2H. The following limited parties participated *pro se*: Irene Gilbert, Suzanne Fouty, Matt Cooper, Anne and Kevin March, Gail Carbiener, and Lois Barry.

On January 10, 2022, the following witnesses testified regarding Issues NC-1, NC-2, NC-3 and NC-4: Gage Miller, Golder Associates; Mark Bastasch, Jacobs Consulting; and Kerri G. Standlee, DSA Acoustical Engineers.

On January 11, 2022, Mark Madison of Jacobs Consulting testified regarding Issue SP-1.

On January 13, 2022, the following witnesses testified regarding Issue PS-4: Douglas J. Dockter from Idaho Power and Chris Lautenberger, Reax Engineering.

On January 14, 2022, Jessica Taylor with Tetra Tech testified regarding Issues FW-3 and LU-11. On the Department's request, due to the unavailability of Department witness Tim Butler from the Oregon Department of Agriculture (ODA), the ALJ continued the witness cross-examination on Issues FW-3 and LU-11 to Friday, January 21, 2022.

On January 18, 2022, the following witnesses testified regarding Issue FW-7: Greg Apke, ODFW; Sarah Reif, ODFW; and Chris James, Tetra Tech.

On January 19, 2022, the following witnesses testified regarding Issues R-2, R-3, R-4, SR-2 and SR-7: Dennis Johnson, POWER Engineers; Louise Kling, AECOM; and Isobel Lingenfelter.

On January 21, 2022, Mark Porter with the ODA testified regarding Issues FW-3 and LU-11.¹² The cross-examination hearing concluded on January 21, 2022.

Fourth Case Management Order: On January 25, 2022, following the close of the cross-examination hearing, the ALJ issued the *Fourth Order on Case Management Matters and Contested Case Schedule*, setting the evidentiary record closing date and closing brief schedule.

Cross-Examination Hearing Transcripts and Corrections Thereto: On January 31, 2022, the ALJ admitted the Cross-Examination Hearing Transcripts and the timely corrections/errata sheets submitted thereon into the evidentiary record.

¹¹ Wally Adams from the Department was also present throughout the hearing to provide technical assistance.

¹² Mr. Butler, the manager of the Oregon Department of Agriculture (ODA) Noxious Weed Program, was unavailable to appear and testify at the cross-examination hearing due to a family medical emergency. The Department provided Mr. Porter, ODA's Integrated Noxious Weed Management Specialist for Northeast Oregon, as its ODA expert on noxious weed management. Mr. Porter reports directly to Mr. Butler at ODA. The ALJ overruled Ms. Gilbert's objections to Mr. Porter testifying on behalf of the ODA in Mr. Butler's stead.

Close of Evidentiary Record: The evidentiary record in this matter closed on January 31, 2022.

Table of Admitted Testimony and Exhibits: On February 1, 2022, the ALJ issued a *List of Testimony and Exhibits Admitted into the Contested Case Hearing Record*. The ALJ provided a table of the evidence (in addition to the B2H Project Record) received by the ALJ and admitted into the contested case record as of January 31, 2022, the evidentiary record close date. Also on February 1, 2022, the ALJ issued a *Response to Idaho Power Company's Request for Clarification Regarding Motions for Summary Determination and Supporting Documents*.

On February 4, 2022, in response to requests from Idaho Power and limited party Dr. Fouty, the ALJ issued an *Amended List* including evidence the ALJ inadvertently omitted from the original list.

On February 11, 2022, the ALJ issued a *Response to Dr. Suzanne Fouty's Request for Clarification on Evidentiary Record*.

On February 14, 2022, the ALJ issued a *Second Amended List of Testimony and Exhibits Admitted into the Contested Case Hearing Record*, with corrections to the *Amended List*.

On February 16, 2022, the ALJ issued a *Response to Irene Gilbert's Request to Amend List of Testimony and Exhibits*, denying Ms. Gilbert's request to add five documents not offered during the Hearing phase to the Table of Additional Admitted Evidence. The ALJ upheld her determination in a *Ruling on Gilbert's Request to Rescind Ruling Denying Request to Amend List of Testimony and Exhibits and Response to Idaho Power Company's Request for Clarification* issued February 25, 2022.

Closing Briefs. The deadline for filing written closing briefs was February 28, 2022. The ALJ received closing briefs from the Department, Idaho Power, and the following limited parties: STOP B2H (Issues NC-1, NC-2, NC-3, NC-4, SR-7 and SP-1); Lois Barry (Issues R-2, R-3, and R-4); Carbiener (Issue SR-2); Cooper (Issues PS-4 and SS-2); Deschner (Issue SR-3); Fouty (Issue SP-1); Geer (Issues FW-3 and FW-6); Gilbert (Issues FW-3, FW-5, HCA-6, LU-7, LU-8, LU-11, NC-2, PS-5, and RFA-1); Gray (Issue NC-6); Horst (Issues HCA-4, PS-6, and SS-3); Lyons (Issue PS-10); Mammen (Issue PS-6); March (Issue FW-7); Marlette (Issues HCA-3 and M-6); McAllister (Issue R-2); Myers (Issues LU-9 and NC-2); and Williams (Issue HCA-7).

The ALJ did not receive closing briefs from the following limited parties: Colin Andrew (Issues R-1 and R-3); Kathryn Andrew (Issue R-3); Badger-Jones (Issue PS-1); Peter Barry (Issue R-3); Foss (Issue LU-4); Miller (Issues SR-2, PS-2, and PS-3); S. Webster (Issues HCA-6; SS-1, and PS-10); White (Issue SS-5); and Winters (Issue PS-4).

The filing deadline for filing written response briefs was March 30, 2022. The ALJ received response briefs from the Department, Idaho Power, and the following limited parties: STOP B2H (Issues NC-1, NC-2, NC-3, NC-4, and SR-7); Lois Barry (Issues R-2, R-3, and R-4); Peter Barry (Issue R-3); Carbiener (Issues RFA-2 and SR-2); Cooper (Issue PS-4); Deschner (Issue SR-3); Fouty (Issue SP-1); Geer (Issues FW-3 and FW-6); Gilbert (Issues FW-3, RFA-1,

HCA-3, and NC-2); Gray (Issue NC-6); Horst (Issues HCA-4, NC-2, PS-6, and SS-3); Lyons (Issue PS-10); Marlette (Issues HCA-3 and M-6); McAllister (Issue R-2); Myers (Issues LU-9 and NC-2); and Williams (Issue HCA-7).

Motions to Strike Portions of Limited Parties' Closing Arguments and Response

Briefs. As part of several response briefs, Idaho Power also filed motions to strike portions of the limited parties' closing briefs that Idaho Power contended referenced evidence not included in the contested case record and/or that raised arguments outside the scope of the issues for which the limited party had standing. Specifically, Idaho Power moved to strike specific statements in the following briefs: STOP B2H's closing brief; Ms. Barry's closing brief on Issues R-2, R-3, and R-4; Mr. Cooper's closing brief on Issue SS-2; Mr. Deschner's closing brief on Issue SR-3; Dr. Fouty's closing brief on Issue SP-1; Ms. Geer's closing brief on Issue FW-6; Ms. Gilbert's closing briefs on Issues FW-3 and FW-5, LU-7 and LU-8, and NC-2; Mr. Horst's closing brief on Issue PS-6; Mr. Lyons' closing brief on Issue PS-10; the Mammens' closing brief on Issue PS-6; Mr. McAllister's closing brief in Issue R-2; and Mr. Myers' closing briefs on Issues LU-9 and NC-2.

On April 6, 2022, the ALJ issued a Response regarding Motions to Strike, advising the parties and limited parties that she would be addressing and incorporating her rulings on the motions to strike in the Proposed Order on Contested Case. The ALJ also gave the limited parties subject to a motion to strike until April 14, 2022 to file their oppositions to the motions.

On April 7, 2022, Idaho Power filed a Motion to Strike Portions of the Response Briefs Filed by STOP B2H (Issue RFA-2); Irene Gilbert, (Issues FW-3, HCA-3, LU-9); Susan Geer (Issue FW-6), Joe Horst and Anna Cavinato (Issue PS-6), Charles Lyons (Issue PS-10), Lois Barry (Issues R-2, R-3, and R-4); Michael McAllister (Issue R-2); Peter Barry (Issue R-3), Gail Carbiener (Issue RFA-2), and Suzanne Fouty (Issue SP-1).

Also on April 7, 2022, Irene Gilbert filed a Motion to Reopen File for Submission of Evidence and Arguments Responding to Idaho Power's Motions to Strike. On April 14, 2022, the ALJ issued a *Ruling on Irene Gilbert's Motion to Reopen the Record for Submission of Additional Evidence in Response to Motions to Strike*, denying the request to reopen the evidentiary record, but allowing Ms. Gilbert additional time to respond to the Motions to Strike.

The ALJ received responses to Idaho Power's motions to strike from the following limited parties: STOP B2H; Lois Barry; Peter Barry; Cooper; Fouty; Geer; Gilbert; Horst/Cavinato; Lyons; and McAllister.

Other Motions to Strike. In response to Idaho Power's motions, limited parties Peter Barry and Matt Cooper filed their own Motions to Strike. Mr. Barry moved to strike the entirety of Idaho Power's application for site certificate (ASC). Mr. Cooper moved to strike portions of Idaho Power's Response Brief regarding Issue PS-4. These motions are also addressed herein.

BURDEN OF PROOF

ORS 183.450(2) and OAR 345-021-0100(2), together, identify the appropriate allocation

of the burdens applicable to EFSC contested case proceedings on an ASC. Applicant bears the burden of proving that the proposed facility complies with all applicable statutes, administrative rules, and local government ordinances. OAR 345-021-0100(2). The party/limited party raising an issue in this contested case by challenging the Department's Proposed Order bears the burden of producing evidence in support of the facts alleged and/or positions taken on any properly raised issue. ORS 183.450(2). That party/limited party also bears the burden of persuading the trier of fact that the alleged facts are true or the proffered position on the issue is correct. Neither Applicant nor the Department is required to disprove an opposing party/limited party's allegations and argument that Applicant has not met a particular statutory/regulatory requirement or Council siting standard. Rather, the party/limited party asserting a deficiency in the findings and/or conclusions in the Department's Proposed Order on the ASC bears the burden of establishing the claim or alleged facts.

Accordingly, Applicant maintains the burden to show by a preponderance of the evidence in the decision record that the proposed facility complies with the Council's siting standards and other applicable statutes and rules. The Department's Proposed Order, as conditioned, determined that the decision record on the ASC indicates Applicant satisfied the requirements for issuance of the requested site certificate. That determination creates a rebuttable presumption that Applicant has satisfied its burden to show that the proposed facility will, more likely than not, comply with all applicable statutes, administrative rules, and local government ordinances. Thus, with regard to provisions of the Department's Proposed Order not challenged in this contested case, the presumption stands and Applicant is not required to make additional showings at the contested case hearing to meet its initial burden. With regard to those provisions of the Department's Proposed Order challenged through the petitions for party status/requests for contested case hearing, a limited party with standing on a particular issue bears the burden of producing evidence sufficient to establish the claim with regard to that issue (*i.e.*, the alleged deficiency in the Department's Proposed Order) to rebut the presumption created by the Department's Proposed Order. Applicant has no obligation to disprove unsubstantiated claims and/or allegations raised by the limited parties.

ISSUES DISMISSED OR RESOLVED ON SUMMARY DETERMINATION

As set out above in the History of the Case, the ALJ authorized motions for summary determination in this matter. Idaho Power timely filed motions for summary determination seeking a favorable ruling on 34 contested case issues.¹³ The Department filed motions for summary determination seeking a favorable ruling on eight issues, seven of which overlapped with Idaho Power's motions.¹⁴ Between July 14, 2021 and August 17, 2021, the ALJ issued a

¹³ Idaho Power sought summary determination on Issues FW-1, FW-2, FW-9, FW-10, FW-11, FW-12, FW-13, HCA-2, HCA-5, LU-1, LU-2, LU-3, LU-5, LU-6, LU-10, N-1, N-2, N-3, NC-5, R-2, RFA-3, SR-1, SR-4, SR-5, SR-6, SP-2, SS-4, TE-1, and miscellaneous issues M-1, M-2, M-3, M-4, M-5, and M-7. Because limited party EOU withdrew from the contested case in June 2021, the ALJ dismissed Issues FW-2 and LU-1 without ruling on Idaho Power's motions regarding these two issues.

¹⁴ Like Idaho Power, the Department sought summary determination on Issues FW-13, LU-1, N-2, SR-1, SR-4, SP-2, and TE-1. The Department also sought summary determination on Issue FW-4. As noted

series of Rulings and Orders on the motions. Those Rulings and Orders dismissed or resolved the following contested case issues:

Fish and Wildlife Habitat Standard (FW)

Issue FW-1: Whether Applicant adequately analyzed sage grouse habitat connectivity in the Baker and Cow Valley Priority Areas of Conservation (PAC), the potential indirect impacts of the proposed facility on sage grouse leks, and the existing number of sage grouse in the Baker and Cow Valley PACs.

The *Amended Order on Party Status* granted STOP B2H and Louise Squire limited party status with standing on Issue FW-1. In the *Ruling and Order on Motions for Summary Determination of Contested Case Issue FW-1*, issued August 5, 2021, and incorporated herein by this reference, the ALJ dismissed Issue FW-1 from the contested case, and dismissed Ms. Squire as a limited party. The ALJ found that neither STOP B2H nor Ms. Squire presented evidence demonstrating any insufficiencies in Idaho Power's analysis of the proposed facility's potential impacts to sage grouse leks and/or sage grouse habitat connectivity. The ALJ further found that Idaho Power had no obligation to ascertain the existing number of sage grouse in the Baker and Cow Valley PACs to establish the proposed facility's compliance with the Fish and Wildlife Habitat Standard.

Ms. Squire did not appeal the ruling terminating her right to participate in the contested case proceeding and dismissing Issue FW-1. Therefore, the *Ruling and Order on Motions for Summary Determination of Contested Case Issue FW-1*, issued August 5, 2021, is final as to Ms. Squire.¹⁵

Issue FW-4: Whether Applicant is required to evaluate habitat impacts of species listed as threatened or endangered under the Federal Endangered Species Act.

The *Amended Order on Party Status* granted Ms. Gilbert limited party status on Issue FW-4. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue FW-4*, issued August 12, 2021, and incorporated herein by this reference, the ALJ dismissed Issue FW-4 from the contested case. The ALJ found that, as a matter of law, the Council's Fish and Wildlife Habitat standard does not require an applicant for a site certificate to specifically evaluate impacts to federally-listed threatened or endangered species and/or their habitats separate and apart from the general analysis of fish and wildlife habitats located within the analysis area.

above, because EOU withdrew from the case, the ALJ did not rule on the Department's motion on Issue LU-1.

¹⁵ See OAR 345-015-0024(2) (an order permanently excluding a party/limited party from further participation in the contested case proceeding is final unless the party/limited party submits an appeal to the Council within seven calendar days of service of the order); see also OAR 345-015-0057 (authorizing a party excluded from participation in the contested case to submit an interlocutory appeal to the Council "within seven calendar days after the date of the ruling of the hearing officer.")

Issue FW-9: Whether State Sensitive Bat species should be removed from the list of preconstruction surveys required by Fish and Wildlife Condition 16.

Only the Department and Idaho Power have standing on Issue FW-9. In the *Ruling and Order on Idaho Power Company's Motion for Summary Determination on Contested Case Issues FW-9, FW-10, FW-11 and LU-10 (Ruling on Issues FW-9, FW-10, FW-11 and LU-10)*, issued August 17, 2021 and incorporated herein by this reference, the ALJ found that Idaho Power was entitled to a favorable ruling on Issue FW-9.¹⁶ Specifically, the ALJ found:

In Fish and Wildlife Condition 16, "State Sensitive bat species" shall be removed from the list of required surveys. In addition, footnote 373 of the Proposed Order shall be deleted.

Issue FW-10: Whether Department-proposed revisions to Fish and Wildlife Condition 12 should be removed to allow specific protocol surveys to meet survey needs of other species.

Only the Department and Idaho Power have standing on Issue FW-10. In the *Ruling on Issues FW-9, FW-10, FW-11 and LU-10*, the ALJ found that Idaho Power was entitled to a favorable ruling on Issue FW-10 as well. Specifically, the ALJ ruled:

In Fish and Wildlife Condition 12, line 3, the reference to Condition 14 shall be removed. The first sentence shall be corrected to state: "During construction, if active pygmy rabbit colonies or the roost of a State Sensitive bat species is observed during the biological surveys set forth in Fish and Wildlife Conditions 15 and 16, the certificate holder shall submit to the Department for its approval a notification addressing the following: * * * .".

Issue FW-11: Whether Department-proposed revisions to Fish and Wildlife Condition 17 incorrectly assign traffic assumptions to new roads.

Only the Department and Idaho Power have standing on Issue FW-11. In the *Ruling on Issues FW-9, FW-10, FW-11 and LU-10*, the ALJ also found that Idaho Power was entitled to a favorable ruling on Issue FW-11. Specifically, the ALJ ruled:

In Fish and Wildlife Condition 17, paragraph b.iii. shall be corrected to state as follows:

¹⁶ Ms. Gilbert filed an affidavit offering exhibits related to Issue FW-9. Because she does not have standing on Issue FW-9, the ALJ did not consider her affidavit or the exhibits referenced therein in ruling on the Motion on Issue FW-9. *See Ruling on Issues FW-9, FW-10, FW-11 and LU-10* at 1 n.2. Subsequently, on February 28, 2022, Ms. Gilbert filed a Closing Brief regarding Issue FW-9, proposing revisions to Recommended Amended Fish and Wildlife Condition 16, including returning "State Sensitive bat species" to the list of required pre- and post-construction surveys. Ms. Gilbert's (untimely) proposed revisions to Recommended Amended Fish and Wildlife Condition 16 are addressed *infra* under the heading *Proposed Site Certificate Conditions Unrelated to Identified Issues on Which the Limited Parties Have Standing in the Contested Case*.

iii. The final Sage-Grouse Habitat Mitigation Plan shall include compensatory mitigation sufficient to address impacts from, at a minimum, all facility components except indirect impacts from existing access roads substantially modified for the facility (related or supporting facilities). For calculation purposes, new facility roads with access control will be assigned a “no-traffic” designation, and new roads without access control will be assigned a “low-traffic” designation.

Issue FW-12: Whether Applicant should include in its Fish Passage Plan and be required to replace a culvert on an unnamed stream (referenced as Crossing ID R-37969 in Exhibit BB-2, Table 1) to an appropriate size for fish passage.

The *Amended Order on Party Status* granted Anne March limited party status on Issue FW-12. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue FW-12*, issued August 13, 2021, and incorporated herein by this reference, the ALJ dismissed Issue FW-12 from the contested case. The ALJ found that Idaho Power is not required to prepare a Fish Passage Plan for Crossing R-37969 or replace the existing culvert at that location because Idaho Power did not propose new construction or major replacement of the artificial obstruction at that crossing location.

Issue FW-13: Whether the proposed Morgan Lake Alternative route complies with the Fish and Wildlife Habitat standard.

The *Amended Order on Party Status* granted Michael McAllister limited party status on Issue FW-13. In the *Ruling and Order on Motions for Summary Determination of Contested Case Issues FW-13, R-2, and SP-2*, issued August 3, 2021 and incorporated herein by this reference, the ALJ dismissed Issue FW-13 from the contested case. The ALJ found that Mr. McAllister did not present any evidence demonstrating that the proposed facility is inconsistent with general fish and wildlife habitat mitigation goals and standards along the Morgan Lake Alternative route.

Mr. McAllister took an interlocutory appeal of this ruling.¹⁷ In the *Energy Facility Siting Council Order on Interlocutory Appeal of Administrative Law Judge’s Ruling on Motion for Summary Determination for Limited Party McAllister’s Issues FW-13, SP-2 and R-2*, issued September 17, 2021, and incorporated herein, the Council affirmed the ALJ’s Ruling and dismissed Issue FW-13 from the contested case proceeding.

Historic, Cultural and Archeological Resources Standard (HCA)

Issue HCA-2: Whether the revision of Historic, Cultural and Archeological Resources Condition 1 (mitigation for NRHP-Eligible Oregon Trail/NHT

¹⁷ Mr. McAllister was entitled to take an interlocutory appeal to the Council because the *Ruling and Order on Motions for Summary Determination of Contested Case Issues FW-13, R-2, and SP-2* would have terminated Mr. McAllister’s right to participate in the contested case proceeding. OAR 345-015-0057(1).

segments) fails to consider BLM Programmatic Agreement and adds new requirements for mitigation that are inconsistent with the Department's definition of "mitigation" in OAR 345-001-0010(33).

The *Amended Order on Party Status* granted Gail Carbiener and the Oregon California Trail Association limited party status on Issue HCA-2. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issues HCA-2 and HCA-5*, issued August 10, 2021 and incorporated herein by this reference, the ALJ dismissed Issue HCA-2 from the contested case. The ALJ found that there is no Council standard or rule requiring Idaho Power to adhere to the BLM Programmatic Agreement, and the Department acted within its authority under OAR 345-001-0010(33) in recommending a county-level mitigation requirement to the HPMP.

Issue HCA-5: Whether Applicant adequately analyzed the feasibility of undergrounding the transmission line as mitigation for potential visual impacts at Flagstaff Hill/NHOTIC.

The *Amended Order on Party Status* granted Jennifer Miller limited party status on Issue HCA-5. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issues HCA-2 and HCA-5*, issued August 10, 2021 and incorporated herein by this reference, the ALJ dismissed Issue HCA-5 from the contested case. The ALJ found that Idaho Power had no obligation to analyze the feasibility of undergrounding the transmission line and the Department had no authority to evaluate alternative routes or mitigation plans not proposed in the ASC.

Land Use Standard (LU)

Issue LU-2: Whether Applicant erred in calculating the percentage of forestland in Umatilla and Union Counties, thereby underestimating and misrepresenting the amount of potentially impacted forestland.

The *Amended Order on Party Status* granted Kathryn Andrew limited party status on Issue LU-2. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issues LU-2, LU-3, LU-5 and LU-6 (Ruling on Issues LU-2, LU-3, LU-5 and LU-6)*, issued July 21, 2021 and incorporated herein by this reference, the ALJ dismissed Issue LU-2 from the contested case. The ALJ found that although Idaho Power erred in calculating the percentage loss to the forestland base in Umatilla and Union Counties, the math errors were not material to Idaho Power's Goal 4 analysis and the proposed project's compliance with the Land Use Standard.

Issue LU-3: Whether Applicant's analysis of forestland impacts failed to consider all lands defined as Forest Land under state law, thereby misrepresenting forest land acreage.

The *Amended Order on Party Status* also granted Ms. Andrew limited party status on Issue LU-3. In the *Ruling on Issues LU-2, LU-3, LU-5 and LU-6*, the ALJ dismissed Issue LU-3 from the contested case. The ALJ found that Idaho Power properly identified all forestland in the project area for purposes of its Goal 4 analysis and compliance with the Land Use Standard.

Issue LU-5: Whether calculation of forestlands must be based on soil class or whether it is sufficient to consider acreage where forest is predominant use.

The *Amended Order on Party Status* granted Irene Gilbert limited party status on Issue LU-5. In the *Ruling on Issues LU-2, LU-3, LU-5 and LU-6*, the ALJ dismissed Issue LU-5 from the contested case. The ALJ found that, in accordance with the Union County Zoning, Partition, and Subdivision Ordinance (UCZPSO), Idaho Power properly used SSURGO soil classification data in determining the predominant use of hybrid-zoned land in Union County.

Issue LU-6: Whether the alternatives analysis under ORS 215.275 included all relevant farmland.

The *Amended Order on Party Status* also granted Ms. Gilbert limited party status with standing on Issue LU-6. In the *Ruling on Issues LU-2, LU-3, LU-5 and LU-6*, the ALJ dismissed Issue LU-6 from the contested case. The ALJ found that Idaho Power's analysis under ORS 215.275 of the need to site the facility on EFU-zoned land included all relevant farmland.

Issue LU-10: Whether the Department-proposed revisions to the Proposed Order requiring landowner consultation pursuant to ORS 215.276 are unnecessarily specific as to high-value farmland owners.

Only the Department and Idaho Power have standing on Issue LU-10. In the *Ruling on Issues FW-9, FW-10, FW-11 and LU-10*, the ALJ found that Idaho Power was entitled to a favorable ruling on Issue LU-10. Specifically, the ALJ ruled:

With regard the Land Use standard, the pertinent language in Section 7.2 (General Provisions) of Attachment K-1, Agricultural Lands Assessment, shall be revised as follows:

- Prior to construction, IPC shall provide notification to the record owner of any land within the site boundary, of the opportunity to consult with IPC for the purpose of locating and constructing the transmission line in a manner that minimizes impacts to farming operations or other operations of land uses for non-agricultural lands.
- The initial notification to the record owner shall allow two weeks to respond to the opportunity to consult with IPC. If the record owner does not respond to IPC within two weeks of the initial notification, IPC shall provide a second notification of the opportunity to consult with IPC via certified mail. If the record owner does not respond within two weeks of the second notification, IPC will have satisfied its obligation to consult pursuant to ORS 215.276(2).

- IPC shall establish the notification list using georeferenced maps containing property owner tax lot information, obtained from the most recent county tax assessor roll.
- IPC shall maintain the georeferenced map and notification list, including a list of record owners that completed consultation and record owners that failed to respond.

Need Standard (N)

Issue N-1: Whether the Department erred in defining capacity in terms of kilovolts instead of megawatts.

The *Amended Order on Party Status* granted STOP B2H limited party status on Issue N-1. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issues N-1, N-2, and N-3 (Ruling on Issues N-1, N-2 and N-3)*, issued July 29, 2021 and incorporated herein by this reference, the ALJ dismissed Issue N-1 from the contested case. The ALJ found that the Department did not err in defining capacity in terms of kilovolts for purposes of evaluating the need for the B2H Project under the Least-Cost Plan Rule.

Issue N-2: Whether in evaluating capacity, the Department applied balancing considerations in contravention of OAR 345-022-0000(3)(d).

The *Amended Order on Party Status* also granted STOP B2H limited party status on Issue N-2. In the *Ruling on Issues N-1, N-2, and N-3*, the ALJ dismissed Issue N-2 from the contested case. The ALJ found that the Department concluded Idaho Power demonstrated the need for the facility under the Least-Cost Plan Rule, OAR 345-023-0020(2), and did not apply balancing considerations to the Need Standard in contravention of OAR 345-022-0000(3)(d).

Issue N-3: Whether Applicant demonstrated need for the proposed facility when Applicant only showed that its needs represent 21 percent of the total capacity.

The *Amended Order on Party Status* also granted STOP B2H limited party status on Issue N-3. In the *Ruling on Issues N-1, N-2, and N-3*, the ALJ dismissed Issue N-3 from the contested case. The ALJ found that Idaho Power demonstrated the need for the proposed facility under the Least-Cost Plan Rule in accordance with OAR 345-023-0005(1) and OAR 345-023-0020(2).

Noise Control Regulations (NC)

Issue NC-5: Whether the revisions in the Proposed Order, Section IV.Q.1, Noise Control Regulation (Methods and Assumptions for Corona Noise Analysis) are inaccurate, specifically the use of the 12:00 a.m. to 5:00 a.m. timeframe to establish ambient noise levels.

The *Amended Order on Party Status* granted Ms. Gilbert limited party status on Issue NC-5. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue NC-5*, issued August 9, 2021 and incorporated herein by this reference, the ALJ dismissed Issue NC-5 from the contested case. The ALJ found that neither Idaho Power nor the Department limited its analysis of potential noise exceedances to the 12:00 a.m. to 5:00 a.m. timeframe. Rather, the potential noise exceedance analysis was based on data from all hours of the day, throughout the entire year.

Retirement and Financial Assurance Standard (RFA)

Issue RFA-3: Whether Applicant has satisfied the Retirement and Financial Assurance standard, whether the financial assurances in the Proposed Order adequately address the risk of stranded assets, and whether Council must evaluate the ability of other project partners to meet financial assurance and retirement cost requirements.

The *Amended Order on Party Status* granted Charles Gillis limited party status on Issue RFA-3. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue RFA-3*, issued July 20, 2021 and incorporated herein by this reference, the ALJ dismissed Issue RFA-3 from the contested case and dismissed Mr. Gillis as a limited party. The ALJ found that Idaho Power satisfied the Retirement and Financial Assurance Standard, that the financial assurances in the Proposed Order adequately address the risk of stranded assets, and that and the Council is not required to consider the ability of other project partners to meet financial assurance and retirement cost requirements.

Mr. Gillis did not appeal the ruling terminating his right to participate in the contested case proceeding and dismissing Issue RFA-3. Therefore, the *Ruling and Order on Motion for Summary Determination of Contested Case Issue RFA-3* issued July 20, 2021 is final.¹⁸

Scenic Resources Standard/Protected Areas Standard (SR)

Issue SR-1: Whether Applicant was required to evaluate impacts to Morgan Lake Park under the Scenic Resources standard because it is recognized as a scenic resource in a local plan (Morgan Lake Recreational Use and Development Plan).

The *Amended Order on Party Status* granted Lois Barry limited party status on Issue SR-1. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue SR-1*, issued July 14, 2021 and incorporated herein by this reference, the ALJ dismissed issue SR-1 from the contested case. The ALJ found that Idaho Power was not required to evaluate impacts to Morgan Lake Park under the Scenic Resources standard because no local land use plan identified Morgan Lake Park as a significant or important scenic resource.

Issue SR-4: Whether Applicant should have evaluated Union County as an important scenic resource under the Scenic Resources standard and, if so, whether

¹⁸ See OAR 345-015-0024(2) and OAR 345-015-0057(2).

the Department erred in concluding that the proposed facility is not likely to result in significant adverse impact to this scenic resource.

The *Amended Order on Party Status* granted David Moyal and Daniel White limited party status on Issue SR-4. In the *Rulings and Order on Motions for Summary Determination of Contested Case Issue SR-4, Limited Parties David Moyal and Daniel White*, issued July 14, 2021 and incorporated herein by this reference, the ALJ dismissed Issue SR-4 and limited parties David Moyal and Daniel White from the contested case. The ALJ found that Idaho Power had no obligation to evaluate Union County as a significant or important scenic resource in the ASC and the Department did not err in omitting an evaluation of Union County as a significant or important scenic resource under the Scenic Resources standard.

Neither Mr. Moyal nor Mr. White appealed this ruling dismissing Issue SR-4 and terminating their right to participate in the contested case proceeding. Therefore, the *Rulings and Order on Motions for Summary Determination of Contested Case Issue SR-4, Limited Parties David Moyal and Daniel White*, is final.¹⁹

Issue SR-5: Whether the Rice Glass Hill Natural Area should be evaluated as a Protected Area.

The *Amended Order on Party Status* granted Susan Geer limited party status on Issue SR-5. In the *Ruling and Order on Motion for Summary Determination on Contested Case Issue SR-5*, issued July 21, 2021 and incorporated herein by this reference, the ALJ dismissed Issue SR-5 from the contested case. The ALJ found that because the Rice Glass Hill Natural Area was not registered as a Natural Area as of May 11, 2007, Idaho Power had no obligation to evaluate the Rice Glass Hill Natural Area as a Protected Area in ASC Exhibit L.

Issue SR-6: Whether Applicant's visual impact assessments are invalid because Applicant did not incorporate Oregonians' subjective evaluation of their resources to evaluated visual impacts, thereby invalidating the visual impact analysis for Morgan Lake Park and other protected areas, scenic resources and important recreational opportunities.

The *Amended Order on Party Status* granted STOP B2H and Lois Barry limited party status on Issue SR-6. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue SR-6*, issued July 26, 2021 and incorporated herein by this reference, the ALJ dismissed Issue SR-6 from the contested case. The ALJ found Idaho Power's visual impact assessments are valid. In addition, the ALJ found that Idaho Power had no obligation under the Council's siting standards to incorporate Oregonians' subjective evaluations of the resource and that Idaho Power's visual impact methodology accounted for viewer subjective evaluations by assuming that all identified visual resources were highly sensitive to impacts.

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¹⁹ See OAR 345-015-0024(2) and OAR 345-015-0057(2).

Soil Protection Standard (SP)

Issue SP-2: Whether the proposed Morgan Lake Alternative complies with the Soil Protection standard.

The *Amended Order on Party Status* granted Mr. McAllister limited party status with standing on Issue SP-2. In the *Ruling and Order on Motions for Summary Determination of Contested Case Issues FW-13, R-2, and SP-2*, issued August 3, 2021 and incorporated herein by this reference, the ALJ dismissed Issue SP-2 from the contested case. The ALJ found that Mr. McAllister did not present any evidence demonstrating that the proposed facility will result in significant adverse impacts to soils in the analysis area along the Morgan Lake Alternative route.

Mr. McAllister took an interlocutory appeal of this ruling. In the *Energy Facility Siting Council Order on Interlocutory Appeal of Administrative Law Judge's Ruling on Motion for Summary Determination for Limited Party McAllister's Issues FW-13, SP-2 and R-2*, issued September 17, 2021, and incorporated herein, the Council affirmed the ALJ's Ruling and dismissed Issue SP-2 from the contested case proceeding.

Structural Standard (SS)

Issue SS-4: Whether Applicant should remove the Hawthorne Loop as a construction access route due to the steep grade and the potential landslide risks if modifications are needed to support construction-related traffic.

The *Amended Order on Party Status* granted Dale and Virginia Mammen limited party status on Issue SS-4. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue SS-4*, issued July 23, 2021 and incorporated herein by this reference, the ALJ dismissed Issue SS-4 from the contested case. The ALJ found that Idaho Power did not propose the Hawthorne Loop as a "related or supporting facility" within the site boundary and did not propose modifications to the Hawthorne Loop as a construction access route, and that the Council lacks jurisdiction to consider and review roads that Idaho Power did not propose as related or supporting facilities.

Threatened and Endangered Species Standard (TE)

Issue TE-1: Whether Applicant was required to have an Oregon Department of Agriculture botanist review the ASC.

The *Amended Order on Party Status* granted Susan Geer limited party status on Issue TE-1. In the *Ruling and Order on Motions for Summary Determination of Contested Case Issue TE-1*, issued July 20, 2021 and incorporated herein by this reference, the ALJ dismissed Issue TE-1 from the contested case. The ALJ found that Idaho Power was not obligated to have an Oregon Department of Agriculture botanist review the ASC, and that the Council (through the Department) properly consulted with the ODA in evaluating the proposed project's compliance with the Threatened and Endangered Species standard as required by OAR 345-022-0070.

General Standard - Miscellaneous Issues (M)

Issue M-1: Site Boundary: Whether, due to substantial modifications likely necessary but not proposed, Applicant should be required to amend the site boundary to include Morgan Lake Road (La Grande, Union County) and, if so, whether the Department should provide notice and the opportunity to comment to potentially affected landowners.

The *Amended Order on Party Status* granted Susan Badger-Jones limited party status with standing on Issue M-1. In the *Ruling and Order on Motion for Summary Determination on Contested Case Issues M-1, M-2, M-3, M-4, and M-5 (Ruling on Issues M-1, M-2, M-3, M-4, and M-5)*, issued July 14, 2021, and incorporated herein by this reference, the ALJ dismissed issue M-1 from the contested case. The ALJ found that the Council lacks jurisdiction to require Idaho Power to amend the site boundary to something other than what Idaho Power proposed in the ASC.

Issue M-2: Site Boundary: Whether Applicant failed to include roads and other areas of use and potential modification from the site boundary thereby prohibiting affected landowners in the proximity of these areas from the opportunity to request a contested case during the ASC process.

The *Amended Order on Party Status* granted Ms. Gilbert standing on Issue M-2. In the *Ruling on Issues M-1, M-2, M-3, M-4, and M-5*, the ALJ dismissed issue M-2 from the contested case. The ALJ found that the Council lacks the authority to evaluate routes and structures that Idaho Power did not propose in its ASC.

Issue M-3: Whether the maps provided in ASC Exhibit F, Maps 50 and 51, fail to comply with OAR 345-021-0010(1)(c)(A) because they do not name major roads or use an appropriate scale; whether Council can issue a site certificate when the proposed facility site boundary does not accurately identify access roads in Union County as related or supporting facilities.

The *Amended Order on Party Status* granted Matt Cooper standing on Issue M-3. In the *Ruling on Issues M-1, M-2, M-3, M-4, and M-5*, the ALJ dismissed issue M-3 from the contested case. The ALJ found that Idaho Power was not required to label major roads or use a particular scale on the notification maps submitted as part of ASC Exhibit F. In addition, the ALJ found the Council did not have jurisdiction to review or evaluate roads not included in the ASC as related or supporting facilities.

Issue M-4: Whether the maps provided in ASC Exhibit B, Road Classification Guide and Access Control, fail to comply with OAR 345-021-0010(1)(c)(A) because they do not include road names or use an appropriate scale; whether Council can issue a site certificate when the maps provided in the ASC are incomplete and do not accurately identify access roads in Union County as related or supporting facilities.

The *Amended Order on Party Status* granted Jane and Jim Howell standing on Issue M-4. In the *Ruling on Issues M-1, M-2, M-3, M-4, and M-5*, the ALJ dismissed Issue M-4 from the contested case. The ALJ found that the Council lacks jurisdiction to review or evaluate roads not included in the ASC as related or supporting facilities.

On August 3, 2021, after the ALJ dismissed Issue M-4, the Howells withdrew as limited parties from the contested case.

Issue M-5: Whether the maps provided in the ASC were sufficient to give notice of potential impacts from the proposed facility.

The Howells also had standing as limited parties on Issue M-5. In the *Ruling on Issues M-1, M-2, M-3, M-4, and M-5*, the ALJ dismissed issue M-5 from the contested case. The ALJ found, among other things, that the maps provided in the ASC are in compliance with the Council's requirements and there is a Council rule requiring that the maps in the ASC suffice to "give notice of potential impacts" from the proposed facility.

On August 3, 2021, after the ALJ dismissed Issue M-5, the Howells withdrew as limited parties from the contested case.

Issue M-7: Notice: Whether Mr. Proesch received adequate notice regarding the proposed transmission line.

The *Amended Order on Party Status* granted Tim Proesch limited party status with standing on Issue M-7. In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue M-7*, issued July 14, 2021 and incorporated herein by this reference, the ALJ dismissed issue M-7 from the contested case and dismissed Mr. Proesch as a limited party. In the Ruling, the ALJ found that Mr. Proesch had no recorded ownership interest in property in the immediate vicinity of the proposed facility and therefore neither Idaho Power nor the Department had any obligation to send him written notice of the proposed project.

Mr. Proesch did not appeal the ruling dismissing Issue M-7 and terminating his right to participate in the contested case proceeding. Therefore, the *Ruling and Order on Motion for Summary Determination of Contested Case Issue M-7*, is final.²⁰

Attached to this Proposed Order as Appendix 2 is a **Table of Exhibits Admitted – Summary Determination Phase**, that sets out, by issue, the affidavits and supporting documents submitted in support of, and opposition to, the motions for summary determination.

REMAINING ISSUES FOR THE CONTESTED CASE HEARING

Fish and Wildlife Habitat Standard

Issue FW-3: Whether the Draft Noxious Weed Plan (Proposed Order Attachment

²⁰ See OAR 345-015-0024(2) and OAR 345-015-0057(2).

P1-5) adequately ensures compliance with the weed control laws, ORS 569.390, ORS 569.400, and ORS 569.445.

Issue FW-5: Whether Applicant should be required to mitigate impacts to riparian areas from the setback location to the outer edges of the riparian area because the riparian habitat should be rated as Category 2 at a minimum.

Issue FW-6: Whether the Noxious Weed Plan provides adequate mitigation for potential loss of habitat due to noxious weeds when it appears to relieve Applicant of weed monitoring and control responsibilities after five years and allows for compensatory mitigation if weed control is unsuccessful.

Issue FW-7: Whether Applicant's Fish Passage Plans, including 3A and 3B designs, complies with the Fish and Wildlife Habitat standard's Category 2 mitigation requirements; whether Applicant must revisit its plans because threatened Steelhead redds have been identified in the watershed.

Historic, Cultural and Archeological Resources (HCA) Standard

Issue HCA-3: Whether Historic, Cultural and Archeological Resources Condition [2]²¹ (HPMP) related to mitigation for crossings of Oregon Trail resources provides adequate mitigation for visual impacts and sufficient detail to allow for public participation.

Issue HCA-4: Whether National Historical Oregon Trail segments with ruts located on Mr. Horst's property (Hawthorne Drive, La Grande) can be adequately protected from adverse impacts from the proposed facility.

Issue HCA-6: Whether, as part of the HPMP (Historic, Cultural and Archeological Resources Condition 2)²², Applicant should be required to have an Oregon Trail expert, recommended by OCTA and agreed to by the Field Director, added to the Cultural Resource Team and present during preconstruction surveys to adequately identify emigrant trail locations.

Issue HCA-7: Whether Applicant adequately evaluated archeological resource "Site 6B2H-MC-10" on Mr. Williams' property, Parcel 03S37E01300.

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²¹ This issue statement has been amended to refer to the correct condition number. Recommended HCA Condition 2 imposes requirements related to the HPMP. See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 513 of 10016. Recommended HCA Condition 1 requires that the facility components avoid direct impacts to Oregon Trail/NHT resources. *Id.* at page 474 of 10016,

²² See footnote above.

Land Use Standard

Issue LU-4: The adequacy of the analysis of potential impacts of transmission line interference with GPS units on irrigation system.

Issue LU-7: Whether the evaluation of the proposed facility impacts to the cost of forest practices accurately determined the total acres of lost production or indirect costs.

Issue LU-8: The adequacy of Applicant's evaluation of the proposed facility impacts to the cost of forest management practices and whether mitigation must be provided for the entire length of the transmission line for the operational lifetime.

Issue LU-9: Whether Applicant adequately analyzed the risk of wildfires from operation of the proposed transmission lines, especially during "red flag" warning weather conditions, and the impact the proposed transmission lines will have on Mr. Myers' ability to use an aerial applicator on his farmland.

Issue LU-11: Whether the impacts from the proposed facility on accepted farm practices and the cost of accepted farm practices have been adequately evaluated or mitigated.

Noise Control Rules

Issue NC-1: Whether the Department improperly modified/reduced the noise analysis area in Exhibit X from one mile of the proposed site boundary to ½ mile of the proposed site boundary and whether OAR 345-021-0010(1)(x)(E) requires notification to all owners of noise sensitive property within one mile of the site boundary.

Issue NC-2: Whether the Department erred in recommending that the Council grant a variance/exception from the Oregon DEQ's Noise Rules, OAR 340-035-0035, and whether the variance/exception is inconsistent with ORS 467.010.

Issue NC-3: Whether the methodologies used for the noise analysis to evaluate compliance with OAR 340-035-0035 were appropriate and whether the ODOE erred in approving the methodology used to evaluate compliance with OAR 340-035-0035.

Issue NC-4: Whether the mitigation/proposed site conditions adequately protect the public health, safety and welfare.

Issue NC-6: Whether Applicant's methodology to assess baseline noise levels (described in the Proposed Order at pp. 635-638) reflect reasonable baseline noise estimates for residents of the Morgan Lake area.

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Public Services Standard

Issue PS-1: Traffic Safety: Whether Applicant was required to evaluate traffic safety impacts from construction-related use of Morgan Lake Road.

Issue PS-2: Fire Protection: Whether the site certificate should require that the public have the opportunity to review and comment on the final Wildfire Mitigation Plan; whether the Wildfire Mitigation Plan should include remote cameras to detect wildfire, safety procedures during red flag conditions, and the requirement that firefighting equipment be present on-site during construction.

Issue PS-3: Fire Protection: Whether the Council's reliance on the Wildfire Mitigation Plan (Public Services Condition 7) prepared by Applicant for the Oregon Public Utility Commission (OPUC) is adequate to address wildfire response consistent with the Public Services standard.

Issue PS-4: Fire Protection: Whether Applicant adequately analyzed the risk of wildfire arising out of operation of the proposed facility and the ability of local firefighting service providers to respond to fires.

Issue PS-5: Whether the Wildfire Mitigation Plan is adequately developed and includes sufficient detail to allow for public participation.

Issue PS-6: Traffic Safety: Whether Applicant adequately evaluated the potential traffic impacts and modifications needed on Hawthorne Drive and Modelaire Drive (Hawthorne Loop).²³

Issue PS-8: Whether Department-proposed revisions to Public Services Condition 7 are redundant with Attachment U-3 and existing condition requirements.

Issue PS-9: Whether Department-proposed revisions to the Fire Prevention and Suppression Plan (Public Services Condition 6, Proposed Order Attachment U-3) incorrectly reference applicability to facility operations.

Issue PS-10: Whether the Draft Fire Suppression Plan (Attachment U-3) is adequate and whether local service providers would be able to respond to a facility-related fire.

Recreation Standard (R)

Issue R-1: Whether Applicant adequately evaluated the potential adverse impact

²³ Although this issue, as written, references "the Hawthorne Loop," the limited parties also challenge Idaho Power's evaluation of traffic impacts on the unpaved, privately owned portion of Hawthorne Drive. This latter portion of existing road is included within the site boundary as a related or supporting facility. See ODOE - B2HAPPDoc3-4 ASC 03_Exhibit C_Project_Location_ASC 2018-09-28, page 94 of 193.

of the proposed facility on recreational opportunities at Morgan Lake Park.

Issue R-2: Whether the visual impacts of the proposed facility structures in the viewshed of Morgan Lake Park are inconsistent with the objectives of the Morgan Lake Park Recreational Use and Development Plan and should therefore be reevaluated.

Issue R-3: Whether the mitigation proposed to minimize the visual impacts of the proposed facility structures at Morgan Lake Park (\$100,000 for recreational facility improvements) is insufficient because the park's remote areas will not benefit from the proposed mitigation.

Issue R-4: Whether Applicant's visual impact assessment for Morgan Lake Park adequately evaluates visual impacts to the more than 160 acres of undeveloped park land and natural surroundings, as visual simulations were only provided for high-use areas.

Retirement and Financial Assurance Standard (RFA)

Issue RFA-1: Whether the \$1 bond amount adequately protects the public from facility abandonment and provides a basis for the estimated useful life of the facility.

Issue RFA-2: Whether, in the event of retirement of the proposed transmission line, removal of concrete footings to a depth of one foot below the surface is sufficient to restore the site to a useful, nonhazardous condition.

Scenic Resources Standard (SR)

Issue SR-2: Whether Applicant satisfied the Scenic Resources and Protected Area standards at Flagstaff Hill/ NHOTIC and whether Applicant adequately analyzed the feasibility of undergrounding the transmission line as mitigation for potential visual impacts.

Issue SR-3: Whether Applicant adequately assessed the visual impact of the proposed project in the vicinity of the NHOTIC and properly determined the impact would be "less than significant."

Issue SR-7: Whether the methods used to determine the extent of an adverse impact of the proposed facility on scenic resources, protected area and recreation along the Oregon Trail were flawed and developed without peer review and/or public input. Specifically, whether Applicant erred in applying numeric values to the adverse impact and whether Applicant used unsatisfactory measurement locations/observation points in its visual impact assessment.

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Soil Protection Standard (SP)

Issue SP-1: Whether the Soil Protection Standard and General Standard of Review require an evaluation of soil compaction, loss of soil structure and infiltration, and loss of stored carbon in the soil and loss of soil productivity as a result of the release of stored carbon in soils.

Structural Standard (SS)

Issue SS-1: Whether Design Feature 32 of the Proposed Order Attachment G-5 (Draft Framework Blasting Plan) should be a site certificate condition to ensure repair of landowner springs from damage caused by blasting.

Issue SS-2: Whether Applicant adequately analyzed the risk of flooding in areas adjacent to the proposed transmission line arising out of the construction-related blasting. Whether Applicant should be required to evaluate hydrology, including more detailed and accurate mapping of existing creeks and ditches that drain into streets and private property, and core samples of sufficient variety and depth to determine the flooding risk to neighborhoods of south and west La Grande.

Issue SS-3: Whether Applicant should be required to test the water quality of private water wells to ensure that construction-related activities are not impacting water quality and quantity.

Issue SS-5: Whether Applicant has adequately evaluated construction-related blasting in Union County, City of La Grande, under the Structural Standard. Specifically, whether Applicant should be required to conduct site-specific geotechnical surveys to characterize risks from slope instability.²⁴

Miscellaneous Issue

Issue M-6: Whether the Proposed Order fails to provide for a public review of final monitoring plans, fails to provide long-term hazardous materials monitoring, and improperly allows exceptions that substantially increase the likelihood of a hazardous material spill in violation of OAR 345-021-0010(w).

LIMITED PARTIES AND ISSUES WITH STANDING

For the reader's convenience, the following table lists the remaining limited parties in this matter and the remaining issues on which each limited party has standing in the contested case hearing:

²⁴ As set out in the *Case Management Order*, Issue SS-5 also raised a concern about "radon emissions." *Case Management Order* at 8. However, in his hearing testimony, Mr. White focused only on slope instability. He did not offer evidence or argument regarding radon emissions. Because Mr. White did not pursue his concern about radon emissions, the ALJ considers it waived. Issue SS-5 is therefore limited to the statement above.

STOP B2H Coalition	NC-1, NC-2, NC-3, NC-4, SR-7, and SP-1
Andrew, Colin	R-1, R-3
Andrew, Kathryn	R-3
Badger-Jones	PS-1
Barry, Lois	R-2, R-3, and R-4
Barry, Peter	R-3
Carbiener, Gail/OCTA	PS-2, PS-3, RFA-1, RFA-2, and SR-2
Cooper, Matt	NC-1, PS-4, and SS-2
Deschner, Whit	SR-3
Foss, Jim and Kay	LU-4
Fouty, Suzanne	SP-1
Geer, Susan	FW-3 and FW-6
Gilbert, Irene	FW-3, FW-5, HCA-3, LU-7, LU-8, LU-11, NC-2, PS-5, R-3, and RFA-1
Gray, Dianne	NC-2 and NC-6
Horst, Joe/Cavinato, Anna	HCA-4, NC-2, PS-6 and SS-3
Lyons, Charles	PS-10
Mammen, Dale and Virginia	PS-6
March, Anne	FW-7
March, Kevin	FW-7
Marlette, JoAnne	M-6 and HCA-3
McAllister, Michael	R-2
Miller, Jennifer	SR-2, PS-2, and PS-3
Myers, Sam	LU-9 and NC-2
Webster, Stacia	HCA-6, SS-1, and PS-10
White, Jonathan	SS-5
Williams, John	HCA-7
Winters, John	PS-4

EVIDENTIARY RULINGS

As discussed above, on May 26, 2021, the ALJ admitted the entirety of the Decision-Making and Administrative Project Record for the Boardman to Hemingway Transmission Line (the B2H Project Record) into the contested case hearing record.

In addition, during the hearing phase of the contested case, the parties and limited parties in this matter filed written direct testimony and exhibits; rebuttal testimony and exhibits; surrebuttal testimony and exhibits; sur-surrebuttal testimony and exhibits; and cross-examination hearing exhibits. The **Table of Additional Admitted Evidence**, attached hereto as Appendix 1, sets out, by identified issue, the additional evidence (testimony and exhibits) admitted into the evidentiary record during the hearing phase of this matter.

The limited parties with standing on Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1 or SS-2 did not timely submit direct testimony and/or supplemental exhibits on these

nine issues.²⁵ In the *Ruling on Idaho Power Company's Motion to Dismiss Issues FW-5, HCA-6, LU-4, LU-7, LU-8, PS-1, PS-5, SS-1 and SS-2 (Motion to Dismiss Ruling)*, issued November 2, 2021, the ALJ found that by failing to present any written direct testimony and supporting exhibits by the September 17, 2021 deadline, the limited parties waived their opportunity to present any testimony or new evidence in support of their claim(s) on these issues.

In the *Rulings on Objections to Direct Testimony and Exhibits*, issued October 15, 2021, the ALJ sustained the objections of the Department and/or Idaho Power and excluded the following documents (listed by issue) from the evidentiary record:

Issue M-6: Michael Blank testimony summary.

Issue FW-3: Geer Exhibits 1, 2, 4, and 5.

Issue FW-6: Geer Exhibits 1, 2, 4, and 5.

Issue HCA-3: Marlette Witness List with witness summaries; Marlette Exhibits 6 and 7.

Issue LU-11: Unmarked Gilbert Exhibit (Myers Testimony; Issue LU-9).

Issue NC-2: STOP B2H Exhibits 7, 8, and 9; Gilbert Exhibits 5 and 10; Ritchie

statement.

Issue PS-4: Cooper Exhibits 15 and 26.

Issue PS-6: Mammen Exhibit 5; Horst/Cavinato Exhibit K.

Issue PS-10: Webster Witness List; Webster Exhibit 35; Lyons Exhibits 10 and 11.

Issue SR-7: STOP B2H Exhibit 15.

In the *Rulings on Idaho Power's Objections to Limited Parties' Surrebuttal Testimony and Exhibits*, issued January 3, 2022, the ALJ sustained Idaho Power's objections and excluded the following evidence:

Issue FW-6: Geer Surrebuttal Exhibit 5S

Issue FW-7: March Surrebuttal Exhibit D.

Issue HCA-7: Williams Surrebuttal testimony (second bullet point only).

In a *Response to Irene Gilbert's Request to Amend List of Testimony and Exhibits* issued February 16, 2022, the ALJ denied Ms. Gilbert's request to add five exhibits to Contested Case Issues LU-7, LU-8 and LU-11 in the Table of Additional Admitted Evidence.²⁶ The ALJ declined to amend the Table of Additional Admitted Evidence because Ms. Gilbert did not offer these documents in support of her position(s) on Issues LU-7, LU-8 and LU-11. The ALJ upheld this determination in a *Ruling on Gilbert's Request to Rescind Ruling Denying Request to Amend List of Testimony and Exhibits and Response to Idaho Power Company's Request for*

²⁵ Ms. Gilbert has standing on Issues FW-5, LU-7, LU-8, and PS-5. Stacia Webster has standing on Issues HCA-6 and SS-1. Jim and Kaye Foss have standing on Issue LU-4. Susan Badger-Jones has standing on Issue PS-1, and Matt Cooper has standing on Issue SS-2.

²⁶ Ms. Gilbert requested to add the Scott Hartell deposition transcript and four Land Use Board of Appeals (LUBA) decisions to Issues LU-7, LU-8, and LU-11.

Clarification issued February 25, 2022.²⁷

In a *Ruling on Irene Gilbert's Motion to Reopen the Record for Submission of Additional Evidence in Response to Motions to Strike* issued April 14, 2022, the ALJ denied Ms. Gilbert's request to reopen the evidentiary record based on a lack of good cause to do so.

FINDINGS OF FACT

Overview: the Applicant, the proposed facility and the project history

1. The applicant for the site certificate at issue herein is Idaho Power Company (Idaho Power). Idaho Power is a wholly owned subsidiary of IDACORP, Inc., incorporated in 1915. Its core business is the generation, transmission, distribution, sale, and purchase of electric energy. Idaho Power serves more than 530,000 customers within a service territory of approximately 24,000 miles in southern Idaho and eastern Oregon. Its power supply system currently includes 4,868 miles of transmission lines, including 692 miles in Oregon. The Company also operates 305 transmission and other stations, and operates and maintains 27,072 miles of distribution lines, 2,212 miles of which are located in Oregon. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 68 of 10016.)

2. The proposed facility, including four alternative route segments, is an approximately 300 mile-long, 500-kilovolt (kV) electric transmission line, plus supporting facilities including access roads and other facility components. The proposed and alternative routes for the facility extend from a switching station to be built near Boardman, Oregon, to the existing Hemingway Substation in Owyhee County, Idaho. The proposed and alternative routes cross five counties in Oregon (Morrow, Umatilla, Union, Baker, and Malheur) and Owyhee County in Idaho. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8 of 10016.)

3. Because the proposed facility also crosses land managed by the Bureau of Land Management (BLM), the Bureau of Reclamation (BOR), the Department of Defense/United States Army Corps of Engineers (USACE), and the United States Forest Service (USFS), the proposed facility is also subject to the permitting process of these federal agencies. (Ranzetta Rebuttal Test. at 12; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8 of 10016.)

4. On July 10, 2010, the Department received a Notice of Intent (NOI) from Idaho Power stating the Company's intent to file an ASC for the proposed Boardman to Hemingway transmission line. On July 16, 2010, the Department issued a public notice of the NOI to the Council's mailing lists and to adjacent property owners as defined in OAR 345-020-0011(1)(f). The Department distributed this public notice jointly with the BLM, the lead agency overseeing the National Environmental Policy Act (NEPA) federal review process, to satisfy both Council and NEPA requirements. The Department also published the notice in multiple local area newspapers within the vicinity of the proposed facility announcing a series of public scoping

²⁷ Because Ms. Gilbert and Ms. Andrew submitted the Hartell deposition transcript with their oppositions to Idaho Power's Motion for Summary Determination on Issues LU-2, LU-3, LU-5, LU-6, there was no need to accept Ms. Gilbert's offer of proof for this document.

meetings in several cities along the proposed transmission line route and requesting public comments on the NOI. In addition, the Department issued review requests to Special Advisory Groups (SAGs), state agencies, local governments, and tribal governments. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 10 of 10016.)

5. On March 2, 2012, the Department issued a Project Order in accordance with OAR 345-015-0160. The Project Order set out the state statutes, administrative rules, and permitting requirements applicable to the construction and operation of the proposed facility and the necessary contents for the ASC. In addition, the Project Order specified the analysis area for the proposed facility. (ODOE - B2HNOIDoc85 B2H-0185 Project Order 2012-03-02, pages 1-40.)

6. On February 27, 2013, Idaho Power submitted its preliminary application for site certificate (pASC) to the Department. (ODOE - B2HAPPDoc1 pASC 00_TOC - 2013-02-28.) The Department, in turn, prepared a review request memorandum to reviewing agencies and compiled a distribution list including all pertinent reviewing agencies listed in OAR 345-001-0010. In accordance with ORS 469.350(2) and OAR 345-021-0050, Idaho Power distributed the Department's memorandum and the pASC to each reviewing agency. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 11 of 10016.)

7. On December 22, 2014, in anticipation of Idaho Power amending the pASC, the Department issued a First Amended Project Order that described and updated the site certificate application requirements. (ODOE - B2HAPPDoc100 First Amended Project Order_12-22-2014, pages 1-34.)

8. The BLM issued its Final Environmental Impact Statement (EIS) in November 2016, and then published its Record of Decision (ROD) on November 17, 2017. The ROD identified the BLM's preferred route for the proposed facility. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 12 of 10016.)

9. In July 2017, Idaho Power submitted an Amended Preliminary Application for Site Certificate (ApASC) to the Department. The Department determined that the ApASC was incomplete and, on September 17, 2017, issued a memorandum to Idaho Power setting out the remaining required information and pending agency comments. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 12 of 10016.)

10. On July 26, 2018, the Department issued a Second Amended Project Order reflecting changes resulting from recent rulemaking and updating the reviewing agency list based on the proposed route and alternative route segments set out in the ApASC. (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, pages 1-29.)

11. Between September 2017 and September 2018, the Department reviewed the ApASC and issued formal requests to Idaho Power for additional information (RAIs). The Department issued RAIs pertaining to ASC exhibits and in response to reviewing agency, local government, and tribal government comment letters. Idaho Power provided responses to the RAIs. After reviewing Idaho Power's responses and, where appropriate, consulting with reviewing agencies to verify the sufficiency of information related to ASC exhibit requirements, the Department

determined the ASC complete as of September 21, 2018.²⁸ (ODOE - B2HAPPDoc1 ASC Determination of Complete Application 2018-09-21, pages 1-3; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 14 of 10016.)

12. On October 3, 2018, the Department issued a Public Notice of the complete ASC. The Department published the notice in local newspapers in Morrow, Umatilla, Union, Baker and Malheur counties, emailed the notice to those on the Department's email list serve, and mailed printed notices to approximately 8,300 physical addresses on the Council's special meeting list for the proposed facility. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 13 of 10016.)

13. In the ASC, as a result of its siting studies and the federal review process, Idaho Power proposed a primary route ("the proposed route") and, in certain areas, alternative routes (the West of Bombing Range Road alternative, the Morgan Lake alternative, and the Double Mountain alternative).²⁹ The proposed and alternative routes allowed Idaho Power options in selecting the final route. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 18 of 10016.)

14. In October 2018, the Department held a series of public information meetings on the completed ASC in the cities of Ontario, Baker City, La Grande, Pendleton, and Boardman, Oregon. The Department also provided notice of the complete ASC to reviewing agencies, along with a request for agency reports on the ASC. Idaho Power mailed all reviewing agencies copies of the complete ASC with the notice and a request for an agency report. In November 2018, the Department received comments from the following agencies, special advisory groups, and tribal governments:

- Baker County Planning Department/Board of Commissioners (Special Advisory Group)
- City of La Grande Planning Department
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Oregon Department of Aviation
- Oregon Department of Environmental Quality
- Oregon Department of Forestry

²⁸ Pursuant to OAR 345-015-0190(5), an ASC is complete "when the Department finds that the applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council standards."

²⁹ In selecting the proposed and alternative routes identified in the ASC, Idaho Power had to balance a myriad of competing constraints and opportunities, which it discussed in detail in ASC Exhibit B. Constraints that drove Idaho Power to select the routes identified in the ASC included federal land management agency requirements and federal land management plans, Western Electricity Coordinating Council Common Corridor Criteria and prudent utility practice, the ODFW's sage grouse habitat rules and fish and wildlife habitat mitigation policies including the prohibitions against siting an energy facility on lands designated Category 1 habitat, prohibitions against siting an energy facility in an identified protected area, and other requirements imposed as part of the Council review process and compliance with site certificate conditions. (Stippel Rebuttal Test., Issues NC-1 and NC-2, at 11.)

- Oregon Department of Fish and Wildlife
- Oregon Department of Transportation
- Oregon Department of State Lands
- Oregon State Historic Preservation Office
- Oregon Water Resources Department
- Union County Planning Department/Board of Commissioners
- United States Bureau of Land Management
- United States Bureau of Reclamation
- United States Department of the Navy
- United States Forest Service

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 13-14 of 10016.)

15. In March 2019, Idaho Power submitted additional information and errata in response to the reviewing agency comments and in response to additional information requests from the Department pursuant to OAR 345-015-0190(9). Thereafter, the Department issued a notice and posted the errata information on its website. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 14 of 10016.)

16. On May 16, 2019, the Council appointed the undersigned ALJ as the hearing officer to conduct the public hearings on the draft proposed order and the contested case proceeding. (ODOE - B2HAPPDoc1 DPO Hearing Officer Appointment 2019-05-16, pages 1-3.)

17. On May 22, 2019, the Department issued a Draft Proposed Order (DPO), public notice of a 62-day comment period on the DPO, and notice of public hearings on the DPO. (ODOE - B2HAPPDoc2 DPO Public Notice 2019-05-22, pages 1-4).

18. In June 2019, on the Council's behalf, the ALJ conducted a public hearing on the DPO in each of the five Oregon counties to be crossed by the proposed facility. The Malheur County hearing was held in Ontario on June 18, 2019. The Baker County hearing was held in Baker City on June 19, 2019. The Union County hearing was held in La Grande on June 20, 2019. The Umatilla County hearing was held in Pendleton on June 26, 2019. And the Morrow County hearing was held in Boardman on June 27, 2019. At the June 26, 2019 hearing in Pendleton, the Council extended the public comment period from July 23, 2019 to August 22, 2019, and extended the applicant's deadline to respond to DPO comments by 60 days, from July 23, 2019 to September 23, 2019. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 14-17 of 10016.)

19. On September 19, 2019, Idaho Power requested an extension of time to respond to comments received on the DPO from September 23, 2019 to November 7, 2019, based on the volume and substance of the comments. Chair Beyeler granted the extension via emergency action, which the Council ratified at its September 26, 2019 Council meeting. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 15 of 10016.)

20. On July 2, 2020, the Department issued the Proposed Order on Application for Site

Certificate (Proposed Order), setting out recommended findings of fact, reasoning, recommended conditions and conclusions of law. The Department proposed as follows:

Subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that preponderance of evidence on the record supports the following conclusions:

1. The proposed Boardman to Hemingway Transmission Line complies with the requirements of the Oregon Energy Facility Siting Council Statutes, ORS 469.300 to 469.520.
2. The proposed Boardman to Hemingway Transmission Line complies with the standards adopted by the Council pursuant to ORS 469.501.
3. The proposed Boardman to Hemingway Transmission Line complies with all other Oregon statutes and administrative rules identified in the second amended project order as applicable to the issuance of a site certificate for the proposed facility.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 697 of 10016.)

Findings related to the Fish and Wildlife Habitat standard

21. In the Second Amended Project Order, the Department stated, in pertinent part, as follows with regard to the requirements of OAR 345-021-0010(1)(p) and the Fish and Wildlife Habitat standard:

The applicant has proposed a “phased survey” approach for data collection during the site certificate review process. * * * For linear facilities, such as transmission lines, there may be situations where the applicant is able to conduct field surveys on several parcels within the site boundary but may not have access on adjacent parcels. In such circumstances, it may be possible that the combination of on-site field surveys plus a desktop evaluation of existing data, aerial photography, and “over the fence” surveys may meet the information requirements of Exhibit P. If the field survey coverage is sufficient for ODOE and Oregon Department of Fish and Wildlife (ODFW) to consider that the information provided is representative of the fish and wildlife habitat, and sensitive species occurrence or habitat, it is possible that this information could be sufficient to be evaluated for compliance with the applicable Council fish and wildlife habitat standard. Exhibit P shall include as much information as possible about the results of the field surveys conducted to date for biological resources and the schedule for future surveys.

Exhibit P shall include an analysis of how the evidence provided supports a finding by the Council that the proposed facility meets the Council’s fish and wildlife habitat standard. Exhibit P must include the results of all surveys for fish

and wildlife habitat in the analysis area. Exhibit P must also identify all state sensitive species that may be present in the analysis area and include the results of surveys for state sensitive species. Also include the survey methodology, including scope and timing of each survey. Surveys must be performed by qualified survey personnel during the season or seasons appropriate to the detection of the species in question. The applicant must also include in Exhibit P its habitat categorization and tables depicting the estimated temporary and permanent impacts, broken down by habitat categories.

* * * * *

Fish and Wildlife Habitat Mitigation Policy (OAR Chapter 635, Division 415) classifies six habitat categories and establishes a mitigation goal for each category. The applicant for a site certificate must identify the appropriate habitat category for all areas affected by the proposed facility and provide the basis for each category designation, subject to ODFW review. The applicant must show how it would comply with the habitat mitigation goals and standards by appropriate monitoring and mitigation.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, pages 18-19 of 29.)

Noxious weed control

22. In ASC Exhibit P1, Attachment P1-5, Idaho Power provided a draft Noxious Weed Plan to describe the measures the Company will take to control noxious weed species and prevent the introduction of these species prior to construction, during construction, and during operation and management of the project. Idaho Power acknowledged that it is the responsibility of the Company and its construction contractors, working with the appropriate land management agencies and the Department, to ensure that noxious weeds are identified and controlled during the construction and operation of the facility and that all applicable federal, state, county, and other local requirements are satisfied. (ODOE - B2HAPPDoc3-25 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, page 744 of 940.)

23. As noted in ASC Exhibit P1, Attachment P1-5, the goal of the Noxious Weed Plan is to describe methods for early detection, containment, and control of noxious weeds that will be implemented during project construction and operation. The Noxious Weed Plan describes the known status of noxious weed species within the project site boundary, the regulatory agencies responsible for the control of noxious weeds, and steps Idaho Power will take in controlling and preventing the establishment and spread of noxious weed species during construction and operation of the facility. The Noxious Weed Plan also describes general preventive and treatment measures, monitoring to evaluate of the effectiveness of the prescribed noxious weed prevention and the control measures to be implemented during the operational phase of the project. (ODOE - B2HAPPDoc3-25 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, pages 744-69 of 940.)

24. In the Noxious Weed Plan, Idaho Power explained that the Company will only be responsible for controlling noxious weeds that are within project right-of-ways (ROWs) and that are a result of the company's construction or operation-related, surface-disturbing activities in the following areas:

Transmission line: Entirety of the ROWs and/or easements;
New roads: Entirety of the ROWs and/or easements;
Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
Communication stations: Entirety of the ROWs and/or easements;
Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

Idaho Power noted that the Company is not responsible for controlling noxious weeds that occur outside of project ROWs or for controlling or eradicating noxious weed species that were present prior to the project. Idaho Power added the following with respect to pre-existing weed infestations:

[Idaho Power] recognizes ORS Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if [Idaho Power] identifies pre-existing weed infestations within a Project ROW, [the Company] will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.

(ODOE - B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, page 760 of 940.)

25. In addition to the draft Noxious Weed Plan, Idaho Power also provided in ASC Exhibit P1 a draft Reclamation and Revegetation Plan (Attachment P1-3) and a draft Vegetation Management Plan (Attachment P1-4). The purpose of the Reclamation and Revegetation Plan is to provide a framework for the reclamation treatments to be applied to areas impacted by the project construction, operation, and maintenance activities. (ODOE - B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, page 556-592 of 940.) The purpose of the Vegetation Management Plan is to describe the methods in which vegetation along the transmission line will be managed during operation of the project. (*Id.* at page 596 of 940.)

26. In the Proposed Order, Section IV.H.1, General Fish and Wildlife Mitigation, the Department addressed, among other things, Idaho Power's methodology for evaluating habitat quantity and quality within the analysis area, the habitat assessment, the potential impacts to fish and wildlife habitat from construction and operation of the proposed facility, and the proposed habitat mitigation plans. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 313-20 of 10016.) The Department described the components of the draft Reclamation and Revegetation Plan, and as Recommended Fish and Wildlife Condition 1, required Idaho Power to finalize, prior to construction of a phase or segment of the facility, the

draft Reclamation and Revegetation Plan. (*Id.* at pages 320-323 of 10016.) As Recommended Fish and Wildlife Condition 2, the Department required Idaho Power to, prior to construction of a phase or segment of the facility, finalize and submit to the Department for its approval, in consultation with ODFW, a final Vegetation Management Plan. (*Id.* at page 324 of 10016.)

27. In the Proposed Order, the Department described the components of the Noxious Weed Plan and found, in pertinent part, as follows:

The draft Noxious Weed Plan provides for control of the two State-level weed lists - Class A and Class B weeds (including those that have been T-designated),³⁰ along with county-level Class A, Class B, and Class C weeds (Attachment P1-5 Section 2.1 of this order). T-designated weeds indicate that the weed is a priority target for control. Further, the Plan ensures that the list of weeds being managed would be up to date, stating: “IPC will review the county lists on a regular basis to ensure that monitoring and control actions are targeting the appropriate species.” If there are weeds listed at the State or county level that are not currently listed in the plan, those weeds would be incorporated during plan finalization, in accordance with the Agency Review Process incorporated by the Department.

The draft Noxious Weed Plan requires pre-construction noxious weed surveys (see Section 4.0 of the plan) for the purpose of establishing pre-disturbance treatment areas, to minimize potential for weed dispersal following commencement of construction activities. The plan also requires vehicle washing stations (wheel washing) in areas identified with noxious weeds, prior to and during construction. During construction and operation, the plan requires control and treatment measures. The final treatment methodologies would be developed based on state and country regulations; applicable land use management requirements; consultation with land managers, county weed boards, and ODOE; and site-specific circumstances; to occur based on the pre-construction Agency Review Process incorporated by the Department consistent with OAR 345-025-0016. The Agency Review Process includes a dispute resolution process to ensure the final plan appropriately satisfies applicable regulatory requirements. * * *

The plan requires agency consultation to establish frequency for long-term monitoring, which would be site-specific. In other words – there may be increased long-term monitoring frequency in disturbance areas with identified noxious weed infestations, and decreased monitoring frequency in disturbance areas without infestations. The plan also addresses ORS Chapter 569, which imposes certain obligations onto occupiers of land within a weed district. To address those obligations, the plan requires that the applicant work with landowners or land management agencies to identify and address weed infestations within the site boundary. Council cannot require the applicant to control weeds outside of the site boundary, either under its standards or ORS Chapter 569, because Council’s

³⁰ T-designated weeds are designated by the Oregon State Weed Board for prevention and control by the Noxious Weed Control Program. Action against T-designated weeds receive priority. (Taylor Rebuttal Test. at 12.)

jurisdiction covers the “site” of the proposed facility. However, land owner consultation would be an ongoing mitigation process under the Agricultural Mitigation Plan, Revegetation Plan and Noxious Weed Plan, where adequate opportunities to evaluate potential offsite impacts could be discussed – additionally, county weed districts have funding and the authority to support landowners with recommendations and implementation of control measures.

* * * At this time, other than presence of noxious weeds within the analysis area, no evidence has been provided on the record that questions the validity of the Noxious Weed Plan or the applicant’s ability to implement and adhere to the requirements of the plan.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 324-25 of 10016.)

28. The Department also included, as Recommended Fish and Wildlife Condition 3, the following:

Recommended Fish and Wildlife Condition 3: The certificate holder shall:

a. Prior to construction of a phase or segment of the facility, in accordance with the OAR 345-025-0016 agency consultation process outlined in the draft Noxious Weed Plan(s) (Attachment P1-5 of the Final Order on the ASC), finalize, and submit to the Department for its approval, a final Noxious Weed Plan. The protective measures as described in the draft Noxious Weed Plan provided as Attachment P1-5 to the Final Order on the ASC, shall be included and implemented as part of the final Noxious Weed Plan, unless otherwise approved by the Department.

b. During operation, the certificate holder shall conduct all work in compliance with the final Noxious Weed Plan referenced in sub(a) of the condition.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 326 of 10016; emphasis in original.)

29. After issuance of the Proposed Order, and in response to concerns raised by the limited parties, Idaho Power updated its draft Noxious Weed Plan to provide more clarity. In the updated draft Noxious Weed Plan, Idaho Power added the requirement that the Company will review the state and county lists annually to ensure that monitoring and control actions are targeting the appropriate species. (Taylor Rebuttal Ex. B at 12.) Idaho Power also updated Table 1, Designated Noxious Weeds Known to Occur or with the Potential to Occur within the Site Boundary. (*Id.* at 15.) With regard to preconstruction surveys, Idaho Power added that surveyors will be trained to identify Oregon flora, specifically native plants, noxious weeds, and threatened and endangered plant species. (*Id.* at 27.) With regard to prevention, and in particular vehicle cleaning, Idaho Power added that “all Construction Contractor(s) will clean construction vehicles and equipment at the Project multi-use areas or other cleaning stations each night or

morning prior to returning to the Project construction areas.” (*Id.* at 29.) Idaho Power also noted that it may avoid cleaning construction vehicles and equipment when moving from noxious weed-contaminated areas to other areas along the transmission line ROW if it “demonstrates, in consultation with ODOE and the relevant county weed department, that Idaho Power has sufficiently controlled the weed contamination or that seasonal limitations will be effective in avoiding the spread of the noxious weeds.” (*Id.*)

30. With regard to post-construction treatments, Idaho Power amended the Noxious Weed Plan to state that the Company will implement noxious weed control efforts “at least once annually” for the first five years and, with the concurrence of the Department, will “continue to monitor the sites as described below in Section 6.1, but will cease treatment unless determined to be necessary through subsequent monitoring.” (Taylor Rebuttal Ex. B at 35.) Finally, with regard to monitoring, Idaho Power added monitoring would be initiated during the first “growing season” following construction. (*Id.* at 36.) Idaho Power added that if control of noxious weeds is deemed unsuccessful after five years of monitoring and noxious weed control actions, the Company will coordinate with ODOE regarding appropriate steps forward and “will prepare a location-specific long-term monitoring plan based on the results of the initial five-year assessment period.” (*Id.* at 36.) Finally, Idaho Power added Appendix B to the Plan, addressing Noxious Weed Treatment Methods and Timing. (*Id.* at 43-53.)

31. The revised draft Noxious Weed Plan remains a draft. In accordance with Recommended Fish and Wildlife Condition 3, Idaho Power will update and finalize the Noxious Weed Plan based on the final facility design and agency review. (Taylor Rebuttal Test. at 40.)

32. Enforcement of the noxious weed statutes is outside the scope of the Council’s review. The Council’s Fish and Wildlife Habitat standard focuses on addressing impacts to habitats resulting from a proposed facility. A certificate holder may have additional noxious weed obligations under ORS Chapter 569, for example, a possible duty to address preexisting noxious weed infestations, but those obligations are enforced through the county courts outside of the Council review process. (Taylor Rebuttal Test. at 10.)

Riparian areas

33. The ODFW Fish and Wildlife Habitat Mitigation Policy provides a framework for assigning one of six category types to habitats based on the relative importance of these habitats to fish and wildlife species. In ASC Exhibit P1, Idaho Power assumed fish presence for all streams designated by ODFW as fish bearing streams. For streams not already designated as fish bearing by ODFW, Idaho Power used field data as the primary factor to determine potential fish presence. (ODOE - B2HAPPDoc3-25 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, page 25 of 940.)

34. In ASC Exhibit P1, Idaho Power also identified all fish and wildlife habitat in the analysis area, classified by habitat categories set forth in the ODFW Fish and Wildlife Habitat Mitigation rule, OAR 635-415-0025. In Table P1-3, Idaho Power listed the six habitat category types, by definition and mitigation goal. (ODOE - B2HAPPDoc3-25 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, page 32 of 940.) In table P1-

4, Idaho Power set out the acres of habitat types by ODFW Habitat Category within the project analysis area. Riparian vegetation was classified as either Category 2 or Category 3. This includes a total of 21.6 acres of Herbaceous Riparian (8.4 in Category 2 and 13.2 in Category 3), 5.5 total acres of Introduced Riparian (4.9 in Category 2 and .7 in Category 3), and 60.4 total acres of Riparian Woodland and Shrubland (59 in Category 2 and 1.4 in Category 3). (*Id.* at page 34 of 940.)

35. In the Proposed Order, the Department addressed and approved Idaho Power's methodology for evaluating habitat quantity and quality within the analysis area, the habitat assessment in ASC Exhibit P1, and the identification of habitat within habitat categories set out in ASC Exhibit P1, Tables P1-3 and P1-4. The Department noted that ODFW staff thoroughly reviewed Idaho Power's habitat categorization methodology during the ASC phase. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 316 of 10016.)

36. In the Proposed Order, at Table FW-1 (Estimated Temporary and Permanent Habitat Impacts and Proposed Mitigation – Proposed Route), the Department found that the Proposed Route would temporarily or permanently impact less than 1 acre of Category 2 Riparian Vegetation, and would temporarily impact 5.5 acres of Category 3 Riparian Vegetation. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 318 of 10016.) At Table FW-2 (Estimated Temporary and Permanent Habitat Impacts and Proposed Mitigation – Alternate Route Segments), the Department further found that the Alternate Route Segments would not have any temporary or permanent impacts on Riparian Vegetation. (*Id.* at page 319 of 10016.)

Fish passage

37. There is no Council standard that specifically addresses fish passage. However, under the Council's General Standard of Review, the Council must determine whether the proposed facility complies with all other applicable Oregon statutes and rules identified in the project order. OAR 345-022-0000(1)(b). The Second Amended Project Order directed that Idaho Power address compliance with ODFW's Fish Passage laws, ORS 509.585 and OAR Chapter 635, Division 412. (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 24 of 29.)

38. In the Second Amended Project Order, the Department ordered as follows with regard to ASC Exhibit BB:³¹

Include information in Exhibit BB related to the following: Compliance with the ODFW Fish Passage rules will be included in and governed by the site certificate. Provide evidence in this exhibit of the facility's compliance with the applicable Fish Passage rules OAR Chapter 635, Division 412.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 24 of 29.)

³¹ OAR 345-021-0010(1)(bb) requires the applicant to provide "[a]ny other information that the Department requests in the project order or in a notification regarding expedited review."

39. In ASC Exhibit BB, Idaho Power included its Fish Passage Plan as Attachment BB-2. In Attachment BB-2, Idaho Power explained that the project will include development of new access roads and improvement of certain existing roads and that some of the roadwork will require crossings of fish-bearing streams. Idaho Power added that, based on OAR 635-412-0020, new road construction affecting fish-bearing streams in Oregon will trigger fish passage rules and require review by the ODFW. (ODOE - B2HAPPDoc3-45 ASC 28_ Exhibit BB_Other_Info_ASC 2018-09-28, page 57 of 209.)

40. In the Introduction to the Fish Passage Plan (Attachment BB-2), Idaho Power explained its methodology compliance with the ODFW's Fish Passage rules. Idaho Power stated, in pertinent part:

The determination of fish-bearing streams was originally reported in the Fish Habitat and Stream Crossing Assessment Summary Report (Tetra Tech 2014). The report identified a total of 18 fish-bearing streams that would be crossed by roads, which included 1 new and 17 existing road-stream crossings. The report was submitted to the ODFW and the Oregon Department of Energy (ODOE) in October 2014 for agency review and approval.

Following the submittal of the Tetra Tech (2014) report, crossing types (and alternatives) for each of the 18 fish-bearing road-stream crossings were identified. These determinations were based on existing structure condition, crossing risk analysis, field data, and analyses that utilized site hydrology, stream characteristics, crossing size, and road ingress/egress. * * *.

* * * * *

After the approval of the Tetra Tech (2014) report and Tetra Tech (2015) Fish Passage Plans and design drawings, major route modifications were identified in 2016. As a result, additional surveys were conducted in the summer of 2016 to evaluate the new road crossings established by the route modifications.

* * * * *

The Tetra Tech (2016) report identified a total of 58 fish-bearing streams that would be crossed by access routes within the states of Oregon and Idaho. All routes are on existing roads and all but 4 have existing crossing structures (bridge, culvert, or established ford). Crossing Type 1 or 2 was identified as the proposed alternative for 50 of the 58 sites (see Table 1). Based on OAR Chapter 635, Division 412, Fish Passage, these crossing sites are not expected to trigger ODFW fish passage requirements because they are existing structures that do not require any new construction or major replacement. * * *.

Crossing Types 3A and 3B were selected as proposed alternatives for the remaining seven crossing sites; these crossings were deemed likely to trigger ODFW review because they would require some new construction (see crossings

highlighted in green on Table 1). This document describes the types of crossings associated with the seven fish-bearing stream crossings and provides ODFW Fish Passage Plans and designs for those crossings.

(ODOE - B2HAPPDoc3-45 ASC 28_ Exhibit BB_ Other_ Info_ ASC 2018-09-28, pages 57-61 of 209.)

41. In the Fish Passage Plan, Idaho Power used the term “fish-bearing” to describe any stream inhabited by “native migratory fish.” For purposes of evaluating the applicability of the ODFW’s Fish Passage rules to a particular crossing, Idaho Power did not distinguish between the types of native fish (anadromous or resident) in labeling a stream as “fish-bearing.” Rather, Idaho Power considered all streams labeled “fish bearing” in the Fish Passage Plan to be inhabited by “native migratory fish” for purposes of the Fish Passage rules. (James Rebuttal Test. at 10.)

42. Idaho Power identified the fish bearing status of streams by using a combination of desktop and field survey analysis. The desktop analysis included GIS mapping of fish bearing streams along the project route, incorporating data from existing GIS data layers and sources (e.g., StreamNet, ODFW, and the Oregon Department of Forestry) into one GIS layer. Idaho Power created maps of fish bearing streams along the project route and distributed the maps to biologists at the ODFW, USFS, and the BLM for review and comment. (James Rebuttal Test. at 12.) Based on comments received from agency review and other local biologists and further evaluation of GIS information, Idaho Power updated the GIS layer to identify the extent of fish distribution and locations for which the ODFW had already made a fish presence determination, as well as additional upstream extents identified as potentially fish bearing. (*Id.* at 12-13.)

43. Following methods reviewed and approved by the ODFW, Idaho Power conducted fisheries habitat and presence surveys to collect data to determine whether streams not already designated as fish bearing by the ODFW did or could support fish use. Idaho Power also collected habitat data to help describe riparian and instream condition as important components of fish habitat quality. Idaho Power also collected habitat data to provide additional information about project-related risks to assist with the crossing assessments associated with avoidance and minimization measures at each crossing location. (James Rebuttal Test. at 13.)

44. Idaho Power assumed that streams designated as fish bearing by ODFW had fish, so the Company did not evaluate these streams for fish presence during field surveys. Idaho Power evaluated other streams identified as potentially fish bearing primarily based on habitat conditions at or near the crossing. (James Rebuttal Test. at 14.) In 2014 and 2016, Idaho Power surveyed streams and crossing sites in the upper Ladd Creek watershed for the presence of fish. (*Id.* at 15-16.)

45. In ASC Exhibit BB, Attachment BB-2 (Fish Passage Plans and Designs), at Table 1 Idaho Power listed the stream name; the crossing identification number; the nearest proposed route milepost; the ownership (public or private); the fish use; the risk ratings; the existing crossing type (culvert, bridge or ford); the potential crossing types (proposed type and potential alternatives); a description of the crossing type; considerations, if any; and the ODFW Fish

Passage trigger, if any. (ODOE - B2HAPPDoc3-45 ASC 28_ Exhibit BB_Other_Info_ASC 2018-09-28, pages 63-66 of 209.)

46. ASC Exhibit BB, Attachment BB-2 (Fish Passage Plans and Designs) includes design descriptions for seven individual crossings: (1) Little Rock Creek, Site R-33010; (2) Rock Creek, Site R-33011; (3) Rock Creek, Site R-33033; (4) Rock Creek, Site R-33147; (5) Goodman Creek, Site R-65725; (6) Cavanaugh Creek, Site R-66818; and (7) Benson Creek, Site R-68790. (ODOE - B2HAPPDoc3-45 ASC 28_ Exhibit BB_Other_Info_ASC 2018-09-28, pages 75-89 of 209; *see also* James Rebuttal Test. at 18.)

47. None of the road crossings covered in the Fish Passage Plan are located in the upper Ladd Creek watershed. (James Rebuttal Test. at 18.) None of the crossings in the upper Ladd Creek watershed trigger the Fish Passage Approval requirements because Idaho Power is not proposing any new construction or major replacements at any of the road-stream crossings in the upper Ladd Creek watershed. (*Id.*) Regardless of whether the streams in the upper Ladd Creek watershed were identified as fish bearing or non-fish bearing, the Fish Passage Plan and Fish Passage Approval requirements are not triggered because Idaho Power is not proposing construction of any new, or major replacement of existing, artificial obstructions on any of the road-stream crossings in that watershed. (*Id.* at 18-19.)

48. Assuming the presence of Snake River Basin steelhead in the upper Ladd Creek watershed does not change the fact that Idaho Power is not proposing any new, or replacements of, any artificial obstructions in the upper Ladd Creek watershed. Idaho Power included information on the streams in the upper Ladd Creek watershed only as background and context in ASC Exhibit BB, Attachment BB-2. (James Rebuttal Test. at 19.) Moreover, the Fish Passage Rules apply to projects proposed for streams that are inhabited, or were historically inhabited, by native migratory fish; that category includes many different species of trout, including redband, rainbow, and steelhead. Idaho Power's Fish Passage Plan did identify streams in the upper Ladd Creek watershed as containing native migratory fish. Therefore, the fact that there might be an additional species of native migratory fish present (the Snake River Basin steelhead) would not change the outcome of Idaho Power's analysis. (*Id.* at 19-20.)

49. In ASC Exhibit P1, Idaho Power analyzed fish and wildlife habitat across the entirety of the project, including those portions of the project affecting the upper Ladd Creek watershed. In that exhibit, Idaho Power discussed the protocols it used to obtain information on the types of habitat in the project area, and categorize the habitats under ODFW's Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0025). (*See generally* ODOE – B2HAPPDoc3-25 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, pages 12-36 of 940). Idaho Power also explained the mitigation measures it would employ for each habitat category. (*Id.* at pages 773-940).

50. ASC Exhibit P1-7B, the Fish Habitat and Stream Crossing Assessment Summary Report, summarizes the results of field surveys conducted in 2014 and 2016 of potential transmission line or access road crossings of fish-bearing streams along the proposed and alternative routes of the project. The surveys assessed fish habitat conditions, stream crossing characteristics, and the crossing risks. The report also describes the steps Idaho Power Company

(IPC) will take to avoid, minimize, and mitigate the potential stream crossing impacts. (ODOE - B2HAPPDoc3-28 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 3_Attach P1-7B 2018-09-28, page 5 of 164.) In ASC Exhibit P1-7B, Idaho Power discussed the assessment methods for the fisheries habitat and crossing surveys. Idaho Power noted that:

The intent was to survey all 128 potential fish-bearing stream crossings (road and transmission line), regardless of perennial, intermittent, or ephemeral designation. However, landowner permission was not granted for all crossing sites. For sites with no access, habitat data were collected, if possible, on the same stream as close to the crossing as access allowed. Some sites had no or only indirect surveys, including 22 sites with no field surveys and another 15 sites that were surveyed at a nearby location other than the direct crossing site.

(*Id.* at page 10 of 164.)

51. In ASC Exhibit P1, Idaho Power described the potential impacts of the project on fish and wildlife species and showed how the project will be consistent with the ODFW's fish and wildlife habitat mitigation goals and standards. Idaho Power included, as ASC Exhibit P1 Attachment P1-6, a draft Fish and Wildlife Habitat Mitigation Plan setting forth the mitigation measures the Company will implement to achieve the goals and standards set out in OAR 635-415-0025. (ODOE - B2HAPPDoc3-25 ASC 16A_ Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, pages 778-815 of 940.) Idaho Power considered all fish bearing streams to be Habitat Category 2, including the streams affected by the seven crossings approved in the Fish Passage Plan. In addition, Idaho Power categorized as Habitat Category 2 each of the fish bearing streams in the upper Ladd Creek watershed above the Interstate 84 culvert within the project site boundary. Therefore, Idaho Power will employ the avoidance, minimization, and compensatory mitigation measures applicable to Habitat Category 2 for those streams in the upper Ladd Creek watershed. (James Rebuttal at 24-25.)

52. Habitat categorization depends on the functions and values of the stream course, and whether or not the habitat meets the definitions for irreplaceable, essential, limited, or important as described in OAR 635-415-0005. The presence of a listed fish does not automatically make a stream Habitat Category 1 or 2. (Reif Rebuttal Test. at 7.) Habitat categorization in ODFW's mitigation policy is based on the functions and values of the habitat, regardless of the presence of a migratory fish or a special status species. Therefore, the mere presence of a special status species does not automatically elevate the habitat categorization of a given area. (Reif Cross-Exam. Test., Tr. Day 5 at 84-85.)

53. In the Proposed Order, the Department noted that fish species can exist within degraded habitat and, even with the presence of a state-listed threatened and endangered species, the habitat does not meet ODFW's definition of Category 1 habitat under OAR 635-415-0025(1) because it is replaceable (*i.e.* waterways could be rehabilitated). (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 316 of 10016, n. 321.)

54. In the Proposed Order, the Department imposed Recommended Fish and Wildlife Condition 4 to ensure that the Fish and Wildlife Habitat Mitigation Plan is consistent with the

ODFW habitat mitigation goals and standards described in OAR 635-415-0025. Recommended Fish and Wildlife Condition 4 requires, among other things, that prior to construction of any phase or segment of the facility, Idaho Power finalize, and submit to the Department for its approval, a final Fish and Wildlife Habitat Mitigation Plan, based on the plan provided as ASC Attachment P-6. The Department specified the information to be included in the final Fish and Wildlife Habitat Mitigation Plan and required that the plan address the potential habitat impacts through mitigation banking, an in-lieu fee program, development of mitigation projects by the certificate holder, or a combination of the same. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 328 of 10016.)

55. In the Proposed Order Section IV.H., Fish and Wildlife Habitat: OAR 345-022-0060, the Department found, in pertinent part, as follows

As depicted in ASC Exhibit P1, Table P1-18, the proposed transmission line would span 47 fish bearing streams and 18 roads would require road or crossing modifications involving fish bearing streams. All of these crossings could potentially include Columbia Basin rainbow trout. The fish passage plans and designs for the seven temporary road crossing structures that would require review by the ODFW are included in Exhibit BB, Attachment BB-3. The Department's evaluation of compliance with ODFW Fish Passage rules is found at Section IV.Q.4., Fish Passage. There, the Department recommends Council find that the applicant's proposed fish passage compliance plan is sufficient to demonstrate compliance with the ODFW Fish Passage rule, that the plan should be finalized prior to construction based on final facility design, and that the plan should be implemented during construction.

* * * * *

Based on the applicant's designs to minimize the number of fish-bearing crossings, and subject to compliance with these fish passage plans and designs, the proposed transmission line is unlikely to adversely affect fish passage. See Section IV.Q.4., Fish Passage, for the Department's assessment of compliance with the ODFW Fish Passage rules and requirements.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 351-53 of 10016.)

56. In the Proposed Order Section IV.Q.4, Fish Passage: OAR 635-412-0035, the Department found, in pertinent part, as follows:

A Report titled, Fish Habitat and Stream Crossing Assessment Summary Report, was submitted to the Department and ODFW in 2014. The report was updated in 2016 and identified a total of 58 fish-bearing streams that would be crossed by access routes within the states of Oregon and Idaho, of which seven crossing sites were identified as potentially triggering ODFW fish passage. Table 1 in ASC Exhibit BB, provides the stream name, proposed crossing type, and fish passage

information. Crossing Types 3A and 3B were the crossing designs selected for the seven crossing sites; these crossings were deemed likely to trigger ODFW review because they would require some new construction.

* * * * *

If any future route modifications require road crossing improvement or modifications beyond those identified in the fish passage plans, as explained in the Fish Passage Plan, the applicant proposes to install all culverts or other stream crossing structures in accordance with ODFW fish passage rules and approvals. Furthermore, comments received by the public suggest that certain culverts on Ladd Creek, which was not identified in the application as supporting anadromous fish, were recently modified and as a result Ladd Creek now contains anadromous fish. To ensure any such new information about stream status and related fish passage is addressed prior to construction, the applicant proposes to request any new information about stream status from ODFW and seek ODFW concurrence on stream status prior to finalizing the Fish Passage Plan.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 693-94.)

57. In the Proposed Order, the Department also recommended Fish Passage Condition 1, which, among other things, requires Idaho Power to “finalize, and submit to the Department for its approval in consultation with ODFW, a final Fish Passage Plan.” (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 694.) Furthermore, the Department required that, as part of finalizing the Fish Passage Plan, “the certificate holder shall request from ODFW any new information on the status of the streams within the site boundary and shall address the information in the final Fish Passage Plan.” (*Id.*) The Department recommended that Council conclude that the proposed facility, including the proposed and alternative routes, complies with the Fish Passage Requirements of OAR Chapter 635, Division 412. (*Id.* at 695-96.)

58. ASC Exhibit P1-7B, Table 3 identifies five road-stream crossing locations in the Ladd Creek watershed with “non-fish” stream designations (R-37018, R-37117, R-37121, R-37124, R-35660). (ODOE - B2HAPPDoc3-28 ASC 16A_Exhibit P1_Wildlife_ASC_Part 3_Attach P1-7B 2018-09-28, page 24 of 164.) While ODFW found that Idaho Power’s methods for evaluating fish presence generally supports the “non-fish” designations for these five crossings, ODFW was not able to definitively identify the exact location of these five crossings in the maps provided in the ASC and therefore could not confirm the non-fish determinations at these crossing locations. (Apke Rebuttal Test. at 2-3.) If Idaho Power provided better maps, ODFW may be able to affirm the non-fish designation for these locations or require that the designation be changed to fish bearing. If the fish use determinations for any of these stream crossings changed from non-fish to fish bearing, then Idaho Power would need to coordinate with ODFW and conduct new crossing evaluations to inform whether the Fish Passage rules apply to these crossings. (*Id.* at 2-4.)

59. To address the concern that ODFW was unable to confirm the non-fish designations at these five unnamed stream crossings, the Department recommended revisions to Recommended Fish Passage Condition 1, paragraph (a). The Department recommended including a requirement that, as part of Idaho Power finalizing the Fish Passage Plan, Idaho Power further confer with ODFW about these crossings:

In addition, the certificate holder shall seek concurrence from ODFW on the fish-presence determinations for non-fish bearing streams within the Ladd Creek watershed, as presented in ASC Exhibit P1-7B Table 3. If the certificate holder in consultation with ODFW, determines any of the previously identified non-fish bearing streams within the Ladd Creek Watershed to be fish bearing, the certificate holder shall complete a crossing risk evaluation and obtain concurrence from ODFW on applicability of fish passage requirements. If fish passage requirements apply, certificate holder shall seek approval from the Energy Facility Siting Council of a site certificate amendment to incorporate ODFW approval of new crossings and fish passage design/plans and conditions.

(ODOE Rebuttal to Direct Testimony, Evidence and Response to Proposed Site Certificate Conditions at 43; *see also* Apke Rebuttal Test.)

Findings related the Historic, Cultural and Archaeological Resources (HCA) standard

60. ASC Exhibit S must include information about historic and cultural resources within the analysis area that have been listed, or would likely be eligible for listing, on the National Register of Historic Places (NRHP) and archaeological resources within the analysis area. ASC Exhibit S must also include information about the significant potential impacts, if any, of the construction, operation and retirement of the proposed facility on these resources and a plan for protection of those resources. The protection plan must include the applicant's proposed monitoring program, if any, for impacts to historic, cultural and archaeological resources during construction and operation of the proposed facility. OAR 345-021-0010(1)(s).

61. In the Second Amended Project Order, the Department directed Idaho Power to include the survey methodology, survey areas, and the results of all surveys conducted for historic, cultural, and archaeological resources, and an analysis of any significant adverse impacts anticipated and proposed mitigation measures. In addition, the Department directed Idaho Power to include maps showing important historic trails located within the Historic, Cultural, and Archaeological Resources analysis area,³² including the segments of the Oregon Trail that are listed or eligible for listing on the NRHP, and discuss measures to avoid or mitigate for impacts to historic trails. (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 21 of 29.)

³² For purposes of the HCA Standard, the analysis area includes all areas within the project site boundary (the Direct Analysis Area) and the area that extends five miles or to the visual horizon, whichever is closer, on either side of the centerline of the Proposed Route and alternative segments. The Direct Analysis Area plus this five-mile radius make up the Visual Assessment Analysis Area, also known as the Area of Potential Effects (APE). (ODOE - B2HAPPDoc3-36 ASC 19_ Exhibit S_ Cultural_ ASC_ Public 2018-09-28, page 21 of 783.)

62. In the Second Amended Project Order, the Department recognized that, due to restricted access to some portions of the site boundary, Idaho Power would be unable to demonstrate compliance for the entirety of the analysis area prior to obtaining a site certificate. To address this limitation, on April 24, 2018, the Department issued a memorandum titled “Energy Facility Siting Council Decisions for Linear Facilities with Restricted Access within a Site Boundary: Boardman to Hemingway Transmission Line.” This memo outlined how the Department will review applications and make recommendations to Council for historic, cultural and archaeological resources that were evaluated in the pASC and ASC. In the Second Amended Project Order, the Department also explained that once Idaho Power gains access to previously restricted areas, the Company shall include that information via a site certificate amendment process. The Department directed Idaho Power to include in ASC Exhibit S as much information as possible about the field surveys conducted to date for cultural resources on state, private, and federal lands, and the schedule for future surveys. (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 21 of 29; Ranzetta Rebuttal Test. at 10.)

63. As discussed previously, because the proposed facility crosses stretches of land managed by the BLM, the project is also subject to federal permitting processes. The BLM is the lead federal agency responsible for completing the NEPA environmental impact analysis, which addresses, among other things, the potential cultural, historic, and archaeological impacts caused by the project and compliance with the National Historic Preservation Act (NHPA), Section 106. The BLM issued its final Environmental Impact Statement (FEIS) in November 2016 and its Record of Decision (ROD) in November 2017. The FEIS and ROD included the results of the BLM’s government-to-government tribal consultations and consultations with other parties with interest in the project’s cultural resources impacts. (Ranzetta Rebuttal Test. at 12-13; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 440 of 10016).

64. The BLM’s NHPA Section 106 process for the B2H project resulted in a Programmatic Agreement (PA). The PA outlined the process for identifying and evaluating historic and cultural properties, assessed the effects of the project on historic and cultural properties, and set out measures to avoid, minimize and mitigate adverse effects that may be caused by the project on federal public land. The PA included provisions requiring the BLM, in consultation with the parties to the PA, to draft a Historic Properties Management Plan (BLM HPMP) that characterizes the historic properties identified within the project area. The BLM HPMP will be used as a guide to address measures to avoid, minimize, and mitigate adverse effects to historic properties located on federal land. Idaho Power included the PA as ASC Exhibit S, Attachment S-5.³³ (Ranzetta Rebuttal Test. at 15-16; ODOE - B2HAPPDoc3-36 ASC

³³ The following agencies and entities were required signatories to the PA: BLM, USFS, Bonneville Power Administration, US Army Corps of Engineers, BOR, Oregon State Historic Preservation Officer, Idaho State Historic Preservation Officer, Washington Dept. of Archaeology and Historic Preservation, the Confederated Tribes of the Umatilla Indian Reservation Tribal Historic Preservation Officer, and the Advisory Council on Historic Preservation. The following entities were invited and/or concurring signatories to the PA: Idaho Power, the Department, US Fish and Wildlife Service, National Park Service, Oregon-California Trails Association, Oregon Historic Trails Advisory Council, Lewis and Clark

19_Exhibit S_Cultural_ASC_Public 2018-09-28, pages 325-54 of 783.)

65. In ASC Exhibit S, Idaho Power set out its cultural resources inventory methodology aimed at ensuring compliance with the Council's HCA standard. Idaho Power described the studies that were, and will be, conducted to locate, identify, and assess the significance of historic and cultural resources and archaeological sites within the analysis area. (ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, pages 27-29 of 783.)

66. Idaho Power identified cultural resources within the analysis area that are listed, or have been determined or recommended eligible for listing, on the NRHP. Idaho Power also included resources that have not been evaluated for NRHP eligibility (*i.e.*, unevaluated) as potentially NRHP-eligible resources. Idaho Power completed its evaluation of cultural resources in accordance with the PA. Idaho Power's inventory and analysis involved a records search, literature review, and multiple field studies. Idaho Power will continue to perform additional inventorying and evaluating of cultural resources in accordance with the PA and Council standards. (Ranzetta Rebuttal Test. at 21-22.)

67. Idaho Power conducted its field surveys consistent with applicable survey protocol plans discussed in the PA. The field surveys include a Cultural Resources Pedestrian Survey of the Direct Analysis Area and surveys in support of the Visual Assessment of Historic Properties Study Plan (VAHP Study Plan) within the Visual Assessment Analysis Area. (Ranzetta Rebuttal Test. at 27; ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, page 30 of 783; *see also* ASC, Exhibit S, Attachment S-2: Visual Assessment of Historic Properties Study Plan, ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, page 196 of 783.)

68. Idaho Power prepared its methodology for assessing indirect impacts to historic properties (the VAHP Study Plan) in consultation with the Section 106 Cultural Resources Working Group. The VAHP Study Plan, ASC Exhibit S, Attachment S-2,³⁴ guided the Visual Assessment of aboveground resources potentially affected by the construction and operation of the proposed facility. (Ranzetta Rebuttal Test. at 27.) Idaho Power conducted its visual assessment of above-ground resources in accordance with the VAHP Study Plan, and in two phases, the reconnaissance level survey (RLS), Phase 1, and the intensive level survey (ILS), Phase 2. (*Id.* at 37-39.) The ultimate goal of the visual assessment was to identify those adverse indirect visual effects on historic properties and trails that might diminish the integrity and the characteristics that make the historic property or trail eligible for the NRHP. (Ranzetta Rebuttal Test. at 43-44; *see also* ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, page 217 of 783.)

69. Idaho Power completed cultural resources field surveys for the project consistent with applicable survey protocol plans. Idaho Power has not yet completed the Enhanced

Heritage Trail Foundation, Burns Paiute Tribe, and the Fort McDermott Paiute and Shoshone Tribe. (ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, pages 353-72 of 783.)

³⁴ ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, pages 196-234 of 783.

Archaeological Survey (EAS), but will do so following issuance of the site certificate and prior to construction. This future survey will address archaeologically sensitive areas, parcels that were not accessible during the pedestrian survey and impacted, unavoidable resources in the final design of the project. (ODOE - B2HAPPDoc3-36 ASC 19_ Exhibit S_ Cultural_ ASC_ Public 2018-09-28, page 30 of 783; Ranzetta Rebuttal Test. at 33-34.)

70. In ASC Exhibit S, Idaho Power noted that the project will cross areas that include state and national historic trails (NHT). The Company explained:

The Oregon NHT is the only NHT within the direct analysis area and is crossed 17 times by the direct analysis area Project in four counties. Separate from the NHT, the direct analysis area crosses a total of 12 segments of the Oregon Trail identified by Project surveys documented in confidential Attachments S-6 and S-10. Seven of these crossings are within the construction footprint. A total of 24 segments of the Oregon Trail documented by Project surveys are within the Visual Assessment analysis area. Three of the Oregon Trail segments documented by Project surveys are NRHP-listed: 35MW00224 (Well Spring, Oregon Trail Site), 35MW00227, 35MW00230 (Emigrant Cemetery), and Oregon Trail - Well Spring Segment. All three sites are within the Visual Assessment analysis area. No NRHP-listed segments of the Oregon Trail are within the direct analysis area.

(ODOE - B2HAPPDoc3-36 ASC 19_ Exhibit S_ Cultural_ ASC_ Public 2018-09-28, page 131 of 783.)

71. In the VAHP Study Plan, Idaho Power employed a visual assessment methodology specific to NHTs and associated resources (*e.g.*, stage stations and/or gravesites), providing methods to identify and record historic trail segments during the assessment phases. Idaho Power's consultants assessed indirect effects by using GIS modeling and mapping overlays, analyzing aerial photographs, determining whether the resource has potential views of the proposed facility, and whether those potential views would diminish the characteristics that make the trail-related resource eligible for the NRHP. (Ranzetta Rebuttal Test. at 40; *see also* ODOE - B2HAPPDoc3-36 ASC 19_ Exhibit S_ Cultural_ ASC_ Public 2018-09-28, pages 211-218 of 783.)

72. As ASC Exhibit S, Attachment S-9, Idaho Power submitted a draft Historic Properties Management Plan (EFSC HPMP), prepared specifically for the Department to demonstrate compliance with the Council's siting standards and certification process.³⁵ The

³⁵ The Introduction to the EFSC HPMP explains:

Although the PA can support the EFSC process, the PA does not supersede the EFSC site certificate process and cannot be fully relied upon to determine compliance with EFSC's standards. Therefore, this HPMP was prepared specifically for ODOE and to comply with the EFSC certification process. It may be modified as necessary following completion of the BLM's HPMP or incorporated as appropriate into the BLM's HPMP through BLM's consultation with ODOE as a party to the PA.

(Proposed Order, Attachment S-9, page 1; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9597 of 10016.)

ESFC HPMP describes the methods for determining NRHP eligibility and effects and provides a general overview of the measures Idaho Power will implement to avoid, minimize and mitigate adverse effects to cultural resources that may result from the project. The cultural resources addressed in the EFSC HPMP include properties listed on, or likely to be listed on, the NRHP (NRHP-eligible and including sites determined significant in writing by a Native American tribe), archaeological sites on public or private land, and archaeological objects on private land within the project site boundary. (ODOE - B2HAPPDoc3-36 ASC 19_ Exhibit S_Cultural_ASC_Public 2018-09-28, pages 699-747 of 783; *see also* ODOE - B2HAPPDoc3-54 ASC Exhibit S_Att. S-9_HPMP Errata Info 2019-03-06, pages 1-8.)³⁶

73. The EFSC HPMP includes an avoidance and mitigation plan, describing the measures that Idaho Power has taken or will take to avoid, minimize, and/or otherwise resolve impacts to cultural resources under the Council's standards. The EFSC HPMP also includes a monitoring plan to document the effectiveness of the avoidance and mitigation measures and the circumstances under which cultural resource monitors will be present. In addition, the EFSC HPMP includes an inadvertent discovery plan that specifies the procedures to follow if Idaho Power discovers a cultural resource during construction, reclamation, and operation and maintenance that was not detected during surveys conducted prior to ground-disturbing activities. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 9597-98 of 10016; Ranzetta Rebuttal Test. at 17.)

74. As set out in the ESFC HPMP, Idaho Power's fieldwork during the RLS phase of the visual assessment identified 764 built environment resources in the Visual Assessment Analysis Area, including multiple crossings of historic trails and pre-contact resources, such as quarries and cairns. The ILS (Phase 2) of the Visual Assessment addressed 231 of these resources, including: NRHP-listed resources, resources that were recommended for additional study or NRHP evaluation, or unevaluated resources; archaeological sites with aboveground features; or newly identified resources following an updated literature search and data gap analysis to cover portions of the project that were not previously identified. Of the 231 resources addressed in the ILS study, 130 were evaluated for project effects and 101 were eliminated. (ODOE – B2HAPPDoc3-36 ASC 19_ Exhibit S_Cultural_ASC_Public 2018-09-28, page 778 of 783). As a result of the project effects analysis, Idaho Power anticipated potential adverse effects for 39 resources. (Ranzetta Rebuttal Test. at 45-46; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9615 of 10016.)

75. The ESFC HPMP further states:

Fourteen of the 39 resources require further consultation and research before making a recommendation on Project effect avoidance, minimization, and/or mitigation strategies. The Project will cross three historic properties with the potential for direct adverse effects. A list of sites with potential adverse effects is

³⁶ The February 2019 Errata Sheet provides requested additional information and documents associated changes to the HPMP. (ODOE - B2HAPPDoc3-54 ASC Exhibit S_Att. S-9_HPMP Errata Info 2019-03-06, page 1 of 8.)

provided in Table 4-1. The majority of potential adverse effects could occur to stacked rock features/cairns. Due to the difficulty in dating and attributing cultural origin, additional consultation with ODOE, SHPO, and tribes will be conducted as an interim step towards determining if mitigation would be appropriate. Resource-specific management and/or treatment plans will be developed as needed as a result of consultations.

(ODOE - B2HAPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9615 of 10016.)

76. In addition to considering the potential for site-specific impacts, Idaho Power performed an analysis that considered the potential cumulative impacts of the proposed facility on Oregon Trail resources. In Idaho Power's cumulative impacts analysis, the Company considered several variables that would bear on the magnitude of the cumulative impacts to the Oregon Trail, including distance, intervening topography, vegetation, atmospheric conditions, and the built environment. In many instances, previous introduction of roads, interstate highways, pipeline rights-of-way, electrical distribution and transmission lines, fence lines, and other forms of development already diminished the physical setting and/or landscape surrounding the Oregon Trail. Idaho Power also considered the trail segment's historical integrity, as over time, development has either diminished or stripped parts of the Oregon Trail of attributes contributing to the segments' historical importance, creating a disconnected historic district with contributing and non-contributing sections and sites. (Ranzetta Rebuttal Test. at 48-51; ODOE - B2HAPDoc3-36 ASC 19_ Exhibit S _Cultural _ASC _Public 2018-09-28, page 98 of 783.)

77. As a result of the cumulative impacts analysis, Idaho Power found that 43.89 miles of the Oregon NHT would have a potential view that is within 0.5 mile of the project's site boundary. For "Contributing Trail Segments" or segments of the Oregon Trail that have been previously identified by surveys or listed on the NRHP, Idaho Power reported that approximately 89.35 miles of these segments fall within the Visual Assessment Analysis Area and about 27.43 of those miles would have a potential view of the facility. As noted in the EFSC HPMP, although the cumulative effect data provides a general indication of the magnitude for indirect impacts, the resource-specific analysis performed during the ILS is more precise in its assessment of impacts to contributing resources associated with the Oregon Trail and informs Project planning in an effort to avoid, reduce, or mitigate impacts. (Ranzetta Rebuttal Test. at 51-52; ODOE - B2HAPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9618 of 10016.)

78. In the Proposed Order, the Department noted that it is a concurring party to the executed PA and that the provisions of the PA may be used to assist the Council in its review of the HCA Standard. In describing the interplay between the PA, the BLM HPMP, and the EFSC HPMP, the Department explained:

[W]hile the PA is not a binding document upon the Department and EFSC, as is described in this section, the Department is recommending use of the PA process, including the HPMP, to align to the maximum extent feasible, the EFSC review

with the federal government review as directed, by ORS 469.370(13). The PA allows for the final determinations of the potential impacts from the proposed facility to historic and cultural properties (including NRHP-listed, -eligible, and unevaluated resources) and the mitigation of adverse impacts that will be outlined in a Historic Properties Management Plan (HPMP). A HPMP required by the PA will be submitted to the BLM and will be reviewed by all PA parties, it is anticipated to be specific to compliance with Section 106 of the National Historic Preservation Act.

In order to address resources that are also protected under the EFSC standard (archaeological resources and objects on private lands, regardless of NRHP-eligibility status), an EFSC-specific HPMP for private and state lands is included as Attachment S-9 to Exhibit S and this order. The EFSC-specific HPMP is intended to maintain compliance with the EFSC standard as well as align with the evaluation, determinations, and mitigation that would be included in the HPMP required by the PA. The HPMP includes an Inadvertent Discovery Plan (IDP), which specifies steps to be taken if a previously unidentified cultural resource is discovered during construction, including stopping construction in the resource vicinity, agency and Tribal government notification and consultation, and data recovery or other mitigation and protection measures.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 440-41 of 10016.)

79. The Department further explained:

The applicant provides an impact assessment to satisfy OAR 345-022-0090(1)(a) which considers the likely NRHP-eligible Oregon Trail/NHT resources as a linear resource, consistent with [the SHPO's] Linear Resources Guidelines, and by individual trail segment, as summarized in Table HCA-3, NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts. The BLM, in consultation with SHPO, would determine appropriate mitigation for impacts based on a cumulative impact analysis from treating trail segments as a linear resource. Because BLM and SHPO review, during the Section 106 process, would evaluate cumulative impacts to the Oregon Trail/NHT as a linear resource and not necessarily the impacts of the proposed facility to individual trail segments within the affected area (i.e. location or county), Council must evaluate potential impacts and appropriate mitigation in this order, consistent with OAR 345-001-0010(33), based on potential impacts to listed or likely NRHP-eligible individual trail segments within the affected area.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 448 of 10016.)

80. With regard to appropriate mitigation for potential adverse impacts to Oregon Trail resources, the Department recommended as follows:

Based on the extent of potential adverse visual impacts to the NRHP-eligible Oregon Trail/NHT resources and within the 5-mile viewshed of the resource identified in Table HCA-3, presented in ASC Exhibit S Attachment S-10, the Department recommends Council require that mitigation include at least one minimization measure (design modification) and one measure resulting in restoration; preservation and maintenance; or compensation (OAR 345-001-0010(33)(b) and (c), (d) or (e)) directly benefiting the affected area – which the Department recommends be defined as the county within which the impacted resource is located. The Department notes that mitigation established through the federal Section 106 compliance review may be used to satisfy the EFSC mitigation requirement for listed or likely NRHP-eligible Oregon Trail/NHT trail segments if applicant can demonstrate that it addresses both the design modifications and the restoration; preservation and maintenance; or compensation mitigation within affected area (county), as included in the below Table HCA-4b (included in the HPMP). If not duplicated through the federal Section 106 process, the applicant shall establish the scope and scale of Table HCA-4b mitigation, prior to construction, subject to Department review and approval, in consultation with SHPO, its consultants, or other entities with expertise with historic trails.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 471 of 10016.)

81. In Table HCA-5b, the Department recommended that the EFSC HPMP establish the following mitigation for each impacted NHRP-Eligible Oregon Trail/NHT Segment: Design modification and at least one of the following, in order of priority:

- Purchase of conservation easement or other land protection where trail traces exist;
- Historic trails restoration within and outside the facility area;
- Land acquisition;
- Public signage, publication/print/media, and/or interpretive plans;
- Trail segment management plans;
- Additional literature or archival review (e.g. historic maps, local papers);
- Remote sensing;
- National Register nomination; Recording—
including HABS/HAER/HALS; [or]
- Funding for public interpretation, archeological resource, or other program benefiting Oregon Trail resources.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 471 of 10016.)

82. In the Proposed Order, the Department noted that some resources, including resources evaluated under the HCA standard, require field studies either during the preparation

of the ASC, or prior to construction of the facility that incorporates the final design and placement of facility components. The Department recommended that the certificate holder submit additional survey information as preconstruction conditions of approval included in the site certificate based upon the extensive and long-term, multi-year, comprehensive field-surveys, database reviews, and technical evaluations Idaho Power completed to inform certain ASC exhibits, including Exhibit S. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 53 of 10016.) The Department also noted that this approach for submitting additional survey information “provides an alternative to the recommendations outlined in the Department’s Energy Facility Siting Council Decisions for Linear Facilities with Restricted Access within a Site Boundary: Boardman to Hemingway Transmission Line memo (April 2018).” (*Id.* at page 54 of 10016, n. 54.)

83. In the Proposed Order, the Department found that the proposed facility would not result in a direct physical disturbance to any listed or likely NRHP-eligible Oregon Trail segments, but would “indirectly (crossing/visibility) impact some Oregon Trail segments.”³⁷ (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 449 of 10016.) The Department agreed with Idaho Power’s visual impact assessment, including visual impacts directly above the resource (crossing) and within a five-mile viewshed. The Department also found that, without mitigation, the proposed facility would result in adverse indirect impacts to nine NRHP-listed or eligible Oregon Trail/National Historic Trail segments (identified in the Proposed Order at Table HCA-3). (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 460-69 of 10016.)

84. In the Proposed Order, the Department included Recommended HCA Condition 1 requiring Idaho Power to “design and locate facility components to avoid direct impacts to Oregon Trail/National Historic Trail resources” consistent with the EFSC HPMP. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 474 of 10016.)

85. The Department also included Recommended HCA Condition 2, which requires Idaho Power to submit to the Department, SHPO, and applicable tribal governments for review to the Department for approval a final EFSC HPMP, based on new survey data from previously unsurveyed areas and the final design of the facility. Recommended HCA Condition 2 also requires that Idaho Power conduct all construction activities in compliance with the final Department-approved EFSC HPMP. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 514 of 10016.)

86. Proposed Order Table HCA-7 lists all the resources inventoried in the site boundary/Direct Analysis area and within the Visual Assessment Analysis Area that may experience a direct or indirect impact, including resources that may potentially be protected

³⁷ The Department explained that a direct impact is ground disturbing construction activity or permanent infrastructure placement, whereas indirect impacts include being able to see the proposed transmission line, towers, or a proposed access road from a resource or trail location. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 449 of 10016.)

under OAR 345-022-0090(1)(a) and OAR 345-022-0090(1)(b) of the ESFC standard.³⁸ Based on information provided by limited party John Williams, the Department added “Site 6B2H-MC-10,” located on property owned by Mr. Williams in Union County, to Table HCA-7 as a potentially impacted historic property or archaeological site on private land. Site 6B2H-MC-10 is described as a hunting blind, an unevaluated resource within the Visual Assessment Analysis Area (5.14 meters south of the Direct Analysis area southern boundary) on the Morgan Lake Alternative Route. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 499 of 10016.)

87. Based on the findings in the Proposed Order, and subject to compliance with the recommended conditions of approval, the Department concluded that, taking into account mitigation, the construction and operation of the proposed facility, including proposed and alternative routes, is not likely to result in significant adverse impacts to any historic, cultural, or archaeological resources, in compliance with the Council’s Historic, Cultural, and Archaeological Resources standard. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 515 of 10016.)

88. On June 28, 2021, based on a nomination by the Oregon State Advisory Committee on Historic Preservation and the Oregon SHPO, the La Grande to Hilgard Segment of the Oregon Trail (linear district) was officially listed in the National Register of Historic Places. (Williams Direct Test., Ex. 13.)

Findings related to the Land Use standard

89. In the Second Amended Project Order, the Department stated, in pertinent part, as follows with regard to ASC Exhibit K, Land Use:

Although local comprehensive plans and land use ordinances may have been amended since local comments were provided, ORS 469.504(1)(b)(A) and OAR 345-021-0050(6)(b)(A) require that the applicable local land use criteria are those in effect on the date the preliminary application for site certificate was submitted, February 27, 2013, for the local jurisdictions identified in the preliminary application. This includes Morrow, Union, Umatilla, Baker, and Malheur counties, and the City of North Powder.

* * * * *

Exhibit K shall include information necessary to demonstrate compliance with the applicable substantive criteria from each county and city code and comprehensive plan that are applicable to issuance of the required permits and approvals.

Exhibit K shall also provide evidence that the proposed facility would comply with the applicable statutory requirements related to the proposed facility, including ORS 215.283, and 215.275 and specifically including all requirements

³⁸ See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 481-92 of 10016.

regarding the location of the proposed facility within EFU zones.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, pages 15-16 of 29.)

90. The proposed transmission line crosses forest-related land use zones in Umatilla and Union Counties. In Union County, the proposed facility crosses land in the Timber-Grazing Zone, a hybrid farm-forest zone that includes farmland, rangeland, and forestland. (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, pages 42, 238 of 614.)

91. The Union County Zoning, Partition and Subdivision Ordinance (UCZPSO) requires land in the Timber-Grazing Zone to be evaluated based on its “predominant use” to determine whether it is Goal 3 farmland or Goal 4 forestland.³⁹ Idaho Power worked with Union County planning staff to determine the predominant use of each of the 61 Union County parcels within the project site boundary located in the Timber-Grazing Zone. (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, page 238 of 614.)

92. To determine the predominant use on each Union County hybrid-zoned parcel, Idaho Power used data from the National Resources Conservation Service Soil Survey Geographic Database (SSURGO), Union County tax lot data, and GIS mapping software. Based on a table provided by Union County planning staff listing each SSURGO soil type and the corresponding predominant use value for each soil type, Idaho Power assigned each parcel an initial predominant use value. Idaho Power then had Union County review each parcel’s initial predominant use value against 2011 aerial photography and tax lot records to adjust the predominant use to reflect current land use. (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, page 239 of 614.)

93. Union County’s review of Idaho Power’s predominant use analysis did not result in any adjustments to the predominant use value Idaho Power initially assigned to parcels in the Timber-Grazing Zone. For 18 of the 61 parcels in the Timber-Grazing Zone located near the National Forest, there was no SSURGO data available. Therefore, for these 18 parcels, in the

³⁹ In this context, Union County defines “predominant use” as “the most common use of a parcel when differentiating between farmland and forest land.” UCZPSO 1.08. The Union County Zoning Ordinance further states:

In determining predominant use NRCS Soil Conservation Service soil maps will be used to determine soil designations and capabilities. The results of this process will be the most important method in determining the predominant use of the parcel. Other factors which may contribute to determining predominant use include parcel characteristics such as a commercial stand of timber, and the current use of the property. Removing a commercial stand of timber from a property will not result in a conversion of predominant use unless the property is disqualified as forest land by the Oregon Department of Forestry.

(UCZPSO 1.08.)

absence of soil data, Idaho Power conservatively determined that the land had a predominant use of forestland. (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, page 239 at 614.)

94. Idaho Power's predominant use analysis for the 61 parcels crossed by the proposed project in Union County's Timber-Grazing Zone showed that the predominant uses within the site boundary are split between forest and range land, with a negligible amount of high value crop land. (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, page 239 of 614.) Idaho Power determined that, for the Proposed Route in Union County, approximately 53 percent of Timber-Grazing zoned land has a predominant use of rangeland and about 47 percent had a predominant use of forestland. For the hybrid-zoned land along the Morgan Lake Alternative Route, Idaho Power determined that about 60 percent had a predominant use of rangeland and about 40 percent was forestland. (*Id.*)

95. In ASC Exhibit K, Attachment K-2, the Right-of-Way Clearing Assessment, Idaho Power addressed existing forestry practices adjacent to the project and impacts to those practices that may occur as a result of the construction and operation of the project. Idaho Power described the county costs of the project within the forested lands analysis area. Idaho Power explained that Union County has 899,000 acres (69%) of forestland out of a total land area of 1,303,000 acres.⁴⁰ Idaho Power explained that the "economic impact to forest sector jobs in Union County is approximately \$97,000, which will be partially offset by agriculture or range land uses after the conversion." (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, page 613 of 614.)

96. In ASC Exhibit K, Attachment K-2, Idaho Power also represented as follows:

The Forested Lands Analysis Area includes approximately 1,249 acres of forest and range lands; however, the forested acreage subject to permanent impact by conversion is substantially less (approximately 776 acres). Based on the results of the forested lands survey and analysis of the potential impacts and efforts to minimize and mitigate for project impacts, the Project will not cause (1) a substantial change in accepted forest or farm practices; or (2) a significant increase in the cost of accepted forest or farm practices on either lands to be directly impacted by the Project or on surrounding lands devoted to farm use.

(ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, pages 613-14 of 614.)

⁴⁰ As addressed in the *Ruling on Issues LU-2, LU-3, LU-5 and LU-6*, in ASC Exhibit K, Attachment 2, Idaho Power erred in calculating the percentage loss to the forestland base in Umatilla and Union Counties. However, the math errors were not material to Idaho Power's Goal 4 analysis and/or the proposed facility's compliance with the Land Use Standard. As pertinent here, in Union County, the percentage of land that would be converted from forestland to agricultural or range use is actually .059 percent (and not .00059 percent, as erroneously stated in ASC Exhibit K). See *Ruling on Issues LU-2, LU-3, LU-5 and LU-6* at 6, 15-16.

97. In ASC Exhibit K, Attachment K-1 (the Agricultural Lands Assessment), Idaho Power analyzed in detail the accepted farm practices in the area surrounding the project and the project's potential impacts on such practices. Idaho Power explained that the agricultural practices within the Agricultural Assessment Area in Union County included rangeland, rangeland/timber, and pasture and that potential impacts of the project include temporary (construction) and permanent (operational) disturbances, as well as the indirect impacts associated with these disturbances and the type of agricultural use disturbed.⁴¹ Idaho Power noted that indirect impacts may include growth-inducing effects caused by the project but occur later in time or farther removed in distance. Indirect impacts may also include changes in the pattern of land use, population density or growth rate, and the related effects of those changes on agriculture. Idaho Power reported that it will take minimization and mitigation actions to address potential impacts to agriculture, including but not limited to the following: restoring land to its former condition; compensating landowners for damages and/or impacts to agricultural operations caused as a result of project construction; micro-siting the towers to avoid agricultural areas, instituting weed control measures; preventing soil erosion; and other measures.⁴² (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, pages 389-443 of 614.)

98. In ASC Exhibit K, Attachment K-1, Idaho Power also included an Agricultural Mitigation Plan identifying the measures that Idaho Power will take to avoid, mitigate, repair, and or provide compensation for impacts that may result from the construction or operation of the Project on privately owned agricultural land. Idaho Power committed to working with impacted landowners regarding mitigation measures and compensation for impacts on privately owned agricultural land. Idaho Power explained that the project, taking into account measures to minimize or mitigate impacts, will not force a significant change in, or significantly increase the cost of, accepted farming practices in the areas surrounding the project in Union County. (ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, pages 247, 389-443 of 614.)

99. In the Proposed Order, the Department reviewed ASC Exhibit K, Attachment K-1, Idaho Power's analysis of the proposed facility's impacts on Goal 3 agricultural lands. The

⁴¹ In his rebuttal testimony, Kurtis Funke summarized these impacts as follows:

[T]emporary impacts to field crops from the transmission line construction; permanent impacts to field crops from transmission line construction; impacts to use of aircraft for farming activities; impacts to field burning; impacts to crop production and irrigation; impacts to livestock operations; impacts to pasture/rangeland; impacts to fencing; impacts to organic farming; impacts to agricultural works; impacts from helicopter operations related to transmission line construction; and impacts to future development, crops, and practices.

(Funke Rebuttal Test. at 14.)

⁴² Of the 1,461 transmission towers along the proposed route, only 26 are proposed to be located within an irrigated portion of an agricultural field, and Idaho Power may be able to further reduce this total number through micrositing. (Funke Rebuttal Test. at 18; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8907 of 10016.)

Department noted that ORS 215.275(5) requires that the reviewing body impose clear and objective conditions of approval on the application to mitigate the impacts of the proposed facility on surrounding lands devoted to farm use to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on surrounding farmlands. The Department then reviewed and analyzed Idaho Power's draft Agriculture Assessment and the Agricultural Mitigation Plan (ASC Exhibit K, Attachment K-1).⁴³ To ensure compliance with the Agricultural Lands Assessment, the Department recommended that the Council impose Recommended Land Use Condition 14, as follows:

Recommended Land Use Condition 14: The certificate holder shall:

a. Prior to construction of any phase or segment of the facility, the certificate holder in accordance with the OAR 345-025-0016 agency consultation process outlined in the draft Agriculture Assessment and Mitigation Plan (Attachment K-1 of the Final Order on the ASC), submit to the Department a final Agricultural Assessment and Mitigation Plan.

b. During construction and operation of any phase or segment of the facility, implement the Agricultural Mitigation Plan as finalized per sub (a) of this condition.

c. During operation, implement a post-construction monitoring plan to identify any remaining soil and agricultural impacts associated with construction that require additional restoration or mitigation, in accordance with Section 7.0 of the Agricultural Mitigation Plan, Attachment K-1 of the Final Order on the ASC.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 232 of 10016.)

100. With regard to ASC Exhibit K, Attachment K-2, the Department expressly approved of Idaho Power's methods for assessing potential impacts to forest practices.⁴⁴ The

⁴³ The Department also added provisions to the Agricultural Mitigation Plan, requiring Idaho Power to provide notification to the record owner of any agricultural lands containing high-value farmland, as defined in ORS 195.300(10), of the opportunity to consult with IPC for the purpose of locating and constructing the transmission line in a manner that minimizes impacts to high-value farmland farming operations. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8917 of 10016.)

⁴⁴ The Department noted:

Based on the above-described approach, and record of consultation with Union and Umatilla Planning Departments to accurately identify and account for forest-zoned lands within the analysis area, the Department recommends Council find that the methods are valid for assessing potential impacts to forest practices.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 237 of 10016.)

Department found, in pertinent part, as follows:

Based on the removal of approximately 776 acres of land from timber harvest production, the applicant quantifies the estimated harvest value to then assess potential economic impacts from the proposed facility. Potential impacts to the cost of accepted forest practices is then based on the economic impact of the proposed facility.

* * * * *

[P]otential impacts to the cost of accepted forest practices from the proposed facility include an annual economic revenue loss of \$212,530 and \$94,710 in Union and Umatilla counties, respectively; and, based on the 100 year (or more) estimated useful life of the proposed facility, a long-term loss of \$21.3 million and \$9.5 million in Union and Umatilla counties, respectively. The applicant notes that the actual value of a particular landowner's timber would be valued based on a timber appraisal completed at the time of land acquisition. As further described below, in addition to the land acquisition process, which would provide compensation for the economic loss of timber harvest area, the applicant proposes mitigation measures to minimize potential impacts to, and the cost of, accepted forest practices. To evaluate the significance of the removal of land from timber harvest potential, the applicant assesses the quantity of forest land lost compared to total forest land available (in acres), per county, resulting in approximately 0.07 and 0.4 percent loss in Union and Umatilla counties, respectively.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 238-40 of 10016.)

101. The Department also noted:

In addition, the applicant would compensate underlying landowners for the loss of land and timber production opportunity, for the life of the facility, based on a certified appraisal of the land value. Compensation would be implemented via private easement agreement or through negotiated settlement. Because this would occur during landowner negotiation or condemnation proceedings under the Oregon Public Utilities Commission, it is not specifically imposed as a site certificate condition or mitigation plan requirement. The Department recommends, however, that Council consider these processes, which would be outside of EFSC jurisdiction, to also provide mitigation consistent with OAR 345-010-0010(33) and would reduce potential impacts to accepted forest practices.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 242 of 10016.)

102. The Department addressed the proposed mitigation for potential impacts to

accepted forest practices. The Department recommended that the Council impose Recommended Land Use Condition 16, requiring implementation of the draft Right-of-Way Clearing Assessment:

Recommended Land Use Condition 16: The certificate holder shall:

- a. Prior to construction, in accordance with the OAR 345-025-0016 agency consultation process outlined in the draft Right-of-Way Clearing Assessment (Attachment K-2 of the Final Order on the ASC), submit to the Department for its approval, a final Right-of-Way Clearing Assessment. The protective measures described in the draft Right-of-Way Clearing Assessment in Attachment K-2 of the Final Order on ASC shall be included and implemented as part of the final Right-of-Way Clearing Assessment, unless otherwise approved by the Department.
- b. During construction, the certificate holder shall conduct all work in compliance with the final Right-of-Way Clearing Assessment.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 242 of 10016.)

103. The Department further found:

In addition, the applicant would compensate underlying landowners for the loss of land and timber production opportunity, for the life of the facility, based on a certified appraisal of the land value. Compensation would be implemented via private easement agreement or through negotiated settlement. Because this would occur during landowner negotiation or condemnation proceedings under the Oregon Public Utilities Commission, it is not specifically imposed as a site certificate condition or mitigation plan requirement. The Department recommends, however, that Council consider these processes, which would be outside of EFSC jurisdiction, to also provide mitigation consistent with OAR 345-010-0010(33) and would reduce potential impacts to accepted forest practices.

Based on the evaluation presented in ASC Exhibit K and reasoning and analysis presented in this order, and compliance with recommended Land Use Condition 16, the Department recommends Council find that the proposed facility would not result in significant adverse impacts to accepted forest practices nor result in a significant increase in the cost of accepted forest practices within the surrounding area and therefore would satisfy the requirements of OAR 660-006-0025(5)(a).

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 242 of 10016.)

104. With regard to the project's compliance with Statewide Planning Goal 3, Agricultural Lands, the Department found:

Goal 3 is implemented through applicable provisions of ORS Chapter 215 and each county's comprehensive plan and land use ordinances. As demonstrated above the proposed transmission line is allowed as a 'utility necessary for public service' on EFU-zoned lands under ORS 215.283(1)(c)(A) and ORS 215.275. As discussed above, and in compliance with ORS 215.275, the applicant's Agricultural Lands Assessment (ASC Exhibit K, Attachment K-1) demonstrates that the certificate holder would minimize impacts to accepted farming practices, and mitigate temporary and permanent impacts where necessary, in order to preserve and maintain agricultural lands consistent with the statutory framework developed to comply with Goal 3.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 246-47 of 10016.)

105. With regard to the project's compliance with Statewide Planning Goal 4, Forest Lands, the Department found:

[M]ost of the forest lands impacted by the proposed transmission line are in Umatilla and Union counties, where it would be conditionally permitted as a "new electric transmission line." As discussed above, the department recommends that the Council accept the applicant's interpretation that the term "new electric transmission line" includes all related and supporting facilities, including access roads. Based on that interpretation, the proposed transmission line and each of its related and supporting facilities are conditionally permitted in Goal 4 forest lands under OAR 660-006-0025(4)(q).

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 247 of 10016.)

106. With regard to the economic consequences of the proposed facility on Land Use concerns, the Department found:

Under the Council's Land Use standard, in order for the Council to grant a Goal 4 exception, the Council must find that the applicant has demonstrated that economic consequences of the proposed facility have been identified and mitigated in accordance with Council standards. The applicant indicates that construction and operation of the transmission line would result in the conversion of approximately 245.6 acre of forestland in Umatilla County and approximately 530.1 acres of forestland in Union County. These losses correspond to approximately [0.034] percent and [0.059] percent of total forestland within the counties, respectively. Additionally, the applicant estimates that the conversion of the above-described forestland would result in an "economic impact to forest sector jobs" in the amount of \$120,000 in Umatilla County and \$97,000 in Union County. The Department interprets "economic impacts" as "opportunity costs" to forestry industry due to land loss; the ASC does not appear to provide a specific

dollar estimate of the value of the land itself. The applicant also indicates that the project would provide economic benefits to the greater Pacific Northwest region, and would create direct economic benefits to the local communities through job creation, increased ad valorem taxes, and local spending stimulus.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 257-58 of 10016.)

107. With regard to Statewide Planning Goal 8 (Recreation Needs), the Department noted that while the proposed facility is not intended to satisfy recreational needs, compliance with the Council's Recreation standard ensures that the proposed facility will not adversely impact the state's recreational needs. As pertaining specifically to Morgan Lake Park (an important recreational opportunity in the project's analysis area under the Recreation standard), the Department referenced Idaho Power's Memorandum of Agreement (MOA) with the City of La Grande to distribute \$100,000 for recreational improvements to the park if Idaho Power selects the Morgan Lake Alternative route. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 250 of 10016.) The MOA contemplates that the funds would be used for upgrades to the park access road, a new entry gate, new toilets, day use area improvements, and signage. (*Id.*) The Proposed Order further states as follows:

Because the applicant's commitments described MOA, if executed, with the City of La Grande is part of the evidence Council could rely on to determine that the proposed facility would be consistent with Goal 8, the Department recommends Council impose the following condition:

Recommended Land Use Condition 17: Within 90-days of construction within Union County, if the Morgan Lake alternative route segment is selected at final facility design, the certificate holder shall provide the Department a copy of the Memorandum of Agreement, if executed, between the City of La Grande and certificate holder for improvements at Morgan Lake Park.

(*Id.* page 251 of 10016.)

108. With regard to compliance with the Land Use standard, the Department concluded:

Based on the foregoing findings and the evidence in the record, and subject to compliance with the recommended conditions, the Department recommends the Council find that the proposed facility, including the proposed and alternative routes, complies with the identified applicable substantive criteria and the directly applicable state statutes and rules and, therefore, complies with the Council's Land Use standard.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 260 of 10016.)

109. Limited party Gilbert raised concerns that Idaho Power did not provide sufficient

objective information on impacts the proposed facility may have on accepted farm practices, such as impacts from permanent project components, potential interference with pivotal irrigation systems, potential impacts from induced current, limiting the ability to use aircraft for farming activities, and impacts to soil and soil erosion. However, Idaho Power addressed these concerns and potential impacts in the Agricultural Lands Assessment and explained the actions the Company will take to avoid, minimize, mitigate, or compensate for these impacts. (Funke Rebuttal Test. at .52-66; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 8897-8925 of 10016.)

110. Limited party Sam Myers is a farmer with a lifetime lease on dryland farm ground in Morrow County, Oregon. The proposed facility crosses Mr. Myers' farmland. Mr. Myers raised concerns about the risks of project-related fires and the impacts a wildfire would have on his cropland. Mr. Myers also raised concerns about the project's impacts on his ability to use aerial chemical applications. (Myers Direct Test. at 1-5.) Idaho Power has addressed the risks of project-related wildfire through its Fire Prevention and Suppression Plan, Wildfire Mitigation Plan, its Public Safety Power Shutoff Plan, and Recommended Public Services Conditions 6 and 7. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 590 of 10016; Dockter Test., Cross-Exam. Hearing Day 3 (Tr. Day 3) at 21-23.) Idaho Power also addressed impacts to a landowner's ability to use aerial applications and the proposed mitigation for those impacts in its Agricultural Lands Assessment, Section 7.0. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8916 of 10016.)

111. If a fire occurred near Mr. Myers' agricultural operations, the fuel source would be mostly herbaceous, grass and grain vegetation. The timing of the fire will determine the fire conditions. The most likely time of year for a fire to move through this property is later in the growing season, when fuel sources are quite dry. This may result in a high intensity fire, but the fire would likely move quickly through the fields due to the presence of higher winds in that area. A fast-moving fire would not cause significant damage to soils. Moreover, a fast-moving fire may have other benefits to the burned area including reduction of viable weed seeds and reduction of disease and insect and rodent incidence. Burning also releases nitrogen, potassium, phosphorus and other nutrients from undecomposed organic matter to the soil. (Madison Rebuttal Test. at 91-92; Madison Rebuttal Exs. M and N.)

Findings related to the Noise Control Rules

112. The DEQ's Noise Control rules were first promulgated in 1974 to implement the provisions of ORS Chapter 467. The DEQ's rules, OAR Chapter 340, Division 35, established standards, provided for exceptions and variances to those standards, and provided for enforcement of the standards. In July 1991, upon legislative approval, the DEQ terminated the Noise Control Program as an agency cost savings measure due to reductions in General Fund support. (Rowe Decl., Attachment 1.) Although the DEQ terminated its Noise Control Program, the statutes and administrative rules remain in force. Now, enforcement of the noise standards falls under the responsibility of local governments and, in some cases, other agencies. The Department and Council must ensure that proposed energy facilities meet the DEQ's noise control regulations. (*Id.*)

113. No Council standard specifically addresses facility-related noise, although as noted above, the Council must ensure that the proposed facility meets the DEQ's rules. Accordingly, OAR 345-021-0010(1)(x) requires that, in the ASC, the applicant provide information about noise generated by facility construction and operation and evidence to support a finding by the Council that the facility complies with the noise control standards in OAR 340-035-0035.

114. In the Second Amended Project Order, the Department modified the requirements of OAR 345-021-0010(1)(x)(E) to accommodate the linear nature of the proposed facility. The Department ordered as follows: "Instead of one mile, to comply with paragraph E, the applicant must develop a list of all owners of noise sensitive property, as defined in OAR 340-035-0015, within one-half mile of the proposed site boundary." (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 23 of 29.) The Department directed Idaho Power to provide a noise analysis and information to support a finding that the proposed facility "will comply with the requirements of OAR 340-035-0035, or that an exception or variance may be issued by Council." (*Id.*)

115. In ASC Exhibit X, Idaho Power set out its analysis of the potential noise impacts from the B2H Project. ASC Exhibit X identified the noise sensitive receptors (NSRs)⁴⁵ within one-half mile of the project's site boundary from noise-generating features such as the transmission line and provided information to demonstrate that the relevant proposed facility noise sources will not exceed the DEQ's maximum permissible sound levels.⁴⁶ Idaho Power also provided information to show that, for the majority of NSRs within the analysis area, the project will not exceed the DEQ's ambient antidegradation standard.⁴⁷ Idaho Power noted that infrequently, during foul weather conditions, the transmission line might exceed the ambient antidegradation standard. Consequently, in ASC Exhibit X, Idaho Power requested that the Council authorize an exception to the proposed facility's compliance with the ambient antidegradation standard because such exceedances would be infrequent events.⁴⁸ (ODOE - B2HAPPDoc3-41 ASC 24_ Exhibit X_Noise_ASC 2018-09-28, pages 5-65 of 371.)

⁴⁵ A NSR is the same thing as a "Noise Sensitive Property." (Bastach Rebuttal Test. at 7.) The DEQ rules define "Noise Sensitive Property" as "real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner." OAR 340-045-0015(38).

⁴⁶ The maximum level for new industry and commerce sources located on a previously unused site is L₅₀ – 50 dBA. OAR 340-035-0035, Table 8.

⁴⁷ The ambient antidegradation standard is set out in OAR 340-035-0035(1)(b)(B)(i). The standard limits the amount by which a new facility can increase sound levels from a baseline ambient level by more than 10 dBA in any one hour.

⁴⁸ OAR 340-035-0035 (Noise Control Regulations for Industry and Commerce) states in part:

(6) Exceptions: Upon written request from the owner or controller of an industrial or commercial noise source, the Department may authorize exceptions to section (1) of this rule, pursuant to rule 340-035-0010, for:

116. In ASC Exhibit X, Idaho Power also described its multi-step methodology for conducting its acoustic analysis of the project. Idaho Power used the methodology to measure the operational noise from the proposed facility, the ambient baseline sound levels at the NSRs, and the frequency of foul weather conditions likely to cause noise exceedances at the NSRs:

In Step 1, Idaho Power identified the NSRs within the analysis area.

In Step 2, Idaho Power determined sound source characteristics for noise modeling of the transmission line during foul weather conditions.

In Step 3, Idaho Power calculated initial screening-level modeling results based on the foul weather conditions, and assessed the likely maximum received sound at the NSRs within the modeling analysis area.

In Step 4, for those NSRs that showed a potential exceedance condition of the 30dBA threshold, Idaho Power conducted baseline sound measurements at or near those locations.

In Step 5, from these baseline measurements, Idaho Power calculated the representative existing L_{50} sound levels and defined new compliance thresholds to assess conformance with the ambient antidegradation standard. Idaho Power calculated the representative existing L_{50} sound levels (baseline ambient noise levels) by taking the average of the measured L_{50} sound levels for the late night time period (12:00 a.m. to 5:00 a.m.).

In Step 6, Idaho Power assigned the L_{50} sound level for each NSR based on measurements performed in Step 5 for monitoring positions in a similar acoustic environment. Then, Idaho Power assessed the ambient antidegradation standard for each NSR. Idaho Power compared the assigned ambient baseline sound level to the modeled future level to assess compliance with the ambient degradation standard.

(ODOE - B2HAPPDoc3-41 ASC 24_ Exhibit X_Noise_ASC 2018-09-28, pages 9-10 of 371; *see also* Bastasch Rebuttal Test. at 16-18.)

117. As set out in ASC Exhibit X, to determine the frequency of foul weather conditions that may cause corona noise⁴⁹ exceedances at the NSRs, Idaho Power relied on historic weather data to predict the frequency of foul weather events at the NSR location. Idaho Power considered the variability of meteorological conditions on an hourly basis throughout the entire

(a) Unusual and/or infrequent events[.]

⁴⁹ Corona sound is usually heard as a hissing or crackling sound accompanied by a low hum and is a function of transmission line voltage, altitude, conductor and weather. (Bastasch Rebuttal Test. at 13.)

year.⁵⁰ (ODOE - B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, page 12 of 371.) Based on this meteorological data, Idaho Power determined that foul weather conditions expected to cause noise exceedances would occur approximately 1.3 percent of the time throughout the year.⁵¹ (*Id.* at page 28 of 371.) In the ASC, Idaho Power asserted that because the potential exceedances are anticipated to occur only approximately 1 percent of the time, the exceedances should be considered infrequent events for purposes of the exception to the standard. (*Id.* at page 31 of 371.).

118. For Step 4 of the acoustical analysis, Idaho Power designed and implemented its own sound monitoring program instead of using what it considered to be the outdated measurement procedures set out in DEQ Manual.⁵² Idaho Power adopted a methodology that is more sophisticated and more conservative than the DEQ Manual in terms of establishing the project's sound impact. The Company developed its sound monitoring protocol in consultation with the Department. Both the Department and its consultants vetted and approved of the protocol. (Bastach Rebuttal Test. at 20-21.) In the ASC, Idaho Power's sound analysis relies on data from 17 monitoring positions. When multiple monitoring positions were in proximity to NSRs, the Company selected the monitoring position with the lower ambient sound level to provide more conservative representative ambient sound levels. The Company also selected monitoring positions that were generally located further from existing ambient sound sources

⁵⁰ ASC Exhibit X, Section 3.2.4, Evaluating Frequency of Foul Weather Conditions, states in pertinent part:

To determine the frequency of foul weather conditions in the analysis area, an analysis of the historical meteorological data (2008-12) was conducted at four discrete data collection stations found in proximity to the Project: Flagstaff Hill, La Grande, Owyhee Ridge, and Umatilla National Wildlife Refuge (NWR). Verified meteorological data were obtained for these stations from the Western Regional Climate Center (WRCC). The WRCC is one of six regional climate centers in the United States and provides meteorological monitoring data for the Pacific Northwest region. * * * .

The hourly meteorological data included parameters such as precipitation, wind speed (mph), wind direction (degree), average air temperature (degrees Fahrenheit), relative humidity (percent), and solar radiation (watts per square meter). The data were analyzed to effectively determine the frequency of relevant foul weather conditions in the vicinity of potentially impacted NSRs.

(ODOE - B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, page 12 of 371.)

⁵¹ ASC Exhibit X, Table X-6 shows meteorological data analyses in terms of frequency. Table X-7 lists the seasonal and diurnal (day, night, and late night) variability in foul weather for the project area. Table X-8 shows the daily and hourly frequency of foul weather and Table X-9 shows the late night frequency of foul weather. (ODOE - B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, pages 28-31 of 371.)

⁵² OAR 340-035-0035(3)(a) requires that sound measurement procedures conform to "the procedures which are adopted in the Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department."

than the NSRs, further contributing to the conservative nature of the baseline ambient sound measurements. (*Id.* at 22.)

119. Idaho Power collected sound measurements at each monitoring position continuously over a two to four-week duration. The initial measurement period began on March 6, 2012 and ended on May 10, 2012. A supplemental measurement period began on March 11, 2013 and ended on June 12, 2013. Idaho Power extended the duration of the measurement period to obtain a statistically significant dataset and to obtain data during a range of meteorological conditions. (Bastasch Rebuttal Test. at 24.)

120. The results of Idaho Power's noise analysis demonstrated that the project complies with the noise rules' upper limits on sound levels ($L_{50} - 50$ dBA), but that in some instances, the corona sound caused by foul weather will result in an exceedance of the ambient antidegradation standard set out in OAR 340-035-0035 (more than 10 dBA in any one hour). (OAR 340-035-0035(1)(b)(B)(i); Bastasch Rebuttal Test. at 4.)

121. In the Proposed Order, Section IV.Q.1, Noise Control Regulation, the Department found that the project would be a new industrial noise source and therefore the requirements established in OAR 340-035-0035(1)(b)(B)(i) are applicable. The Department addressed construction noise and predicted noise levels from general construction activities and operational noise, including the potential corona noise generated from the proposed transmission line and operations and maintenance activities. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 626 of 10016.)

122. The Department expressly approved Idaho Power's sound measurement procedure, stating in part as follows:

Sound measurements at each monitoring position were collected continuously over a 2- to 4- week duration. The initial measurement period commenced March 6, 2012, and ended on May 10, 2012, and the supplemental measurement period commenced March 11, 2013 and ended on June 12, 2013.

The Department relied upon its third-party consultant, Golder Associates, to review the protocol. Based on review, Golder Associates confirmed that the sound measurement procedures and baseline noise measurements were technically accurate. Based on the Department's third-party consultant recommendations and review, and review of facts represented in ASC Exhibit X, the Department recommends Council approve the applicant's sound monitoring points and measurement procedures, as allowed under OAR 340-035-9 0035(3)(a) and (b).

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 634-635 of 10016.)

123. In the Proposed Order, the Department also addressed Idaho Power's request for an exception to the ambient antidegradation standard based on the expected infrequency of potential

exceedances.⁵³ (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 649-52 of 10016.) In doing so, the Department reviewed Idaho Power's methodology for predicting the frequency of foul weather conditions and the analysis of foul weather frequency. The Department noted:

To predict the frequency of foul weather conditions in the analysis area, the applicant evaluated hourly meteorological data, from 2008-2012, including precipitation, wind speed, wind direction, average air temperature, relative humidity, and solar radiation from the following four Western Regional Climate Center (WRCC) meteorological stations - Flagstaff Hill, La Grande, Owyhee Ridge, and Umatilla Northwest Wildlife Refuge. In ASC Exhibit X, the applicant utilized the meteorological datasets for each WRCC station to ascertain diurnal and seasonal variations in weather conditions. Additionally, the applicant identified periods of rainfall events over the course of consecutive days and consecutive hours to inform their definition of infrequent. The applicant averaged the data from the meteorological stations and found that foul weather (i.e. weather conditions comprised of a rain rate of 0.8 to five millimeters per hour [mm/hr]) occurred for at least one hour during 13 percent of the days (or approximately 48 days per year).

The applicant conducted a sensitivity analysis during the late night time period and provided the results in ASC Exhibit X, Table X-9. Based on historic average rainfall conditions measured at the 4 WRCC meteorological stations, the frequency of foul weather conditions lasting one hour or more ranges from 22 to 80 days per year, with foul weather occurring in the late night hours (for a period of one hour or more), between two and seven percent of the time.

The Department utilized a third-party consultant, Golder Associates, to support technical review of the exception request, specifically the accuracy of weather data relied upon and applicant's evaluation of foul weather frequency. The Department's consultant utilized a trained meteorologist for the evaluation and determined the meteorological data to be complete and accurate, and the assumed rain rate of 0.8 to 55 mm/hr used in the acoustic modeling, based on the meteorological data, to be conservative for a predominately arid region. Based on its review, the consultant recommended the Department consider that, because the

⁵³ OAR 340-035-0010, titled "Exceptions" states as follows:

(1) Upon written request from the owner or controller of a noise source, the Department may authorize exceptions as specifically listed in these rules.

(2) In establishing exceptions, the Department shall consider the protection of health, safety, and welfare of Oregon citizens as well as the feasibility and cost of noise abatement; the past, present, and future patterns of land use; the relative timing of land use changes; and other legal constraints. For those exceptions which it authorizes the Department shall specify the times during which the noise rules can be exceeded and the quantity and quality of the noise generated, and when appropriate shall specify the increments of progress of the noise source toward meeting the noise rules.

applicant applied a higher than average rain rate, the likelihood of ambient antidegradation standard exceedance could reasonably be limited to infrequent or unusual events.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 651 of 10016.)

124. Next, the Department addressed the meaning of the phrase “infrequent or unusual” for purposes of the Noise Control rules:

The phrase “infrequent or unusual” is not defined in DEQ’s statutes (ORS 467.030) or noise rules. Therefore, to resolve ambiguity, the Department considers it necessary to interpret the phrase based on the regulatory interpretation methodology described in *PGE v. Bureau of Labor 28 and Industries*, 317 Or 606, 610-12 (1993) and modified in *State v. Gaines*, 346 Or 160 (2009) (“*Gaines*”). Consistent with the methodology, the Department considers the text and context of the phrase within the rule, and applies the general maxims of regulatory language construction to support its interpretation. The relevant dictionary definition of “infrequent” and “unusual” is: “occurring at wide intervals in time,” and “uncommon” or “rare.” The definition includes the concept that the circumstances are not constant, not continuous, and not representative of normal operating conditions.

Having considered the text of the rule, the Department considers the contextual rule provisions under OAR 340-035-0005 which states that the underlying policy of the noise rules is to protect the health, safety and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions. Given that the -0005 policy is to protect citizens from excessive noise emissions which, under typical meteorological conditions for the region, is not expected from the proposed facility, it appears contrary not to consider foul weather events – the contributing factors of excessive noise emissions – unusual or infrequent under OAR 340-035-0035(6)(a). Therefore, based on the Department’s review, technical review and recommendations of its third-party consultant, Golder Associates, and the analysis presented above, the Department recommends Council find that exceedances of the ambient antidegradation standard during foul weather events would be infrequent or unusual under OAR 340-035-0035(6)(a) and that Council grant an exception to the proposed facility.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 651-52 of 10016.)

125. As further evidence to support the conclusion that corona sound caused by foul weather would be an infrequent occurrence along the proposed facility, Idaho Power presented an internal Bonneville Power Administration (BPA) memorandum dated May 26, 1982 that discusses sound level limits for BPA facilities. The BPA memorandum (Proposed Order Attachment 5) notes that BPA consulted with the Oregon DEQ and the Washington State

Department of Ecology regarding state and local noise control regulations. The memorandum explains that, based on BPA's meteorological assessment of weather east of the Cascades, corona sound caused by foul weather conditions east of the Cascades would be, by definition, "infrequent" and therefore the transmission line would be eligible for an exception to the states' noise rules.⁵⁴ (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7879 of 10016.)

126. Idaho Power also presented evidence of BPA's transmission line noise studies for other transmission line projects where BPA focused on the infrequent occurrence of foul weather in the project vicinity. BPA's meteorological analysis showed that foul weather would occur between one and seven percent of the year, depending on the project location. (Bastasch Rebuttal Test. at 33-34; *see also* ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7904-05 of 10016.)

127. Idaho Power's approach to estimating potential exceedances of the ambient antidegradation standard is intentionally conservative and, for that reason, likely overestimates the frequency of actual exceedances. For example, Idaho Power estimated the level of corona sound modeling that would be produced if the facility were operating at the maximum operational voltage of 500 kV. However, during typical operations the line will be operating at a substantially lower voltage. Moreover, the Company's modeling assumed that exceedances would occur during any foul weather event, day or night, but the actual exceedances are anticipated to occur only during periods where ambient sound levels are lowest, typically during the late night hours. Additionally, Idaho Power's modeling did not consider the masking phenomenon, *i.e.*, the sound of heavy rain hitting foliage, which tends to increase the actual ambient sound levels during foul weather. Finally, Idaho Power's modeling removed from the calculation any hour in which wind was greater than 10 mph. Because wind can increase ambient sound levels, removing the hours in which the wind was more than 10 mph also tends to result in a lower assumed ambient sound level than actual conditions. (Bastasch Rebuttal Test. at 29-36.)

128. In essence, exceedances of the ambient antidegradation standard due to facility-related noise would be infrequent because three conditions need to coincide to result in an exceedance: (1) a low ambient noise environment (generally late night or early morning hours and low wind); (2) foul weather (rain or high humidity); and (3) the transmission line operating at or near maximum voltage. (Miller Cross-Exam. Test, Tr. Day 1 at 30-31; *see also* Bastasch Rebuttal Test. at 31.)

⁵⁴ The memorandum explains:

It is BPA's interpretation that a frequency of occurrence of less than 1 percent will qualify as an exception to the regulations. For [alternating current] transmission lines located in areas where a rain rate from 0.8 to 5mm/hr will occur less than one percent of the time during the year, audible noise from the line will be an infrequent event and thus be considered as an exception from noise regulations. Based on a meteorological analysis of the frequency of these rain rates (0.8 to 5mm/hr) [alternating current] transmission lines east of the Cascades will meet this criteria.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7879 of 10016.)

129. At Idaho Power's request, the Department also considered whether granting an exception to the DEQ's ambient antidegradation standard would allow for the protection of health, safety, and welfare of Oregon citizens pursuant to OAR 340-035-0010(2). The Department found that potential exceedances of the ambient antidegradation standard along the proposed transmission line and at 41 NSR locations "would be infrequent, estimated under worse-case conditions anticipated to occur two to seven percent of the time." (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 652 of 10016.) The Department added:

[A]ctual noise-related impacts are anticipated to be minimal as residents are assumed to be indoors at the time of the exceedance during late night and very early mornings (12:00 a.m. to 5:00 a.m.) and during foul weather (*i.e.* when it is raining). Therefore, it is expected that NSRs would experience noise levels inside their houses 10 dBA 3 (with windows open) to 20 dBA (with windows closed) lower than modeled in ASC Exhibit X due to noise attenuation and absorption by residential structures.

As represented in ASC Exhibit X, the applicant also commits to working with impacted NSRs to attempt to resolve concerns, avoid, monitor, and mitigate noise at NSRs caused by audible corona noise and potential exceedances. The mitigation plan may include micrositing the relevant portions of the proposed transmission line within the site boundary; however, the applicant reiterates that the micrositing may not affect other landowners, unless agreed-to in writing by those other landowners. Other mitigation measures include, but are not limited to the installation of, or cash equivalent of, certain window treatments shown to be effective in reducing indoor sound pressure levels. Further, the applicant represents that it would establish a system to receive and respond to complaints associated with potential operational corona noise from landowners not identified in Attachment X-5 of this order. The complaint response plan includes a process for complaint filing, receipt, review and response for NSR exceedances evaluated in the ASC and NSRs that are not identified in the ASC.

(*Id.* at pages 652-53 of 10016.)

130. The Department recommended that the Council impose conditions related to Idaho Power's proposed noise exceedance mitigation plans and complaint response plan. The conditions are designed to ensure that granting an exception to the proposed facility would not preclude the protection of public health, safety, and welfare otherwise afforded through compliance with DEQ's noise control rules. Recommended Noise Control Condition 1 in the Proposed Order requires Idaho Power to work with the 41 NSR property owners identified in Attachment X-5 to develop mutually agreed upon Noise Exceedance Mitigation Plans, specific to each NSR location. The site-specific Noise Exceedance Mitigation Plans will include agreed upon measures to be implemented at the NSR location to minimize or mitigate the ambient antidegradation standard noise exceedance. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 653-54 of 10016.)

131. Recommended Noise Control Condition 2 in the Proposed Order requires Idaho Power to develop and implement a complaint response plan to address noise complaints and requires that the plan include certain provisions, including the process for complaint filing, receipt, review and response. The recommended condition also requires Idaho Power to notify the Department within three working days of receipt of a project-related noise complaint, describes the process for determining if corona noise exceeds the ambient antidegradation standard, and describes the process for developing a plan to minimize or mitigate project-related exceedances of the ambient antidegradation standard. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 655 of 10016.)

132. At Idaho Power's request, the Department also considered whether granting an exception to DEQ's ambient antidegradation standard is appropriate in light of the feasibility and cost of noise abatement.⁵⁵ The Department noted that typical noise abatement technologies, such as insulators, silencers, and shields, are not reasonable technologies for transmission lines due to the line's length as well as safety and operational limitations. To ensure that Idaho Power constructs the proposed transmission line using materials to reduce corona noise, the Department recommended that the Council impose Recommended Noise Control Condition 3, requiring Idaho Power to implement design measures and construction techniques to minimize potential corona noise during facility operation. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 656 of 10016.)

133. In its discussion of granting an exception to the noise rules, the Department explained that because foul weather conditions may occur at any point during the day or night, at any point along the proposed transmission line, and because the proposed transmission line would operate 24 hours a day, year-round, placing time limitations on the exception would not be appropriate. The Department recommended that the Council establish that the ambient antidegradation standard may be exceeded at any time during infrequent or unusual foul weather events, as authorized through the OAR 340-035-0035(6)(a) exception. The Department also recommended imposing the following condition, describing the exception:

Recommended Noise Control Condition 4: During operation:

- a. An exception to compliance with the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) (i.e. an increase of 10 dBA above ambient sound pressure levels) is granted for infrequent or unusual foul weather events during facility operation, pursuant to OAR 340-035-0035(6)(a).
- b. The ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) may be exceeded by the transmission line any time of day or night during infrequent or unusual foul weather events. [OAR 340-035-0010(2)]
- c. The quantity and quality of noise generated in exceedance of the ambient

⁵⁵ As noted above, OAR 340-035-0010(2) identifies "the feasibility and cost of noise abatement; the past, present, and future patterns of land use; the relative timing of land use changes; and other legal constraints" as other factors to consider in establishing exceptions to the noise rules.

antidegradation standard (ambient plus 10 dBA) at OAR 340-035-0035(1)(b)(B), during infrequent or unusual foul weather events, shall not be more than 10 dBA (or ambient plus 20 dBA), as measured at any NSR location, and from corona noise consisting of a low hum and hissing, frying or crackling sound, respectively. [OAR 340-035-0010(2)]

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 662 of 10016.)

134. In the Proposed Order, the Department also addressed Idaho Power's request for a variance under OAR 340-035-0100.⁵⁶ The Department recommended that the Council evaluate the variance request for the entirety of the transmission line alignment based on its interpretation that the ambient antidegradation standard under OAR 340-035-0035(1)(b)(B)(i) applies to the transmission line. Based on its evaluation of the variance criteria, the Department recommended that the Council impose Recommended Noise Control Condition 5, granting a variance to compliance with the ambient antidegradation standard pursuant to OAR 340-035-0100(1) for the transmission line and allowing the project to exceed the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) at any time of day or night. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 666 of 10016.)

135. In the Proposed Order, the Department found as follows with regard to the proposed facility's compliance with the Noise Control Rules:

Based on the foregoing findings and conclusions of law, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that an OAR 340-035-0035(6)(a) exception (unusual or infrequent events) and variance to compliance with the ambient antidegradation standard (OAR 340-035-0035(1)(b)(B)(i)) be granted for the proposed facility and that the proposed facility, including the proposed and alternative routes, would otherwise comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 666-67 of

⁵⁶ OAR 340-035-0100(1) states:

Conditions for Granting. The Commission may grant specific variances from the particular requirements of any rule, regulation, or order to such specific persons or class of persons or such specific noise source upon such conditions as it may deem necessary to protect the public health and welfare, if it finds that strict compliance with such rule, regulation, or order is inappropriate because of conditions beyond the control of the persons granted such variance or because of special circumstances which would render strict compliance unreasonable, or *impractical due to special physical conditions or cause*, or because strict compliance would result in substantial curtailment or closing down of a business, plant, or operation, or because no other alternative facility or method of handling is yet available. Such variances may be limited in time.

(Emphasis added.)

10016.)

136. In addition to minimizing corona sound through the construction design required by Recommended Noise Control Site Condition 1, Idaho Power proposes to mitigate exceedances in other ways. First, Idaho Power will microsite the project components within the site boundary to increase the distance between the NSR and the transmission line where feasible and agreed-to with the landowner. Second, the Company plans to offer to retrofit those residences where the exceedances are expected with new windows designed to improve the sound insulation. The Company commits to working with a qualified acoustical consultant and the affected NSR owner to implement acoustical upgrades. (Bastasch Rebuttal Test. at 52-53.)

137. In ASC Exhibit X, Idaho Power used monitoring position (MP) 11 as representative of the NSRs along the proposed route in Union County. MP 11 was located at a cabin approximately 5 miles south of Meacham, Oregon, along Segment 3 (Union County). MP 11 was approximately 1.1 miles from Interstate 84, and approximately 207 feet from the Union Pacific Railroad line. The nearest existing transmission line is approximately one half mile, and is owned by BPA. In the ASC, Idaho Power provided the following description of conditions at MP 11:

Daytime field observations noted 8 to 10 heavy trucks (some with snowplows) that passed the meter within one hour. Snowplows passing by the meter were measured at approximately 80 dBA. Freight train traffic was present on the Union Pacific Railroad situated immediately adjacent to the property. Nighttime field observations noted generally quiet conditions with no traffic, sounds of water running in a creek, light snow/rain showers, and light winds.

(ODOE - B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, page 160 of 371.) Idaho Power's measurement of existing sound levels at MP 11 (for the period of March 7, 2012 to April 6, 2012) at late night and low wind conditions disclosed a baseline ambient noise level of 32 dBA (L₅₀ one hour). (*Id.* at 22 of 371.) Idaho Power used the 32 dBA baseline value to assess the potential for exceedances at identified NSRs near Morgan Lake in Union County. (*Id.*)

138. Limited parties raised concerns with Idaho Power's choice to use MP 11 to set the baseline ambient sound level for all NSRs along the Morgan Lake Alternative. In support of their challenge, limited parties presented evidence from acoustical engineer Kerrie Standlee who, over the course of several hours on the morning of September 12, 2021, measured the ambient noise level from a residence on Morgan Lake Road owned by limited party Greg Larkin. Mr. Standlee measured the hourly L₅₀ noise level between 12:25 a.m. and 4:00 a.m., in calm wind conditions, 48 to 50 degree temperature, and 73 percent relative humidity. On that date, during that three and a half hour period, the ambient sound measurements ranged from a high of 29 dBA (between 12:25 a.m. and 1:00 a.m.) to a low of 20 dBA (between 3:00 a.m. and 4:00 a.m.). Based on this sample, Mr. Standlee opined that: (1) the ambient noise at residences in the vicinity of Morgan Lake is likely 10 to 12 dB lower than the level used in Idaho Power's noise analysis; and (2) the ambient noise level measured at MP 11 (32 dBA) is not representative of the ambient noise levels at residences in the vicinity of Morgan Lake. (STOP B2H Ex. 5 at 4.)

139. In response to limited parties' concerns that Idaho Power did not adequately assess baseline noise levels at NSRs in the area of Morgan Lake, the Company's consultant performed supplemental sound monitoring at four additional locations near the NSRs (MPs 100, 101, 102 and 103) over 21 days, from October 10 to November 1, 2021. MP 100 was located on private property immediately adjacent to Morgan Lake Park; MP 101 was located off Wood Road, downslope from the residences; MP 102 was located along Morgan Lake Road, on a bluff overlooking La Grande; and MP 103 was established to represent the NSRs in the La Grande valley closer to I-84. (Bastasch Rebuttal Test. at 63-65.)

140. Measured when winds gusts were less than 10 miles per hour, with no rain and relative humidity less than 90 percent, the average L_{50} during the period of midnight to 5:00 a.m. at these four monitoring positions were as follows:⁵⁷

MP 100 – 31 dBA
MP 101 – 36 dBA
MP 102 – 32 dBA
MP 103 – 43 dBA

(Bastasch Sur-surrebuttal Test Ex. I; Bastasch Cross-Exam. Test., Tr. Day 1 at 58-60.)

141. Overall, the results of Idaho Power's supplemental monitoring confirmed that the Company's decision to use 32 dBA as the ambient baseline level for MP 11 (representing the ambient noise level at NSRs in the Morgan Lake area) was appropriate. (Bastasch Cross-Exam. Test., Tr. Day 1 at 64-65.) The one decibel difference (between the 31 dBA baseline level recorded at MP 100 and the 32 dBA at MP 11) is not perceivable to the human ear. (*Id.* at 65.)

Findings related to the Public Services standard – Traffic Safety

142. Pursuant to OAR 345-021-0010(1)(u), ASC Exhibit U must include information regarding potential adverse impacts on public services, including traffic safety, and evidence to support a finding by Council that the project complies with the Public Services Standard. In the Second Amended Project Order, the Department directed Idaho Power to provide estimated facility-related traffic during construction and operation and the potential impact on traffic safety. The Department also directed Idaho Power to describe the "proposed transportation routes for the transport of heavy equipment and shipments of facility components during construction, including proposed ground and air transportation routes within the analysis area."⁵⁸ (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 22 of 29.)

⁵⁷ These are the corrected L_{50} values set out in Bastasch Sur-surrebuttal Exhibit I and not the erroneous calculations provided in Mr. Bastasch's November 12, 2021 Rebuttal Testimony. In his Sur-surrebuttal and Cross-Examination testimony, Mr. Bastasch acknowledged that he had erred in his initial calculations when classifying the weather. (Bastasch Cross-Exam. Test., Tr. Day 1, at 58-59.)

⁵⁸ In the context of the Public Services Standard, the "analysis area" means the area within the site boundary and 10 miles from the site boundary. (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, pages 24-25 of 29; *See also* Grebe Rebuttal Test. at 6-7.)

143. As part of ASC Exhibit B,⁵⁹ Idaho Power included a “Road Classification Guide and Access Control Plan” to provide information about the access roads for the proposed facility. The purpose of the Road Classification Guide and Access Control Plan is “to define which Project roads are included within the Site Boundary” and “to classify each access road by the type and amount of disturbance” from the construction and operation of the proposed facility.⁶⁰ (ODOE - B2HAPPDoc3-3.2 ASC 02c_Exhibit B_Attachment B-5_ASC_PART 1 2018-09-28, page 5 of 114.)

144. In the ASC, Idaho Power defined the term “Access Road” as “[a] linear travel route designated to support construction, operation, and maintenance of the transmission line.” (ODOE - B2HAPPDoc3-3.2 ASC 02c_Exhibit B_Attachment B-5_ASC_PART 1 2018-09-28, page 8 of 114.) Idaho Power considered access roads to be “related or supporting facilities.”⁶¹ Idaho Power explained as follows:

Construction of the Project will require vehicle, truck, and crane access to all construction areas. Existing roads will be used as the main access road network. IPC assumes that existing paved roads and bridges were designed to meet Oregon Department of Transportation and Idaho Transportation Department and other applicable standards and will therefore not require improvements prior to Project construction. *Access to construction sites will require improvements to existing unpaved roads and construction of new access roads. Construction of new access roads will be required only as necessary to access structure sites lacking direct access from existing roads, or where topographic conditions such as steep terrain, rocky outcrops, and drainages prohibit safe overland access to the Project.* Most construction areas will be accessed using low-standard roads including those owned by private parties, counties, and state and federal agencies.

(*Id.*; emphasis added.)

145. Much of the heavy construction equipment necessary to construct the facility, such as large excavators, cranes, feller bunchers, and tracked equipment, generally will operate on the project right of way or private access roads, except when heavy equipment is moved from one isolated section of the line to another on public roads. (Grebe Rebuttal Test. at 9.)

⁵⁹ Pursuant to OAR 345-021-0010(1)(b), Exhibit B must include “information about the proposed facility, construction schedule and temporary disturbances of the site.”

⁶⁰ The Road Classification Guide and Access Control Plan is also included as Attachment B-5 to the Proposed Order. (See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8448 or 10016.)

⁶¹ The term “related or supporting facility” is defined in ORS 469.300(24) as “any structure, proposed by the applicant, to be constructed or substantially modified in connection with the construction of an energy facility * * *.”

146. Idaho Power used traffic consulting and engineering firms (Tetra Tech and HDR, Inc.) to develop and design the methodology and assumptions used to assess traffic safety impacts and determine mitigation measures. In ASC Exhibit U, Idaho Power included a traffic impact analysis and a Transportation and Traffic Plan that discusses proposed measures to mitigate construction impacts on traffic safety. (Grebe Rebuttal Test. at 11-12; ODOE - B2HAPPDoc3-38 ASC 21_ Exhibit U_ PublicServices_ ASC 2018-09-28, pages 89-132 of 143.)

147. In ASC Exhibit U, Idaho Power also addressed whether existing roads would require improvements. Idaho Power also identified the minimum access-road requirements for the proposed transmission line and station construction and operation. Using the requirements for the passage of the largest piece of construction equipment (an aerial lift crane) as a baseline, Idaho Power's consultants determined that a 14-foot wide roadway and a 16 to 20-foot wide surface for turns are the minimum requirements for an access road. (ODOE - B2HAPPDoc3-38 ASC 21_ Exhibit U_ PublicServices_ ASC 2018-09-28, page 116 of 143; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 556 of 10016.)

148. In determining which existing roads would require improvements for the proposed facility's construction and operation, Idaho Power's consultants also considered the generally accepted industry standards for minimum access road requirements in terms of road grade and turns (horizontal curve radii). (Grebe Rebuttal Test., Exs. D and E; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 557 of 10016.) The consulting firms conducted desktop reviews of existing roads based on aerial photos and, where practicable, field reconnaissance, to assess the width, grade, and condition of existing roads within the analysis area. (ODOE - B2HAPPDoc3-3.2 ASC 02c_ Exhibit B_ Attachment B-5_ ASC_ PART 1 2018-09-28, page 14 of 114; Grebe Rebuttal Test. at 2-3.)

149. As noted previously, in the ASC Idaho Power proposed a primary route and alternative routes. In Union County, Idaho Power proposed the Mill Creek Route and the Morgan Lake Alternative. The Proposed Route enters Union County at MP 88.3, and traverses the county for 39.9 miles. At MP 105.8, the Proposed Route/Mill Creek Route runs approximately 0.4 miles west of the La Grande city limits.⁶² The 18.5 mile Morgan Lake Alternative Route runs to the west of the Proposed Route. It leaves the Mill Creek Route at MP 98.8, approximately 1 mile west of Hilgard Junction State Park. The Morgan Lake Alternative Route proceeds south and then southeast, crossing the Grande Ronde River at MP 0.8. It then turns east and southeast. At MP 6.3, the alternative route passes about 0.2 mile southwest of Morgan Lake. (ODOE - B2HAPPDoc3-4 ASC 03_ Exhibit C_ Project_ Location_ ASC 2018-09-28, pages 15-16 and 24-25 of 193.)

⁶² ODOE - B2HAPPDoc3-4 ASC 03_ Exhibit C_ Project_ Location_ ASC 2018-09-28, pages 15-16 of 193 (describing the Proposed Route in Union County). See ASC Exhibit C, Attachment C-2, Map 51, which shows the La Grande city limit boundary line, the site boundary line, and the unimproved portion of Hawthorne Road within the site boundary as potentially needing substantial modification. (ODOE - B2HAPPDoc3-4 ASC 03_ Exhibit C_ Project_ Location_ ASC 2018-09-28, page 94 of 193.) See also ASC Exhibit B, Attachment B-5 (Road Classification Guide and Access Control Plan), Map 54, showing the same. (ODOE - B2HAPPDoc3-3.3 ASC 02d_ Exhibit B_ Attachment B-5_ ASC_ PART 2 2018-09-28. Page 1 of 85.)

150. In the Proposed Order, Section IV.M.6, Public Services/Traffic Safety, the Department stated as follows:

The applicant classified road segments for existing roads to determine the extent of improvements needed and whether or not the road would then be included in the site boundary as a related or supporting facility. Existing roads that would be used for construction and operation of the proposed facility but would not require substantial modification are not “related or supporting facilities” and, therefore, are not included in the site boundary.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 557 of 10016.)

151. With regard to traffic safety concerns under the Public Services Standard, the Department included Recommended Public Services Condition 2, requiring Idaho Power to, among other things, submit to the Department a final county-specific Transportation and Traffic Plan at least 90 days prior to construction of a facility phase or segment. To address concerns about potential impacts from construction on roads managed by public service providers, the Department recommended that Idaho Power provide a list of permits and agreements from local jurisdictions as part of its final county-specific Transportation and Traffic Plan. The Department also recommended that Idaho Power update its Road Classification Guide and Access Control Plan and provide it as part of the final Transportation and Traffic Plan. The final county-specific Transportation and Traffic Plan must be approved by the Department, in consultation with each county or jurisdiction, prior to construction. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 568-71 of 10016.)

152. In the Proposed Order, at footnote 562, the Department explained:

Commenters, including Union County and the City of La Grande, expressed concerns about impacts from traffic and to roads including but not limited to Morgan Lake Road, Glass Hill Road, Old Oregon Trail Road, Olsen Road, Modelaire-Hawthorne Loop, and Sunset Drive. The Department notes that the applicant identifies these existing public roads as potential connecting access roads assumed to be maintained to meet road maintenance standards of the owner (County, ODOT, etc.). *The applicant is not representing to substantially modify these roads; therefore, they are not included in the site boundary proposed by the applicant in the ASC, under EFSC review.* See Recommended Public Services Condition 2 which requires a county-specific Transportation and Traffic Plan that identifies final haul routes, documentation of existing road conditions, and the requirement that if the applicant must substantially modify roads not currently within the site boundary, it must submit an Amendment Determination Request or submit a Request for Amendment of the Site Certificate receive Council approval via an amendment, if necessary. *[The unpaved portion of Hawthorne Drive]⁶³ is included in the site boundary, requiring substantial modification, 21-70%*

⁶³ The Proposed Order erroneously identifies this road as “Hawthorne Lane.” (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 557 of 10016.)

improvements which may include reconstruction of portions of the road to improve road function. Possible road prism widening, profile adjustments, horizontal curve adjustments, or material placement. Final road improvements would be reviewed and approved by the Department, in consultation with each County as part of the county-specific Transportation and Traffic Plan.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 557 of 10016; emphasis added.)

153. In the Proposed Order, the Department concluded:

Based on the analysis presented here, and in compliance with recommended conditions, the Department recommends that the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts to the ability of public and private traffic safety providers within the analysis area. Additionally, the construction and operation of the proposed facility is not likely to result in significant adverse impacts to traffic volumes and congestion on proposed commuting and hauling routes proposed to be used by the applicant during construction.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 571 of 10016.)

154. On May 19, 2021, Idaho Power's traffic safety consultants traveled to La Grande to conduct a follow up site visit and field review of access roads for the proposed construction of the facility. The trip focused on reviewing access roads in the area between La Grande and Morgan Lake to determine whether the roads were adequate for construction and vehicle use or whether the roads may require modifications prior to use for construction vehicles. The site visit team also considered whether there were any safety measures that may be appropriate in connection with use of these roads in light of concerns raised by members of the public. (Grebe Rebuttal Test. at 13; Grebe Rebuttal Ex. B.)

155. On their May 19, 2021 field review, the site visit team drove Modelaire Drive and the paved portion of Hawthorne Drive (streets comprising the Hawthorne Loop) to survey the existing conditions. The site visit team analyzed the grade and curves of the roads in the Hawthorne Loop and again determined that construction vehicles should be able to ascend/descend the grades and navigate the curves without issue. (Grebe Rebuttal Test.; Grebe Rebuttal Ex. B at 6-7.) The consultants noted potential visibility concerns along the Hawthorne Loop. To address these concerns, Idaho Power proposes using traffic control measures such as pilot vehicles, traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety, minimize localized traffic congestion, and avoid accidents due to limited visibility. These safety measures will be fully vetted by the Department, in consultation with Union County and the City of La Grande where applicable, in the Final Traffic Plan(s) for such road segments prior to construction. (Grebe Rebuttal Test. at 38.)

156. Because Idaho Power did not have an approved right of entry to the privately owned, gravel road portion of Hawthorne Drive, the site visit team was unable to perform site reconnaissance on that portion of the roadway.⁶⁴ (Grebe Rebuttal Test. at 26; Grebe Rebuttal Ex. B at 7.) However, based on observations from the paved portion of the Hawthorne Loop and Google Earth Imagery, Idaho Power's consultants determined that the unpaved portion of Hawthorne Drive is typically 15-23 feet wide with dirt/gravel surfacing and the existing width should be adequate to support construction vehicles while allowing them to pass oncoming traffic.⁶⁵ Horizontal curves appear to range from a 60 to 75 feet radius, and grades are approximately 15-17 percent when measured on Google Earth. Based on these observations, the measurements of the unpaved portion of Hawthorne Drive are within the minimum access road requirements stated in Idaho Power's application. (Grebe Rebuttal Test. at 40.)

157. Idaho Power's traffic safety consultants also determined that the unpaved, private access portion of Hawthorne Drive should be adequate to support construction traffic for the construction of the transmission line:

Construction vehicles used for rural transmission line construction are often all-wheel drive high clearance vehicles designed to traverse narrow and steep roads in rougher terrain. Interactions between construction vehicles and the traveling public should be minimal and limited to material/equipment delivery or morning and evening trips as crews access the work area. Construction traffic may need to use caution and reduced speeds, as well as implement additional traffic control measures, such as flashing beacons or brightly colored equipment, if there are reduced visibility situations. Barricades, fencing, or traffic delineators could also be set up to separate vehicles from pedestrians if a particular location of concern is noted.

(Grebe Rebuttal Ex. B at 8; *see also* Grebe Rebuttal Test. at 28.)

158. Based on the consultants' access road field reviews, Idaho Power determined that substantial modifications are unlikely, but may possibly be required for the unpaved, private access portion of Hawthorne Drive. To avoid tight turning conditions and possible traffic congestion issues on the gravel road, Idaho Power could and likely would air-lift materials and equipment by helicopter, coordinate with nearby property owners to implement one-way traffic for short periods of times (approximately half an hour), or use flaggers and pilot spotter vehicles. (Grebe Rebuttal Test. at 26-27.)

⁶⁴ A portion of this unpaved, privately owned road is located within the city limits (Tax Lot 4700) and the remainder is located within Union County. The road primarily serves as an access (the only ingress and egress) for property owners, residents and/or emergency and service vehicles. (Mammen Direct Test; Horst Direct Test.)

⁶⁵ According to Mr. Horst's measurements, the widest part of the road is 20 feet, with sections at 14 feet wide. (Horst Direct Test.)

159. Because Idaho Power has not yet been granted access to the unpaved, private access portion of Hawthorne Drive to perform a detailed reconnaissance review, the Company conservatively assumed that its construction contractor might need to make substantial modifications to the roadway by widening certain parts of the gravel roadway to mitigate tight turning conditions. Additionally, Idaho Power determined that this portion of roadway would likely need non-substantial maintenance activities such as blading⁶⁶ and watering for dust mitigation. (Grebe Rebuttal Test. at 27.)

160. The unpaved, private access portion of Hawthorne Drive is located in a geologic hazard zone that encompasses a large area of the west hills of La Grande. (Mammen Direct Test. at 5; Mammen Ex. 6.) Therefore, if it is later determined that the roadway needs substantial modification in connection with the proposed facility construction or operation, Idaho Power will, prior to construction or road modification, complete appropriate engineering due diligence and consult with a licensed civil engineer to assess the proposed construction or road design in relation to potential geologic hazards. (Grebe Rebuttal Test. at 42-43.)

161. Limited parties Horst and Cavinato reside in a home on the privately owned, unpaved portion of Hawthorne Drive that is within the city limits of La Grande. The La Grande to Hilgard segment of the Oregon Trail passes through Mr. Horst's property. This segment is listed on the National Registry. (Horst Direct Test.; Horst Ex. I.) There are visible ruts where the trail leaves the main road. (Horst Direct. Test.) There is also a deep water well on the property, located approximately 10 feet from the gravel road. (*Id.*; Horst Ex. H.)

162. Mr. Horst raised safety concerns about construction vehicle use of the Hawthorne Loop because there are no sidewalks in the neighborhood. Mr. Horst also raised concerns about construction vehicle use of the Hawthorne Loop and use of the unpaved, privately owned portion of Hawthorne Drive due to blind corners, narrow roads, and the "steep terrain." (Horst Direct Test. at 3-5.) In addition, Mr. Horst expressed concern that passing heavy construction equipment could cause damage to the well on his property. (*Id.* at 6.)

163. In the opinion of Idaho Power's geotechnical engineering expert, Mr. Horst's concern that vibrations from passing construction vehicles, including large construction haul trucks, excavators, cranes, or tracked equipment, are minimal and are unlikely to have a permanent impact on nearby structures unless there is significant cumulative fatigue. The proposed construction-related traffic on Hawthorne Drive adjacent to Mr. Horst's property, three or four daily one-way trips of large construction vehicles, is not enough to result in a cumulative fatigue effect or cause permanent damage. The vehicles will be traveling at a reduced speed as a mitigation measure and any turbidity in the well water that caused by the passing of construction vehicles will be temporary. (Cummings Rebuttal at. 46.)

⁶⁶ Blading entails the redistribution of surface material over the road surface using a mechanical grader. Bladed road features typically include cuts and/or fills to construct a smooth travel surface and manage surface water drainage and include the manipulation or creation of a road prism and profile. Bladed roads are used where side slope is over 8 percent or over rough and uneven terrain. (Grebe Rebuttal Test. at 33.)

164. Dale and Virginia Mammen reside in a home on Balsa Street, off of Modelaire Drive in the Hawthorne Loop. The Mammens also raised traffic safety concerns about construction vehicle use of the Hawthorne Loop and the unpaved, privately owned portion of Hawthorne Drive⁶⁷ due to blind corners, narrow roads, steepness, and slope instability. (Mammen Direct Testimony at 4-7.)

Findings related to the Public Services standard – Fire Protection

165. In the Second Amended Project Order, with regard to fire protection, the Department directed that the ASC include “an analysis of potential facility-related impacts to fire protection services, including fire protection on forestland and rangeland.” (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 22 of 29.)

166. In ASC Exhibit U, Idaho Power explained that most of the land within the site boundary, approximately 72 percent, is privately owned. The BLM manages about 25 percent of the land in the Site Boundary, with the remaining 3 percent managed by other federal (USFS and U.S. Bureau of Reclamation) or State agencies. Idaho Power also explained that, for private lands within the analysis area, fire protection and response falls to fire departments, rural fire protection districts, and rangeland fire protection associations. (ODOE - B2HAPPDoc3-38 ASC 21_ Exhibit U_ PublicServices_ ASC 2018-09-28, pages 18-21 of 143.)

167. In preparing ASC Exhibit U, Idaho Power contacted federal, state, and local fire response organizations within the analysis area. Each organization provided information regarding the number of paid and volunteer firefighters in the organization, the firefighting equipment, and the estimated response times to reach the project site. (ODOE - B2HAPPDoc3-38 ASC 21_ Exhibit U_ PublicServices_ ASC 2018-09-28, pages 20-21, 58 of 143.) Idaho Power incorporated the information received into ASC Exhibit U, Table U-10, which summarizes staffing levels, equipment, and response times that responded to the requests for information.⁶⁸ (*Id.* at pages 20-21 of 143.) Idaho Power also explained as follows:

Not all lands in the analysis area fall within a designated fire district. In those cases, the closest or best situated fire district responds to fires. Mutual aid agreements have been established between local fire districts and adjacent counties to pool resources, ensure cooperation between these entities, and prevent fires on a county and state level instead of isolating efforts to local districts (Martin 2016; Hessel 2016; Morgan 2016; Weitz 2016). As a result of these mutual aid agreements, the fire district that responds to a fire may not be the district that the fire occurs in, or even the closest district; instead, response is based on the district that is best situated and suited to respond. In addition, fire

⁶⁷ The Mammens refer to this portion of Hawthorne Drive as a “private easement access (PEA)” because it is privately owned, and not a county road or city street. (Mammen Direct Test. at 3.)

⁶⁸ At the time the La Grande Rural Fire Protection District provided information to Idaho Power (in 2017), the Morgan Lake area was not under the district’s protection. (Deposition of Kretschmer at 6-8. Cooper Direct Ex. 6.) In 2019, the district annexed 21 or 22 properties in the general vicinity of Morgan Lake to its protection area, but not Morgan Lake Park. (*Id.* at 40, 45, 50.) Morgan Lake Park is dual protected by the Oregon Department of Forestry and the City of La Grande. (*Id.* at 8.)

protection agencies in Idaho may be the best positioned to respond to a fire along portions of the Project in Malheur County, Oregon.

Response times to fires in the analysis area vary depending on the time of day, the priority of the emergency/call and the location of the emergency and the type of available access. Most of the fire districts within the analysis area comprise volunteers, and in some cases, it takes considerable time to collect and mobilize an entire fire crew. In addition, much of the analysis area includes open remote lands where access is limited. A fire in one of these areas may not be immediately identified. However, once a fire has been identified, the fire districts responding to requests for information have indicated that average response times range from about 8 to 40 minutes, depending on the location[.]

(*Id.* page 20 of 143.)

168. Idaho Power also addressed the project-related impacts on fire protection services, and stated that considering the Company's Fire Prevention and Suppression Plan (Attachment U-3), the project was not expected to have significant adverse impacts. Idaho Power explained that it developed the draft Fire Prevention and Suppression (FPS) Plan to ensure that fire prevention and suppression measures are carried out in accordance with federal, state, and local regulations. Idaho Power added that:

By implementing these measures, the Project will not increase fire ignitions, and therefore will not impact sagebrush steppe and native grasslands. The final plan will incorporate input from the construction contractor to ensure coordination with local fire fighters and emergency responders for effective emergency response.

(ODOE - B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, page 28 of 143.)

169. In ASC Exhibit U, Idaho Power further explained the following:

Wildfires are a concern in the general Site Boundary area. IPC believes that during facility construction and operation the abilities of the rural fire districts and the BLM and USFS to provide fire protection services within the Site Boundary will be enhanced for the following reasons:

- Establishment of Project roads that will reduce response time, serve as potential fuelbreaks and point of attack for firefighting personnel;
- Presence of earthmoving equipment within the Site Boundary during construction; and
- Presence of water trucks within the Site Boundary during construction.

The concerns of these local fire protection agencies include traffic, access, and safety issues, and mitigation for each are included in Attachment U-2, Section 4.2.1.

(ODOE - B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, page 29 of 143.)

170. ASC Exhibit U, Attachment U-3, the FPS Plan describes the fire prevention measures to be taken during construction, operation and maintenance of the facility. Idaho Power explained that prior to and during construction, measures would be taken to minimize the risk of fire including: training personnel, prohibiting smoking, using spark arresters, clearing parking areas, vehicles and storage areas of flammable material, providing fire extinguishing equipment, prohibiting burning, and maintaining communications with fire control agencies. Idaho Power acknowledged its responsibilities for fire suppression on lands protected by the Oregon Department of Forestry, and agreed to restrict or cease construction operations in specified locations during periods of high fire danger at the direction of the land-management agency's closure order. (ODOE - B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, pages 137-143 of 143.)

171. In the draft FPS Plan, Idaho Power explained Oregon's wildfire protection system, fire suppression responsibilities and coordination between agencies and organizations. The draft FPS Plan states:

The prevention and suppression of wildfires in eastern Oregon is carried out by the BLM, USFS, Oregon Department of Forestry (ODF) in conjunction with the Rangeland Fire Protection Associations (RFPA) and Rural Fire Protection Districts (RFPD), and local fire districts and agencies (Table 1). The agencies' activities are closely coordinated, primarily through the Pacific Northwest Wildfire Coordinating Group. Coordination of firefighting resources also occurs under Oregon's Emergency Conflagration Act that allows the state fire marshal to mobilize and dispatch structural firefighting personnel and equipment when a significant number of structures are threatened by fire and local structural fire-suppression capability is exhausted.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9777 of 10016.)

172. With regard to facility operation, the draft FPS Plan states:

During transmission line operation, the risk of fire danger is minimal. The primary causes of fire on the ROW result from unauthorized entry by individuals for recreational purposes and from fires started outside the ROW. In the latter case, authorities can use the ROW as a potential firebreak or point of attack. During transmission line operation, access to the ROW will be restricted in accordance with jurisdictional agency or landowner requirements to minimize recreational use of the ROW.

(ODOE - B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, page 142 of 143.)

173. In the Proposed Order, the Department addressed the provisions of the draft FPS Plan. In discussing the fire protection districts service territory and the proposed facility, the Department noted that the vast majority of the proposed facility would be located either within the boundaries of a local fire response organization or on federal land where fire response is managed by BLM or the Forest Service. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 581 of 10016.) The Department also found as follows:

During construction, in those areas covered by a fire response organization or located on federal land, the certificate holder would attempt to negotiate an agreement with the relevant fire response organization or federal agencies as presented in Table PS-10 above, outlining communication and response procedures for potential fires within their boundaries. In those areas not covered by a fire response organization and not located on federal land, the certificate holder would attempt to negotiate an agreement with nearby fire response organizations or the federal agencies to provide fire response. If no such agreements can be reached, the certificate holder would propose alternatives such as contracting with a private fire response company or providing additional firefighting equipment at those sites. These commitments are represented in Section 1.4 Fire Response Agreements of the draft Fire Prevention and Suppression Plan (see Attachment U-3 of this order), referenced in recommended Public Services Condition 6 below.

In accordance with OAR 345-025-0016, the Department incorporated an agency review process, inclusive of a dispute resolution component, into the draft Fire Prevention and Suppression Plan, to allow appropriate federal, state and local agencies an opportunity to review and comment on the plan, including identification of appropriate fire district contacts and agreement components.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 583-84 of 10016.)

174. The Department proposed amending the draft FPS Plan to include the following:

1.4 Fire Response Agreements

In areas not covered by a fire response organization or located on federal land, the certificate holder will attempt to negotiate an agreement with the relevant fire response organization or federal agencies as presented in Table 2 above, outlining communication and response procedures for potential fires within their boundaries during facility construction and operation. In those areas not covered by a fire response organization and not located on federal land, the certificate holder will attempt to negotiate an agreement with nearby fire response organizations or the federal agencies to provide fire response. If no such agreements can be reached, the certificate holder will propose alternatives such as contracting with a private fire response company or providing additional

firefighting equipment at those sites. The certificate shall provide documentation to the Oregon Department of Energy, demonstrating the final agreements or alternative contract agreements for fire response.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9780 of 10016.)

175. To ensure Idaho Power's compliance with the FPS Plan and reduce potential impacts to fire protection providers during construction, the Department recommended the Council impose the following:

Recommended Public Services Condition 6: Prior to construction of a facility phase or segment, in accordance with the OAR 345-025-0016 agency consultation process outlined in the plan (Attachment U-3 of the Final Order on the ASC), the certificate holder shall submit final Fire Prevention and Suppression Plan(s) to the Department. The final Fire Prevention and Suppression Plan shall include the following, unless otherwise approved by the Department:

- a) The protective measures as described in the draft Fire Prevention and Suppression Plan as provided in Attachment U-3 of the Final Order on the ASC. The final plan shall establish that wildfire training for onsite workers and facility personnel be conducted by individuals that are National Wildfire Coordination Group and Federal Emergency Management Agency certified.
- b) A description of the fire districts and rural fire protection districts that will provide emergency response services during construction and copies of any agreements between the certificate holder and the districts related to that coverage.
- c) All work must be conducted in compliance with the approved plan during construction of the facility.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 587 of 10016.)

176. In the Proposed Order, the Department also addressed operational fire protection management. The Department noted that in the ASC, Idaho Power "describes and provides practices, protocols and management plans to manage wildfire risk, all of which would apply to the proposed facility."⁶⁹ (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 588 of 10016.) The Department further found as follows:

The applicant describes its intent to develop and implement a Wildfire Mitigation

⁶⁹ Idaho Power included measures to reduce the risk of fire in its draft FPS Plan, the Right of Way Clearing Assessment and the Vegetation Management Plan. (Lautenberger Direct Test. at 55.) In addition, the Company's Wildfire Mitigation Plan includes actions that will address the risk of wildfires during operation of the project. (*Id.*; *see also* Lautenberger Rebuttal Test. at 55.)

Plan that identifies strategies to further mitigate fire-related risks associated with its transmission operations and how the company prevents and responds to fire events. The Wildfire Mitigation Plan would utilize a risk-based approach that focuses on assessing wildfire risk and then taking actions to prevent wildfires and damage to infrastructure from wildfires. Operations and maintenance practices, programs, and activities would have specific targeted actions in those high wildfire threat areas. The Wildfire Mitigation Plan would also identify performance metrics and monitoring to ensure actual actions are consistent with those set forth in the plan.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02. Page 590 of 10016.)

177. The Department recommended the Council impose Recommended Public Services Condition 7, as follows:

Recommended Public Services Condition 7: The certificate holder shall:

- a. Prior to operation, provide a copy of its Wildfire Mitigation Plan to the Department and each affected county which provides a wildfire risk assessment and establishes action and preventative measures based on the assessed operational risk from and of wildfire in each county affected by the facility. The plan shall address facility and emergency contacts, agency coordination and responsibilities, necessary fire-fighting equipment, and long-term agreements with service providers, as needed.
- b. During operation, the certificate holder shall update the Wildfire Mitigation Plan on an annual basis, or frequency determined acceptable by the Department in consultation with the Oregon Public Utilities Commission.
- c. During operation, for the service territories the facility would be located within, the certificate holder shall provide to each of the fire districts and rural fire protection a contact phone number to call in the event a district needs to request an outage as part of a fire response.
- d. Any Wildfire Mitigation Plan required by the Oregon Public Utilities Commission shall be considered by EFSC as meeting the requirements of this condition.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 590 of 10016.)

178. The Department concluded that based on the analysis presented in the Proposed Order, and in compliance with recommended conditions:

[T]he Department recommends that the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse

impacts to the ability of public and private fire protection providers to provide fire response services within the analysis area.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 590 of 10016.)

179. The risk of project-related wildfires is assessed by considering both the probability of fire and the potential consequence of the fire. (Lautenberger Rebuttal Test. at 61.)

180. In 2020, Idaho Power prepared its 2021 Wildfire Mitigation Plan and submitted the plan to the Oregon PUC (OPUC) and the Idaho PUC (IPUC) for approval. The primary objectives of the Wildfire Mitigation Plan are to identify and implement strategies that reduce wildfire risk associated with Idaho Power's transmission and distribution facilities and improve Idaho Power's transmission and distribution system's resiliency to any wildfire event, independent of the fire's ignition source. (Dockter Direct Test. at 3-4; Dockter Direct Ex. A at 11.) In December 2021, Idaho Power issued its 2022 Wildfire Mitigation Plan, which it submitted to the OPUC on December 30, 2021 in preparation for the 2022 fire season. (Dockter Cross-Exam. Test., Tr. Day 3 at 22; Dockter Sur-surrebuttal Ex. B.) Aside from the inclusion of a Public Safety Power Shutoff Plan (PSPS Plan) in the 2022 version, the differences in the two Wildfire Mitigation Plans are minor. (Dockter Cross-Exam. Test, Day 3, Tr. 3 at 22.)

181. The 2022 Wildfire Mitigation Plan includes measures to address weather-related wildfire risks. The Wildfire Mitigation Plan includes a specific fire potential index (FPI) tool that incorporates fire weather into the decision-making tool to reduce fire threats and risks. The FPI reflects key variables, such as the state of native vegetation across the service territory (also known as a "green-up"), fuels (ratio of dead fuel moisture component to live fuel moisture component), and weather (sustained wind speed and dew point depression). (Dockter Rebuttal, Exhibit A, at 18; Lautenberger Rebuttal Test. at 44.) Each variable is assigned a numeric value, and those individual numeric values are summed to generate an FPI score from zero to 16, which expresses the degree of fire threat expected for each of the 7 days included in the forecast. The Company then characterizes the risk as Green, Yellow, or Red based on the FPI score. A Green FPI score indicates low potential for a large fire to develop and spread, a Yellow score indicates an elevated potential, and a Red score indicates a higher potential for fire based on below normal vegetation and fuel moisture content, combined with strong winds and low relative humidity. (*Id.*; Lautenberger Rebuttal Test. at 45.)

182. In the 2022 Wildfire Mitigation Plan, Idaho Power specifically considered the route of the proposed facility. Idaho Power identified two locations along the route as having an increased wildfire risk (Yellow risk zone) and no areas of higher risk (Red risk zone). Although the proposed facility has not yet been built, Idaho Power stated its intention to apply its annually-reviewed Wildfire Mitigation Plan to the construction and operation of the facility. (Dockter Sur-surrebuttal Test., Ex. B, at 19.)

183. The PSPS Plan included in the 2022 Wildfire Mitigation Plan addresses Idaho Power's ability to proactively de-energize its electrical facilities in identified areas of extreme wildfire risk to reduce the potential of those electrical facilities becoming a wildfire ignition

source or contributing to the spread of wildfires. (Dockter Sur-surrebuttal Test., Ex. B at 65-95.) As set out in the PSPS Plan, Idaho Power will initiate a power shutoff plan if the Company determines a combination of critical conditions indicate the transmission and distribution system at certain locations is at an extreme risk of being an ignition source and wildfire conditions are severe enough for the rapid growth and spread of wildfire. Idaho Power will evaluate as a whole (not relying on one single factor but a combination of all factors), without limitation, the criteria set forth in the plan. (*Id.* at 75.)

184. The 2022 Wildfire Mitigation Plan specifically addresses Red Flag Warnings as a consideration in implementing the PSPS Plan. The Plan states:

A Red Flag Warning (RFW) is a forecast warning issued by the National Weather Service (NWS) to inform the public, firefighters and land management agencies that conditions are ideal for wildland fire combustion and rapid spread. RFWs are often preceded by a Fire Weather Watch (FWW), which indicates weather conditions that could occur in the next 12–72 hours. The NWS has developed different zones across the nation for providing weather alerts (such as RFWs) to more discrete areas. These zones are shown on this NWS webpage: [] RFWs for Idaho Power’s service territory include Idaho Zones (IDZ) 401, 402, 403, 413, 420 and 422; and Oregon Zones (OR) 636, 637, 642, 634, 644, 645 and 646; and are monitored and are factored into Idaho Power’s determination of whether to initiate a PSPS. Boise and Pocatello NWS offices will not issue RFWs if fuels are moist and fire risk is low. The following thresholds are used by most NWS offices:

- Daytime:
 - Relative humidity of 25% or less
 - Sustained winds greater than or equal to 10 miles per hour (mph) with gusts greater than or equal to 20 mph over a four-hour time period
- Nighttime:
 - Relative humidity of 35% or less
 - Sustained winds greater than or equal to 15 mph with gusts greater than or equal to 25 mph over a three-hour time period
- Lightning:
 - The NWS rarely issues RFWs for lightning in the western United States. For this to occur, the Lightning Activity Level—a measure of lightning potential specifically as it relates to wildfire risk—needs to be at 3 or higher.

(Dockter Sur-surrebuttal Test., Ex. B, at 76; *see also* Lautenberger Rebuttal Test. at 38.)

185. High voltage transmission lines are less likely to ignite fires than lower voltage lines because, as the voltage increases: (1) taller and more resilient support structures (poles/towers) are used to keep conductors at greater distances from ground level; (2) the requirements for right-of-way clearance become stricter as line voltage increases and create a

broader right-of-way; and (3) vegetation is less likely to contact energized lines because conductors are more likely to be sited above tree canopy and vegetation management practices become more aggressive. (Lautenberger Direct Test. at 41.)

186. Distribution and transmission lines are classified by voltage. Generally speaking, distribution lines carry less than 34 kV; subtransmission lines carry 34, 46, and 69 kV; high voltage transmission lines carry between 115 kV and 230 kV; extra high voltage lines (EHV) carry 345, 500 and 765 kV; and ultra-high voltage lines carry more than 765 kV. (Lautenberger Direct Test. at 42.) EHV and ultra-high voltage lines have stricter requirements on minimum tower height, right-of-way width, and vegetation encroachment than high voltage transmission lines. (*Id.* at 46.)

187. 500 kV towers have construction requirements that are much more robust than those for lower voltages. Tower heights are increased and rights-of-way, usually between 150 feet and 250 feet, are wider relative even to high voltage transmission lines. These requirements reduce the potential for tree line contact or conductor clashing to cause fires, because aluminum particles are likely to burn to completion before contacting the ground. Furthermore, 500 kV lines are typically mounted on steel lattice towers that are stronger than the single-pole steel or wooden poles used for lower voltages. The stricter engineering requirements, higher tower heights, and wider rights-of-way make extra high voltage transmission lines, including 500 kV lines such as the proposed facility, less likely to cause fires than high voltage transmission lines. (Lautenberger Direct Test. at 46-47.)

188. Idaho Power's fire protection expert, Dr. Christopher Lautenberger, conducted an analysis of fire ignitions associated, or allegedly associated, with electrical transmission lines. He analyzed the most current data from the California Public Utilities Commission (as no analogous data exist for Oregon or Idaho) and found that of nearly 3,200 total ignitions, only two were associated with 500 kV transmission lines. (Lautenberger Direct Test. at 52.) Based on his research, Dr. Lautenberger concluded, "only an extremely small percentage of fire ignitions have been caused by high voltage transmission lines, with an even smaller percentage of fires associated with extra high voltage transmission lines such as B2H." (*Id.* at 54.) Dr. Lautenberger further noted that the proposed route for the project parallels or closely follows the Quartz to La Grande 230 kV transmission line for approximately 43 miles. That transmission line has been in operation nearly 70 years and Idaho Power has found no evidence of the line causing a fire. (*Id.* at 55; *see also* Dockter Direct Test. at 5.)

189. Dr. Lautenberger also analyzed data from the Fire Occurrence Database to determine historical fire ignitions within 50 miles of the project site. He found that approximately 16,000 fires had ignited within 50 miles of the project site between 1992 and 2018. The vast majority of these fires were small and quickly contained. Since 2000, eight fires exceeding 10,000 acres have burned within one mile of the project site. These large fires were caused by lightning, and not power lines. Dr. Lautenberger concluded that given the frequency of ignitions in the area, the fire ignition rates potentially associated with the project route are insignificant in comparison to the background ignition rates from natural and human-caused fires. He also considered the frequency of ignitions juxtaposed with the historic perimeters of fires and determined that fires that ignite in the area are often contained while they are still small.

(Lautenberger Rebuttal Test. at 25-27.)

190. In Dr. Lautenberger's opinion, the occurrence of severe fire weather near the proposed facility site is less frequent than in places like Northern California, where the largest wildfires have occurred. Offshore winds that have driven many of the large-loss fires in California are not a concern in Idaho or Eastern Oregon. Historically, wildfires near the project site have been relatively small and quickly contained. (Lautenberger Rebuttal Test. at 53.) Moreover, although Red Flag Warnings occur in Eastern Oregon, it is still unlikely that the project would start a fire in Red Flag Warning weather conditions because fires caused by 500 kV transmission lines are exceedingly rare. (Lautenberger Rebuttal Test. at 54.)

191. Limited parties raised the concern that transmission lines can exacerbate existing fires through arcing or flashovers. Arcing or flashovers can occur when there is a fire burning adjacent to or underneath transmission lines. According to Dr. Lautenberger, research literature on fire-induced flashovers of transmission lines has found that "it is the flame that has a high ion and electron concentration, making it conductive, which causes flashover when extended from the ground into the proximity of the conductor." (Lautenberger Rebuttal Test. at 59.) Because the proposed facility will have a minimum ground clearance of 34.5 feet and because flame heights of approximately 35 feet are not likely to occur in the right-of-way, it is unlikely that a fire would cause a flashover on the proposed facility. (*Id.*) In addition, the risk of flashovers does not result in a significant adverse impact to fire response providers' ability to provide fire protection in the area because the line would be de-energized in the event of fire. (*Id.* at 60.)

192. Limited parties also raised the concern that, in ASC Exhibit U, Table U-10, Idaho Power understated the response times of local fire protection organizations to respond to a fire in the project site area, and in particular, understated the time in which the La Grande Rural Fire Protection District (LGRFPD) could respond to a fire in the area of Morgan Lake.⁷⁰ (Cooper Direct Test. at 7, 12-13; Cooper Surrebuttal Test.) However, the LGRFPD is not the primary agency responsible for responding to a fire in the vicinity of Morgan Lake. There are two other fire response agencies, the La Grande Fire Department and the Oregon Department of Forestry (ODF), that share primary responsibility for fire protection in the Morgan Lake area.⁷¹ Both agencies are located closer to Morgan Lake than the LGRFPD and are therefore likely able to respond more rapidly to a fire at or near Morgan Lake. (Dockter Cross-Exam. Test., Tr. Day 3 at 17; Dockter Sur-surrebuttal Ex. C.) Furthermore, if there was a wildland fire in that area, the ODF would likely take the lead on the fire. (Dockter Cross-Exam. Test., Tr. Day 3 at 17.) In addition, in the event of such a fire, the Blue Mountain Interagency Dispatch Center would be able to deploy aerial resources from the La Grande Airport, which is located approximately four

⁷⁰ Table U-10 sets out the LGRFPD's response time to the analysis area generally (4 to 8 minutes), and not specifically to the Morgan Lake Area. (ODOE - B2HAPPDoc3-38 ASC 21_Exhibit U_Public Services_ASC 2018-09-28, page 21 of 143.) However, for a fire near Morgan Lake Park, it would take the LGRFPD several minutes longer (between 12 to 16 minutes) to respond to the top of Morgan Lake Road in a brush tender. (Deposition of Craig Kretschmer, May 13, 2021, at 9-11, Cooper Direct Ex. 6; *see also* Cooper Direct. Test. at 13.)

⁷¹ (Deposition of Craig Kretschmer, May 13, 2021, at 8, 12-1; Cooper Direct Ex. 6.)

miles from La Grande and about six miles from Morgan Lake. (*Id.* at 17-18.)

193. The risk of fire in the area in proximity to Mr. Myers' agricultural operations in Morrow County is also low, given the irrigation, fallow fields, and discontinuous fuels. In addition, the slopes adjacent to the property are predominantly less than 15 degrees. The lack of fires occurring in the area historically indicates the area is of lower fire risk than areas that have burned previously.⁷² (Lautenberger Rebuttal Test. at 54; Lautenberger Cross-Exam. Test, Day 3, Tr. 3 at 43-44.) Consequently, considering the distance between phases on the project's structures, the height of the structures, and the soil type along the site boundary, the probability that a whirlwind or dust devil would ignite a fire along the transmission line is very small. (Lautenberger Rebuttal Test. at 55.)

Findings related to the visual impact assessment under the Scenic Resources, Protected Areas, and Recreation standards.

Visual impact assessment methodology

194. In the Second Amended Project order, the Department ordered as follows with regard to Idaho Power's methodology for assessing the visual impacts of the proposed facility on scenic resources:

A visual impact assessment is required as part of Exhibit R; while no specific methodology is required by EFSC rule, the applicant must demonstrate why the proposed facility is [in] compliance with the Scenic Resources standard. Visual simulations or other visual representations are not required, but can provide important evidence for use by the Department and Council in understanding the potential visual impact of the proposed facility to Scenic Resources.

It is recommended the application include visual depictions (photo-simulations) of the project's impact on scenic resources within the analysis area and that the visual simulations include depictions from select viewpoints in protected areas identified in Exhibit L that may be affected by the proposed facility. It is also recommended that any photo-simulations and visual impacts assessments of permanent structures include all facility components, as applicable. For the purposes of Exhibit R, "local" land use plans include state, county, and city planning documents or inventories. The applicant shall also describe the measures it will take to minimize significant adverse impacts to important scenic resources.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 20 of 29.)

⁷² In his cross-examination testimony, Dr. Lautenberger explained that Idaho Power has no record of dust devils causing outages or fires anywhere in its service territory. He also testified that he analyzed Morrow County data from the Homeland Infrastructure Foundation Level Dataset, which showed there are 400 miles of transmission lines in Morrow County, including about 90 miles of 500 kV lines. He cross-referenced that data with ignition locations from the fire-occurrence database and determined that "if dust devils do occur in Morrow County in the vicinity of transmission lines, they have not led to any fire ignitions." (Lautenberger Cross-Exam. Test., Tr. Day 3 at 44.)

195. The Second Amended Project Order provided similar direction with regard to Exhibit T and the Recreation standard:

A visual impact assessment is required as part of Exhibit T; while no specific methodology is required by EFSC rule, the applicant must demonstrate why the proposed facility is [in] compliance with the Recreation standard. Visual simulations or other visual representations are not required, but can provide important evidence for use by the Department and Council in understanding the potential visual impact of the proposed facility to important Recreation sites.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 22 of 29.)

196. The Second Amended Project Order also provided the same direction with regard to Exhibit L and the Protected Area standard: “A visual impact assessment is required as part of Exhibit L; while no specific methodology are required by EFSC rule, the applicant must demonstrate why the proposed facility is [in] compliance with the Protected Areas standard.” (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 16 of 29.)

197. As required by the Second Amended Project Order, Idaho Power included visual impact assessments as part of ASC Exhibits L, R, and T. In Exhibit L Attachment L-3, Exhibit R Attachment R-1, and Exhibit T Attachment T-4, Idaho Power described its methodology for assessing the proposed facility’s impact to visual resources. ASC Exhibit R Attachment R-1, states as follows:

The methodology described in Attachment R-1 of this document was applied to the impact assessment and significance determination presented in Exhibits L, R, and T. This methodology, though rooted in impact assessment procedures established by the Bureau of Land Management (BLM) and United States Department of Agriculture Forest Service (USFS), addresses feedback from the Oregon Department of Energy (ODOE) received via Request for Additional Information (RAI) R-24, asking that the definition of “significance” provided in the Energy Facility Siting Council’s (EFSC or Council) rules at OAR 345-001-0010(52) be considered in the analysis.

(ODOE - B2HAPPDoc3-35 ASC 18_ Exhibit R_ Scenic Resources_ ASC 2018-09-28, page 140 of 570.)

198. As the Company explained in ASC Exhibit R, Attachment R-1 Idaho Power performed a three-part analysis for each identified resource: (1) establish baseline conditions; (2) assess potential impacts of the project; and (3) determine potential significance of project impacts. Consistent with OAR 345-001-0010(52), the Company based its determination of whether an impact may be significant by considering the “context of the action or impact, its intensity and the degree to which the possible impacts are caused by the proposed action.” (ODOE - B2HAPPDoc3-35 ASC 18_ Exhibit R_ Scenic Resources_ ASC 2018-09-28, page 157 of 570.)

199. Idaho Power's methodology for assessing impact to visual resources incorporated the BLM visual "sensitivity level" criterion and the USFS visual "concern" criterion, both of which measure the degree to which viewers subjectively value a visual resource. Scenic resources that viewers value highly are considered "highly sensitive" (under the BLM Visual Resource Management (VRM) or of "high concern" (under the USFS Scenery Management System (SMS)). (See ODOE - B2HAPPDoc3-35 ASC 18_ Exhibit R_ Scenic Resources _ASC 2018-09-28, page 147 of 570.)

200. In the ASC, Idaho Power explained its visual impact assessment methodology for establishing baseline conditions as follows:

Baseline conditions were established by assessing indicators of *scenic quality/attractiveness* and *landscape character* for each resource. The assessment was completed using a combination of general observations made during field visits, baseline data collected at representative KOPs [key observation points], and review of landscape features relative to Project components using Google Earth. These data were used to identify baseline landscape character and scenic quality for each scenic resource. Viewer groups were also identified as part of establishing baseline conditions. KOPs were identified through review of applicable land use and resource plans, consultation with agencies and organizations, and viewshed analysis. The KOPs used in the analysis are indicated on the maps included as Attachment R-2.

The analysis area includes scenic resources administered by the BLM and USFS. Both agencies have established baseline scenic resources inventory procedures:

- The BLM manages visual resources through the Visual Resource Management System (BLM 1986). Visual values are established through the visual resource inventory (VRI) process, which classifies scenery based on the assessment of three components: scenic quality, visual sensitivity, and distance.
- The USFS manages scenic resources through the Visual Management System established in The National Forest Management, Volume 2, Agricultural Handbook 462 (1974) to inventory, classify, and manage lands for visual resource values. In 1995, the USFS visual resource management guidelines and monitoring techniques evolved into the Scenery Management System (SMS) as described in *Landscape Aesthetics: A Handbook for Scenic Management, Agricultural Handbook* (USFS 1995). The USFS describes baseline condition in a similar manner; however baseline components include measures of scenic attractiveness and integrity, landscape visibility (i.e., distance zones), and concern level (i.e., sensitivity).

Because analogous concepts to scenic quality are found in the USFS SMS as scenic attractiveness and in the BLM Visual Resource Management system as scenic quality, the approach and terminology used by these land management

agencies was used to assess baseline conditions on lands administered by these agencies. In other words, the BLM system was used on BLM lands and USFS system was used on USFS lands. To address scenic resources on non-BLM or non-USFS lands, the method that most closely matched the prevailing geographic location and physiography of the resource were used according to the following conventions:

- BLM methods were applied to scenic resources in non-forested areas.
- USFS methods were applied to scenic resources in forested areas.

(ODOE - B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, page 147 of 570.)

201. In its visual assessment analyses, Idaho Power conservatively assumed the highest possible degree of sensitivity and subjective value for each resource evaluated. In ASC Exhibit R Attachment R-1, Idaho Power explained:

Viewer groups associated with each resource were evaluated to understand certain characteristics that inform the extent to which potential changes in landscape character and quality would be perceived (perception of change). *This assessment assumes a high sensitivity exists among all viewer groups based on the identification of the resource as important in a planning document. Therefore, this assessment instead focuses on understanding characteristics that describe the relationship of the observer to the potential impact, and the landscape context of that relationship.* Viewer characteristics assessed included viewer location (distance), viewer geometry (superior, inferior, or at grade), and viewer duration or exposure (BLM 1986). The landscape context included consideration of landscape type – i.e., focal or panoramic.

(ODOE - B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, page 150 of 570; emphasis added.)

202. In the Proposed Order, the Department outlined Idaho Power's three-part process for implementing its visual impact methodology and assessing impacts to resources as follows:

(1) Evaluation of baseline conditions, which involved collecting information related to:

- a. Scenic Quality and Attractiveness. The characteristic is assigned a score or ranking, based on the BLM and USFS methods.
- b. Landscape Character. This is a USFS system. The BLM does not use a "landscape character" classification, so this information was assessed for all protected areas based on the USFS system.

c. Viewer groups and characteristics.

(2) Impact likelihood and assessment, which involved the following assessment criteria:

- a. Likelihood of impact,⁷³
- b. Magnitude of impact – duration;
- c. Magnitude of impact – visual contrast and scale domination;⁷⁴ and
- d. Magnitude of impact – resource change and viewer perception.⁷⁵

(3) Consideration of intensity, causation, and context (based upon Council’s definition of “significant” OAR 345-001-0010(52)).

- a. Impact intensity⁷⁶
- b. Degree to which the possible impacts are caused by the proposed action
- c. Context⁷⁷

⁷³ The Council’s definition of “significant” requires that the applicant consider both the magnitude and likelihood of a potential impact. For purposes of its analysis, Idaho Power assumed that any identified potential impact was likely to occur. (Kling Rebuttal Test. at 38.)

⁷⁴ Visual contrast is the extent to which an object appears different from the surrounding environment. Idaho Power measured visual contrast objectively by considering form, line, color, and texture. (Kling Rebuttal Test. at 40.) Scale dominance is the scale of an object relative to elements of the landscape that form its setting. Idaho Power assessed scale dominance based on whether the project feature was dominant, co-dominant, or subordinate in relation to the landscape. (*Id.* at 41-42.)

⁷⁵ Idaho Power used the magnitude determination to evaluate the level of resource change. Idaho Power assessed viewer perception as low, medium or high based on the location of the viewer relative to the potential medium to high magnitude impact. (Kling Rebuttal Test. at 45.)

⁷⁶ Idaho Power relied on resource change and viewer perception to determine the intensity of the potential visual impact. (Kling Rebuttal Test. at 46.) If a potential impact would result in low resource change, then Idaho Power concluded the potential impact was low. Similarly, if the potential impact would result in a high degree of resource change, then Idaho Power determined the impact high intensity. However, if the potential impact would result in a medium resource change, but viewers’ perception of that change would be high, then Idaho Power considered it to be a high-intensity potential impact. For other impacts causing medium resource change with either a low or medium degree of viewer perception, Idaho Power considered the impact as of medium intensity. (*Id.* at 47.)

⁷⁷ The context of an impact refers to the role of scenery as a valued attribute of the resource in question and the extent to which expected impacts are consistent with the standards and guidelines of relevant land management objectives. Idaho Power considered a potential medium or high-intensity impact significant

d. Potential significance. “Significance” was determined based on if the valued scenic attributes of the protected area could persist, or not, based on the proposed facility’s potential impact.⁷⁸

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 279 of 10016.) Idaho Power found a high-intensity impact to be potentially significant for purposes of its visual impact analysis if the affected resource no longer provided the valued scenic attributes for which it was deemed important. In short, to be considered significant, a potential impact had to: (1) be high intensity; (2) preclude the impacted resource’s ability to provide the scenic value for which the resource was designated or recognized in the applicable land management plan; and (3) last for a duration of at least 10 years. (Kling Rebuttal Test. at 49.)

203. In the Proposed Order, the Department concurred with Idaho Power’s methodology for assessing visual impacts and recommended that Council, in its review, concur with the methodology. The Department identified the following reasons for its concurrence:

- The proposed facility would cross both BLM and USFS land, and on those lands, the applicant is required to utilize those agency’s respective visual resource impact assessment methods;
- Both the BLM and USFS approved the proposed facility location in its ROD(s), indicating compliance with the respective visual impact methodologies and standards;
- The applicant adapted each of the methodologies to use evaluative criteria based upon the Council’s definition of “significant” under OAR 345-001-0010(53);
- The BLM and USFS visual impact methodologies provide an objective system to evaluate visual impacts;
- Using the BLM and USFS methods to assess visual impacts to EFSC protected areas is consistent with the statutory direction at ORS 469.370(13) to conduct a site certificate review in a “manner that is consistent with and does not duplicate the federal agency review.”

if scenic values were a valued aspect of the affected resource and the project’s impacts would preclude the resource from continuing to provide those values. (Kling Rebuttal Test. at 47.)

⁷⁸ For its scenic resources analysis, Idaho Power considered all identified resources to include scenery as a valued asset. (Kling Rebuttal Test. at 49.) For resources analyzed under either the Protected Areas or Recreation Standards, Idaho Power reviewed whether scenery was included as a perceived amenity of those sites. For example, the Ladd Marsh Wildlife Area was determined not to include scenery as a valued attribute, because that resource was designated as a protected area to provide habitat benefits for various species and none of Ladd Marsh’s management goals included protections for scenery. Because the potential visual impacts from the Project would not preclude Ladd Marsh from providing the wildlife-oriented benefits identified in its management plan, Idaho Power found those potential impacts to be less than significant. (*Id.* at 49.)

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 279-280 of 10016.)

Visual impacts in the vicinity of the NHOTIC

204. The National Historic Oregon Trail Interpretive Center (NHOTIC) is located on top of Flagstaff Hill and has extensive background views to the west across Baker Valley to the Blue Mountains and to the southeast across Virtue Flat. The NHOTIC facility includes a visitor center, a theater, and a gift shop. There are also outdoor exhibits. There is a trail network within the NHOTIC parcel that provides visitor access to areas within the Area of Critical Environmental Concern (ACEC). Panorama Point is a lookout established outside of the NHOTIC parcel but included as a recreational opportunity within the NHOTIC. This lookout directs view to the west, which would be towards the proposed facility. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 423 of 10016.)

205. The NHOTIC ACEC parcel is both a scenic resource as described in OAR 345-022-0080 and a protected area as described in OAR 345-022-0040. In the ASC, Idaho Power assessed the NHOTIC ACEC parcel under the Scenic Resources standard, the Protected Area standard, and the Recreation standard. In the Proposed Order, the Department noted that the NHOTIC ACEC parcel is 507 acres, managed by the BLM for the preservation of its unique historic resource and visual qualities, and characterized by high recreational use. The Proposed Order found as follows:

The proposed facility would be located within one mile of the NHOTIC main building and within 130 feet of the western boundary of the NHOTIC Parcel. Potential visual impacts of the proposed facility within the NHOTIC parcel would include visual impacts from intermittent views of transmission structures, typically from elevated vantage points. Taking into account the mitigation discussed below and in this order, the applicant states that the proposed facility would introduce low to medium magnitude impacts depending on tower and viewer location within the NHOTIC parcel. The highest magnitude impacts, evaluated as medium, would be experienced from the western portion of the parcel near Panorama Point and level 2 and 3 trails, as presented in ASC Exhibit L Attachment L-4, photo simulations 5-25C, and 5-25D. Views of the proposed facility would be experienced from an elevated vantage point and would be predominantly peripheral or intermittent such that viewer perception would be up to medium. *Impacts would slightly reduce the scenery adjacent to the NHOTIC parcel but would not alter the overall scenic quality of the NHOTIC parcel such that resource change would be medium.* As described above, based on descriptions in the ASC Exhibits S and L and based upon staff familiarity of the site, the *Department concurs with the applicant's conclusion that the proposed facility would be one of several developments contributing to the overall landscape character and quality, therefore the existing landscape character would be retained within the boundary of the ACEC and resource change would be medium.*

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 283 of 10016; emphasis added.)

206. The Department further found as follows:

[T]he NHOTIC parcel was designated to preserve the unique historic resource and visual qualities. The Oregon Trail ACECs, including NHOTIC, were specifically designated to preserve the unique historic resource, the Oregon Trail, and visual qualities within this geographic area. Because no development is proposed within a half mile corridor centered on the Oregon Trail within the ACEC, the resource values for which the NHOTIC parcel was designated to protect would not be impacted by the proposed transmission line. Additionally, recommended Historic, Cultural, and Archaeological Resources Condition 1 would require that the proposed facility avoid direct impacts to Oregon Trail and National Historic Trail resources. The number of towers visible would also vary depending on viewer position within the ACEC. As discussed in detail in ASC Exhibit L, to mitigate for potential visual impacts, the applicant proposes to use a modified tower structure, consisting of H-frame structure type with a natina (brown-weathered coloring) for towers proposed to be located directly west of the NHOTIC. There is an existing H-frame 230 kV transmission line in this area, visible from NHOTIC, and the proposed modified tower structure in this location would reduce visual impacts of the proposed facility by mimicking the existing H-frame 230 kV transmission line, though the proposed facility would have larger structures and would be made of steel, not wood.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 284 of 10016.)

207. As to the proposed facility's visual impacts to the NHOTIC, the Department concluded as follows:

[T]he Department notes that in its Record of Decision (ROD), the BLM has authorized the proposed facility in this area, which is an important consideration because the BLM is the landowner and manager of NHOTIC. The EFSC Protected Areas standard adopts as protected areas those areas that are designated by other government agencies, including BLM ACECs. As such, by authorizing the route in ROD, the federal agency (BLM) that administers the Management Plan for NHOTIC is authorizing the placement of the proposed facility in this location, and above-ground as permissible within the scenic designations in the Management Plan. Considering that the agency that manages the NHOTIC land and has identified the NHOTIC as having significant or important scenic value has authorized the proposed facility in the location proposed in the ASC, the Department considers this relevant information with regard to the EFSC Protected Areas standard. Based on this analysis, and considering the recommended mitigation, the Department recommends that the Council find that visual impacts

to the protected area would be less than significant.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, age 287 of 10016.)

208. To reduce potential impacts to the Oregon Trail ACEC – NHOTIC Parcel, NHOTIC recreation site, and VRM II area, and to incorporate the proposed mitigation measures, the Department recommended that the Council include the following condition:

Recommended Scenic Resources Condition 3: At final facility design, the certificate holder shall select transmission structures, to be constructed in the vicinity of the National Historic Oregon Trail Interpretive Center between approximately Milepost 145.1 and Milepost 146.6, with the following design modifications:

- a. H-frames;
- b. Tower height no greater than 130 feet; and
- c. Weathered steel (or an equivalent coating).

Additionally, the certificate holder shall construct the facility using tower structures that meet the following criteria between approximately Milepost 146.6 and Milepost 146.7:

- a. H-frames;
- b. Tower height no greater than 154 feet; and
- c. Weathered steel (or an equivalent coating).

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 424 of 10016.)

209. In the ASC, Idaho Power assessed potential impacts from the viewpoint KOPs 5-25d at NHOTIC. Idaho Power also assessed potential impacts from KOP 5-25c, located outside the NHOTIC. Idaho Power identified an additional KOP, 5-25e, near the visitor center. Idaho Power assessed potential impacts of the Flagstaff Hill Alternatives from this KOP using a photo simulation in preparation for the ASC. In the ASC, Idaho Power assessed potential impacts from this KOP, but did not prepare a separate photo simulation of the potential impacts. In response to concerns raised by limited parties, Idaho Power also developed a video animation to better assess potential project visibility from level 3 trails located in the western portion of the ACEC. These animations confirmed Idaho Power's conclusions presented in the ASC that impacts would be greater in this portion of this ACEC, but also illustrated the limited visibility of the project from areas around the visitor center and level 1 and 2 trails. Idaho Power selected these KOPs to demonstrate how the visual impacts from the project will vary at different sites throughout the NHOTIC. Idaho Power selected KOPs near the main NHOTIC building, where visitor traffic is heavy, to represent recreational visitors to the NHOTIC. KOP 5-25c is located at the Panorama Point viewing platform near the westernmost boundary of the NHOTIC—which is the area closest to the project. (Kling Rebuttal Test at 55-56; Kling Rebuttal Exhibits J and J3.)

210. For the contested case record, Idaho Power's environmental research and planning

expert, Louise Kling, prepared a photo simulation depicting the visual impacts to NHOTIC based on Idaho Power's proposed mitigation via design changes. Kling Exhibit D shows the visual impacts resulting from lattice structures and H-frame structures with a comparison of the visual simulations of the transmission line with and without mitigation. (Kling Rebuttal Test. at 63-64; Kling Rebuttal Ex. D.)

211. Limited party Carbiener's land use and environmental planning expert, Isobel Lingenfelter, created a 3-dimension model of the NHOTIC and surrounding area and used photogrammetry software to create a representation of the proposed project in the area, using 129.37 feet-high H-frame towers at regular intervals 900 feet apart. (Lingenfelter Test., Exhibits 1-35.)

Visual impacts at Morgan Lake Park

212. Morgan Lake Park is a regional park provided by the City of La Grande Parks and Recreation Department. The park is approximately 204.5 acres and located outside the city limits, approximately three miles southwest of La Grande. The park includes two lakes, Morgan Lake and Little Morgan Lake (also known as Twin Lake). (Kling Rebuttal Test. at 76.) Park facilities include 12 campsites, 5 barbeque pits, 4 fishing piers, a restroom, a boat launch, and a floating dock. There is no fee for camping and no motors are allowed on the lake. (ODOE - B2HAPPDoc3-37 ASC 20_Exhibit T_Recreation_ASC 2018-09-28, page 18 of 291.) Recreational activities at the park include camping, fishing, hiking, wildlife study, bird watching, and stargazing. (McAllister Direct. Test. at 3-5.)

213. With regard to the Recreation standard, in the Second Amended Project Order, the Department ordered, in pertinent part, as follows:

The application shall analyze the importance of recreational opportunities in the analysis area using the factors listed in OAR 345-022-0100(1), discuss any significant potential adverse impacts to important recreational opportunities, and describe measures proposed to avoid, minimize or mitigate those impacts. Please list all recreational opportunities in the analysis area and the applicant's analysis of whether those recreational opportunities are considered "important" or not.
* * * A visual impact assessment is required as part of Exhibit T; while no specific methodology is required by EFSC rule, the applicant must demonstrate why the proposed facility is [in] compliance with the Recreation standard. Visual simulations or other visual representations are not required, but can provide important evidence for use by the Department and Council in understanding the potential visual impact of the proposed facility to important Recreation sites.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 22 of 29.)

214. The proposed project will not cross any portion of Morgan Lake Park and therefore will not result in any permanent displacement of any recreational uses associated with the park. Both the Proposed Route and the Morgan Lake Alternative are near Morgan Lake Park. The Proposed Route is located 0.6 mile to the north of the park at its closest point. The Morgan Lake

Alternative passes approximately 0.2 miles from Morgan Lake Park at its closest point. (Kling Rebuttal Test. at 79.)

215. In ASC Exhibit T, as required by OAR 345-021-0010(1)(t),⁷⁹ Idaho Power evaluated potential impacts to Morgan Lake Park as an important recreational opportunity in the project area.⁸⁰ (ODOE - B2HAPPDoc3-37 ASC 20_Exhibit T_Recreation_ASC 2018-09-28, page 32 of 291.) In summarizing the visual impacts to Morgan Lake Park, Table T-1 notes: “Vegetation will block views of the towers from most locations in the park. The cleared right-of-way will not be visible. Viewers could experience weak contrast from the Project while engaging in transient or stationary activities.” (*Id.*)

216. In Exhibit T, Attachment T-4, Visual Impact Methodology and Analysis, Idaho Power stated as follows:

The Proposed Project will result in long-term visual impacts to Morgan Lake Park. Impacts will be medium intensity as measured by visual contrast and scale dominance, resource change, and viewer perception. Visual impacts will not preclude visitors from enjoying the day use and overnight facilities offered at the Morgan Lake Park. Therefore, visual impacts to Morgan Lake Park will be **less than significant**.

(ODOE - B2HAPPDoc3-37 ASC 20_Exhibit T_Recreation_ASC 2018-09-28, page 155 of 291; emphasis in original.)

217. On August 20, 2019, Idaho Power executed the MOA with the City of La Grande to provide further mitigation of potential impacts to Morgan Lake Park resulting from the proposed facility along the Morgan Lake Alternative. As found above, Idaho Power agreed to provide \$100,000 to the City of La Grande if the Company constructs the Morgan Lake Alternative. The City of La Grande and Idaho Power agreed that the funds are primarily intended for recreational improvements at Morgan Lake Park (*e.g.*, day use area improvements, toilet upgrades, a new entry gate).⁸¹ The funds are not specifically intended to mitigate for visual impacts. To mitigate for the visual impacts to Morgan Lake Park, the Proposed Order includes Recommended Recreation Condition 1, set out above. (Kling Rebuttal Test. at 82.)

⁷⁹ OAR 345-021-0010(1)(t) requires that the ASC include as Exhibit T, “[i]nformation about the impacts the proposed facility would have on important recreational opportunities in the analysis area, providing evidence to support a finding by the Council as required by OAR 345-022-0100[.]”

⁸⁰ Idaho Power did not assess Morgan Lake Park under the Scenic Resources standard or the Protected Areas standard because the Park is not identified as a significant or important scenic resource in any local land use plan as required by the Scenic Resources standard (OAR 345-022-0080) and does not fall within any of the categories listed in the Protected Areas standard (OAR 345-022-0040(1)). (Kling Rebuttal Test. at 77-78.)

⁸¹ (*See* ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 250-51 of 10016, discussing the MOA and Recommended Land Use Condition 17.)

218. In November 2019, in response to comments received on the Draft Proposed Order (DPO), Idaho Power performed a supplemental analysis of Morgan Lake Park under the Recreation standard, including an updated visual impacts analysis. In the supplemental analysis, Idaho Power addressed the following impacts: (1) Direct or indirect loss of a recreational opportunity as a result of facility construction or operation; (2) Noise resulting from facility construction or operation; (3) Increased traffic resulting from construction or operation; and (4) Visual impacts of facility structures. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7698 of 10016.)

219. With regard to loss of recreational opportunities, the supplemental analysis states:

The Project will not cross any portion of Morgan Lake Park and therefore will not result in any permanent displacement of any recreational uses associated with the park. During construction, there could be temporary, intermittent access delays when Morgan Lake Road or other access roads are controlled for safety purposes to accommodate construction vehicles and equipment. However, any delays getting to the park are expected to be only intermittent and short in duration (i.e., not lasting longer than 30 minutes), and access within the park will not be affected at all. Therefore, the project will result in any direct or indirect loss of recreational opportunity.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7698 of 10016.)

220. With regard to noise resulting from facility construction or operation, the supplemental analysis notes that the park would experience some level of short-term noise impacts during construction. During operation, potential sources of noise would be maintenance activities and corona noise. Idaho Power explained its methodology for estimating increase in sound levels and frequency of exceedances. The supplemental report notes that, “during typical operating conditions, corona noise is estimated at 27 dBA at the edge of the transmission line right of way, and this level of sound (or lower) would be representative of sound levels at the park during fair weather conditions. Twenty-seven dBA is a low level and would not cause a significant noise impact to any recreation opportunity.” (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7699 of 10016.) Idaho Power further concluded that “the low-level of corona noise, during infrequent weather conditions, is unlikely to cause a significant noise impact at Morgan Lake Park.” (*Id.* at 7701 of 10016.)

221. As for traffic impacts, Idaho Power concluded that any traffic impacts will be temporary in nature and not result in a significant adverse impact to recreation resources, including Morgan Lake Park. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7702 of 10016.)

222. In addressing visual impacts in the supplemental analysis, Idaho Power explained as follows:

Idaho Power first notes that Morgan Lake Park is considered in the EFSC process as *an important recreation opportunity and evaluated for compliance with the Council's Recreation Standard*, but is not separately evaluated as a Scenic Resource because the applicable management plan for Morgan Lake Park, the Morgan Lake Recreational Use and Development Plan, did not identify Morgan Lake Park as an important scenic resource. Accordingly, while Idaho Power did evaluate potential visual impacts associated with the project, it is important to also note that, per the Morgan Lake Recreational Use and Development Plan, there are no specific scenic views or values associated with the Morgan Lake Park that are regarded as particularly important for purposes of compliance with the Recreation Standard. Idaho Power's analysis of visual impacts focused on the elements of Morgan Lake Park that are most important for the recreation activities at the park, which include camping, picnicking, fishing, and boating.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7702 of 10016; emphasis added.)

223. Idaho Power further explained:

Views of the Project will be experienced from a neutral position and will be peripheral and head-on, intermittent and continuous depending on viewer position and activity. As mentioned above, vegetation will block views of the towers from most locations in the park (including Morgan Lake), so viewer perception would be intermittent and peripheral while viewers are moving through the park. However; popular park activities (picnicking, fishing, and camping) are stationary and views experienced during those activities would be continuous and/or head-on, depending on the location of the particular activity. The only recreational facility at Little Morgan Lake is a short foot trail between Morgan Lake and Little Morgan Lake, thereby limiting viewers to areas primarily located east of Little Morgan Lake near the foot trail. Therefore, viewer perception from Little Morgan Lake would be medium due to location of viewers. The cleared ROW of the Morgan Lake Alternative will not be visible from Morgan Lake Park. Visual contrast will vary from weak to strong throughout the park, depending on the level of vegetation screening provided at each location. Resource change would be high and viewer perception would be moderate. There will be no Project facilities within the boundary of Morgan Lake Park. Scenic attractiveness and landscape character would be reduced and scenic integrity will be reduced to moderate such that resource change would be high. Although high intensity visual impacts could occur to Morgan Lake Park, they would not occur in primary recreation areas concentrated around the shore of and on Morgan Lake.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7703 of 10016.) With regard to the proposed facility's long-term visual impacts to Morgan Lake Park, Idaho Power concluded:

Impacts will be high intensity in some areas of the park as measured by visual contrast and scale dominance, resource change, and viewer perception. Visual impacts will not preclude visitors from enjoying the day use and overnight facilities offered at the Morgan Lake Park as high intensity impacts will occur in areas of the park managed for wildlife habitat not recreation. Therefore, visual impacts to Morgan Lake Park will be less than significant.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 7710-11 of 10016.)

224. In section IV.L of the Proposed Order, the Department recognized Morgan Lake Park as an important recreation opportunity and evaluated Idaho Power's impact assessment of the park and 20 other identified important recreational opportunities. The Department noted that Idaho Power assessed visual impacts to important recreational opportunities using the methodology described in Exhibit L (Protected Areas) and Exhibit R (Scenic Resources). (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 520 of 10016.)

225. In its discussion of Morgan Lake Park as an important recreational opportunity, the Department stated as follows:

Both the applicant and the City of La Grande provided comments on the DPO identifying that, in light of the City's continued opposition to the proposed facility in Union County, the City and applicant executed a Memorandum of Agreement (MOA) outside the EFSC process. Part of the MOA addresses the City's concerns about potential impacts at Morgan Lake Park, if the Morgan Lake alternative is selected for construction. The City and applicant agreed that, if this route is selected, the applicant would provide the City with \$100,000 for recreational improvements at Morgan Lake Park. The improvements include upgrades to the access road to the Park as well as a new entry gate, the installation of new vault toilets at the campground, day use improvements, signage, and other improvements to the recreational opportunities within the Park.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 528 of 10016.)

226. In addressing the visual impacts of the proposed facility at Morgan Lake Park, the Department found as follows:

[B]ased on the applicant-modeled H-frame towers in specific locations and to reduce the overall potential visual impacts to the affected human population of user of the Morgan Lake Park recreational opportunity, the Department recommends that Council include the following condition as Recreation Condition 1:

Recommended Recreation Condition 1: If the Morgan Lake alternative facility route is selected, the certificate holder shall construct the facility using tower structures that meet the following criteria for the transmission line that would be visible from Morgan Lake Park, specifically between milepost (MP) 6.0 to MP 6.9 miles 5-7 of the Morgan Lake alternative, as shown on ASC Exhibit C, Attachment C-3, Map 8.

- a. H-frames;
- b. Tower height no greater than 130 feet; and
- c. Weathered steel (or an equivalent coating).

Based on the analysis presented here, the Department recommends that the Council find that the proposed Morgan Lake alternative facility with recommended mitigation would not cause a significant adverse impact to the recreational opportunities at Morgan Lake Park.

(ODOE - B2HAPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 531-32 of 10016.)

227. The Policy Statement in the Morgan Lake Plan provides, in pertinent part:

Morgan Lake Park shall be managed and improved in a manner consistent with the objective of providing a quality outdoor recreational experience harmonious with a natural forest and lake area (as opposed to typical city park activities). Example activities consistent with this objective include fishing, bird watching, nature study, boating, but do not include baseball, motor bike trails, hunting, shooting, or playground activities using swings, merry-go-rounds, slides, etc.

A goal of minimum development of Morgan Lake Park should be maintained to preserve the maximum of natural setting and to encourage solitude, isolation, and limited visibility of users while at the same time providing safe and sanitary condition for users.

(McAllister Ex. 4 at 6.)

228. For the contested case record, Idaho Power's expert Ms. Kling revisited Idaho Power's supplemental analysis of Morgan Lake Park to address the limited parties' concerns that Idaho Power did not assess undeveloped areas within the park that support recreation activities such as birdwatching and nature study. (Kling Rebuttal Ex. E.) The Revised Supplemental Analysis provides an assessment of both developed and undeveloped areas,⁸² with consideration

⁸² The Revised Supplemental Analysis states, in part:

The project will be visible from approximately 16 percent of the Park, and primarily from the access road and day-use parking areas located to the south of Morgan Lake, and undeveloped areas west and south of Little Morgan Lake. * * * .

of additional mitigation that expands the use of H-frames between milepost 5 and 8. Idaho Power applied this additional mitigation to provide more continuity in tower type with the viewshed of Morgan Lake Park, and to reduce tower heights such that they would not be visible from the majority of campsites and the boat launch. (Kling Rebuttal Test. at 83.) Ms. Kling also developed a video animation to evaluate further the project's potential impacts to undeveloped recreation opportunities at Morgan Lake Park. The animation allows the viewer to determine the extent to which project features would be visible from areas not previously included in the ASC (the prior analysis focused on developed recreation opportunities). (Kling Rebuttal Test. at 79-81; Kling Rebuttal Ex. F.)

229. The Revised Supplemental Analysis discussed the magnitude of the proposed facility's impact on Morgan Lake Park in terms of duration, virtual contrast and scale dominance, resource change and viewer perception. As pertinent here, the Revised Supplemental Analysis noted:

[Visual Contrast and Scale Dominance] Though much of the park will have no to low visibility, visual contrast will be moderate to high where the towers are not screened. High visual contrast will be limited to the southern portions of the Park, and areas located along the western edge of Little Morgan Lake. In these areas, towers will appear co-dominant to dominant within the landscape. Therefore, impact magnitude for the park as a whole will be medium-high.

[Resource Change] The landscape character and scenic attractiveness of the park will be maintained in the northern portion, where developed recreation opportunities will be located. The majority (84 percent) of Morgan Lake Park and

For the most part, areas located north of Morgan Lake would have limited views of transmission towers, with exposure either precluded by vegetation, or minimized as a result of the combined effects of vegetation screening or backdrop provided by topography []. The landscape in these areas would appear similar to existing conditions, with broad, unobstructed, panoramic views extending to the north, east, and west []. Views to the south would appear enclosed due to the presence of the conifer stands along the southern perimeter of the lake, as is experience under existing conditions [].

One tower would be fully visible from a short segment of trail connecting Morgan Lake and Little Morgan Lake, and dispersed areas to the north []. The tower would contrast against the existing landscape at a weak to moderate level as a result of the backdrop provided by the hillside, and the consistency in vertical line with surrounding trees. Along the north side of Morgan Lake, tops towers would be visible to the west on approach to the west side of the lake, though viewer exposure from within the park would be limited to the top of the towers and with partial screening from vegetation lake [].

From the northwestern side of Little Morgan Lake, multiple towers with the potential for skylining could be seen []. Visual contrast in these areas is anticipated as moderate due to the skylining []. * * * As disclosed in the ASC, high magnitude impacts are expected in areas south of Morgan Lake and Little Morgan Lake due to the proximity of the Project and the lack of screening.

(Kling Rebuttal Ex. B at 6-12, embedded photos and citations to Exhibit F1, F2 and F3 omitted.)

its recreational features (campsites, fishing piers, and floating dock) will be screened from views of the Project []. In areas of dispersed or undeveloped recreation in the southern portion of the park, scenic integrity will be reduced to a moderate level for the majority of areas; however, integrity would be reduced to low in the southern portion of the Park, particularly in day use areas along the Sheep Creek Trail. Therefore, resource change of Morgan Lake Park as a whole will be medium.

[Viewer Perception] Viewer perception will range from low to high throughout Morgan Lake Park. Views of the Project will be experienced from a neutral position and will be equally peripheral and head-on and range from intermittent to continuous. Therefore, viewer perception for the park as whole will be medium.

(Kling Rebuttal Ex. B at 14-15; emphasis in original.)

230. Like the prior analyses, the Revised Supplemental Analysis referenced the Morgan Lake Plan objectives, and considered scenery as a valued attribute of the recreation opportunity. (Kling Rebuttal Ex. B at 17.) The Revised Supplemental Analysis also noted that while the project will introduce moderate contrast to the landscape and high visual contrast in discrete areas in the southern portion of the park, it would not preclude visitors from enjoying the recreation opportunities offered at the park. The Revised Supplemental Analysis concluded:

The Proposed Project will result in long-term visual impacts to Morgan Lake Park, primarily in the southern periphery of the park. Impacts will be of varying intensity as measured by visual contrast and scale dominance, resource change, and viewer perception. Visual impacts will not preclude visitors from engaging in the recreational opportunities offered at Morgan Lake Park, including the undeveloped or developed (day use and overnight facilities) opportunities. Therefore, visual impacts to Morgan Lake Park will be less than significant.

(*Id.*)

231. In response the limited parties' concerns regarding potential visual impacts to undeveloped areas within Morgan Lake Park, Idaho Power proposes using H-frame towers on the Morgan Lake Alternative between milepost 5 and milepost 8 in the vicinity of the park. (Kling Rebuttal Test. at 80; Kling Rebuttal Ex. E.)

Findings related to the Retirement and Financial Assurance standard

232. In the Second Amended Project Order, Section III(m) the Department stated as follows with regard to Exhibit M of Idaho Power's application for site certificate (ASC):

To find that the proposed transmission line satisfies the Financial Assurance Standard (OAR 345-022-0050(2)), the Council must find that the applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

The application shall include the type and amount of the applicant's proposed bond or letter of credit to satisfy the requirements of OAR 345-022-0050.

The applicant shall propose a bond or letter of credit in a form and amount adequate to restore the site to a useful, non-hazardous condition in the event construction of the transmission line is not completed or if the transmission line were to be retired. Recognizing that the permanence of the transmission line can be less certain as circumstances change and technology evolves over time, it is recommended that the applicant submit a proposal that recognizes the increased risks associated with changing circumstances and/or an aging facility, and proposes a bonding mechanism commensurate with that risk.

The application shall include a proposed mechanism by which the certificate holder can keep the Council apprised of the condition of the transmission line, evolving transmission technology, and the line's performance in the context of the larger northwest power grid; an age at which a bond would become warranted to provide adequate restoration assurance in the event the transmission line were to be retired or decommissioned; and the amount, or graduated amount, of that bond.

(ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 17 of 29.)

233. In accordance with the Second Project Order, Idaho Power, in ASC Exhibit M, set out its proposed approach for satisfying the Financial Assurances standard (proposed type and amount of bond or comparable security) and evidence of reasonable likelihood of obtaining security in the event the project would be retired. Idaho Power proposed that it obtain and maintain a bond or letter of credit during the construction phase of the project and after the project has been in service for 50 years. (ODOE - B2HAPPDoc3-21 ASC 13_ Exhibit M_Financial Capability_ASC 2018-09-28, pages 1-11 of 19.)

234. In ASC Exhibit M, Idaho Power provided evidence that it has the capability to finance the construction of the project and meet the requirements for retirement and restoration of the project site. Idaho Power explained that it is a vertically integrated, regulated utility that operates a large fleet of assets, including generation, transmission, and distribution facilities and that it has remained in business without interruption or default for nearly 100 years. Idaho Power noted, among other things, that it is a rate-regulated utility under the jurisdiction of the Idaho PUC and the Oregon PUC and the rates set by both state commissions include the costs associated with retiring facilities that are taken out of service. Idaho Power reported that it maintains credit ratings that have historically enabled it to access secured and unsecured debt at reasonable rates and under acceptable terms. Idaho Power also noted that it has in place a \$300 million credit facility with a syndicate of large financial institutions, with a termination date of October 2022, and that it may, when necessary, obtain capital contributions from IDACORP, Inc., Idaho Power's parent entity. (ODOE - B2HAPPDoc3-21 ASC 13_ Exhibit M_Financial Capability_ASC 2018-09-28, pages 11-12 of 19.)

235. In ASC Exhibit M, Attachment M-2, as evidence of its financial capability to obtain a letter of credit in the amount of the retirement, decommissioning and site restoration costs,

Idaho Power submitted a letter from Wells Fargo Bank. The Wells Fargo letter states the bank's willingness to furnish or arrange a letter of credit to cover the full costs of retiring the project and returning the site to a useful and non-hazardous condition:

Based upon Idaho Power's current credit ratings, profile and information we have as of the date hereof and subject to acceptable pricing, terms and requisite internal approvals, and assuring no market disruption, Wells Fargo confirms to you that it would be highly interested in arranging (as administrative agent or under the existing credit facility or otherwise) and believes it would be successful in arranging, a syndicated letter of credit in an amount up to \$141 million for a period not to exceed three years (the LC Facility) for the purpose of ensuring Idaho Power's obligation that the site of the Boardman-to-Hemingway transmission project be restored to a useful and non-hazardous condition.

(ODOE - B2HAPPDoc3-21 ASC 13_ Exhibit M_ Financial Capability_ ASC 2018-09-28, page 19 of 19.)

236. In ASC Exhibit W, Idaho Power provided information about site restoration following cessation of operation of the facility. Idaho Power estimated that the useful life of the proposed facility will be in excess of 100 years.⁸³ Idaho Power addressed site restoration activities, and asserted that such activities would be done in accordance with a Council-approved retirement plan. Idaho Power also addressed site restoration costs, and estimated that, should the facility be retired, the total cost of restoring the site to a useful, non-hazardous condition is \$140,902,000 in 4th quarter 2016 dollars. In addition, Idaho Power proposed site certificate conditions to ensure compliance with the relevant Council standards pertaining to retirement and financial assurance. Idaho Power submitted, as ASC Exhibit W, Attachment W-1, its cost estimate for removal and site restoration. (ODOE - B2HAPPDoc3-40 ASC 23_ Exhibit W_ Retirement_ ASC 2018-09-28, pages 1-28.)

237. In ASC Exhibit W, and as required by OAR 345-027-0020(9), Idaho Power set out its plan for restoring the site to a useful, non-hazardous condition in the event of cessation of construction or operation. In ASC Exhibit W, Attachment W-1, Idaho Power explained that site restoration would involve removal of the transmission line (including all support structures, conductors, overhead shield wires, and communication sites) and the following components at the switching station: interconnecting bus system, switches, breakers, and instrumentation for the control and protection of the equipment. Idaho Power noted that its retirement plan will provide for removal of the cement foundations for each support structure to a depth of one foot below grade (depending on ground slope), except that any foundations located in land zoned Exclusive Farm Use (EFU) will be removed to a depth of three feet below grade.⁸⁴ (ODOE -

⁸³ The risk that the proposed facility would need to be retired is extremely low. From a practical standpoint, a 500 kilovolt ("kV") transmission line is designed, constructed, and operated to be in-service in perpetuity. From an accounting perspective, the useful life of a transmission line is 100 years. (Ellsworth Rebuttal Test. at 4-6.)

⁸⁴ Idaho Power proposed removing footings to a depth of one foot below ground surface in areas outside EFU-zoned land because it is more environmentally impactful to completely remove the footings than to

B2HAPPDoc3-40 ASC 23_Exhibit W_Retirement_ASC 2018-09-28, page 7 of 28; *see also* ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 300 of 10016.)

238. In the Proposed Order, the Department found that a 100-year lifetime is a reasonable estimated useful life for the proposed facility.⁸⁵ The Department also recommended that, based on the evidence in the record, the Council find that Idaho Power has the ability to restore the site to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility, subject to compliance with the recommended conditions set out therein. (ODOE - B2HAPPDoc2-1 Proposed Order on ASC and Attachments 2019-07-02, pages 299-302 of 10016.)

239. The Department reviewed Idaho Power's cost estimate and confirmed that the site restoration tasks, unit costs, labor rates, and cost estimate assumptions constitute a reasonable site restoration cost for the facility. The Department recommended that the Council find that \$140,779,000 (3rd Quarter 2016 dollars) is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition. (ODOE - B2HAPPDoc2-1 Proposed Order on ASC and Attachments 2019-07-02, page 304 of 10016.)

240. In accordance with the Council rules requiring mandatory site certificate conditions related to the RFA standard,⁸⁶ the Department recommended conditions requiring Idaho Power to prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition and to retire the facility in accordance with a retirement plan approved by the Council if the Company permanently ceases construction or operation of the facility. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02,

leave in place the portion of the footings below one foot in depth. To maintain a safe and stable excavation site, each additional foot of removal depth increases the width of the excavation by two feet in each direction. Therefore, a 10-foot diameter footing removed to a depth of one foot would require a 14-foot diameter hole, whereas the same footing removed to a depth of three feet would require a 22-foot diameter hole, assuming 2:1 side slopes to prevent soils from caving into the hole and mixing with concrete debris. Idaho Power proposed a removal depth of three feet for footings in the EFU zone because of the concern that a one foot depth would provide insufficient clearance for farming equipment and for installation of irrigation. On farmland, concrete footings left in place could interfere with and damage equipment. (Ellsworth Rebuttal Test. at 38-39.)

⁸⁵ The Department found as follows:

The applicant explains that while components of transmission facilities may be replaced over time with new materials and hardware, the applicant designs, constructs, and operates the components of its transmission system for indefinite service. Based on the applicant's explanation of operating its transmission system for over 100 years and maintains it to operate it in perpetuity, the Department concurs that 100 year lifetime is a reasonable estimated useful life for the proposed facility.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 299-300 of 10016.)

⁸⁶ *See* OAR 345-025-0006(7), (8) and (9)

page 301 of 10016.) The Department also included Recommended RFA Condition 4 requiring Idaho Power to, among other things, submit a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee in an amount that will be increased on a quarterly basis to correspond with the cost of the construction over four years, to account for the total decommissioning cost for the facility. (*Id.* at 307-308.)

241. To satisfy mandatory condition OAR 345-025-0006(8)⁸⁷ the Department included Recommended RFA Condition 5, requiring that, once the facility is placed in service, Idaho Power maintain a bond or letter of credit as follows:

a. From the In-Service Date until In-Service Year 51, the amount of bond or letter of credit shall be \$1.00.

b. On the 50th anniversary of the In-Service Date, the certificate holder shall begin maintaining a bond or letter of credit in an amount that will increase on an annual basis for the next 50 years. In year 51, the amount of the bond or letter of credit will be set at one-fiftieth (1/50) of the total estimated decommissioning costs, adjusted for inflation, as specified in section (d) of this condition. Each year, through the 100th year of service, the bond or letter of credit shall be increased by one-fiftieth (1/50) of the estimated decommissioning costs. Once the bond or letter of credit is in an amount equal to 100 percent of decommissioning costs, it will remain at that level for the life of the facility.

c. On the fifth anniversary of the In-Service Date, and on each subsequent quinquennial thereafter, the certificate holder shall notify the Department 60 days prior and report to the Council in writing or in-person on the following subjects: (i) the physical condition of the facility; (ii) any evolving transmission or electrical technologies that could impact the continued viability of the facility; (iii) the facility's performance in the context of the larger power grid; and (iv) the certificate holder's general financial condition, including the certificate holder's credit rating at that time. * * * Based on the information provided in the 5-year report, and the Department's review and recommendations of such reports, the Council will consider whether the certificate holder should be required to post a bond or letter of credit that varies from the financial assurance requirements set forth in sections (a) and (b) of this condition. The certificate holder shall be subject to the Council's determination. The Council's determination may include extending the date on which the certificate holder would be required to begin posting the financial assurances set forth in section (b) of this condition.

d. The estimated total decommissioning cost for the facility is \$140,779,000 (3rd Quarter 2016 dollars), to be adjusted to the date of issuance of the bond or letter of credit in In-Service Year 51, and on an annual basis thereafter. Subject to Department approval, the certificate holder may request an adjustment of the bond

⁸⁷ OAR 345-025-0006(8) states, in pertinent part, "The certificate holder must maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility."

or letter of credit amount based on final design configuration of the facility by applying the unit costs presented in, Attachment W-1 of the Final Order on the ASC, Facilities Removal and Site Restoration Cost Estimate. Such adjustments may be made without amendment to the site certificate. The Council authorizes the Department to agree to these adjustments in accordance with this condition. *
* *

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 310-11 of 10016.)

242. The Department concluded:

Subject to compliance with Retirement and Financial Assurance Conditions 1 through 3, the Department recommends the Council find that the proposed facility can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility. Subject to compliance with Retirement and Financial Assurance Conditions 4 and 5, the Department recommends that the Council find that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 311 of 10016.) The Department therefore recommended that the Council find that the proposed facility, including the proposed and alternative routes, complies with the Council's Retirement and Financial Assurance standard. (*Id.* at page 312.)

243. On October 12, 2021, Idaho Power obtained an updated letter of willingness from Wells Fargo Bank. The updated letter proposes up to a five-year letter of credit to cover the entire construction period. The letter of willingness can be updated annually until it is replaced by a letter of credit or bond when construction begins on the project. (Mills Rebuttal Test. at 4; Mills Rebuttal Ex. B.)

244. A financial institution cannot agree to a letter of credit for an indefinite amount of time. Financial conditions may change that require adjustments to factors such as carrying costs associated with the letter of credit. Therefore, letters are typically approved for a term length of no more than a five-year period. Letters of credits/bonds can be repeatedly renewed to continue coverage through the required term length. For the proposed facility, the letter of credit may have a five year term and then Idaho Power and its lenders will renegotiate the letter of credit/bond terms prior to the term's end, to extend coverage for an additional five years. It is standard industry practice to renew letters of credit/bonds to extend through the necessary length of coverage. (Mills Rebuttal Test. at 5.)

245. Idaho Power has discussed the phased-in aspect of the letter of credit/bond set out in the Proposed Order (Recommended RFA Condition 5) with Wells Fargo. The bank confirmed that the quarterly incremental increase in the letter of credit as construction on the project progresses is an arrangement to which it is willing to agree. Idaho Power also discussed the

quarterly incremental approach with its bond surety provider, and it confirmed quarterly incremental increases were reasonable and not out of the ordinary. (Mills Rebuttal Test. at 6.)

Findings related to the Soil Protection standard

246. In the Second Amended Project Order, the Department ordered Idaho Power to provide the following information with regard to the Soil Protection standard:

The applicant shall include information describing the impact of construction and operation of the proposed facility on soil conditions in the analysis area. Describe all measures proposed to maintain soil productivity during construction and operation. It is recommended that the applicant consult with local farmers, landowners, soil conservation districts, and federal land managers regarding mitigation of impacts to agricultural and forest lands. Specific discussion could include weed encroachment, interference with irrigation equipment, and the potential for restrictions to aerial applications caused by the proximity of transmission towers.

Exhibit I shall also include the required evidence related to the federally-delegated National Pollutant Discharge Elimination System (NPDES) 1200-C permit application. * * *.

If the applicant intends to rely upon an erosion and sediment control plan to meet the Soil Protection standard, provide a draft of the plan for review.

(ODOE - B2HAPPDdoc15 ApASC Second Amended Project Order 2018-07-26, page 14 of 29.)

247. As required by OAR 345-021-0010(1)(i)⁸⁸ and the Second Amended Project Order, in ASC Exhibit I, Idaho Power identified the major soil types in the analysis area,⁸⁹ identified the current land uses that require or depend on productive soils, and identified and assessed the significant potential adverse impacts to soils from the project. (ODOE - B2HAPPDdoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 13-27 of 115.) Idaho Power also explained that impacts to soils are limited because not all of the site boundary will be disturbed. In ASC Exhibit I states that, for the total proposed route, construction activities will disturb 21 percent (4,347.6 acres) of the site boundary, and that operation will disturb 3.6 percent (756.9 acres) of the site boundary. (*Id.* at page 17 of 115.) Idaho Power focused its quantitative soil analyses the construction disturbance area (CDA) and the smaller operation disturbance area (ODA). (Madison Rebuttal Test. at 9.)

⁸⁸ OAR 345-021-0010(1)(i) requires that the applicant provide, as Exhibit I, “[i]nformation from reasonably available sources regarding soil conditions and uses in the analysis area, providing evidence to support findings by the Council as required by OAR 345-022-0022[.]” In ASC Exhibit I, Table I-1 identified the soil orders within the site boundary, by acres for each county. (ODOE - B2HAPPDdoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 14 of 115.)

⁸⁹ For purposes of the Soil Protection standard, the analysis area means the area within the site boundary. (ODOE - B2HAPPDdoc2 Proposed Order on ASC and Attachments 2019-07-02, page 99 of 10016.)

248. In ASC Exhibit I, Idaho Power explained its methods for identifying soil properties and its use of the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) State Soil Geographic Database (STATSGO) to characterize soil erosion and soil reclamation properties. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 7 of 115.) Idaho Power noted that “when the final route has been selected and prior to construction, additional site-specific soil properties will be surveyed during the site-specific geotechnical investigation.” (*Id.*)

249. Idaho Power identified current land uses in the analysis area that require or depend on productive soils through analysis of high value farmland soils data and land cover type data. Idaho Power used SSURGO soils data to identify soils within the analysis areas that have potential for agricultural use. To characterize land cover types within the site boundary, Idaho Power used Regional Gap Analysis Project data along with desktop interpretation of 2012 National Agriculture Imagery Program imagery. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 13 of 115; Madison Rebuttal Test. at 10-11.) Idaho Power noted that additional information regarding agricultural land uses is presented in the Agricultural Lands Assessment, ASC Exhibit K, Attachment K-1, which identifies the types of agriculture and the specific crops grown in the analysis area. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 13 of 115.)

250. Because the proposed facility does not include cooling towers and has no effluent discharges, Idaho Power did not evaluate the potential adverse impact to soils from chemical factors such as salt deposition and land application of liquid effluent. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 16 of 115; Madison Rebuttal Test. at 12.)

251. Idaho Power assessed the potential adverse impacts to soils from the Project due to erosion, loss of soil reclamation potential, compaction, chemical spills, and herbicide use. Idaho Power evaluated soil erosion potential based on four factors, the soil K factor (susceptibility to displacement by rainfall), wind, slope assessment, and the T factor (tolerance to remain productive). (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 9-10 of 115; Madison Rebuttal Test. at 13.) As for loss of soil reclamation potential, Idaho Power considered several soil properties, including soil compaction, the amount of stony-rocky soil, droughty soil, depth to bedrock, and the presence of hydric soils. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 11-12 of 115; Madison Rebuttal Test. 17-18.) As for soil compaction, Idaho Power explained that its review of the STATSGO database indicated there were no highly compaction-prone soils within the site boundary, and therefore it did not quantify the impacts to highly compaction-prone soils. Idaho Power nevertheless addressed mitigation of compacted soils due to construction activities in Exhibit I. (*Id.*)

252. In ASC Exhibit I, Idaho Power also described the proposed measures to be taken to avoid or mitigate adverse impacts to soils. Idaho Power explained that as part of the siting process, the Company communicated with local, state, and federal entities, landowners, and other stakeholders to obtain input to minimize project impacts to irrigated agricultural lands and

other sensitive resources. In response to stakeholder communications, Idaho Power shifted the Proposed Route and included an alternative route for consideration. Idaho Power explained that it will conduct additional soil analysis during the final geotechnical exploration program and will consider the potential sensitivity of soils in designing and siting the facility. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 28 of 115.) Idaho Power added that it will minimize soil impacts by using best management practices (BMPs) and restoration efforts to restore soil surfaces and vegetation following disturbances.⁹⁰ (*Id.*) Idaho Power explained that the draft Reclamation and Revegetation Plan (ASC Exhibit P1, Attachment P1-3), sets out the measures to be used to ensure reclamation success in disturbed areas.⁹¹ (*Id.* at page 29 of 115.)

253. To address potential impacts to productive soils (privately owned agricultural lands), Idaho Power prepared an Agricultural Impacts Mitigation Plan (AIMP), which it incorporated into the Agricultural Land Assessment. (ODOE - B2HAPPDoc3-19 ASC 11_ Exhibit K_Land Use_ASC 2018-09-28, pages 430-37 of 614; Madison Rebuttal Test. at 27.) The AIMP identifies the measures Idaho Power will take to avoid, mitigate, repair and/or provide compensation for impacts that may result from the construction or operation of the facility on privately owned agricultural land. (*Id.*; Madison Rebuttal Test. at 27-28.)

254. As required by Council rules, Idaho Power included a draft monitoring plan for soil impacts during construction and operation. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 36-37 of 115.) In addition, Idaho Power proposed site certificate conditions to ensure compliance with the Soil Protection standard, including conditions requiring the Company to finalize and submit for Department approval the following plans: An Oregon DEQ-approved construction related Spill Prevention, Control, and Countermeasures Plan (SPCC Plan), a final Blasting Plan, an Oregon DEQ-approved Erosion

⁹⁰ On this point, ASC Exhibit I states:

IPC will obtain an NPDES 1200-C Stormwater Construction Permit, and will implement an ESCP. IPC proposes a generic set of construction BMPs to be available for use on a majority of the Project where soils are not highly erosive, slopes are not steep, and construction is away from surface water. More specific BMP methods and BMP locations will be designated in areas with higher potential for soil erosion impacts. Where steep slopes cannot be avoided, site-specific BMPs tailored to encountered soil types in those areas will be applied to control and reduce erosion. The ESCP will present appropriate BMPs for minimizing impacts in areas with steep slopes. No construction will occur until the 1200-C stormwater permit has been obtained and the ESCP has been finalized and approved by ODEQ.

(ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 29 of 115.)

⁹¹ The Reclamation and Revegetation Plan was developed primarily to address potential impacts to fish and wildlife habitat, as opposed to rehabilitation of disturbed soils. However, it provides the framework for reclamation of areas impacted by project construction, operation, and maintenance. It also sets out the requirements for implementing and monitoring reclamation of disturbed vegetation and meeting the reclamation success standards. (Madison Rebuttal Test. at 28-29.)

and Sediment Control Plan (ESCP), a Reclamation and Revegetation Plan, and a Vegetation Management Plan. (*Id.*)

255. In ASC Exhibit I, Idaho Power also included Table I-12, identifying the information responsive to the requirements of OAR 345-021-0010(1)(i), OAR 345-022-0022, and Second Amended Project Order and its location within the ASC. (ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 39-40 of 115.)

256. In the Proposed Order, the Department included Recommended Soil Protection Condition 1 requiring that, prior to construction, Idaho Power submit to the Department a final copy of its NPDES 1200-C permit, including the final ESCP, and that the Company conduct all work in compliance with the NPDES 1200-C permit and ESCP.⁹² The Department also included Recommended Soil Protection Condition 2 requiring submission of a final SPCC Plan and compliance with that Plan during construction of the facility. In the event Idaho Power takes over operation of the Longhorn Station, the Department included Recommended Soil Protection Condition 3, requiring a DEQ-approved SPCC Plan for operation. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 104-06 of 10016.) In addition, the Department included recommended conditions requiring Idaho Power to finalize and submit for Department approval a final Blasting Plan and requiring the Company to monitor and inspect facility components for soil impacts. (*Id.* at pages 108-09 of 10016.) The Department further noted that Recommended Fish and Wildlife Habitation Condition 2 requires the certificate holder to submit to the Department for approval a final Vegetation Management Plan monitoring and to conduct all work in compliance with that plan. (*Id.*)

257. Based on its findings and conclusions in the Proposed Order, and subject to compliance with the recommended site certificate conditions, the Department recommended that the Council find the proposed facility in compliance with the Soil Protection standard. ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 109-10 of 10016.)

258. In ASC Exhibit I, Idaho Power presented the soils information at the order level by county for the entire site boundary on Table I-2-1. (ODOE-B2HAPPDoc3-17 ASC 09b_ Exhibit I_Soil_ASC_Part 2 2018-09-28, pages 70-72 of 88.) In response to requests from limited parties, Idaho Power prepared an updated Table I-2-1 presenting soils information by county with the soil order, soil ID, soil name, acreage, percent and acreage of disturbance area, and soil properties. (Madison Rebuttal Test. at 52-53; Madison Rebuttal Ex. D; Madison Cross-Exam. Test., Tr. Day 2 at 49-52.)

⁹² The Department noted that the draft ESCP requires salvaging and segregating topsoil to reduce impacts to farmland and forested areas. The Department explained that Idaho Power's Agricultural Lands Assessment (ASC Exhibit K, Attachment K-1) details how the Company would mitigate impacts to productive soils and the agricultural and forest operations that require or depend on those soils. The Department added that Recommended Land Use Condition 14 requires the Company to finalize and submit to the Department for approval an Agricultural Lands Assessment, and to conduct all work in accordance with that assessment. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 107 of 10016.)

Findings related to compliance with the Structural Standard

259. The Structural Standard requires that the Council evaluate whether the applicant has adequately characterized the seismic hazard risk of the site, the geological and soil hazards of the site, and whether the applicant can design, engineer, and construct the proposed facility to avoid dangers to human safety and the environment from these hazards. OAR 345-022-0020.

260. In the Second Amended Project Order, the Department acknowledged that for this proposed facility, it would not be practical for Idaho Power to obtain detailed site-specific geotechnical investigation for the entire site boundary in advance of completing the final facility design and obtaining full site access. Nevertheless, the Department required that, as part of ASC Exhibit H (Geologic Hazards and Soil Stability) Idaho Power provide evidence that it consulted with the Oregon Department of Geology and Mineral Industries (DOGAMI) regarding the level of geologic and geotechnical investigation determined to be practical for the application submittal. The Department also required that geotechnical reports included in Exhibit H meet Oregon State Board of Geologist Examiners guidelines, as determined based on Idaho Power's consultation with DOGAMI. (ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 14 of 29.)

261. In ASC Exhibit H, Idaho Power provided information regarding the geological and soil stability within the site boundary for the project. Idaho Power described the analysis area, the methods to be used to generate the detailed information required by Council's standards, the geological and soil stability studies conducted to date, and a summary of its consultation with DOGAMI. Idaho Power also described the site-specific geotechnical work to be performed before construction, to be included in the site certificate as conditions; the approximate locations of geotechnical work; an assessment of seismic hazards; an assessment of geology and soil related hazards (including landslides, flooding, and erosion); and measures to be taken to avoid or mitigate dangers to human safety and the environment resulting from geologic hazards. (ODOE - B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, pages 7-35 of 243.)

262. Idaho Power's geotechnical and environmental consultant identified and assessed landslide hazard areas within the site boundary. The consulting firm reviewed historically recorded landslides from the SLIDO database and identified other unstable land conditions from geologic maps and aerial imagery. The consultant then supplemented the landside hazard area inventory by a limited reconnaissance-level survey, evaluating current land stability factors such as soil composition, slope, and revegetation. (Sorensen Rebuttal test. at 13-14; *see also* ODOE - B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, page 8 of 243).

263. Prior to construction, once Idaho Power obtains access and permission to proposed field investigation sites, Idaho Power will commence the second phase of its geotechnical exploration related to slope stability and landslides. Idaho Power's consultant will conduct geotechnical exploration to investigate subsurface soil and geologic conditions with an emphasis on areas identified as potential geologic hazards in ASC Exhibit H, Attachment H-1, the Engineering Geology and Seismic Hazards Supplement. (Sorensen Rebuttal test. at 19-20; ODOE - B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, page 41 of

243.)

264. Using the results of the geotechnical investigation, Idaho Power will prepare a final engineering geologic report, the Phase 2 Site-Specific Geotechnical Report, prior to final design and construction to assess site-specific hazards in conformance with DOGAMI's guidance and the Oregon State Board of Geologist Examiners' 2014 Guidelines for Preparing Engineering Geological Reports. (Sorensen Rebuttal Test. at 23; ODOE - B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, page 9 of 243.) In its Phase 2 Site-Specific Geotechnical Report, Idaho Power will include the requisite site-specific information for sites that will be impacted by construction and operation of the project. Idaho Power will attempt to locate structures, such as transmission tower foundations, to avoid potential slope instability hazards wherever possible. Idaho Power will locate structures with sufficient setback from slopes to mitigate for potential slope instability during construction and operation. Where appropriate and necessary, Idaho Power will employ appropriate slope instability mitigation techniques, including modification of slope geometry, hydrogeological mitigation, slope reinforcement methods, or revegetation. (Sorensen Rebuttal Test. at 24-25.)

265. Performing additional site-specific surveys prior to obtaining a site certificate is neither practical, because Idaho Power is unable to obtain right of entry for multiple sites, nor necessary for compliance with the Council's Structural Standard. Idaho Power has performed, to the extent practicable, a thorough analysis of landslide potential and slope stability in the project analysis area. (Sorensen Rebuttal Test. at 32.)

266. In its Phase 2 Site-Specific Geotechnical Report, to be completed after issuance of the site certificate and prior to construction, Idaho Power will include the requisite site-specific information for sites that will be impacted by construction and operation of the project. Further, where appropriate and necessary, Idaho Power will employ appropriate slope instability mitigation techniques. (Sorensen Rebuttal Test at 32.)

267. Although blasting is not specifically addressed in any Council standard, the Structural Standard addresses impacts that could potentially result from blasting activities, such as slope instability, landslides, and flooding. Because construction of the proposed facility may involve blasting, Idaho Power included, as part of ASC Exhibit G, Attachment G-5, a draft Framework Blasting Plan. As stated in the introduction of the Framework Blasting Plan:

The [Plan] outlines methods to mitigate risks and potential impacts associated with blasting procedures that may be required for construction of the [project]. Also included in this section is a preliminary outline for the Blasting Plan to be prepared by the Construction Contractor(s) and submitted to Idaho Power Company (IPC) if blasting is required. The Compliance Inspection Contractor (CIC) and the appropriate agencies will be notified in advance of any required blasting so the area can be cleared. If blasting is to occur on federal lands, IPC will submit the Blasting Plan to the federal land-management agencies for final review and approval.

* * * * *

The complete Blasting Plan will be developed by the Construction Contractor(s) in consultation with IPC as detailed engineering design of the Project is completed and will contain the detailed information necessary for site-specific guidance. This plan framework provides Project-specific guidance for development of the complete Blasting Plan by identifying treatments and measures required to avoid, minimize, and mitigate Project-related impacts; prevent unnecessary degradation of the environment; ensure blasting activities comply with federal, state, or other agency requirements; and meet any stipulations of the Site Certificate. The Construction Contractor(s) will be responsible for preparing and implementing the complete Blasting Plan.

(ODOE - B2HAPPDoc3-13 ASC 07_ Exhibit G_ Materials_ ASC 2018-09-28, page 96 of 102.)

268. The Framework Blasting Plan includes design features for the project to be applied project-wide for environmental protection and to address concerns related to blasting. As pertinent here, Design Feature 32 states as follows:

Design Feature 32. Watering facilities (tanks, natural springs and/or developed springs, water lines, wells, etc.) will be repaired or replaced if they are damaged or destroyed by construction and/or maintenance activities to their predisturbed condition as required by the landowner or land-management agency. Should construction and/or maintenance activities prevent use of a watering facility while livestock are grazing in that area, then the Applicant will provide alternate sources of water and/or alternate sources of forage where water is available.

(ODOE - B2HAPPDoc3-13 ASC 07_ Exhibit G_ Materials_ ASC 2018-09-28, page 102 of 102.)

269. Idaho Power submitted the Framework Blasting Plan in draft form in the ASC because the company did not have access to all land on which the transmission line is routed and therefore cannot determine with certainty precisely whether or where blasting will be required. Also, Idaho Power plans to make the final decisions regarding blasting locations in consultation with its Engineering, Procurement, and Construction contractor after the project design has been finalized, and the project design cannot be finalized until after the Council approves the site certificate. (Cummings Rebuttal Test. at 20.)

270. In the Proposed Order, the Department noted that, consistent with the Structural Standard, Idaho Power developed the draft Framework Blasting Plan “to ensure that the proposed facility design and construction avoids dangers to human safety and environment from risks such as subsidence, landslides, and slope instability which could be impacted by blasting activities.” (ODOE- B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 89 of 10016.) The Proposed Order discussed the plan’s safety procedures and notification process. The Department, based on consultation with DOGAMI and other agencies, recommended adding several requirements to the Risk Management section (Section 8) of the draft plan. The Department recommended, among other things, that the plan include the requirement to implement a seismic monitoring plan or application of scaled distance factors to

monitor and ensure ground vibration at the nearest structured do not exceed NFPA established limits during blasting activities. (*Id* at pages 90-91 of 10016.)

271. In addition, the Department recommended the Framework Blasting Plan include requirements for preparing and submitting post-monitoring and seismic report(s) and that the contractor demonstrate adequate insurance coverage for a minimum of \$1,000,000. The Department also recommended that the plan include an established agency review process applicable to finalization of the draft plan and any future plan amendments. The review process will allow adequate opportunities for appropriate state and local agencies, with subject matter expertise, to review, coordinate and ensure the plan complies with applicable requirements and minimizes environmental and health and safety risks during facility construction. (ODOE-B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 90-92 of 10016.)

272. The Department also recommended several conditions related to the Structural Standard, including measures to design the proposed facility to avoid seismic and non-seismic hazards. Recommended Structural Standard Condition 1, requires that prior to construction of a phase or segment of the facility, the certificate holder submit an investigation plan and a site-specific geological and geotechnical investigation report, prepared by an Oregon-licensed professional engineer or geologist, demonstrating that the facility site has been adequately characterized and that the facility and temporary construction activities, such as blasting, have been designed and located to avoid seismic, soil, and geologic standards. (ODOE-B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 88 of 10016.)

273. Recommended Structural Standard Condition 1 also sets out the minimum information required in the pre-construction investigation report, including specific methods for evaluating potential slope instability and landslide hazards, as follows:

Potential slope instability and landslide hazards based on boring locations spaced approximately 1 mile along the alignment: at dead-end structures; any corners or changes in alignment heading (angles); crossings of highways, major roads, rivers, railroads, and utilities as power transmission lines, natural gas pipelines, and canals; *locations where blasting may occur*; and, *locations necessary to verify lithologic changes and/or geologic hazards such as landslides, steep slopes, or soft soil area.*

(ODOE - B2HAPPDoc2-1 Proposed Order on ASC w Hyperlink Attachments 2019-07-02, page 89 of 10016; emphasis added.)

274. With regard to flooding risks from construction and operation of the proposed facility, the Proposed Order states as follows:

The applicant represents that it would set facility structures and towers back from areas of high flood risks during final design; or, where structures cannot be set back, the applicant would conduct a site-specific structural and erosion hazard assessment and would coordinate with local flood zone managers to determine mitigation requirements. Recommended Structural Standard Condition 1 would

require the pre-construction site-specific geological and geotechnical investigation report to, in part, identify facility components within the 100-year flood zone, any related potential risk to the facility, and measures to mitigate the identified hazards.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 94 of 10016.) The Department also found that the mitigation measures listed in ASC Exhibit H would reduce risks posed by flooding, soil erosion, landslides, and mass wasting events. (*Id.* at 99 of 10016.)

275. To address landowner concerns regarding construction-related blasting, Idaho Power agreed to incorporate the requirement of Design Feature 32 into a site condition, as part of Recommended Soil Protection Condition 4:

b. Prior to construction, the certificate holder will consult with landowners regarding right-of-way acquisition, and during these consultations, the certificate holder will discuss with the landowner any blasting that the certificate holder plans to conduct on the landowner's property. If the landowner identifies a natural spring or well on the property, the certificate holder will notify the landowner that at the landowner's request, the certificate holder shall conduct pre-blasting baseline flow and water quality measurements for turbidity. The certificate holder shall compensate the landowner for adequate repair or replacement if damages to the flow or quality of the natural spring or well occur solely as a result of blasting.

(Cummings Rebuttal Test. at 44-45.)

276. Given the size of the blasts required to place transmission tower foundations, the geotechnical testing, the site-specific reconnaissance that Idaho Power will undertake prior to blasting, and the safety measures required by the Draft Framework Blasting Plan, it is highly unlikely that private wells would be impacted by blasting conducted for the project. (Cummings Rebuttal Test. at 43-44.)

277. Any blasting required to place tower foundations for the project will not be of the size or strength that would likely cause damage to nearby structures or features, or exacerbate flooding risks. Blasting configurations for tower foundations, by their nature, involve relatively small diameter blast holes, small charge weights, shallow blast hole depths, and short durations of excitation. Such practices do not produce seismic excitation or ground displacement that approaches such a level of off-site severity that could damage structures or exacerbate flooding risks to nearby properties. Furthermore, where the blasting contractor is required to address potential blasting impacts, the blasting contractor can employ additional measures to mitigate these potential impacts in accordance with recommended site conditions and the Framework Blasting Plan guidelines. (Cummings Rebuttal test. at 13.)

278. Idaho Power will consult with landowners regarding any blasting that Idaho Power plans to conduct on the landowner's property. At the landowner's request, Idaho Power will conduct pre-blasting baseline flow and water-quality measurements, testing specifically for

turbidity. Because the blast holes are highly unlikely to intercept ground water that can migrate to wells or springs, it is not necessary to test well water for contaminants other than turbidity. (Cummings Rebuttal Test. at 44.)

279. Limited parties Horst and Cavinato also raised concerns under the Structural Standard that vibrations caused by passing construction vehicles may cause damage to a well located on their property, close to the unpaved portion of Hawthorne Drive. (Horst Direct Test. at 6.) As found above, there is a deep water well on Mr. Horst's property, located approximately 10 feet from the gravel road. (*Id.*; Horst Ex. H.) About half of the well depth has steel casing, the remainder is drilled through hard rock. Mr. Horst also raised concerns that the well could be damaged from blasting activities on or near his property. (Horst Direct Test. at 6)

280. Robert Cummings is a geological engineer with expertise in rock blasting, geotechnical and mineral exploration and applied mining and engineering geology. In Mr. Cummings' opinion, the limited parties' concerns are unfounded and there is no need to perform preconstruction well water testing based on increased construction traffic on Hawthorne Drive. The seismic vibrations from passing construction vehicles will be minimal, and the limited traffic will not result in a cumulative fatigue effect or cause permanent damage to the well. There is also no need for Idaho Power to build new roads to direct construction-related traffic away from the deep well on the Horst-Cavinato property. Idaho Power's proposed mitigation measures, including reduced vehicle speeds, will address the limited parties' concerns about the well. (Cummings Rebuttal test. at 3, 46).

281. Limited party Jonathan White lives on Modelaire Drive in La Grande. His home is about 500 feet from the project site boundary at Hawthorne Dr. Mr. White raised concerns that construction-related blasting may cause damage to his home, property, and neighborhood streets. (White test.)

Findings related to hazardous materials management and monitoring

282. As part of Exhibit G, the ASC must include a materials analysis with: (a) an inventory of the industrial materials flowing into and out of the proposed facility during construction and operation; (b) the applicant's plans to manage hazardous substances⁹³ during construction and operation, including measures to prevent and contain spills; and (c) the applicant's plans to manage non-hazardous waste materials during construction and operation. (OAR 345-021-0010(1)(g).)

⁹³ The Oregon DEQ defines the term "hazardous substance" in OAR 340-122-0115(30) as follows:

- (a) Hazardous waste as defined in ORS 466.005;
- (b) Any substance defined as a hazardous substance pursuant to section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act, P.L. 96-510, as amended, and P.L. 99-499;
- (c) Oil as defined in ORS 465.200(18); and
- (d) Methane generated at a historic solid waste landfill; and
- (e) Any substance designated by the commission under ORS 465.400.

283. In addition, as part of Exhibit W, the ASC must include information about site restoration. For facilities that might produce site contamination by hazardous materials,⁹⁴ the ASC must include a proposed monitoring plan or an explanation why a monitoring plan is unnecessary. (OAR 345-021-0010(1)(w)(E).)

284. In ASC Exhibit G, as required by OAR 345-021-0010(1)(g), Idaho Power described the hazardous and non-hazardous material to be used as part of the proposed project and the plan for managing these materials. In ASC Exhibit G, Section 3.3, Idaho Power described its plan to manage hazardous substances during construction and operation, including measures to prevent and contain spills:

Hazardous materials will be segregated when stored within the multi-use areas. Hazardous materials will be stored in approved containers and clearly labeled. The construction contractor will maintain an inventory of all hazardous materials used and corresponding material safety data sheets (MSDS). The construction contractor will maintain copies of the required MSDSs for each hazardous chemical, and will ensure they are readily accessible during each work shift, to all employees when they are in their work areas. MSDSs will also be kept in service and refueling vehicles. The MSDSs will provide basic emergency response information for small and large releases of each hazardous material. If bulk hazardous materials are used, the Emergency Response Guidebook, produced by the United States Department of Transportation, also will be used to prepare for emergencies.

(ODOE - B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, page 14 of 102.)

⁹⁴ The Oregon DEQ defines “hazardous materials” differently than “hazardous substance.” Pursuant to OAR 340-142-0005(9):

“Hazardous material” means one of the following:

- (a) Hazardous waste as defined in ORS 466.005.
- (b) Radioactive waste as defined in ORS 469.300, radioactive material identified by the Energy Facility Siting Council under 469.605 and radioactive substances as defined in 453.005.
- (c) Communicable disease agents as regulated by the Health Division under ORS 431 and 433.010 to 433.045 and 433.106 to 433.990.
- (d) Hazardous substances designated by the United States Environmental Protection Agency under section 311 of the Federal Water Pollution Control Act, P.L. 92-500, as amended.
- (e) Substances listed by the United States Environmental Protection Agency in 40 Code of Federal Regulations Part 302 — Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments.
- (f) Material regulated as a Chemical Agent under ORS 465.550.
- (g) Material used as a weapon of mass destruction, or biological weapon.
- (h) Pesticide residue.
- (i) Dry cleaning solvent as defined by ORS 465.200(9).

285. As Attachment G-4 to ASC Exhibit G, Idaho Power included its Spill Prevention, Control, and Countermeasures Plan (SPCC Plan) to be implemented during construction of the project. The SPCC Plan outlines the preventive measures and practices that contractors will employ to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event of such a spill, to expedite the response and remediation. (ODOE - B2HAPPDoc3-13 ASC 07_ Exhibit G_ Materials_ ASC 2018-09-28, page 66 of 102.)

286. Section 2 of the SPCC Plan addresses spill prevention practices. Spill prevention practices include: avoiding environmentally sensitive areas when selecting sites for project staging; requiring each contractor to develop a detailed, site-specific Hazardous Materials Management Plan prior to construction; and requiring each contractor to store, handle, and transfer fluids used during construction in a careful manner to prevent spills of hazardous materials. The SPCC Plan also requires that the dispensing and transfer of hazardous materials and wastes occur in accordance with national standards, including bonding or grounding during transfer of flammable liquids. (ODOE - B2HAPPDoc3-13 ASC 07_ Exhibit G_ Materials_ ASC 2018-09-28, pages 68-72 of 102.)

287. Section 3 of the SPCC Plan addresses emergency preparedness and requires that each contractor develop an emergency response plan for environmental emergency preparedness and response, appropriate for the hazardous materials and wastes used and generated. Section 4 of the SPCC Plan addresses incident or emergency response and includes a process requiring immediate notification in the event of a release of one pound or more of any hazardous material or any amount of hazardous waste. (ODOE - B2HAPPDoc3-13 ASC 07_ Exhibit G_ Materials_ ASC 2018-09-28, pages 72-76 of 102.)

288. In ASC Exhibit W, as required by OAR 345-021-0010(1)(w)(E), Idaho Power addressed site restoration in the event of retirement of the project. Idaho Power explained that because high-voltage transmission lines are designed and maintained to remain in service in perpetuity, it is highly unlikely that the project would ever be retired. Nevertheless, in ASC Exhibit W Idaho Power described the actions that would be necessary to restore the project site in the unlikely event the project is retired. In Section 3.5 of ASC Exhibit W, Idaho Power explained that when operating, the project is not likely to produce site contamination by hazardous materials. Therefore, a monitoring plan for hazardous materials is unnecessary:

The Project is not likely to cause site contamination by hazardous materials because the hazardous materials to be employed during Project construction and operation are limited to oils in transformers at the station, propane tanks at communication sites, and small quantities of lubricants, vehicle fuels, and herbicides used during Project construction and maintenance. A Spill Prevention, Control, and Countermeasures Plan will be developed by the Engineering, Procurement, and Construction contractor and submitted to ODOE prior to commencing construction of the Project. The Spill Prevention, Control, and Countermeasures Plan is developed to prevent and address any leakage or spills of these materials that may occur during construction and operations of the Project. Additionally, IPC will fully comply with Oregon Department of Environmental

Quality requirements for storage of hazardous materials and cleanup and disposal of hazardous waste on all lands associated with the Project. Given the limited quantities of hazardous materials that will be used for the Project, site contamination is highly unlikely and therefore a monitoring plan is unnecessary.

(ODOE - B2HAPPDoc3-40 ASC 23_ Exhibit W_ Retirement_ ASC 2018-09-28. page 11 of 28.)

289. In the Proposed Order, the Department discussed Idaho Power's draft SPCC Plan in connection with compliance with the Soil Protection standard. The Department noted that, during construction of the project, Idaho Power will require construction contractors to abide by the SPCC Plan. The Proposed Order set out pertinent provisions of the Draft SPCC Plan and recommended conditions relating to the SPCC Plan:

Recommended Soil Protection Condition 2: The certificate holder shall:

- a. Prior to construction of the facility, submit to the Department a final copy of a Construction Spill Prevention Control and Countermeasures Plan (SPCC Plan). The protective measures described in the draft Construction SPCC Plan, as provided in Attachment G-4 of the Final Order on the ASC, shall be included in the final SPCC Plan, unless otherwise approved by the Department.
- b. During construction of the facility, the certificate holder shall conduct all work in compliance with the final SPCC Plan.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 106 of 10016.)

290. The Proposed Order further found that Idaho Power did not anticipate needing an SPCC Plan during operations unless it were to operate the Longhorn Station instead of BPA. However, if that were to happen, the Department recommended another Soil Protection Condition related to implementing an SPCC Plan during operation of the Longhorn Station, if necessary.

Recommended Soil Protection Condition 3: Prior to operation, if the certificate holder is required by DEQ statutes or rules to implement a SPCC Plan for operation of the facility, the certificate holder shall submit to the Department a copy of a DEQ-approved operation-related SPCC Plan. The certificate holder shall maintain compliance with the operation-related SPCC Plan during operations at the Longhorn Station.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 106-07 of 10016.)

291. In the Proposed Order, with regard to measures to contain chemical spills, the Department found as follows:

Based upon applicant representations, and compliance with the recommended conditions, any spills are expected to be limited and contained, and would be unlikely to leave the site boundary.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 107 of 10016.) The Department further recommended that the Council find the proposed facility in compliance with the Soil Protection standard, subject to Idaho Power's compliance with the recommended site certificate conditions. (*Id.* at pages 109-110.)

292. With regard to the Retirement and Financial Assurance Standard and the requirement to restore the site to a useful, non-hazardous condition at the end of the facility's useful life, the Proposed Order acknowledged Idaho Power's intent to design and maintain the transmission line to remain in service in perpetuity. The Department agreed that 100-year lifetime is a reasonable estimated useful life for the facility. In the Proposed Order, the Department recommended Retirement and Financial Assurance Conditions to ensure adequate restoration of the site to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility. (ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 299-302 of 10016.)

293. The Department did not require Idaho Power to implement a long-term hazardous materials monitoring plan because no hazardous materials will be used or stored on site during operation of the facility. With regard to facility retirement and site restoration, the Department found, in pertinent part, as follows:

The mandatory condition at OAR 345-025-0006(7), which the Department recommends the Council adopt as Retirement and Financial Assurance Condition 1, requires the certificate holder to prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder. Hazardous materials that would be used during facility construction and operation would be limited to oils in the shunt reactors at Longhorn station, propane tanks at communication sites, and small quantities of lubricants, vehicle fuels, and herbicides used during facility construction and maintenance. None of the oils in the reactors at the Longhorn Station would contain polychlorinated iphenyls (PCB). Recommended Soil Protection Condition 2 would require the applicant and its contractors to follow a Spill Prevention, Control, and Countermeasures Plan or similar type of spill prevention and management plan to minimize and address and leakage or spills of these materials during facility construction and operation.

In Section IV.B., Organizational Expertise of this order, the Department recommends that the Council find that the applicant has the organizational expertise to construct, operate, and retire the proposed facility in compliance with that Council standard. In addition, the Department recommends that the Council find that the applicant meets the Council's Soil Protection, Fish and Wildlife Habitat, and Waste Minimization standards (Sections IV.D., IV.H., and IV.N. of

this order, respectively). Each of those sections imposes conditions on the applicant that are designed so that the construction and operation of the proposed facility would minimize adverse impacts on the surrounding land.

Based upon the evidence in the record, the Department recommends that the Council find that the applicant has the ability to restore the site to a useful, non-hazardous condition following permanent cessation of construction or operation of the proposed facility, subject to compliance with the recommended conditions listed above.

(ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 302 of 10016.)

294. Petroleum-based products are considered hazardous substances, but not hazardous materials. (Stippel Rebuttal Testimony, Issue M-6, at 10.) Idaho Power will not be using or storing any hazardous materials, as defined by Oregon DEQ, during construction or operation of the proposed facility, except blasting agents and explosives, which will only be used during construction. (*Id.* at 7; ODOE - B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, pages 15-18 of 102.)

295. During operations, Idaho Power will be using gasoline, diesel fuel, motor oil, antifreeze and transmission fluid inside vehicles that come and go from the project site, but it will not be storing these materials on site. In addition, Idaho Power will be using herbicide for on-site weed control, but herbicides are not a recognized or regulated hazardous material for purposes of the DEQ rules. Furthermore, herbicide will not be stored on site during operations. It will be delivered to the site when needed and hand applied under manufacturer directions. (Stippel Rebuttal Test. Issue M-6, at 9; ODOE - B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, page 15 of 102.)

CONCLUSIONS OF LAW

Fish and Wildlife Habitat Standard

Issue FW-3: The draft Noxious Weed Plan complies with the Council's standards. Idaho Power is not required to demonstrate compliance with the Weed Control Laws to satisfy the Fish and Wildlife Habitat Standard. The Council is not the agency responsible for enforcing compliance with the Weed Control Laws.

Issue FW-5: The Fish and Wildlife Habitat standard does not require or establish setbacks. Ms. Gilbert has not established that Idaho Power must mitigate impacts to riparian areas from the setback location to the outer edges of the riparian area or that all riparian habitat areas should be ODFW Habitat Category 2 at a minimum.

Issue FW-6: The updated draft Noxious Weed Plan is adequate to serve its

intended purpose of establishing the measures the Company will take to control noxious weed species and prevent the introduction of these species during construction and operation of the project. Ms. Geer has not presented evidence or persuasive argument to show that the Noxious Weed Plan is invalid or that Idaho Power will be unable to implement and adhere to the plan when finalized.

Issue FW-7: Idaho Power's Fish Passage Plan complies with the Fish and Wildlife Habitat standard's Category 2 mitigation requirements. Idaho Power is not required to revisit its fish passage plans because threatened Steelhead redds (Snake River Basin Steelhead) have been identified in the upper Ladd Creek watershed.

Historic, Cultural and Archeological Resources Standard

Issue HCA-3: Recommended HCA Condition 2, requiring Idaho Power to submit a final EFSC HPMP for Department approval and to conduct all construction-related activities in compliance with the approved EFSC HPMP provides adequate mitigation for visual impacts to identified HCA resources. There is no requirement for Council to provide further public review and comment on the EFSC HPMP prior to finalization of the plan.

Issue HCA-4: National Historical Oregon Trail segments with ruts located on Mr. Horst's property can be adequately protected from adverse impacts from proposed facility based on HCA site certificate conditions. Any direct impacts would be avoided and indirect impacts would be minimized and mitigated.

Issue HCA-6: Limited party Webster has not established that, as part of Recommended HCA Condition 2, Idaho Power is required to have Oregon Trail expert added to the Cultural Resource Team and present during preconstruction surveys to identify emigrant trail locations.

Issue HCA-7: For purposes of Council review under the HCA standard, Idaho Power adequately evaluated historic and archaeological resource identified as "Site 6B2H-MC-10" on Mr. Williams' property, Parcel 03S37E01300.

Land Use Standard

Issue LU-4: The Fosses have not established that operation of the proposed transmission line would interfere with GPS-navigated irrigation systems.

Issue LU-7: In evaluating the proposed facility impacts to the cost of forest practices, Idaho Power accurately determined the total acres of lost production and indirect costs.

Issue LU-8: Idaho Power adequately evaluated the proposed facility's impacts on forest management practices. The proposed measures to mitigate impacts on

forested areas are adequate and appropriate.

Issue LU-9: Idaho Power adequately analyzed the risk of wildfires from operation of the proposed transmission lines, especially during “red flag” warning weather conditions and the impact the proposed transmission line may have on Mr. Myers’ ability to utilize aerial application on his farmland.

Issue LU-11: Idaho Power adequately evaluated the impacts from the proposed facility on accepted farm practices and the cost of accepted farm practices. The proposed measures to mitigate the facility’s impacts to surrounding farmlands are adequate and appropriate.

Noise Control Rules

Issue N-1: The Department lawfully modified the noise sensitive property owner identification requirement in ASC Exhibit X from one mile to one-half mile of the site boundary. OAR 345-021-0010(1)(x)(E) does not require notification to all owners of noise sensitive properties within one mile of the site boundary.

Issue N-2: The Department did not err in recommending that the Council grant a variance or exception from the Oregon DEQ’s Noise Rules. The Department’s recommendation is consistent with ORS 467.010.

Issue N-3: Idaho Power’s methodologies for evaluating compliance with OAR 340-035-0035 were appropriate. The Department did not err in approving the methodology.

Issue N-4: The proposed mitigation/Recommended Noise Control Conditions (as amended herein) adequately protect the public health, safety, and welfare.

Issue N-6: Idaho Power’s methodology for assessing baseline noise levels reflect reasonable baseline noise estimates for residents of the Morgan Lake area.

Public Services Standard

Issue PS-1: Ms. Badger-Jones has not established that Idaho Power was required to evaluate traffic safety impacts from construction-related use of Morgan Lake Road.

Issue PS-2: Further public review and comment on the Wildfire Mitigation Plan is unnecessary for purposes of approving the site certificate. Furthermore, there is no requirement under the Council’s rules that the Wildfire Mitigation Plan include specific fire protection or suppression tools, such as remote cameras, a shut off plan, and on-site firefighting equipment and personnel during construction.

Issue PS-3: The Council’s reliance on Public Services Condition 7 and the

OPUC-approved Wildfire Mitigation Plan is adequate to address wildfire response consistent with the Public Services standard.

Issue PS-4: Idaho Power adequately analyzed the risk of wildfire arising out of operation of the proposed facility and the ability of local firefighting service providers to respond to fires in the project area.

Issue PS-5: Ms. Gilbert presented no evidence or argument in support of this issue. A preponderance of the evidence establishes the sufficiency of the Wildfire Mitigation Plan as it relates to compliance with the Public Services standard.

Issue PS-6: Idaho Power has adequately evaluated the potential traffic impacts and modifications needed on the Hawthorne Loop, as well as the unpaved, private-access portion of Hawthorne Drive.

Issue PS-8: The Department's proposed revisions to Public Services Condition 7 are redundant with Attachment U-3 (the FPS Plan) and existing condition requirements.

Issue PS-9: A preponderance of the evidence supports Idaho Power's proposed revisions to draft FPS Plan and the Department's proposed revisions to Recommended Public Services Condition 6.

Issue PS-10: The draft FPS Plan (Attachment U-3) is adequate to establish compliance with the Public Services standard in terms of fire protection. The evidence also demonstrates that local service providers would be able to respond to a facility-related fire.

Recreation Standard

Issue R-1: Idaho Power adequately evaluated the potential adverse impact of the proposed facility on recreational opportunities at Morgan Lake Park.

Issue R-2: Idaho Power is not required to demonstrate compliance with the Morgan Lake Park Plan because there are no proposed project components located within the park boundary. Nevertheless, Idaho Power considered the objectives and values of the Morgan Lake Plan in determining that scenery is a valued attribute of Morgan Lake Park, and incorporated that determination in its analysis of potential project impacts to the park.

Issue R-3: The funds paid to the City of La Grande are not intended to mitigate for the proposed facility's visual impacts at Morgan Lake Park. Rather, the funds are intended for recreational improvements as mitigation for potential impacts to the park as a recreational resource. Recommended Recreation Condition 1 provides the mitigation for visual impacts.

Issue R-4: Idaho Power's supplemental analysis of Morgan Lake Park adequately evaluates the proposed project's visual impacts in the undeveloped areas of the park.

Retirement and Financial Assurance Standard

Issue RFA-1: The proposed \$1 bond amount for the first 50 years of operation, with a phased-in increase over the next 50 years of operation until the bond covers the full decommissioning cost, adequately protects the public from facility abandonment and provides a basis for the estimated useful life of the facility.

Issue RFA-2: In the event of retirement of the proposed transmission line, removal of concrete footings to a depth of one foot below the surface is sufficient to restore the site to a useful, nonhazardous condition.

Scenic Resources and Protected Areas Standards

Issue SR-2: Idaho Power satisfied the Scenic Resources and Protected Area standards at Flagstaff Hill/NHOTIC. Idaho Power was not required to analyze the feasibility of undergrounding the transmission line as mitigation for potential visual impacts.

Issue SR-3: Idaho Power accurately assessed the visual impact of the proposed project in the vicinity of the NHOTIC and properly determined that the impact would be less than significant as defined by Council rule.

Issue SR-7: The methodology Idaho Power used to determine the extent of adverse impact of the proposed facility on scenic resources, protected areas, and recreation along the Oregon Trail was reasonable and appropriate. Limited parties have not shown that the methodology was flawed, that Idaho Power erred in applying numeric values to the adverse impact, and/or that the Company used unsatisfactory measurement locations/observation points in its visual impact assessment.

Soil Protection Standard

Issue SP-1: Neither the Soil Protection Standard nor the General Standard of Review require Idaho Power to evaluate soil compaction, loss of soil structure and infiltration, loss of stored carbon in the soil, and/or the loss of soil productivity as a result of the release of stored carbon in soils to demonstrate compliance with the Council's standards. Idaho Power presented sufficient information for the Council to find that the proposed facility, taking into account mitigation, is not likely to result in a significant adverse impact to soils.

Structural Standard

Issue SS-1: Ms. Webster has not sustained her burden of producing evidence on this issue. Additionally, Idaho Power has proposed a modified version of Design Feature 32 be added to Recommended Soil Protection Condition 4.

Issue SS-2: Mr. Cooper has not shown that construction-related blasting is likely to increase the risk of flooding in areas adjacent to the proposed transmission line. Mr. Cooper also has not established the need to evaluate hydrology or to analyze all existing creeks and ditches that drain into streets and private property, or the need to take core soil samples prior to selection of the final route for Idaho Power to demonstrate compliance with the Structural Standard.

Issue SS-3: Limited parties Horst and Cavinato have not established the need to require Idaho Power to test water quality of private water wells before, during, and after construction of the proposed facility.

Issue SS-5: Idaho Power has provided sufficient evidence to evaluate compliance with the Structural Standard. There is no need for Idaho Power to conduct additional site-specific geotechnical surveys prior to issuance of the site certificate to comply with Structural Standard. Based on compliance with the pertinent conditions, Idaho Power has demonstrated the ability to evaluate and avoid potential geologic and soils hazards, and blasting-related impacts, in accordance with the standard's requirements.

Miscellaneous Issue

Issue M-6: Public review is not required for finalization of the SPCC Plan. The SPCC Plan is sufficient for purposes of compliance with the Soil Protection and Retirement and Financial Assurances standards. Because the proposed facility will not produce contamination from hazardous materials, no long-term monitoring for hazardous materials is necessary and Idaho Power was not required to propose such a monitoring plan in the ASC pursuant to OAR 345-021-0010(w).

OPINION

Fish and Wildlife Habitat Standard

As pertinent to the remaining issues in this matter, the Fish and Wildlife Habitat standard, 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[.]

Noxious weed control – Issues FW-3 and FW-6

Issue FW-3: Whether the Draft Noxious Weed Plan (Proposed Order Attachment P1-5) adequately ensures compliance with the weed control laws, ORS 569.390, ORS 569.400, and ORS 569.445.

Oregon’s Weed Control law are set out in ORS Chapter 569. ORS 569.390, titled “Owner or occupant to eradicate weeds,” states as follows:

Each person, firm or corporation owning or occupying land within the district shall destroy or prevent the seeding on such land of any noxious weed within the meaning of ORS 569.360 to 569.495 in accordance with the declaration of the county court and by the use of the best means at hand and within a time declared reasonable and set by the court, except that no weed declared noxious shall be permitted to produce seed.

ORS 569.400, addressing the refusal or failure to eradicate weeds, states in pertinent part:

(1) If the owner or occupant of the land fails or refuses to immediately destroy or cut the noxious weeds in accordance with ORS 569.360 to 569.495, the weed inspector shall at once notify the county court. The county court shall at once take necessary steps for enforcement of ORS 569.360 to 569.495. * * * .

And finally, ORS 569.445, addressing the duty to clean machinery before moving, states in pertinent part:

No person operating or having control of any threshing machinery, clover huller, hay baler, seed cleaning or treating machinery or other machinery shall move said machinery over any public road or from one farm to another without first thoroughly cleaning it. Before moving it, all hay or bundle racks and all other equipment shall be thoroughly swept and cleaned. * * * .

Limited parties Geer and Gilbert have standing on Issue FW-3. Both Ms. Geer and Ms. Gilbert contend that, in order to grant a site certificate, the Council must find that the applicant’s weed control plan complies with ORS 569.390, 569.400, and 569.445. More specifically, they argue that the draft Noxious Weed Plan does not comply with Oregon’s Weed Control laws for the following reasons: (1) it does not require Idaho Power to control all noxious weeds within the site boundary; (2) it does not apply to all state and county-listed noxious weeds; (3) it does not include provisions ensuring that no noxious weeds will go to seed; (4) it does not require sufficient monitoring and control for the life of the development; and (5) it does not sufficiently account for vehicle and equipment cleaning.⁹⁵ See Gilbert Opening Arguments Issue FW-3;

⁹⁵ In their arguments, Ms. Geer and Ms. Gilbert also raise contentions that fall outside the scope of Issue FW-3. Specifically, both limited parties challenge the procedure for finalizing the Noxious Weed Plan and assert that the public is entitled another opportunity to review and comment before the Plan is

Geer Direct Test.; Geer Direct Test.; Gilbert Closing Brief; Geer Closing Arguments on Issues FW-3 and FW-6; Geer Response to Closing Arguments Issues FW-3 and FW-6; Gilbert Response Brief Issue FW-3.

Contrary to the limited parties' contentions, Idaho Power is not required to demonstrate compliance with ORS Chapter 569 to satisfy the Council's siting standards generally or the Fish and Wildlife Habitat standard in particular.⁹⁶ This is because there is no specific requirement under ORS 469.510 or under OAR 346-021-0010 to address weed control in the ASC and the Department did not identify ORS Chapter 569 as applicable to the proposed facility in the Project Order.⁹⁷ Furthermore, the Council is not responsible for enforcing Oregon's Weed Control laws, as per ORS 569.400 that enforcement responsibility lies with the county courts. Therefore, contrary to Ms. Gilbert's argument, the Council is not waiving compliance with the Weed Control laws by finding that the proposed facility complies with the Fish and Wildlife Habitat standard.

Responsibility for pre-existing weed infestations. Both Ms. Gilbert and Ms. Geer argue that Idaho Power bears responsibility for weed control throughout the site boundary (and not just the ROWs) and that the Council must impose conditions to ensure that noxious weeds are not allowed to go to seed for the life of the development. However, the siting standards only require that Idaho Power address noxious weed infestations resulting from the project and that the Company prevent or mitigate those project-related adverse impacts. There is no Council rule that requires Idaho Power to demonstrate that it will eradicate preexisting noxious weeds that are not the result of ground disturbance associated with project construction. ORS Chapter 569 may impose additional obligations on Idaho Power as a landowner or occupant to control non-project-related noxious weed infestations, but as noted above, those obligations are independent from and not a requirement of demonstrating compliance with the Council's siting standards.

Treating all state and county-listed weeds. Ms. Geer argues that Idaho Power should treat all noxious weeds, regardless of their classification. Based on the provisions of the updated draft Noxious Weed Plan, Idaho Power commits to identifying, controlling, treating, and monitoring noxious weed species listed on Oregon's Weed Board Class A, B and T lists; as well as Baker, Malheur, Morrow, Umatilla, and Union county Class A and B lists.⁹⁸ Idaho Power also commits to consulting with county weed districts annually regarding appropriate treatment (if any) for Class C weeds and to annual review of state and county weed lists to ensure that any

finalized. Gilbert Opening Arguments Issue FW-3 at 6; Geer Surrebuttal Test. Although this contention falls outside the scope of Issue FW-3, the same challenge to the finalization of draft plans is addressed *infra* in connection with Issue M-6.

⁹⁶ Contrast with OAR 345-022-0060 specifically requiring consistency with ODFW's habitat mitigation goals and standards and the sage-grouse specific habitat mitigation requirements.

⁹⁷ OAR 345-015-0160 requires the Department to send a project order to the applicant establishing, among other things, "(a) All state statutes and administrative rules containing standards or criteria that must be met for the Council to issue a site certificate for the proposed facility, including applicable standards of divisions 22, 23 and 24 of this chapter."

⁹⁸ Taylor Rebuttal Exhibit B at 35.

changes in noxious weed classification will be identified and incorporated into the Plan.⁹⁹ The updated draft Noxious Weed Plan is consistent with the state Weed Control laws.

Frequency of monitoring/prohibiting weeds going to seed: Limited parties Geer and Gilbert argue that, in order to comply with the Weed Control laws, Idaho Power must monitor areas that may contain Category B noxious weeds twice annually and the Noxious Weed Plan only provides for annual monitoring for up to five years. The limited parties also argue that, pursuant to ORS 469.390, the Noxious Weed Plan must include provisions ensuring that no noxious weeds will go to seed. As discussed above, although ORS 569.390 requires landowners and occupiers to use the best means to prevent the seeding of any noxious weed, nothing in the weed control statutes specifically require twice annual monitoring of the land in issue. Second, and as previously discussed, any obligation to control noxious weeds imposed on a landowner or occupier by ORS Chapter 469 is independent of the showing an applicant must make to demonstrate compliance with the Council's siting standards in general, and the Fish and Wildlife Habitat standard in particular.

In addition, as set out in the updated draft Noxious Weed Plan, Idaho Power has committed to monitoring and controlling noxious weeds "at least once annually" during the first five-year period.¹⁰⁰ After the five-year initial assessment period, Idaho Power will prepare a location-specific long-term monitoring plan to ensure control or mitigation of all project-related noxious weed infestations.¹⁰¹ Finally, there is no need for the Noxious Weed Plan to include provisions ensuring that no noxious weeds will go to seed because the Council is not responsible for enforcing the provisions of ORS 569.390.

Vehicle and equipment cleaning/compliance with ORS 569.445. Finally, Ms. Gilbert argues that the Noxious Weed Plan must comply with ORS 569.445, and that for the life of the project, Idaho Power must thoroughly clean all vehicles and equipment prior to movement over any public roads or from one property to another. Gilbert Opening Argument at 6-7; Gilbert Closing Brief at 12-14. Ms. Gilbert contends that because ORS 569.445 requires thorough cleaning of "any threshing machinery, clover huller, hay baler, seed cleaning or treating machinery or other machinery," the statute extends to any vehicle or machinery that Idaho Power may use in constructing or operating the facility.

Both the Department and Idaho Power assert that the Company is not required to demonstrate compliance with ORS 569.445 in order for the Council to grant the site certificate. They further assert that Ms. Gilbert's reading of ORS 569.445 is overbroad, and the statute is limited to in its application to agricultural machinery. The ALJ agrees with the Department and Idaho Power on both points.

First, as discussed above, because the Weed Control laws are not referenced in ORS 469.501 or the Project Order, Idaho Power is not required to demonstrate compliance with ORS

⁹⁹ *Id.* at 11-12.

¹⁰⁰ Taylor Rebuttal Exhibit B at 36 (updated draft Noxious Weed Plan, Section 6.1).

¹⁰¹ *Id.*

569.445 for purposes of the Council’s siting standards and Council is not responsible for enforcing these laws. Second, even if Idaho Power was required to demonstrate compliance with the Weed Control laws, ORS 569.445 is not applicable in this context. Applying accepted principles of statutory construction, the ALJ finds that the phrase “or other machinery” in ORS 569.445 is limited to other machinery used for agricultural purposes and does not extend to passenger vehicles, construction vehicles, and/or construction equipment.

Under the interpretive rule of *eiusdem generis*, a nonspecific or general phrase that appears at the end of a list of items in a statute is to be read as referring only to other items of the same kind as the items in the list. *See, e.g., Vannatta v. Keisling*, 324 Or 514, 533 (1997). Consequently, the phrase “other machinery” in ORS 569.445 must be read in light of the types of machinery specified in the statute (“threshing machinery, clover huller, hay baler, seed cleaning or treating machinery”). All of these items share the same basic characteristic – machinery commonly used in farming. Simply stated, the text and context of ORS 569.445 does not support Ms. Gilbert’s broad interpretation of the term “other machinery.” The statute does not apply to Idaho Power’s construction and operation of a high voltage transmission line.

In summary, the draft Noxious Weed Plan, as updated, complies with the Council’s standards. Idaho Power is not required to demonstrate compliance with the Weed Control Laws to satisfy the Fish and Wildlife Habitat Standard. Because the Council is not the agency responsible for enforcing compliance with the Weed Control Laws, the Noxious Weed Plan need not include provisions ensuring that no weeds will go to seed for the life of the development.

*Proposed site certificate conditions related to Issue FW-3.*¹⁰²

Ms. Gilbert timely proposed site certificate conditions related to noxious weed control in her Opening Arguments,¹⁰³ which are addressed below. Ms. Gilbert proposed additional conditions in her Closing Brief on Issue FW-3.¹⁰⁴ To the extent these additional conditions and requested modifications to the Proposed Order are substantively different from those conditions timely proposed in her September 17, 2021 filing, the conditions and requested modifications are untimely.¹⁰⁵ Therefore, the ALJ declines to address them.

¹⁰² In its Rebuttal to Direct Testimony, Evidence and Response to Proposed Site Certificate Conditions, at pages 25-28, the Department proposed amending Recommended Fish and Wildlife Condition 3. However, in its Closing Brief, the Department withdrew the proposed revisions/amendments to Recommended Fish and Wildlife Condition 3 based on the revisions and clarifications in Idaho Power’s updated draft Noxious Weed Plan (submitted as Taylor Rebuttal Exhibit B). ODOE Closing Brief at 16-20.

¹⁰³ The conditions that Ms. Gilbert proposed in her Opening Arguments on Issue FW-3 overlap in many respects with conditions she proposed in her Opening Arguments on Issue LU-11. To the extent Ms. Gilbert’s proposed conditions for Issue LU-11 relate to noxious weed control, they are addressed in this section.

¹⁰⁴ *See* Gilbert Closing Brief on FW-3 at 33-34.

¹⁰⁵ Pursuant to OAR 345-015-0085(1), “parties shall submit proposed site certificate conditions to the hearing officer in writing according to a schedule set by the hearing officer.” In this matter, the ALJ set

Gilbert Proposed Noxious Weed Condition 1: During construction, operation and site restoration, IPC will require any equipment leaving the site to travel on public roads or which will cross from one property owners land to another to be cleaned to assure there is no unintentional spread of noxious weeds.¹⁰⁶

Gilbert Proposed Noxious Weed Condition 2: No noxious weeds are allowed to develop seeds within the site development.¹⁰⁷

Gilbert Proposed Noxious Weed Condition 3: The developer will monitor and treat noxious weeds occurring within the site boundary annually for the life of the development unless a different schedule is approved by the ODFW and the Council.¹⁰⁸

Gilbert Proposed Noxious Weed Condition 4: Monitoring and treatment methodologies to be followed for the life of the project will be developed in coordination with the ODFW.¹⁰⁹

Gilbert Proposed Noxious Weed Condition 5: The developer will monitor and control all noxious weeds within their site boundary for the life of the project on a schedule approved by the ODFW and updated every five years.¹¹⁰

Both the Department and Idaho Power assert that the above-proposed conditions are inappropriate and/or unnecessary for purposes of establishing compliance with the Council's siting standards. The ALJ agrees, and for the reasons that follow, the ALJ denies Ms. Gilbert's proposed noxious weed conditions.

Gilbert Proposed Noxious Weed Condition 1 is unnecessary and inappropriate because, as discussed above, ORS 569.445 does not apply to Idaho Power's construction vehicles and equipment. Moreover, the vehicle washing protocols set out in the Noxious Weed Plan are sufficient to ensure that Idaho Power's construction vehicles and equipment will not introduce or spread noxious weeds.

Gilbert Proposed Noxious Weed Condition 2 is unnecessary and inappropriate because it

September 17, 2021 as the deadline for submitting written direct testimony, evidence, and any proposed site certificate conditions. *Case Management Order* at 16, 18.

¹⁰⁶ Gilbert Opening Arguments Issue FW-3 at 7; Gilbert Opening Arguments Issue LU-11 at 16.

¹⁰⁷ Gilbert Opening Arguments Issue FW-3 at 15; Gilbert Opening Arguments Issue LU-11 at 16.

¹⁰⁸ Gilbert Opening Arguments Issue FW-3 at 15; Gilbert Opening Arguments Issue LU-11 at 16.

¹⁰⁹ Gilbert Opening Arguments Issue FW-3 at 8.

¹¹⁰ Gilbert Opening Arguments Issue FW-3 at 12.

extends beyond the Council's jurisdiction. Idaho Power's commitments and obligations regarding noxious weeds are set out in the Noxious Weed Plan. As set out therein, Idaho Power commits to controlling noxious weeds that are within project ROWs and that result from the Company's surface-disturbing activities during construction and operation. As previously stated, the Council is not tasked with enforcing ORS 569.390. Enforcement of the weed eradication laws lies with the county court. *See* ORS 569.400(1).

Gilbert Proposed Noxious Weed Conditions 3, 4 and 5 are also inappropriate and unnecessarily restrictive. The updated draft Noxious Weed Plan provides that if Idaho Power's control of noxious weeds is deemed unsuccessful after five years of monitoring and noxious weed control actions, then the Company will coordinate with ODOE regarding appropriate steps forward and will prepare a location-specific long-term monitoring plan based on the results of the initial five-year assessment period.¹¹¹ Insofar as Ms. Gilbert's proposed conditions grant ODFW sole authority to determine the methods and frequency of noxious weed monitoring and treatment, the proposals are inconsistent with the Council rules governing agency review final monitoring and mitigation plans. Accordingly, the ALJ rejects each of Ms. Gilbert's proposed conditions related to noxious weed control.

Ms. Geer also timely proposed site certificate conditions related to Issue FW-3 (and FW-6), which are addressed below. In her Closing Arguments, Ms. Geer submitted additional proposed conditions related to Issue FW-3.¹¹² To the extent that these additional proposed conditions are substantively different from those timely proposed in her September 17, 2021 filings, the proposals are untimely and the ALJ declines to address them.

Geer Proposed Noxious Weed Condition 1: The developer must implement a management and monitoring plan which assures that noxious weeds located on the site of the proposed transmission line are not allowed to produce seeds during the life of the project. The [Council] must determine that the plan meets the requirements of the statute, approve of the plan, and include it in the site certificate.¹¹³

Geer Proposed Noxious Weed Condition 2: Prior to the start of construction, Idaho Power will consult with Oregon Natural Areas program, land trusts, and local Parks departments to re-examine the proposed routes to avoid high quality natural areas and submit a revised Application for Site Certificate to the Energy Facility Siting Committee.¹¹⁴

¹¹¹ Taylor Rebuttal, Exhibit B at 36.

¹¹² In her Closing Arguments Ms. Geer restated her proposed conditions and proposed additional revisions/amendments to Recommended Fish and Wildlife Condition 3. Geer Closing Arguments at 20-23.

¹¹³ Geer Proposed Invasive Weeds Site Certificate Condition, September 17, 2021.

¹¹⁴ Geer Proposed Conditions on Issues FW-3 and FW-6 at 2.

Geer Proposed Noxious Weed Condition 3: Prior to the start of construction, Idaho Power will agree to control invasive weeds that are ecologically devastating to natural, scenic and recreational areas - not just those weeds on county and state noxious weeds lists, which are only those driven by being “economically important” (agriculture). Idaho Power would consult with local experts on each natural, scenic, and recreation area to get lists of ecologically damaging weeds to control.¹¹⁵

Geer Proposed Noxious Weed Condition 4: Request that Idaho Power assume weed control for the life of the B2H transmission line project.

Geer Proposed Noxious Weed Condition 5: Request that Idaho Power prepare a detailed Final Weed Plan which all concerned parties and any member of the public will review and provide input; this will become part of the Application for Site Certificate.

Site Certificate Conditions of Susan Geer on Issues FW-3 and FW-6 at 2.

Both the Department and Idaho Power oppose Ms. Geer’s proposed noxious weed conditions as inappropriate and/or not necessary to meet the requirements of ORS Chapter 569. The ALJ agrees.

Geer Proposed Noxious Weed Condition 1 is inappropriate because, as discussed above, the Council is not required to determine that the Noxious Weed Plan complies with the Weed Control laws. The Council’s authority to address noxious weeds is limited to assessing compliance with Council siting standards. Also, as discussed above, the Council is not responsible for enforcing ORS 569.390. That responsibility lies with the weed supervisors and county courts.

Geer Proposed Noxious Weed Condition 2 and 3 are inappropriate and/or unnecessary because they exceed the Council’s jurisdiction. As to Proposed Condition 2, the Council has no authority to direct Idaho Power to consult with other programs or agencies to re-examine the proposed routes. Also, as Idaho Power notes, the term “high quality natural areas” is vague and ambiguous, and the proposed condition is unnecessary because Idaho Power has provided sufficient evidence to establish that the project complies with the Protected Area Standard. Idaho Power also notes that the project will directly impact only one State Natural Area, the Ladd Marsh Wildlife Area, but the impacts are permissible under OAR 345-022-0040(3). As to Geer Proposed Noxious Weed Condition 3, the Council has no authority to require that Idaho Power address “ecologically devastating” weeds that are not listed on Weed Board and impacted counties’ lists of Class A and Class B noxious weeds.

Geer Proposed Noxious Weed Condition 4 is unnecessary because, as discussed above, weed control is adequately addressed in the updated draft Noxious Weed Plan.

¹¹⁵ *Id.*

Geer Proposed Noxious Weed Condition 5 is inappropriate because it is inconsistent with the Council's rule governing monitoring and mitigation plans. Idaho Power will finalize the Noxious Weed Plan in consultation with the Department and appropriate state and local agencies. As discussed in more detail later in this order,¹¹⁶ the Council's rules do not require further public review and comment on monitoring and mitigation plans prior to finalization and Council's approval of a site certificate. *See* ORS 469.402 (authorizing the Council to delegate the approval of a future action to the Department).

For the above-stated reasons, the ALJ denies Ms. Geer's proposed conditions related to noxious weed control and natural areas.

Issue FW-6: Whether the Noxious Weed Plan provides adequate mitigation for potential loss of habitat due to noxious weeds when it appears to relieve Applicant of weed monitoring and control responsibilities after five years and allows for compensatory mitigation if weed control is unsuccessful.

Ms. Geer also has standing on Issue FW-6. On this issue, Ms. Geer asserts as follows: (1) in natural areas, Idaho Power should be required to prevent or eliminate all non-native invasive plant species and not just those listed as noxious; (2) the Noxious Weed Plan improperly relieves Idaho Power of monitoring and control responsibilities after five years at the expense of native habitat; (3) the Noxious Weed Plan does not provide adequate mitigation for potential loss of habitat; and (4) the Noxious Weed Plan does not offer adequate compensatory mitigation if weed control is unsuccessful. Geer Closing Arguments Issue FW-6 at 15-17. For the reasons that follow, Ms. Geer's challenges to the adequacy of the Noxious Weed Plan are without merit.

Non-native species in natural areas. Ms. Geer's argument about non-native invasive species in natural areas is outside the scope of Issue FW-6. Issue FW-6 asks whether the Noxious Weed Plan provides adequate mitigation for potential habitat loss due to noxious weed infestations resulting from project-related activities; it does not encompass the presence of non-native invasive species in natural areas. Moreover, even if Ms. Geer had properly raised this argument, no Council siting standard requires prevention or eradication of non-native invasive plant species as a condition for siting an energy facility. Treatment of non-native invasive plant species is a matter outside of the Council's jurisdiction and there is no authority for the Council to require that Idaho Power prevent or eliminate all non-native invasive plant species in natural areas within the site boundary.

Monitoring and control responsibilities. Contrary to Ms. Geer's contention, the Noxious Weed Plan does not relieve Idaho Power of monitoring and control responsibilities after five years. As discussed above with regard to Issue FW-3, the updated draft Plan establishes a five-year initial assessment period, after which Idaho Power will prepare a location-specific long-term monitoring plan to ensure control or mitigation of all project-related

¹¹⁶ *See* discussion *infra* in connection with Issue M-6 and limited party Marlette's contention that the Council should provide the public an additional opportunity to review and comment on all draft monitoring and mitigation plans prior to approving a site certificate.

noxious weed infestations.¹¹⁷ This five-year initial assessment period followed by a long-term monitoring plan is consistent with past Council orders and in compliance with the Fish and Wildlife Habitat standard. Ms. Geer has not demonstrated otherwise.

Mitigation for loss of habitat. To the extent Ms. Geer contends that the Fish and Wildlife Habitat Mitigation Plan is inadequate or that the habitat categories addressed therein are overly broad, these arguments fall outside the scope of Issue FW-6. As previously discussed, Issue FW-6 is limited to whether the Noxious Weed Plan provides adequate mitigation for potential adverse impacts from noxious weeds resulting from project construction and/or operation. Ms. Geer has not demonstrated that the Noxious Weed Plan is inadequate for its stated purpose.¹¹⁸

Compensatory mitigation. Ms. Geer asserts that none of the draft plans (Reclamation and Revegetation, Habitat Mitigation, and draft Noxious Weed) suffices to compensate landowners for the loss of high-quality native habitat. She also asserts that the mitigation goal of no net loss is “becoming a controversial practice,” and that even mitigation that fulfills legal requirements often fails to fully compensate for lost habitat. Geer Closing Argument at 17-18. First, this argument exceeds the scope of Issue FW-6, which as previously discussed, is limited to the adequacy of the weed monitoring and control provisions of the Noxious Weed Plan. Second, Ms. Geer’s challenge is misplaced because the goal of compensatory mitigation is not to compensate the landowner, but to compensate for the lost habitat. The Council’s Fish and Wildlife Habitat standard applies the ODFW Habitat Mitigation Policy, which is designed to address adverse impacts to fish and wildlife habitat, and not impacts to landowners. Furthermore, as Idaho Power notes in its Response Brief, if a landowner is adversely impacted by habitat loss, the Company will address this during negotiations with the landowner related to the ROW for the project. These negotiations occur outside the site certificate process and the Council’s jurisdiction.

In summary, a preponderance of the evidence establishes that the updated draft Noxious Weed Plan is adequate to serve its intended purpose, setting out the measures the Company will take to control noxious weed species and prevent the introduction of these species during construction and operation of the project. Ms. Geer has not presented evidence or persuasive argument that brings into question the validity of the updated draft Noxious Weed Plan or Idaho Power’s ability to implement and adhere to the plan when finalized.

Proposed site certificate conditions related to Issue FW-6:

In an addendum to her closing brief on Issues FW-3 and FW-6, Ms. Geer proposed an additional site certificate condition. She requested that Idaho Power electronically share the data

¹¹⁷ See Taylor Rebuttal Exhibit B at page 36 (updated draft Noxious Weed Plan, Section 6.1).

¹¹⁸ As the Department notes in its Closing Brief, Idaho Power’s mitigation for potential habitat loss is not limited to the requirements of the draft Noxious Weed Plan. The Council’s evaluation of whether the proposed facility meets the requirements of OAR 345-022-0060 is collectively based on the draft Reclamation and Revegetation Plan, the draft Habitat Mitigation Plan and draft Noxious Weed Plan. ODOE Closing Brief at 24.

on noxious weeds and revegetation success required under Section 6.0 of the Reclamation and Revegetation Plan “in a user-friendly format with other Oregon state agencies, affected landowners, and upon request to any interested member of the public.” Geer Addendum to Closing Brief, February 28, 2022 at 1.

Ms. Geer did not timely submit this proposed condition to the ALJ in accordance with the schedule set in the *Case Management Order*, and therefore neither the Department nor Idaho Power had any opportunity to address and respond to it. Because Ms. Geer did not timely submit this requested condition, the ALJ declines to address its necessity or appropriateness.

Ruling on Idaho Power’s Motion to Strike Portions of Ms. Geer’s Closing Argument for FW-6:

With regard to Issue FW-6, Idaho Power moves to strike statements in Ms. Geer’s Closing Argument that Idaho Power contends are outside the scope of the issue. Specifically, Idaho Power moves to strike statements challenging the adequacy of the Fish and Wildlife Habitat Mitigation Plan, statements asserting the Noxious Weed Plan must separately address noxious weeds in natural areas, and statements pertaining to the Council’s General Standard of Review. Idaho Power’s Response Brief and Motion to Strike, Issue FW-6, at 5-7.

The ALJ agrees that the challenged statements in Ms. Geer’s Closing Argument are outside the scope of Issue FW-6. Issue FW-6 asks whether the Noxious Weed Plan provides for adequate weed monitoring and control provisions when it appears to relieve Idaho Power of responsibility after five years. Issue FW-6 does not involve a challenge to the adequacy of the Fish and Wildlife Habitat Mitigation Plan. Therefore, the ALJ gives no weight to Ms. Geer’s arguments regarding the Fish and Wildlife Habitat Mitigation Plan. Furthermore, Ms. Geer did not timely raise her concerns about weed control measures in natural areas or compliance with the General Standard of Review (OAR 345-022-0000). Therefore, the ALJ does not consider her arguments on those matters.

Riparian area setbacks – Issue FW-5

Issue FW-5: Whether Applicant should be required to mitigate impacts to riparian areas from the setback location to the outer edges of the riparian area because the riparian habitat should be rated as Category 2 at a minimum.

Ms. Gilbert has standing on Issue FW-5. She waived her opportunity to submit witness testimony or additional evidence on this issue. Therefore, she is limited in her closing arguments to relying on evidence previously admitted into the evidentiary record as part of the B2H Project Record.¹¹⁹ In her closing argument, Ms. Gilbert argues that: (1) under ODFW habitat mitigation rules, all fish bearing water sources and riparian area habitats should be rated as Category 1, or Category 2 as a minimum; and (2) the BLM’s FEIS requires a 300-foot setback and, based on

¹¹⁹ See *Ruling on Motion to Dismiss* at 4-6.

ORS 469.310¹²⁰ and ORS 469.370(13),¹²¹ the Council should require that same setback be incorporated into the site certificate. Gilbert Closing Brief at 2-6.

With regard to habitat characterization, Ms. Gilbert argues that “[t]he plain language of the ODFW habitat mitigation rules lead an individual to conclude that the presence of specific wildlife species at a site would impact the category of habitat the area is assigned.” Gilbert Closing Brief at 5. She further asserts that the Department and Council have misinterpreted the ODFW’s habitat mitigation rule and that their interpretation of required mitigation for riparian habitat impacts is not entitled to deference. Gilbert Closing Brief at 7-8. However, contrary to Ms. Gilbert’s contention, even according to ODFW’s interpretation of OAR 635-415-0025, the mere presence of a special status species or a migratory versus resident fish does not automatically elevate the habitat categorization of a given area.¹²² Therefore, the Department’s reading of the habitat categorization rule (*i.e.*, that fish species can exist within a degraded habitat and the existence of a state-listed threatened and endangered species does not meet the definition of a Category 1 habitat)¹²³ is consistent with ODFW’s interpretation of its own rule.

Furthermore, as set out in the findings, the Department addressed and approved Idaho Power’s methodology for identifying the types and locations of habitat, including riparian habitats, affected by the proposed facility. In the Proposed Order, the Department also noted that ODFW staff thoroughly reviewed Idaho Power’s habitat categorization methodology. Both ODFW and the Department approved Idaho Power’s approach to assigning habitat categories (Category 2 or Category 3) to riparian habitat areas.¹²⁴ The Department also noted that the mere presence of special status species in fish bearing streams does not require identifying riparian areas as Habitat Category 2.¹²⁵

As to the extent of the setbacks, Ms. Gilbert has not provided any evidence or identified any statute or rule requiring greater riparian setbacks than those included in the Proposed Order. Contrary to Ms. Gilbert’s contention, the Fish and Wildlife Habitat standard does not require or establish particular setbacks from fish bearing streams. Rather, the standard requires consistency with ODFW’s habitat mitigation goals and standards. For Category 2 habitats, OAR 635-415-

¹²⁰ ORS 469.310 sets out the policy for energy facilities in Oregon: “[I]t is the declared public policy of this state that the siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety and in compliance with the energy policy and air, water, solid waste, land use and other environmental protection policies of this state.”

¹²¹ ORS 469.370(13) requires the Council to “conduct its site certificate review, to the maximum extent feasible, in a manner that is consistent with and does not duplicate the federal agency review.”

¹²² Reif Cross-Exam. Test., Tr. Day 5 at 84-85.

¹²³ See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 316 of 10016, n. 321.

¹²⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 316-18 of 10016.

¹²⁵ See also Reif Cross-Exam. Test., Tr. Day 5 at 84-85.

0025 does not require specific setbacks, application of federal habitat protections, or complete avoidance of impacts. Rather, under ODFW's rule, the Category 2 mitigation goal is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity. For the project at issue, mitigation for temporary and permanent impacts would occur via revegetation and long-term acquisition and enhancement of mitigation lands, which are consistent with the ODFW's Category 2 and 3 mitigation goals.

In summary, Ms. Gilbert has not established that Idaho Power is required to mitigate impacts to riparian areas from the setback location to the outer edges of the riparian area or that all riparian habitat areas should be designated ODFW Habitat Category 2 at a minimum. A preponderance of the evidence in the record supports the riparian setbacks identified in the Proposed Order.

Proposed site certificate conditions related to Issue FW-5:

In her Closing Brief on Issue FW-5, Ms. Gilbert submitted two proposed conditions related to setbacks in riparian areas.¹²⁶ Because Ms. Gilbert did not submit these proposed conditions to the ALJ in a timely manner in accordance with the schedule set in the *Case Management Order*,¹²⁷ there is no need to address their necessity or appropriateness. Nevertheless, based on the discussion of Issue FW-5 above, both proposed conditions are unnecessary and inappropriate because Idaho Power is not required to have a 300-foot setback in riparian areas.

Ruling on Idaho Power's Motion to Strike Portions of Ms. Gilbert's Closing Brief on Issue FW-5:

¹²⁶ Ms. Gilbert included proposed the following conditions in her Closing Brief on Issue FW-5, :

(1) Prior to the start of construction in areas within 300 feet of water sources, wildlife surveys must be completed to determine if the habitat is supporting wildlife listed as threatened or endangered. Every effort should be made to avoid the riparian area extending 300 feet from the water source. Any construction activity occurring in the riparian area will require mitigation for direct impacts as well as mitigation for indirect impacts in an area extending up to 300 feet from the location of the activity.

(2) Developer will avoid construction in the riparian zone extending 300 feet from water sources. Direct and indirect impacts to riparian areas within 300 feet of water containing fish require habitat mitigation be provided at a minimum of Category 2 level.

Gilbert Closing Brief Issue FW-5 at 8.

¹²⁷ Pursuant to OAR 345-015-0085(1), "parties shall submit proposed site certificate conditions to the hearing officer in writing according to a schedule set by the hearing officer." In this matter, the deadline for submitting written direct testimony, evidence, and any proposed site certificate conditions was September 17, 2021. *Case Management Order* at 16, 18. *See also Ruling on Motion to Dismiss* at 6 ("Because Ms. Gilbert waived the opportunity to submit witness testimony and any new evidence, her presentation on Issue FW-5 is limited to argument based on evidence previously admitted into the contested case record as part of the B2H Project Record.")

In the motion, Idaho Power moves to strike statements in Ms. Gilbert's brief that reference documents that are not part of the evidentiary record and/or that raise arguments outside the scope of Issue FW-5. Specifically, Idaho Power moves to strike statements that reference the Oregon Integrated Water Resources Strategy,¹²⁸ statements that reference the Total Maximum Daily Load (TMDL) for the Upper Grande Ronde Sub-Basin,¹²⁹ and a general reference to the "federal register regarding fish present" in streams near the project.¹³⁰ Alternatively, Idaho Power asks that these challenged statements be given no weight. Issue FW-5 Motion to Strike at 4-5.

The ALJ agrees that the Oregon Integrated Water Resources Strategy and the TMDL for the Upper Grande Ronde Sub Basin are not part of the B2H Project Record and that Ms. Gilbert is not entitled to reference or rely upon these documents in her Closing Brief on Issue FW-5. Therefore, the ALJ gives these challenged statements no weight. Furthermore, Ms. Gilbert's reference to the federal register is entitled to no weight, because she has not cited any specific code provision.

Fish Passage Plans – Issue FW-7

Issue FW-7: Whether Applicant's Fish Passage Plans, including 3A and 3B designs, complies with the Fish and Wildlife Habitat standard's Category 2 mitigation requirements; whether Applicant must revisit its plans because threatened Steelhead redds have been identified in the watershed.

Limited parties Ann and Kevin March have standing on Issue FW-7. The Marches contend that Idaho Power cannot demonstrate compliance with ODFW's Habitat Category 2 mitigation goals or the Fish Passage rules because streams designated as non-fish bearing in the ASC may actually provide habitat for Snake River Basin steelhead.¹³¹ The Marches further assert that Idaho Power bears the burden to identify all streams that may provide habitat for

¹²⁸ See Gilbert Closing Brief Issue FW-5 at 6 ("Oregon's Integrated Water Resources Strategy from August 2012 indicates that * * *").

¹²⁹ See *id.* ("* * * the results are made abundantly clear in the report regarding the Upper Grande Ronde Sub-Basin TMDL by the Oregon Department of Environmental Quality from 2000.").

¹³⁰ See *id.* at 2.

¹³¹ The Marches also fault the ODFW for not undertaking habitat surveys in the Ladd Creek watershed since the Oregon Department of Transportation completed the I-84 improvement project in 2018 and for not identifying Snake River Basin steelhead in the watershed. They argue that ODFW is not complying with its own Habitat Mitigation requirements and Fish Passage rules. See March Closing Brief at 7-12. However, the Marches' challenge to the adequacy of ODFW's surveys and studies falls outside the Council's jurisdiction and the scope of Issue FW-7. Also, as the Department notes in its Response Brief, the fact that ODFW may not have the capacity and had not prioritized spawning surveys in the Ladd Creek watershed is immaterial to the Council's review of Idaho Power's ability to comply with the Fish and Wildlife Habitat standard or the Fish Passage Law. Department Response at 22.

Snake River Basin Steelhead and to “definitively state” which streams in the upper Ladd Creek watershed are not capable of providing fish habitat. March Closing Brief at 2, 16, 24.

As an initial matter, the Marches misstate the burden of proof for purposes of establishing compliance with the Council standards in general, and OAR 345-022-0060 in particular. In general, Idaho Power has the burden of proving by a preponderance of the evidence in the decision record that the facility complies with all applicable statutes, administrative rules and applicable local government ordinances. OAR 345-021-0100(2). More specifically, under the Fish and Wildlife Habitat standard, Idaho Power must provide information demonstrating that, more likely than not, the design, construction and operation of the proposed facility, taking into account mitigation, *are consistent with* the general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025. OAR 345-022-0060. Contrary to the Marches’ contention, however, to establish compliance with the Fish and Wildlife Habitat standard and/or the Fish Passage rules, Idaho Power does not have to “definitively state” whether Snake River Basin steelhead have entered the upper Ladd Creek watershed and/or whether Snake River Basin Steelhead have populated streams previously categorized as non-fish bearing.

The following points are important to keep in mind in resolving Issue FW-7: First, Idaho Power categorized all potentially fish bearing streams in the upper Ladd Creek watershed above the I-84 culvert within the site boundary as Habitat Category 2.¹³² Therefore, the potential presence of Snake River Basin Steelhead in these streams would not change the habitat designation. Second, Idaho Power is not proposing construction of new road crossings or major replacement of existing road crossings on any identified streams in the upper Ladd Creek watershed.¹³³ Consequently, there no need for Idaho Power to prepare a Fish Passage Plan for any of the crossings in the upper Ladd Creek watershed regardless of the potential presence of Snake River Basin Steelhead in these streams because all proposed project-related crossings in the upper Ladd Creed watershed will rely on the existing bridges or culverts.¹³⁴

In their Closing Brief, the Marches argue that “OAR 635-415-0020 is not fulfilled because of a lack of studies and data since the completion of the I-84 Fish Passage Improvement Project.” March Closing Brief at 26. However, contrary to the Marches’ contention, and as discussed above, Idaho Power is not obligated to satisfy the provisions of OAR 635-415-0020 (Implementation of Department Habitat Mitigation Requirements). Rather, pursuant to OAR 345-022-0060 (Fish and Wildlife Habitat), Idaho Power is required to show, by a preponderance of the evidence, that taking into account mitigation, the design, construction and operation are “consistent with” the mitigation goals and standards of OAR 635-415-0025(1) through (6).

¹³² James Rebuttal Test. at 19-20; *see also* ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 315-316 of 10016.

¹³³ James Rebuttal Test. at 18 (“Regardless of whether the streams in the upper Ladd Creek watershed were identified as fish-bearing or non-fish-bearing, the Fish Passage Plan and Fish Passage Approval requirements are not triggered because Idaho Power is not proposing construction of any new, or major replacement of existing, artificial obstructions on any of the road-stream crossings in that watershed.”)

¹³⁴ James Rebuttal Test. at 18-19.

Idaho Power has done so in ASC Exhibit P1, Attachment P1-6.¹³⁵ Furthermore, to the extent the Marches' assert that the ODFW has not complied with OAR 635-415-0020 because it has not studied or surveyed the Ladd Creek watershed since ODOT completed the I-84 Fish Passage Improvement Project, that claim falls outside the Council's jurisdiction.

The Marches next argue that "OAR 345-021-0010(1)(p) is not fulfilled because no presence of threatened and sensitive [Snake River Basin Steelhead] was documented in the Ladd Creek watershed." March Closing Brief at 26. However, as discussed above, Idaho Power has no obligation to document the presence of this species in the Ladd Creek watershed in ASC Exhibit P1 in order to establish compliance with the Fish and Wildlife Habitat standard.

The Marches further contend that Idaho Power has presented "incomplete fish passage data" and that "OAR 635-412-0020 may not be fulfilled due to the lack of assumed native migratory fish presence and a lack of data verifying a 'non-fish' designation at 5 crossings." March Closing Brief at 26. First, as previously discussed, Idaho Power has no obligation to definitively show that streams labeled non-fish bearing in the Ladd Creek watershed do not, in fact, bear Snake River Basin Steelhead (or other fish species) to establish compliance with the Council's standards. Second, because Idaho Power does not propose to construct fish passage obstructions for any of the crossings in the upper Ladd Creek watershed, the Fish Passage Approval rules are not triggered in that watershed and the Company is not required to prepare a Fish Passage Plan for any of these crossings. Third, as discussed below, the Department has recommended amending Fish Passage Condition 1 to address the concern that the ODFW was not able to definitively affirm the non-fish bearing designation of the five non-fish road-stream crossings in the upper Ladd Creek watershed identified in ASC Exhibit P1-7B, Table 3. Recommended Amended Fish Passage Condition 1 and Recommended Fish and Wildlife Condition 4 will ensure that any new information regarding fish use arising prior to construction will be addressed.

The Marches also argue that "OAR 635-412-0035 may not be fulfilled because of a lack of data from ODFW and [Idaho Power] in regards to streams labeled as 'non-fish' streams." March Closing Brief at 26. This argument lacks merit for the same reasons stated above. OAR 635-412-0035 (Fish Passage Criteria) only applies where there is a proposal to construct an artificial obstruction across waters of the state inhabited or historically inhabited by native migratory fish. OAR 635-412-0020(1). Here, Idaho Power does not propose construction or major replacement of any artificial obstructions in the upper Ladd Creek watershed, therefore the proposed project will not trigger the Fish Passage Approval requirements in the upper Ladd Creek watershed.¹³⁶

¹³⁵ ODOE - B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, pages 773-940 of 940. *See also* ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 326-329 of 10016.

¹³⁶ Furthermore, in the event updated information required by Recommended Fish Passage Condition 1 indicates that streams previously designated non-fish bearing are, in fact, fish bearing *and* Idaho Power subsequently revises its proposal to include construction of an artificial obstruction at such a crossing location (thereby triggering the Fish Passage requirements), then Recommended Amended Fish Passage

Finally, the Marches assert that the ASC is missing ephemeral stream habitat data and that “OAR 635-021-0010 (1)(p)(D)(E)(F) and OAR 635-412-0020 are not fulfilled due to an assumed ‘non-fish’ designation of ephemeral streams and a lack of data to support this designation.” March Closing Brief at 26. As the Department notes, this is a new contention not previously raised in the Marches’ petition for party status or the evidence submitted in support of Issue FW-7. Department Response to Closing Arguments at 20. Idaho Power similarly argues that this contention (compliance with the content requirements of OAR 345-021-0010(1)(p)) is outside the scope of Issue FW-7. Idaho Power’s Response Brief for Issue FW-7 at 68. The ALJ agrees. Because the Marches raised this contention for the first time in their Closing Brief, neither the Department nor Idaho Power had the opportunity to respond to this challenge with rebuttal evidence. Therefore, this particular contention (failure to include ephemeral stream habitat data in the ASC) is not properly before the ALJ.¹³⁷

In summary, in the Proposed Order, the Department found that, assuming compliance with the recommended Fish Passage condition, the proposed facility complies with the Fish Passage Requirements of OAR chapter 635, division 412. The Marches have not demonstrated otherwise. The Department further found that, assuming compliance with recommended Fish and Wildlife conditions (in particular, Recommended Fish and Wildlife Condition 4 pertaining to the Fish and Wildlife Habitat Mitigation Plan) the proposed facility is consistent the ODFW habitat mitigation goals and standards described in OAR 635-415-0025. The Marches have not demonstrated otherwise. The presence of Snake River Basin Steelhead in the upper Ladd Creek watershed does not alter these determinations.

Proposed site certificate conditions related to Issue FW-7:

In response to testimony filed by the Marches on Issue FW-7, the Department proposed a revision to Recommended Fish Passage Condition 1(a), to require a re-evaluation of streams identified as non-fish bearing in the Ladd Creek watershed as part of finalizing the Fish Passage Plan.

ODOE Recommended Amended Fish Passage Condition 1(a):¹³⁸

a) Prior to construction, the certificate holder shall finalize, and submit to the Department for its approval in consultation with ODFW, a final Fish Passage Plan. As part of finalizing the Fish Passage Plan, the certificate holder shall

Condition 1 would require that Idaho Power seek Council approval of a site certificate amendment to incorporate ODFW approval and fish passage design/plan for the road-stream crossing.

¹³⁷ Moreover, and contrary to the Marches’ unsupported assertion, evidence in the record demonstrates that, to the greatest extent possible, Idaho Power surveyed all potential fish-bearing stream crossings, regardless of perennial, intermittent, or ephemeral designation. See ODOE - B2HAPPDoc3-28 ASC 16A_Exhibit P1_Wildlife_ASC_Part 3_Attach P1-7B 2018-09-28, page 10 of 164

¹³⁸ The new/amended language is in bold.

request from ODFW any new information on the status of the streams within the site boundary and shall address the information in the final Fish Passage Plan. **In addition, the certificate holder shall seek concurrence from ODFW on the fish-presence determinations for non-fish bearing streams within the Ladd Creek watershed, as presented in ASC Exhibit P1-7B Table 3. If the certificate holder in consultation with ODFW, determines any of the previously identified non-fish bearing streams within the Ladd Creek Watershed to be fish-bearing, the certificate holder shall complete a crossing risk evaluation and obtain concurrence from ODFW on applicability of fish passage requirements. If fish passage requirements apply, certificate holder shall seek approval from the Energy Facility Siting Council of a site certificate amendment to incorporate ODFW approval of new crossings and fish passage design/plans and conditions.** The protective measures described in the draft Fish Passage Plan in Attachment BB-2 to the Final Order on the ASC, shall be included as part of the final Fish Passage Plan, unless otherwise approved by the Department.

ODOE Rebuttal to Direct Testimony at 43.

Idaho Power does not oppose the revision/amendments to the Department's Recommended Amended Fish Passage Condition 1. Given the Department's recommendation and Idaho Power's assent, the ALJ recommends that the Council approve this proposed revision/amendment.

The Marches timely proposed seven additional site certificate conditions related to Issue FW-7.¹³⁹ Both the Department and Idaho Power contend that these proposed conditions are unnecessary, inappropriate and unsupported by evidence in the record.

March Proposed FW Condition 1: Prior to the start of construction, Idaho Power will request that the Oregon Department of Fish and Wildlife undertake and complete a formal analysis and survey of the Ladd Creek Watershed for Snake River Basin Steelhead.

This proposal is both unnecessary and inappropriate. It is unnecessary because, as discussed above, the presence of Snake River Basin Steelhead in the Ladd Creek watershed will not change the habitat category or the fact that Idaho Power is not proposing to construct or replace any crossings on streams in this watershed. It is inappropriate because requests to the ODFW fall outside the Council's jurisdiction. Therefore, this proposed condition is denied.

March Proposed FW Condition 2: Prior to the start of construction, Idaho Power will request of the National Oceanographic and Atmospheric Administration that the agency undertake a 2.11 Re-initiation of Consultation. This can and should be undertaken [] if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered.

¹³⁹ See Site Certificate Conditions of Anne and Kevin March Issue FW-7, filed September 17, 2021.

This proposal is both unnecessary and inappropriate because implementation of the federal Endangered Species Act and requests to NOAA fall outside the Council's jurisdiction. Accordingly, this proposed condition is denied.

March Proposed FW Condition 3: Prior to the start of construction, Idaho Power will request that the Record of Decision be revisited once this new information is entered into the NOAA database.

This proposal is both unnecessary and inappropriate because the BLM's Record of Decision is a matter outside the Council's jurisdiction. Therefore, this proposed condition is denied.

March Proposed FW Condition 4: Idaho Power shall revise its plans for the Ladd Creek Watershed once it receives this information from ODFW and NOAA, to accurately reflect migration patterns of Snake River Basin Steelhead and its spawning and rearing habitat.

This proposal is unnecessary and inappropriate because, as discussed previously, the assumed distribution of Snake River Basin Steelhead in the upper Ladd Creek watershed does not change the habitat category nor does it trigger the Fish Passage Approval requirements. Accordingly, this proposed condition is also denied.

March Proposed FW Condition 5: Idaho Power shall adjust its construction work window plans to accommodate this species and its habitat with no loss of fish or net loss of critical habitat.

This proposal is unnecessary and inappropriate because Idaho Power does not propose construction or major replacement of any stream crossings in the upper Ladd Creek watershed (where the Marches contend that Snake River Basin Steelhead are present). In the absence of any proposed construction there is no need to impose seasonal restrictions on when construction may occur. Consequently, this proposed condition is denied.

March Proposed FW Condition 6: Idaho Power shall create a mitigation plan for the Ladd Creek Watershed based on the presence of Threatened Snake River Basin Steelhead.

This proposal is unnecessary and inappropriate because the presence of Snake River Basin Steelhead in the Ladd Creek watershed will not change the habitat category or the fact that Idaho Power does not propose construction or replacement of stream crossings in this watershed. Therefore, this proposed condition is denied.

March Proposed FW Condition 7: Idaho Power shall create a Fish Plan in conjunction with ODFW that incorporates this data of historic and present use of Snake River Basin Steelhead in the Ladd Creek Watershed for migration and spawning and rearing habitat.

For the same reasons set out above, this proposal is unnecessary and inappropriate. The assumed distribution of Snake River Basin Steelhead in the upper Ladd Creek Watershed does not, in and of itself, trigger the Fish Passage Approval requirements. Moreover, the Fish Passage Rules require a Fish Passage Plan for a specific crossing or obstruction, rather than for the entirety of a watershed. Therefore, this proposed condition is also denied.

Historic, Cultural and Archeological Resources Standard

The HCA standard, OAR 345-022-0080, provides in pertinent part:

[T]o issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:

- (a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;
- (b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in 358.905(1)(c); and
- (c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).

Oregon Trail resources – Issues HCA-3, HCA-4 and HCA-6

Issue HCA-3: Whether Historic, Cultural and Archeological Resources Condition [2] (EFSC HPMP) related to mitigation for crossings of Oregon Trail resources provides adequate mitigation for visual impacts and sufficient detail to allow for public participation.

Limited parties Gilbert and Marlette have standing on Issue HCA-3. They both contend that Idaho Power has not provided sufficient evidence to support a finding of compliance with the HCA standard because the EFSC HPMP does not clearly identify the historic resources, potential adverse visual impacts to those resources, and site-specific mitigation plans. (Marlette Closing Brief, Issue HCA-3; Gilbert Closing Brief, Issue HCA-3). Ms. Gilbert adds that Idaho Power is treating the Oregon Trail as a single historic site, and therefore it must identify all impacts for the entire transmission line and appropriate mitigation before the Council can approve a site certificate. She asserts that the project “requires this evaluation to occur prior to the start of construction on any section of the proposed transmission line. This information must be provided in order to make an eligibility determination, not afterwards.” Gilbert Closing on Issue HCA-3 at 4-5; *see also* 15-17. Ms. Gilbert also argues that the Council cannot determine whether the proposed facility is not likely to result in significant adverse impacts to historic resources until Idaho Power surveys the entirety of the analysis area. *Id.* at 19-20.

First, it is important to note that the proposed facility will not result in direct physical

disturbance to any listed or likely NRHP-eligible Oregon Trail segments. The proposed facility will, however, cross or be visible from Oregon Trail segments and therefore will indirectly impact these resources.¹⁴⁰ Second, and contrary to the limited parties' contentions, the HCA standard does not require that Idaho Power complete all tasks to ensure that project impacts to historical or cultural resources are avoided, minimized or mitigated to less than significant prior to issuance of a site certificate. As the Department noted in the Proposed Order, some tasks (including the cultural resource survey data based on final design and site access) may be completed and submitted for review *after* issuance of a site certificate and prior to construction:

Pursuant to OAR 345-015-0190(5), an ASC is complete when the Department finds that the applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council standards. Further, under ORS 469.401(2), the site certificate shall contain conditions that ensure compliance with the standards, statutes and rules that apply to the facility. Therefore, the Council may use the information in the record to make findings and impose conditions to ensure compliance with the Council standards that require surveys, *and the final survey information may be submitted for review prior to construction.*

ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 53 of 10016; emphasis added.

In Section IV.K. of the Proposed Order, the Department specifically endorsed this process with regard to compliance with the HCA standard:

The Department, in coordination with SHPO and the BLM, and to be consistent with EFSC statute, determined the most prudent pathway to evaluate EFSC historic, cultural, and archaeological resource information is to align with the Section 106 federal review. * * *

To ensure that, based on the Section 106 compliance review, the resource inventory tables are provided to the Department and include updated impact assessment and mitigation measures via the [EFSC] HPMP to verify compliance with OAR 345-022-0090, the Department recommends the Council adopt Recommended Historic, Cultural, and Archaeological Resources Condition 2, outlined further below. Final impact avoidance, minimization, and mitigation measures depends on which, if any, of the subsection of the EFSC Historic, Cultural, and Archaeological Resources standard apply (OAR 345-022-0090(1)(a) through (c)). Because the EFSC standard relies upon the determinations that will result from the Section 106 compliance review, the Department recommends Historic, Cultural, and Archaeological Resources Condition 2, require the final HPMP to be submitted to the Department, SHPO and applicable Tribal government reviewing agencies *once the lead federal agency eligibility determinations have been established and based upon final design of the phase or segment of the proposed facility.* The Department recommends the applicant

¹⁴⁰ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 449 of 10016.

provide county-specific mitigation measures for impacts to NHT/Oregon Trail resources.

ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 512-13 of 10016; emphasis added.

Ms. Gilbert next argues that, as part of establishing compliance with the HCA Standard, Idaho Power must demonstrate compliance with the Programmatic Agreement and NHPA Section 106 requirements. Gilbert Closing on HCA-3 at 7-12. Simply stated, and contrary to Ms. Gilbert's contention, Idaho Power is not required to demonstrate compliance with NEPA Section 106 or the PA for purposes of the Council's review because the Council does not enforce compliance with federal laws.

In her opening argument on Issue HCA-3, Ms. Gilbert specifically challenges the methodology Idaho Power used to assess visual impacts to historic properties for purposes the HCA standard. She notes that Idaho Power used a different method to assess impacts for EFSC than it did for the BLM. She questions whether "the EFSC review can be accepted as meeting NEPA requirements." Gilbert Opening on HCA-3 at 4. This contention falls outside the scope of Issue HCA-3, which is limited to the adequacy of the EFSC HPMP. Further, as noted above, for purposes of the Council's review under the Council rules, Idaho Power is not required to demonstrate compliance with the PA and BLM HPMP.

The Council's HCA standard does not mandate any specific methodology for assessing visual impacts. Furthermore, as set out in the Rebuttal Testimony of Kirk Ranzetta, the BLM and SHPO methodologies for assessing visual impacts do not completely align with the information an applicant must provide for Council review under the HCA standard, particularly in light of the Council's definition of "significant" adverse impacts in OAR 345-001-0010(52).¹⁴¹ Nevertheless, as discussed above, Idaho Power coordinated with the BLM, SHPO and Department in developing its methodology for assessing visual impacts to historic properties (VAHP Study Plan) and incorporated pertinent aspects of the BLM methodology and the SHPO methodology into its plan.¹⁴² Idaho Power used, and will continue to use, this same methodology to ascertain the potential effects to historic properties and cultural resources for the entire length of the proposed transmission line.¹⁴³

¹⁴¹ Ranzetta Rebuttal Test. at 79-81. OAR 345-001-0010(52) states:

"Significant" means having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resource affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.

¹⁴² Ranzetta Rebuttal Test. at 80-81.

¹⁴³ *Id.*

The PA is not a binding document in the Council review process. The VAHP Study Plan, which as noted above, was prepared in consultation with the Section 106 Cultural Resources Working Group, provides a reasonable and appropriate method for assessing indirect impacts from the project for purposes of the HCA standard. Furthermore, the EFSC HPMP, prepared specifically for the Department and to comply with the Council's certification process, provides adequate mitigation measures for visual impacts to historic and cultural resources.

In her Response Brief, Ms. Marlette argues that the proposed facility will have a substantial adverse impact on the National Historic Oregon Trail because the transmission line will be visible from the trail segments and NHOTIC. She argues that Idaho Power's proposed mitigation methods do not sufficiently protect against significant and permanent adverse impacts, and that even indirect impacts should be avoided, rather than minimized or mitigated. (Marlette Response at 1-3.) Ms. Gilbert, in her response, similarly argues that the proposed facility will "permanently and seriously degrade" the Oregon Trail resources within the state and that there is no way to mitigate for impacts that will reduce the visual impact to less than significant to areas such as NHOTIC.¹⁴⁴ (Gilbert Response at 1-3.)

The limited parties state their concerns, but they provide no persuasive evidence to support the contention that the proposed facility will result in significant adverse impacts to Oregon Trail resources that cannot be adequately mitigated. In the Proposed Order, the Department evaluated Idaho Power's proposed mitigation for indirect impacts to Oregon Trail resources¹⁴⁵ and recommended mitigation for indirectly affected Oregon Trail segments, all to be included in the EFSC HPMP.¹⁴⁶ The Department noted:

[M]itigation established through the federal Section 106 compliance review may be used to satisfy the EFSC mitigation requirement for listed or likely NRHP-eligible Oregon Trail/NHT trail segments if applicant can demonstrate that it addresses both the design modifications and the restoration; preservation and maintenance; or compensation mitigation within affected area (county), as included in the below Table HCA-4b (included in the HPMP). If not duplicated through the federal Section 106 process, the applicant shall establish the scope and scale of Table HCA-4b mitigation, prior to construction, subject to Department review and approval, in consultation with SHPO, its consultants, or

¹⁴⁴ To the extent Ms. Gilbert seeks to apply the visual impact assessment requirements of the Council's Scenic Resources or Protected Area standard, or of the NEPA Section 106 process, to the HCA standard, her arguments are misplaced. The Scenic Resources and Protected Area standards are designed to measure different impacts to different resources than the HCA standard. Moreover, as previously discussed, the federal requirements for assessing cultural resources are also inapplicable to the HCA standard.

¹⁴⁵ See Proposed Order, Tables HCA-3 and HCA-4 (also included in the EFSC HPMP), ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 461-70 of 10016.

¹⁴⁶ See Proposed Order, Table HCA-5b (also included in the EFSC HPMP), ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 471-72 of 10016.

other entities with expertise with historic trails.

ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 471 of 10016. Per the Department's recommendation, the EFSC HPMP requires that Idaho Power use design modification and at least one other mitigation measure, with a demonstrated direct benefit to the affected area. The limited parties have not demonstrated that these mitigation measures set out in the EFSC HPMP are inconsistent with the Council's definition of mitigation under OAR 345-001-0010(33).

Finally, the limited parties argue that the Court of Appeals' decision in *Gould v. Deschutes County*, 216 Or App 150 (2007), requires that the EFSC HPMP be adequately developed (*i.e.*, that it include all site-specific mitigation plans) prior to issuance of the site certificate and/or that the Council must defer consideration of the plan to allow public participation in the plan finalization. See Gilbert Closing on HCA-3 at 20; Marlette Closing at 5-6. The limited parties misconstrue *Gould* and its application in the context of the Council's review of an ASC. For the reasons discussed in more detail below (in connection with Issue M-6),¹⁴⁷ *Gould* does not require further public review and comment of the EFSC HPMP prior to finalization of the plan and/or Council's approval of the site certificate. See ORS 469.402 (authorizing the Council to delegate the approval of a future action to the Department).

In summary, a preponderance of the evidence establishes that the EFSC HPMP provides adequate mitigation for visual impacts to HCA resources. Recommended HCA Condition 2 requires that Idaho Power conduct all construction activities in compliance with the final Department-approved EFSC HPMP. The Council's rules do not require further public review and comment on the EFSC HPMP prior to finalization and approval of the plan.

Proposed site certificate conditions related to Issue HCA-3:

Ms. Gilbert timely submitted one proposed condition in her opening argument brief regarding Issue HCA-3,¹⁴⁸ discussed below. She also submitted several more proposed conditions related to the HCA standard in her closing brief on HCA-3.¹⁴⁹ Because Ms. Gilbert

¹⁴⁷ See the discussion of *Gould* in connection with Issue M-6 and Ms. Marlette's contention that the Council should provide the public an additional opportunity to review and comment on all draft monitoring and mitigation plans prior to approving a site certificate.

¹⁴⁸ Gilbert Contested Case Opening Argument Regarding Issue HCA-3 at 4. Ms. Gilbert also timely submitted two other proposed conditions related to the HCA Standard (related to the Programmatic Agreement and to visual analysis for historic places), which are discussed *infra*, under the heading *Gilbert Additional Proposed Site Certificate Conditions*.

¹⁴⁹ Gilbert Contested Case Closing Regarding Issue HCA-3 at 8, 10-13, 18-20. Two of the conditions proposed in Ms. Gilbert's closing brief are similar to those included in her September 17, 2021 submission: one requiring a cumulative effects assessment pursuant to 36 CFR § 800.5, and the other pertaining to the Programmatic Agreement and the requirement to identify and provide mitigation for historical properties within five miles of the transmission line. Those two proposed conditions are discussed *infra*, under the heading *Gilbert Additional Proposed Site Certificate Conditions*.

did not submit these latter proposed conditions to the ALJ in a timely manner in accordance with the schedule set in the *Case Management Order*,¹⁵⁰ the ALJ declines to address their necessity or appropriateness.

Gilbert Proposed HCA Condition: The developer must complete a visual analysis of all historic sites using the methods accepted and used by BLM in evaluating visual impacts.

Both the Department and Idaho Power oppose this proposed condition as unnecessary and inappropriate. The ALJ agrees. Under ORS 469.370(13), the Council shall conduct its site certificate review, to the maximum extent feasible, in a manner that is consistent with and does not duplicate the federal agency review. However, the Council's role is to ensure compliance with applicable state and local laws, not federal laws. As discussed above, there is no requirement under the Council's standard that Idaho Power use the BLM's methodology to assess visual impacts to historic properties.

Furthermore, Idaho Power has already aligned its visual impact assessment for the Council's review process with the BLM's Section 106 review process.¹⁵¹ Idaho Power included the Programmatic Agreement in the ASC. To assess compliance with the Council's HCA standard, Idaho Power prepared the VAHP Study Plan in consultation with the Section 106 Cultural Resources Working Group, which included the Department, SHPO, and the BLM. The VAHP Study Plan guided Idaho Power's visual assessment of above-ground cultural resources potentially affected by the construction and operation of the proposed facility, to determine whether the effects are adverse. Because the BLM's visual resource management responsibilities and impact assessment measures differ from the methods for inventorying and assessing the project's impacts on historical and cultural resources under the Council's standards, it is not appropriate to require Idaho Power to use the same assessment tools in this context.¹⁵²

In short, Ms. Gilbert has not demonstrated that this proposed condition is necessary or appropriate. The Department and Idaho Power have explained why it is unnecessary. Accordingly, the proposed condition is denied.

Ruling on Idaho Power's Motion to Strike Portions of Ms. Gilbert's Response Brief on Issue HCA-3:

In its motion, Idaho Power moves to strike, or in the alternative requests that no weight be given to, statements and arguments in Ms. Gilbert's Response Brief on Issue HCA-3 that

¹⁵⁰ Pursuant to OAR 345-015-0085(1), "parties shall submit proposed site certificate conditions to the hearing officer in writing according to a schedule set by the hearing officer." In this matter, the deadline for submitting written direct testimony, evidence, and any proposed site certificate conditions was September 17, 2021. *Case Management Order* at 16, 18.

¹⁵¹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 439 of 10016.

¹⁵² See Ranzetta Rebuttal Test. at 79-81.

reference compliance with the Protected Areas standard and the Land Use Standard. Idaho Power argues that these standards and Ms. Gilbert's statements related thereto, are outside the scope of Issue HCA-3, which is limited to whether the EFSC HPMP complies with the HCA standard. Motion at 5-7.

In her response brief, Ms. Gilbert references the Protected Areas standard and the Land Use standard in arguing that the project will have a significant adverse impact on Oregon Historic Trail resources. Gilbert Response on Issue HCA-3 at 3-7. The ALJ agrees that Ms. Gilbert's references to/and reliance upon these other standards are misplaced in the context of Issue HCA-3. Accordingly, the ALJ grants Idaho Power's request and gives these statements no weight.

Issue HCA-4: Whether National Historical Oregon Trail segments with ruts located on Mr. Horst's property (Hawthorne Drive, La Grande) can be adequately protected from adverse impacts from proposed facility.

Limited parties Horst and Cavinato have standing on Issue HCA-4. They argue that the segment of the Oregon Trail that runs across the Horst property is listed on the National Registry, that there are visible ruts alongside the private access portion of Hawthorne Drive, and that Idaho Power has not properly identified these ruts in the ASC. They also argue that the construction and operation of the proposed facility will adversely impact their property and quality of life and that monetary compensation will not compensate for their loss of peace and tranquility. Horst Closing Brief at 8, 12.

Limited parties Horst and Cavinato have not presented persuasive evidence to support their claim. Rather, the contested case record establishes that Idaho Power can adequately protect the NHT segments with ruts located on the Horst property from any adverse impacts from the proposed facility.¹⁵³ First, Recommended HCA Condition 1 requires Idaho Power to design and locate facility components to avoid direct impacts to Oregon Trail/NHT resources, including trail ruts, regardless of where the resources are located.¹⁵⁴ Consequently, if Idaho Power opts for the Mill Creek Route as the final route, and if NHT ruts are identified in the Direct Analysis Area, then the Company will avoid direct impacts to these resources by micrositing portions of the project or using other measures to protect the ruts from degradation.

Second, as discussed previously, Recommended HCA Condition 2 requires Idaho Power to submit a final EFSC HPMP that will be updated based on the outcome of the Section 106 review with site-specific mitigation identified based on final design and location of the project

¹⁵³ Idaho Power did not identify the Oregon Trail segments located on the Horst property in its initial analysis because these resources lie outside the Direct Analysis Area and Idaho Power did not have access to the property to perform surveys to assess impacts. When Idaho Power obtains permission to survey the property, the Company, in consultation with the Department and the Oregon SHPO, will evaluate the segments and develop measures to avoid, minimize, or mitigate impacts consistent with the PA and the EFSC HPMP. Ranzetta Rebuttal Test. at 83.

¹⁵⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 474 of 10016.

and the final impact assessments. Therefore, Idaho Power would minimize and mitigate indirect impacts to NHT ruts on the Horst property in accordance with HCA Condition 2 and the EFSC HPMP.

Accordingly, a preponderance of the evidence establishes that Idaho Power can protect Oregon Trail segments with ruts located on Mr. Horst's property. The limited parties have not shown otherwise.

Issue HCA-6: Whether, as part of the [EFSC] HPMP Applicant should be required to have an Oregon Trail expert, recommended by OCTA and agreed to by the Field Director, added to the Cultural Resource Team and present during preconstruction surveys to adequately identify emigrant trail locations.

Limited party Stacia Webster has standing on Issue HCA-6, and bears the burden of producing evidence to support her claim. Ms. Webster did not file any written direct testimony or exhibits in support of her position on Issue HCA-6 nor did she submit written closing argument regarding this issue. Because Ms. Webster failed to submit evidence and/or argument in support of her contention, the claim is unsubstantiated.¹⁵⁵ The findings in the Proposed Order constitute prima facie evidence of Idaho Power's compliance with the HCA standard.

Archaeological resource Site 6B2H-MC-10 – Issue HCA-7

Issue HCA-7: Whether Idaho Power adequately evaluated historic and archaeological resource "Site 6B2H-MC-10" on Mr. Williams' property, Parcel 03S37E01300.

Limited party Williams has standing on Issue HCA-7. As set out in the findings above, Proposed Order, Section IV.K.1.3, Table HCA-7 lists Site 6B2H-MC-10 on Mr. Williams' property as a potentially impacted historic property or archaeological site on private land. The Proposed Order describes the resource as unevaluated hunting blind within the Visual Assessment Analysis Area along the Morgan Lake Alternative Route.¹⁵⁶ Mr. Williams argues that Idaho Power has not completely surveyed his property and that the Council should not approve a site certificate until the Company has properly evaluated and documented resources on his property in accordance with the requirements of OAR 345-022-0090. Williams Closing Argument at 1. In his direct testimony, Mr. Williams asserted that his property (including Site 6B2H-MC-10) is listed on the NRHP. Mr. Williams also asserted that an archaeologist located a rock alignment and two lithic scatters in or near the Direct Analysis Area, which were not addressed in Tetra Tech's Summary of Surveys. Williams Direct Test. at 1-3.

First, to the extent that Mr. Williams asserts Idaho Power failed to address archaeological resources on his property other than Site 6B2H-MC-10, these claims fall outside the scope of

¹⁵⁵ Because Issue HCA-6 is unsubstantiated, there is no need to address the merits of the claim in this order. *See Ruling on Motion to Dismiss* at 8.

¹⁵⁶ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 499 of 10016.

Issue HCA-7.¹⁵⁷ Issue HCA-7 is limited to the adequacy of Idaho Power's evaluation of Site 6B2H-MC-10.¹⁵⁸

Second, and contrary to Mr. Williams' contention, Site 6B2H-MC-10 is not listed on the NRHP. In 2021, the Oregon Trail La Grande to Hilgard Segment was listed on the NRHP, but there is no evidence that Site 6B2H-MC-10, a hunting blind, was included in that listing. Third, Idaho Power has yet to evaluate Site 6B2H-MC-10 because the site is not located within the Direct Analysis Area. Rather, Site 6B2H-MC-10 is located just south of the Direct Analysis Area's southern boundary, within the Visual Assessment Analysis Area.¹⁵⁹ As explained previously, Idaho Power will evaluate indirect impacts cultural resources during Phase 2 of its VAHP Study Plan, in accordance with the Department's recommendations in the Proposed Order and the EFSC HPMP, and consistent with the processes contained in the PA.¹⁶⁰ Also as previously stated, the Council's standards do not require Idaho Power to complete its visual assessments and the Enhanced Archaeological Survey prior to issuance of the site certificate. The EFSC HPMP will be finalized and approved by the Department prior to construction of the facility. Idaho Power will complete Phase 2 of the archeological survey after the site certificate is issued, but prior to construction on the selected route, when site access has been secured for all properties.¹⁶¹

In short, the preponderance of the evidence establishes that Idaho Power adequately evaluated Site 6B2H-Mc-10 consistent with the Council's HCA standard. Mr. Williams has not shown to the contrary.

Proposed site certificate conditions related to Issue HCA-7:

In his Closing Argument, Mr. Williams also proposed site certificate conditions related to his property and the contents of the finalized EFSC HPMP.¹⁶² Because Mr. Williams did not submit these proposed conditions to the ALJ in a timely manner with his direct testimony in accordance with the schedule set in the *Case Management Order*, the ALJ declines to address

¹⁵⁷ See *Rulings on Idaho Power Company's Objections to Limited Parties' Surrebuttal Testimony and Exhibits*, issued January 3, 2022, at 5.

¹⁵⁸ *Id.*; see also *Amended Order on Party Status* at 74, 79.

¹⁵⁹ Ranzetta Rebuttal Test. at 85-86.

¹⁶⁰ Ranzetta Rebuttal Test. at 86; see also Proposed Order, Table HCA-7: Potentially Impacted Resources under OAR 345-022-0090(1)(a), at 492 n. 498, ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 499 of 10016.

¹⁶¹ Ranzetta Rebuttal Test.; see also ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 445-46 of 10016.

¹⁶² See Williams Closing Argument at 2.

them.¹⁶³

Land Use Standard

As pertinent here, ORS 469.503 states as follows:

In order to issue a site certificate, the Energy Facility Siting Council shall determine that the preponderance of the evidence on the record supports the following conclusions:

* * * * *

(4) The facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

Additionally, the Land Use standard, OAR 345-022-0030 provides, in pertinent part:

(1) To issue a site certificate, the Council must find that the proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

(2) The Council shall find that a proposed facility complies with section (1) if:

(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and the Council finds that the facility has received local land use approval under the acknowledged comprehensive plan and land use regulations of the affected local government; or

(b) The applicant elects to obtain a Council determination under ORS 469.504(1)(b) and the Council determines that:

(A) The proposed facility complies with applicable substantive criteria as described in section (3) and the facility complies with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3)[.]

* * * * *

(3) As used in this rule, the “applicable substantive criteria” are criteria from the affected local government's acknowledged comprehensive plan and land use ordinances that are required by the statewide planning goals and that are in effect on the date the applicant submits the application. * * *.

¹⁶³ As noted previously, the deadline for submitting written direct testimony, evidence, and any proposed site certificate conditions was September 17, 2021. *Case Management Order* at 16, 18.

GPS irrigation systems – Issue LU-4

Issue LU-4: Adequacy of the analysis of potential impacts of transmission line interference with GPS units on irrigation system.

Limited parties Jim and Kaye Foss have standing on Issue LU-4, and bear the burden of producing evidence to support their claim. The Fosses did not file any written direct testimony or exhibits in support of their position on Issue LU-4 nor did they submit written closing argument regarding Issue LU-4. Because the Fosses failed to submit evidence and/or argument in support of their contention that operation of the proposed transmission line would interfere with the GPS navigated irrigation system on their property, the ALJ considers their claim unsubstantiated.¹⁶⁴ The findings in the Proposed Order constitute *prima facie* evidence of Idaho Power's compliance with the Land Use standard.

Forest management practices – Issues LU-7 and LU-8

Issue LU-7: Whether the evaluation of the proposed facility impacts to the cost of forest practices accurately determined the total acres of lost production or indirect costs.

Issue LU-8: The adequacy of Applicant's evaluation of the proposed facility impacts to the cost of forest management practices and whether mitigation must be provided for the entire length of the transmission line for the operational lifetime.

Ms. Gilbert has standing on Issues LU-7 and LU-8. Ms. Gilbert did not timely submit any direct testimony, exhibits, or proposed site certificate conditions in support of her contentions on Issues LU-7 or LU-8.¹⁶⁵ However, she submitted a written closing brief combining her arguments on these two issues. In her Closing Brief on Issues LU-7 and LU-8, Ms. Gilbert argues that Idaho Power did not properly identify forestlands in Union County in accordance with Statewide Planning Goal 4 and did not properly calculate the potential impacts to the costs of accepted forest practices.¹⁶⁶ More specifically, Ms. Gilbert asserts that Idaho Power erred in applying the substantive criteria from the UCZPSO because Union County's ordinance does not comply with state law. Gilbert Closing Brief at 7, 17, 23-26. She further

¹⁶⁴ Where, as with Issue LU-4, the claim is deemed unsubstantiated, there is no need to address the merits of the claim in this order. *See Ruling on Motion to Dismiss* at 9.

¹⁶⁵ *See Ruling on Motion to Dismiss* at 9-11.

¹⁶⁶ Ms. Gilbert raises essentially the same contentions with Issues LU-7 and LU-8 that she raised in opposing Idaho Power's Motion for Summary Determination regarding Issue LU-5. *See Ruling on Issues LU-2, LU-3, LU-5 and LU-6* at 19-23. Issue LU-5 asked "whether calculation of forest lands must be based on soil class or whether it is sufficient to consider acreage where forest is predominant use." *Id.* at 2. In ruling in Idaho Power's favor as a matter of law, the ALJ found that Idaho Power properly used SSURGO soil classification data in determining the prominent use of hybrid-zoned land in Union County. *Id.* at 8, 22-23.

contends that land with a timber capability rating of 20 cubic foot per acre per year (cf/ac/yr) must be considered forestland and that Idaho Power must use the same soil capacity standard when determining prominent use and differentiating between farmland and forestland in Union County.¹⁶⁷ *Id.* at 9, 25, 29. As discussed below, Ms. Gilbert’s arguments are without merit.

As set out above, to issue a site certificate, the Council must find that the proposed facility complies with the statewide land use planning goals adopted by the Land Conservation and Development Commission. Statewide Planning Goal 3, pertaining to agricultural lands, states that “agricultural lands shall be preserved and maintained for farm use * * *.” OAR 660-015-0000(3). Statewide Planning Goal 4, pertaining to forestlands, states as follows:

To conserve forest lands by maintaining the forest land base and to protect the state’s forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.

OAR 660-015-0000(4).

To implement Goal 4, the Land Conservation and Development Commission (LCDC) adopted administrative rules, found in OAR chapter 660, division 6. OAR 660-006-0000 sets out the requirements for governing bodies to accomplish the purpose of conserving forestlands. Local governments must (a) designate forestlands on the comprehensive plan map consistent with Goal 4 and OAR chapter 660, division 6; (b) zone forestlands for uses allowed pursuant to OAR chapter 660, division 6; and (c) adopt plan policies consistent with OAR chapter 660, division 6. For purposes of Goal 4, and as relevant here, “forest lands” means “those lands acknowledged as forest lands.” OAR 660-006-0005(7). OAR 660-006-0015 requires that lands inventoried as forestlands be designated in the comprehensive plan and implemented with a zone that conserves forestlands consistent with OAR chapter 660, division 6, unless an exception to Goal 4 applies.

OAR 660-006-0025 sets out uses authorized in forest zones. OAR 660-006-0050 authorizes a governing body to establish hybrid agriculture/forest zones with the same authorized uses. As pertinent here, “new electric transmission lines” may be authorized on forestlands,¹⁶⁸ subject to the following review standards:

¹⁶⁷ Ms. Gilbert also includes in her Closing Brief on Issues LU-7 and LU-8 arguments that are outside the scope of either issue, such as challenges to the draft Fish and Wildlife Mitigation plan and the draft Noxious Weed Plan. Because these arguments are outside the scope of Issue LU-7 or LU-8, the ALJ declines to address them in this context.

¹⁶⁸ OAR 660-015-0025(4)(q) states:

The following uses may be allowed on forest lands subject to the review standards in section (5) of this rule:

* * * * *

(a) The proposed use will not force a significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands; [and]

(b) The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel[.]

OAR 660-006-0025(5).

As discussed in the findings, the UCZPSO includes a hybrid farm-forest zone, the Timber-Grazing zone, as authorized by OAR 660-006-0050. UCZPSO 5.02 addresses permitted uses in the Timber-Grazing zone. UCZPSO 5.04 sets out the authorized conditional uses in the Timber-Grazing zone and the general review criteria. UCZPSO 5.04 mirrors the language in OAR 660-006-0025(4)(q) by authorizing “new electric transmission lines” as a conditional use in the Timber-Grazing zone. UCZPSO 5.04.21. Similarly, UCZPSO 5.06 mirrors the language in OAR 660-006-0025(5) in setting out the conditional use review criteria:

A use authorized by Section 5.04 of this zone may be allowed provided the following requirements or their equivalent are met. These requirements are designed to make the use compatible with forest operations and agriculture and to conserve values found on forest lands.

1. The proposed use will not force a significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands.
2. The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.

UCZPSO 5.06.

In preparing ASC Exhibit K, Idaho Power worked closely with Union County planning staff to analyze the predominant use on each of the 61 parcels within the project site boundary located wholly or partially in the Timber-Grazing Zone. In accordance with UCZPSO requirements, Idaho Power determined the predominant use of the hybrid-zoned parcels by using soil maps and SSURGO data to determine soil designations and capabilities where such data was available. Where such data was not available to evaluate the predominant use, Idaho Power conservatively classified the land as forestland.¹⁶⁹ Idaho Power determined that for the Proposed

(q) New electric transmission lines with right of way widths of up to 100 feet as specified in ORS 772.210. New distribution lines (e.g., gas, oil, geothermal, telephone, fiber optic cable) with rights-of-way 50 feet or less in width[.]

ORS 772.210, in turn, authorizes a public utility to enter and condemn lands for construction of service facilities.

¹⁶⁹ ODOE - B2HAPPDoc3-19 ASC 11_Exhibit K_Land Use_ASC 2018-09-28, page 239 of 614.

Route, approximately 53 percent of Timber-Grazing zoned land has a predominant use of rangeland and about 47 percent had a predominant use of forestland. For the Morgan Lake Alternative Route, Idaho Power determined that about 60 percent had a predominant use of rangeland and about 40 percent was classified as forestland.¹⁷⁰

Contrary to Ms. Gilbert's contentions, Idaho Power did not err in applying the UCZPSO to identify the amount of forestland in Union County potentially impacted by the proposed facility. Furthermore, Ms. Gilbert has not established that Union County's zoning ordinance is contrary to state law, as there is no state law provision requiring that all land parcels consisting of soils capable of producing 20 cf/ac/year of timber be classified as forestland when determining prominent use and differentiating between farmland and forestland.

Ms. Gilbert cites to OAR 660-033-0130(4)(c)(B)(iii)¹⁷¹ in support of her contention that soils with a capacity to produce as little as 20 cf/ac/yr must be classified as forestland. However, this rule, found in Chapter 660, Division 33 (Agricultural Land) is not applicable to the Goal 4 analysis, and does not govern the predominant use analysis for the Timber-Grazing zone in Union County.

Ms. Gilbert also sites to several LUBA decisions to support her argument, but these decisions also fail to demonstrate that Idaho Power erred in determining the predominant use of hybrid-zoned land in Union County. The LUBA cases referenced in Ms. Gilbert's brief address the classification of land based on soils data in the context of a land use plan amendment. The cases apply OAR 660-006-0010(2) to discuss the process of identifying Goal 4 forestland, but the rule's provisions relevant to identifying "lands suitable for commercial uses" only apply "where a plan amendment is proposed."¹⁷² The matter at hand is the Council's evaluation of

¹⁷⁰ *Id.*

¹⁷¹ OAR 660-033-0130(4)(c)(B)(iii), pertains to approval of a *single family residential dwelling* on land zoned for *agricultural use* not provided in conjunction with farm use in counties outside the Willamette Valley. The provision states, in part, as follows:

If the parcel is under forest assessment, the dwelling shall be situated upon generally unsuitable land for the production of merchantable tree species recognized by the Forest Practices Rules * * *. If a lot or parcel is under forest assessment, it is presumed suitable if, in Western Oregon, it is composed predominantly of soils capable of producing 50 cubic feet of wood fiber per acre per year, or in Eastern Oregon it is composed predominantly of soils capable of producing 20 cubic feet of wood fiber per acre per year. If a lot or parcel is under forest assessment, to be found compatible and not seriously interfere with forest uses on surrounding land it must not force a significant change in forest practices or significantly increase the cost of those practices on the surrounding land[.]

¹⁷² OAR 660-006-0010, titled Identifying Forest Land, states in pertinent part:

(1) Governing bodies shall identify "forest lands" as defined by Goal 4 in the comprehensive plan. Lands inventoried as Goal 3 agricultural lands, lands for which an

compliance with Goal 4 for purposes of siting an energy facility, not a plan amendment application. Furthermore, even if these LUBA decisions were relevant to determining the predominant use of parcels in Union County's hybrid farm-forest zone, the cases do not establish, as a matter of law, a bright line threshold for the level of cf/ac/yr productivity that qualifies land as forestland.

Third, and most importantly, even if Idaho Power did understate the amount of Goal 4 forestland in Union County potentially impacted by the proposed facility, the fact remains that the calculation of impacted forestland in Union County is not pertinent to the evaluation of whether the proposed facility complies with Goal 4. For purposes of the Council's review, the relevant inquiry is whether the proposed facility (an authorized use in forest lands under OAR 660-006-0025(4)(q)) satisfies the review standards set out in OAR 660-006-0025(5) (*i.e.*, whether the proposed use will force a significant change or significantly increase the cost of accepted farming or forest practices or significantly increase the risk of fire). The conditional use review criteria in Union County (UCZPSO 5.04) are the same as those set out in OAR 660-006-0025(5). Therefore, any purported error related to identifying forestland in Union County would not substantively affect the analysis of whether the proposed transmission line satisfies the conditions to be sited in Goal 4 forestlands.

Finally, to the extent Ms. Gilbert asserts that the proposed facility will significantly increase the cost of accepted farming or forest practices on Goal 4 forestlands, she has not provided any evidence to support this contention. The Department found that the proposed facility satisfies the conditional use criteria of OAR 660-006-0025(5)(a) and Ms. Gilbert has not shown otherwise. Nor has Ms. Gilbert demonstrated the need for Idaho Power to implement all planned mitigation measures for the operational lifetime of the project. Indeed, there is no reason to require Idaho Power to continue implementing mitigation measures during operations that are specific to the construction phase, and no need to require forest impact mitigation measures along the entire transmission line, when the line only crosses forestlands in two

exception to Goal 4 is justified pursuant to ORS 197.732 and taken, and lands inside urban growth boundaries are not required to be planned and zoned as forest lands.

(2) *Where a plan amendment is proposed:*

(a) Lands suitable for commercial forest uses shall be identified using a mapping of average annual wood production capability by cubic foot per acre (cf/ac) as reported by the USDA Natural Resources Conservation Service. Where NRCS data are not available or are shown to be inaccurate, other site productivity data may be used to identify forest land, in the following order of priority:

(A) Oregon Department of Revenue western Oregon site class maps;

(B) USDA Forest Service plant association guides; or

(C) Other information determined by the State Forester to be of comparable quality.

Emphasis added.

counties, Umatilla and Union.

To summarize, with regard to Issue LU-7, a preponderance of evidence in the record demonstrates that Idaho Power accurately identified the amount of forest land impacted by the proposed facility in Union County, and accurately estimated the total acres of lost production and indirect costs. Ms. Gilbert has not shown otherwise. With regard to Issue LU-8, the preponderance of the evidence establishes that Idaho Power adequately evaluated the proposed facility's impacts on the cost of forest management practices. The proposed measures to mitigate impacts on forested areas are adequate and appropriate, and Ms. Gilbert has not presented any evidence to demonstrate otherwise.

Proposed site certificate conditions related to Issues LU-7 and LU-8:

In her Closing Brief on Issues LU-7 and LU-8, Ms. Gilbert proposed, for the first time in this contested case, 10 new site certificate conditions related to forestland in Union County.¹⁷³

¹⁷³ Ms. Gilbert proposed the following site certificate conditions in her Closing Brief:

Unnumbered Gilbert Proposed Condition: Prior to the start of construction in Union and Umatilla Counties, the developer must provide documentation that mitigation was provided to forest landowners to compensate for the loss of timber production for the life of the development. This amount was calculated by the department to be approximately \$40,100 per acre of impact for forested land in Union County and \$24,600 per acre of impact for forest land in Umatilla County. This amount is in addition to the negotiations for an easement for the transmission line and associated roads.

Gilbert Proposed Forestland Condition 1: Prior to the start of construction in Union County the developer must provide documentation regarding the soil types and capacity amounts used to determine whether parcels of land being crossed was "forest land."

Gilbert Proposed Forestland Condition 2: Charts showing the amount of land in each category based upon the soil type and mitigation required for habitat impacts must be updated.

Gilbert Proposed Forestland Condition 3: The council must determine if the development complies with the Land Use Goal 4 based upon the increased amount of forest land being impacted.

Gilbert Proposed Forestland Condition 4: The forest practices plan must be updated and other rules that are impacted by the change in forest land being crossed.

Gilbert Additional Proposed Forestland Condition 1: Documentation in the file showing 18.3 acres of permanent impacts to forest land on the Morgan Lake Route and documentation in the "Plan for Alternate Practice" showing that 296.8 acres of forest land will be cleared. At a minimum, the mitigation needs to include the acres of trees being cleared for the duration of the project. * * * This amount plus any additional forest land not previously identified must be mitigated.

However, because Ms. Gilbert did not submit these proposed conditions in accordance with the schedule set by the ALJ in the *Case Management Order*, the Department and Idaho Power had no opportunity during the contested case hearing to present evidence in response to these proposals. Because Ms. Gilbert's submission of these proposed conditions is untimely and in contravention of the *Ruling on Motion to Dismiss*, the ALJ declines to address them.

Ruling on Idaho Power's Motion to Strike Portions of Ms. Gilbert's Closing Brief on Issues LU-7 and LU-8:

In its Response Brief, Idaho Power moves to strike or, in the alternative, give no weight to certain statements in Ms. Gilbert's Closing Brief on Issues LU-7 and LU-8. Specifically, Idaho Power challenges statements that address an issue for which Ms. Gilbert does not have limited party status, statements that seek to relitigate matters already resolved on summary determination, and/or statements that reference or rely on the Hartell deposition transcript and exhibits. Idaho Power Motion to Strike, Issues LU-7 and LU-8 at 7-13.

As discussed in the Evidentiary Rulings section above, the ALJ declined to reopen the evidentiary record to admit certain documents, including the Hartell deposition transcript, that Ms. Gilbert did not timely offer in support of her position(s) on Issues LU-7, LU-8 and LU-11. The ALJ noted that Ms. Gilbert submitted the Hartell deposition transcript in support of her opposition to Idaho Power's Motion for Summary Determination on Issues LU-2, LU-3, LU-5, LU-6, but she did not offer it as evidence during the hearing testimony phase.

Because Ms. Gilbert did not timely offer the Hartell deposition transcript (or the exhibits referenced in the transcript) in connection with Issues LU-7, LU-8 or LU-11, she is not entitled to rely upon this evidence in her Closing Brief. Furthermore, as discussed previously, based on the *Ruling on Motion to Dismiss*, Ms. Gilbert is limited in her closing arguments on Issues LU-7 and LU-8 to referencing evidence previously admitted into the evidentiary record as part of the B2H Project Record. For these reasons, the ALJ grants Idaho Power's alternate request and gives no evidentiary weight to Ms. Gilbert's discussion of the Hartell deposition in her Closing

Gilbert Additional Proposed Forestland Condition 2: The evaluation of impacts causing increased costs or requirements to change procedures in forest lands must be corrected to address the additional forest land impacted.

Gilbert Additional Proposed Forestland Condition 3: Amounts identified as needed to provide mitigation for habitat impacts to forest land must be updated to reflect new information.

Gilbert Additional Proposed Forestland Condition 4: Updated financial impacts of development must have objective mitigation required to compensate landowners for the impacts.

Gilbert Additional Proposed Forestland Condition 5: No credit for mitigation can be allowed for actions that are not required and identified in the Site Certificate including payments to landowners resulting from right of way compensation.

Gilbert Closing Brief Issues LU-7 and LU-8 at 4, 9-11, and 34.

Brief.¹⁷⁴ The ALJ also gives no weight to arguments in the Closing Brief outside the scope of Issues LU-7 and LU-8 (such as challenges to the Fish and Wildlife Habitat Mitigation Plan and the Noxious Weed Plan and comments on the alleged unmitigated costs of the proposed facility to be assumed by the landowner).

Accepted farm practices – Issues LU-11 and LU-9

Issue LU-11: Whether the impacts from the proposed facility on accepted farm practices and the cost of accepted farm practices have been adequately evaluated or mitigated.

Ms. Gilbert also has standing on Issue LU-11. Ms. Gilbert challenges, on multiple grounds, the Proposed Order's analysis of potential impacts to farm practices. Ms. Gilbert asserts that the Proposed Order and Site Certificate fail to comply with ORS 215.275(4) and (5) and fail to protect agricultural lands and landowners from adverse impacts.

ORS 215.275 addresses the siting of utility facilities in exclusive farm use-zoned lands. As pertinent here, the statute provides:

(4) The owner of a utility facility approved under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this section shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

(5) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

¹⁷⁴ In the Motion to Strike, Issues LU-7 and LU-8, Idaho Power also asked that, even if the challenged portions of Ms. Gilbert's Closing Brief are not considered, the ALJ review the Hartell deposition transcript to assess whether consideration of the excluded document would have altered the determination on Issues LU-7 and LU-8. Motion to Strike, Issues LU-7 and LU-8 at 9. In accordance with Idaho Power's request, the ALJ has reviewed the Hartell deposition transcript (as offered in by Ms. Gilbert on June 25, 2021 in opposition to Idaho Power's Motion for Summary Determination on Issue LU-5, without deposition exhibits attached). In the deposition, Mr. Hartell explained Union County's process for determining predominant use of land parcels and identifying forest land in the Timber-Grazing zone. He also explained that Union County's review of Idaho Power's predominant use analysis did not result in any adjustments to the predominant use value that Idaho Power initially assigned to parcels in the Timber-Grazing zone. The ALJ confirms that nothing in the Hartell deposition transcript would change her conclusions and determinations on Issues LU-7 and LU-8.

In essence, this zoning law makes the utility owner responsible for restoring, as nearly as possible, disruptions to farmland caused by the construction and operation of the facility, and requires the governing body to impose clear and objective conditions on the construction and operation of the facility to mitigate and minimize any impacts on surrounding farmland.

With regard to compliance with ORS 215.275(4), Ms. Gilbert contends that the Proposed Order fails to adequately address the proposed facility's impacts on agricultural landowners and the costs of restoring the land to allow for farming, should the facility be retired or abandoned. Gilbert Opening Arguments Issue LU-11 at 5-6; Gilbert Closing Brief Issue LU-11 at 1-3, 8-10. On the one hand, Ms. Gilbert misreads ORS 215.275(4) and conflates it with OAR 345-022-0050, the Retirement and Financial Assurance standard. The zoning law requires the facility owner to restore agricultural land damaged or disturbed by the "siting, maintenance, repair or reconstruction of the facility," whereas the Council standard requires a finding that, upon retirement, the applicant is able to obtain a bond or letter of credit in an amount sufficient to restore the site to a "useful, non-hazardous condition." Insofar as Ms. Gilbert challenges the sufficiency of Idaho Power's retirement under ORS 215.275(4), her argument is misplaced.¹⁷⁵

On the other hand, and contrary to Ms. Gilbert's contention, the Proposed Order includes a site certificate condition addressing Idaho Power's compliance with ORS 215.275(4). As set out in the findings above, Recommended Land Use Condition 14 requires Idaho Power to implement the Agricultural Lands Assessment. The Agricultural Lands Assessment, in turn, requires the Company to restore, as nearly as possible, any impacted farmlands to former productivity.¹⁷⁶ The obligations in Recommended Land Use Condition 14 and the Agricultural Lands Assessment will ensure that Idaho Power will restore productivity, as nearly as possible, to any impacted farmlands as required by ORS 215.275(4).

With regard to ORS 215.275(5), Ms. Gilbert asserts that the various mitigation plans set out in the Proposed Order, including the Agricultural Lands Assessment and Agricultural Mitigation Plan, the Noxious Weed Plan, and the Fire Prevention and Suppression Plan, do not contain clear and objective conditions that serve to mitigate and minimize the proposed facility's impacts on surrounding farmlands. She also contends that these plans do not contain enough detail to allow the public the right to participate in the process. Gilbert Opening Arguments Issue LU-11 at 3-4, 6-16; Gilbert Closing Brief Issue LU-11 at 7-8, 11-24.

Ms. Gilbert's concerns about the sufficiency of the Noxious Weed Plan are addressed above in connection with Issue FW-3. Ms. Gilbert's concerns about the sufficiency of the Fire Prevention and Suppression Plan appear to be outside the scope of Issue LU-11, but are nevertheless addressed *infra* in the context of Issues PS-4 and PS-10. Ms. Gilbert's concerns about the finalization of draft plans generally (and the lack of opportunity for public review and

¹⁷⁵ Ms. Gilbert's challenges to the adequacy of Idaho Power's bond/letter of credit are outside the scope of Issue LU-11. The argument is addressed *infra* in connection with Issue RFA-1.

¹⁷⁶ See Proposed Order, Attachment K-1 at 35 (Section 7.0, discussing the Agricultural Mitigation Plan and efforts to minimize impacts to agricultural lands); ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8916 of 10016.

comment) also appear to be outside the scope of Issue LU-11, but are nevertheless addressed elsewhere in this order.¹⁷⁷

Ms. Gilbert's specific challenges to the adequacy of the Agricultural Lands Assessment and the Agricultural Mitigation Plan incorporated therein are also without merit. As set out in the findings, the Agricultural Mitigation Plan (Section 7 of Attachment K-1) identifies the measures Idaho Power will take to avoid, mitigate repair and/or provide compensation for impacts that may result from the construction or operation of the proposed facility on privately owned agricultural land. The plan states that the Company "will reasonably restore the land to its former condition or compensate each landowner, as appropriate, for damages and/or impacts to agricultural operations caused as a result of Project construction and as outlined in this plan."¹⁷⁸ The plan identifies specific actions that Idaho Power take to minimize and mitigate impacts including but not limited to tower placement, weed control, replacement of topsoil and removal of rocks contained in any material brought to the construction area and scheduling construction activities to minimize impacts to livestock operations.¹⁷⁹ In the Proposed Order, the Department found that adherence with the plan and Recommended Land Use Condition 14 will restore agricultural land impacted by construction of the facility as nearly as possible to prior condition, as required by ORS 215.275(4), following clear and objective conditions to mitigate impacts to agricultural landowners as required by ORS 215.275(5).¹⁸⁰

In her Opening Arguments and Closing Brief, Ms. Gilbert identified a list of potential impacts to farm practices that she contends will result from the project,¹⁸¹ but she has not provided any evidence to support these assertions. In addition, she has failed to acknowledge the findings in the Proposed Order regarding the potential impacts to agricultural lands, the provisions of the Agricultural Lands Assessment, and/or the rebuttal testimony of Idaho Power's witness, Kurtis Funke, responding to each of her concerns.¹⁸²

Ms. Gilbert also challenged calculations set out in Attachment K1, Table 5-7, Site Boundary and Average Temporary/Permanent Disturbance Areas by Project Component, and asserted that Idaho Power failed to include all land that will subject to construction and permanent impacts. Gilbert Closing Brief at 32-34. Contrary to Ms. Gilbert's contentions, however, the preponderance of the evidence establishes that Idaho Power did not understate the amount of agricultural land in the project area. The preponderance of the evidence also establishes that Idaho Power appropriately included the features that would result in construction

¹⁷⁷ See the discussion of *Gould* under Issue HCA-3 *supra* and the discussion under Issue M-6 *infra*.

¹⁷⁸ ODOE – B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8918 of 10016.

¹⁷⁹ *Id.*, pages 8916 to 8924 of 10016.

¹⁸⁰ *Id.*, pages 23-32 of 10016.

¹⁸¹ See Gilbert Opening Arguments Issue LU-11 at 17-19; Gilbert Closing Brief Issue LU-11 at 27-38.

¹⁸² See Funke Rebuttal Test. at 46-66 (responding to each concern/allegation identified in Ms. Gilbert's Opening Arguments on Issue LU-11).

disturbance in Table 5-7.¹⁸³ To the extent Ms. Gilbert identified errors in the presentation of acres impacted for different structure types, Idaho Power prepared an updated Table 5-7 correcting these errors.¹⁸⁴

Moreover, even assuming that Idaho Power did err in its calculation of acreage of agricultural land permanently disturbed by the project the error would not alter the evaluation of under ORS 215.275(5). As the Department notes in its Closing Brief:

[A]s presented in the Proposed Order, the Department’s evaluation of whether the proposed facility would significantly impact accepted farm practices or the cost thereof under ORS 215.275(5) is not based on acres of permanent impacts. Rather, the evaluation is based on the applicant’s assessment of accepted farm practices within the area surrounding the site boundary; the applicant’s assessment of potential impacts to those practices; and whether the applicant’s proposed mitigation for those impacts would ensure that accepted farm practices are not significantly impacted. Therefore, correlating a factual discrepancy to the ORS 215.275 compliance evaluation ignores the substance of the evidence and information developed and relied upon for the ORS 315.275 evaluation.

ODOE Closing Brief at 75.

In short, the fact that the proposed facility will have construction-related and permanent impacts on privately owned agricultural lands does not mean the facility cannot satisfy the requirements of ORS 215.275. As the Oregon Supreme Court recognized in *Friends of Parrett Mountain v. NW. Nat. Gas Co.*, 336 Or 93, 115, (2003), the requirement in ORS 215.275(5) to mitigate and minimize a utility facility’s impacts on agricultural land “requires the general reduction in the intensity and frequency of an impact, not * * * the absolute avoidance or elimination” of such impacts.

A preponderance of evidence in the record establishes that Idaho Power adequately assessed and mitigated potential impacts to accepted farm practices on surrounding farmlands consistent with ORS 215.275(5). The Company has demonstrated compliance with the Council’s Land Use Standard as it relates to Issue LU-11. Ms. Gilbert has not shown otherwise.¹⁸⁵

¹⁸³ Funke Rebuttal Test. at 48-49.

¹⁸⁴ *Id.* at 49-50; Funke Rebuttal Exhibit C.

¹⁸⁵ As Idaho Power notes in its Closing Arguments and Response Brief, unsupported concerns about potential impacts to exclusive farm use-zoned lands cannot reasonably support a conclusion that a proposed facility will result in a significant change in accepted farm practices or a significant increase in the cost of farm practices. See *Falcon Heights. Water and Sewer Dist. v. Klamath County*, LUBA No. 2011-068 at 12-13 (Dec. 22, 2011), Attachment A to Idaho Power’s Closing Arguments for Contested Case Issues LU-4, LU-7, LU-8, LU-9, and LU-11.

Proposed site certificate conditions related to Issue LU-11:

In her Opening Arguments on Issue LU-11, Ms. Gilbert proposed site certificate conditions related to monitoring and control of noxious weeds. Gilbert Opening Arguments at 13, 16. Those proposed conditions are addressed above in Issue FW-3.

In her Closing Brief on Issue LU-11, Ms. Gilbert restates the proposed noxious weed conditions and proposes additional conditions related to the finalization of draft mitigation plans and mitigation for impacts to agricultural lands.¹⁸⁶ Because Ms. Gilbert did not submit these additional proposed conditions to the ALJ in a timely manner in accordance with the schedule set in the *Case Management Order*, the Department and Idaho Power had no opportunity during the contested case hearing to present evidence in response. Therefore, the ALJ declines to address these untimely proposed conditions in any detail, other than to note that, Ms. Gilbert has not presented evidence to support them and based on the determination on Issue LU-11 above, they are unnecessary and inappropriate.

Issue LU-9: Whether Applicant adequately analyzed the risk of wildfires from operation of the proposed transmission lines, especially during “red flag” warning weather conditions and the impact the proposed transmission lines will have on Mr. Myers’ ability to use an aerial applicator on his farmland.

Limited party Sam Myers has standing on Issue LU-9 as a personal interest. In his submissions on this issue, Mr. Myers focused on the cost of farm practices related to wildfire risks and potential damage to soils caused by a catastrophic fire. Specifically, Mr. Myers asserts that Idaho Power’s draft Fire Prevention and Suppression Plan does not adequately address the risk of transmission line-related fires during Red Flag weather conditions and/or in extreme whirlwind events. He also contends that the Company lacks a mitigation plan to rehabilitate soils damaged in the event of a catastrophic fire. Myers Direct Test. at 1-5; Myers Closing Brief

¹⁸⁶ Ms. Gilbert proposed the following conditions for the first time in her Closing Brief on Issue LU-11:

1. Prior to the start of construction, all proposed final plans will be jointly developed with the impacted county staff. They will be provided [the] opportunity to make recommendations prior to the start of drafting and will be provided a justification if their recommendations are not implemented.
2. Prior to the start of construction, mitigation will be determined for impacts to agricultural landowners and a formal agreement signed to address issues of increased costs and mandatory changes in procedures as a result of the project.
3. Prior to the issuance of a site certificate the developer must establish the costs associated with the impacts the development will have on agricultural landowners, the procedural changes, and specify how those costs and changes will be mitigated for impacted farm owners.

Gilbert Closing Brief on Issue LU-11 at 26-28, 41.

at 1-12. In addition, in his Closing Brief, Mr. Myers questions the mitigation for any limitations that the proposed facility may have on his ability to use an aerial applicator on his farmland. Myers' Closing Brief at 13.

Red Flag Warnings and whirlwinds. Contrary to Mr. Myers' contentions, Idaho Power adequately analyzed the risk of project-related wildfire during Red Flag warning weather conditions. Although the proposed facility is not yet under construction, Idaho Power analyzed the potential fire risk zones along the proposed route in its 2022 Wildfire Mitigation Plan.¹⁸⁷ The Company's 2022 Wildfire Mitigation Plan specifically addresses Red Flag Warning concerns as a consideration in implementing the PSPS Plan.¹⁸⁸ The PSPS plan thoroughly addresses potential weather-related risks and details Idaho Power's plans for managing its operations to address those risks.¹⁸⁹

The evidence also demonstrates that the risk of a project-related fire is very low even during Red Flag Warning conditions and/or gusty wind conditions. As Idaho Power's expert witness Dr. Lautenberger explained, 500 kV transmission lines rarely ignite fires.¹⁹⁰ Moreover, occurrences of severe fire weather near the project site are less frequent than in places like Northern California, where the largest wildfires occurred. Offshore winds that drove many of the large-loss fires in California are not a concern in Eastern Oregon or Idaho.¹⁹¹ Therefore, even if Mr. Myers is correct that large dust devils occur in Morrow County, there is little risk they would interact with a transmission line to cause a fire. The distance between phases on the project's structures, the height of the structures and the soil type along the site boundary also decrease the likelihood that a dust devil would cause sparking and ignite a fire.¹⁹²

Fire impact on soils. Mr. Myers also raised the concern that a project-related catastrophic fire could cause significant damage to his soil. He asserts that Idaho Power should have "a plan in place for immediate soil rehabilitation and compensation." Myers Closing Brief at 12-13. As discussed above (and in more detail below in the context of Issues PS-4 and PS-10), the likelihood of a catastrophic project-related wildfire during operation is very low. Fires caused by 500kV transmission lines are exceedingly rare. Moreover, historically, wildfires in the area near Mr. Myers' agricultural operations have been relatively small and quickly contained. Given the improbability of a project-related wildfire disrupting Mr. Myers' agricultural operations, there is no need for Idaho Power have a soil rehabilitation plan in place for Mr. Myers' agricultural land.

¹⁸⁷ Dockter Sur-surrebuttal Test., Ex. B at 18-19.

¹⁸⁸ *Id.*, Ex. B at 76; Dockter Cross-Exam. Test., Tr. Day 3 at 22-23.

¹⁸⁹ Dockter Sur-surrebuttal, Ex. B at 65.

¹⁹⁰ Lautenberger Direct Test. at 46-54.

¹⁹¹ Lautenberger Rebuttal Test. at 53.

¹⁹² *Id.* at 55.

Furthermore, a preponderance of the evidence also demonstrates that, if a fire were to occur at or near Mr. Myers' agricultural operations, the fire would most likely result in minimal damage to soils. As Idaho Power's soil expert Mark Madison explained, the fuel source would be mostly herbaceous, grass and grain vegetation. The low-intensity fire would likely move quickly through the fields due to winds in that area, and low intensity, fast moving fires do not cause significant damage to soils.¹⁹³ Consequently, Mr. Myers' challenge to the proposed facility's compliance with the Land Use standard on this basis is unpersuasive.

Aerial application. Finally, Mr. Myers asserts that because the proposed transmission line limits landowners' ability to utilize aerial spraying, the facility violates the Land Use standard, and Idaho Power has yet to make any effort to compensate for this permanent impact to farming practices. Myers Closing Brief at 13-14. Contrary to Mr. Myers' contention, however, the Land Use standard does not require complete avoidance or the absence of impacts to accepted farm practices. Rather, as previously discussed, the applicable law simply requires a general reduction in the intensity and frequency of an impact.¹⁹⁴

In its Agricultural Lands Assessment, Idaho Power identified aerial agricultural operations as one of the accepted farm practices on surrounding farmlands that the project may impact. Idaho Power acknowledged that the presence of transmission lines prevents aerial access to crops directly beneath the lines, may potentially decrease crop yields, and may indirectly impede aerial application of chemicals to other portions of the field depending on orientation, wind direction, and other factors.¹⁹⁵ Idaho Power has committed to minimize potential impacts to aerial spraying by siting the transmission lines as much as possible along the edges of fields, existing roadways, or natural boundaries, rather than through existing fields, which will result in less risk to the applicator and more efficiency to the producer.¹⁹⁶ Through these actions, Idaho Power will reduce the intensity and frequency of impacts to farmlands, consistent with ORS 215.275(5).

As to Mr. Myers' farmland in particular, Idaho Power acknowledged that the proposed transmission line may impact Mr. Myers' ability to use aerial applications. As discussed above, the Company will attempt to reduce potential impacts to active agricultural fields through micro-siting facility components.¹⁹⁷ Moreover, although such negotiations are outside the Council's site certificate approval process, the Company will work with the landowner(s) to negotiate an easement for the right-of-way, and will minimize impacts to the extent practicable.

In sum, although the proposed project may impact Mr. Myers' agricultural operations, a

¹⁹³ Madison Rebuttal Test. at 92; *See also* Madison Rebuttal Ex. M.

¹⁹⁴ ORS 215.275(5); *see also* *Friends of Parrett Mountain v. NW. Nat. Gas Co.*, 336 Or 93, 115, (2003).

¹⁹⁵ Proposed Order, Attachment K-1, ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 8904-05 of 10016.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* page 8906 of 10016.

preponderance of the evidence demonstrates that Idaho Power sited the project in a manner that will generally reduce the intensity and frequency of impacts to farmlands, and that the Company will further minimize and mitigate the specific impacts to Mr. Myers' operations when negotiating an easement with him. Idaho Power has shown that the project complies with the Land Use standard notwithstanding the impact the project may have on Mr. Myers' farm practices.

Proposed site certificate conditions related to Issue LU-9:

In his Closing Brief, Mr. Myers proposed several site certificate conditions that he asserts are necessary to ensure compliance with the Land Use standard.¹⁹⁸ Because Mr. Myers did not submit these additional proposed conditions to the ALJ in a timely manner in accordance with the schedule set in the *Case Management Order*, the Department and Idaho Power had no opportunity during the evidentiary phase to respond to these proposals.¹⁹⁹ Accordingly, the ALJ declines to address these untimely proposed conditions in any detail, other than to note that, Mr. Myers has not presented evidence to support them and, based on the determination on Issue LU-9 above, the proposed conditions are neither necessary nor appropriate.

Ruling Idaho Power's Motion to Strike Portions of Mr. Myers' Closing Brief, Issue LU-9:

In its Response Brief, Idaho Power moves to strike or, in the alternative, give no weight to certain statements in Mr. Myers' Closing Brief on Issue LU-9. Idaho Power challenges statements that seek to raise an issue for which Mr. Myers was not granted limited party status and/or that rely on evidence not admitted into in the record of the contested case. Specifically,

¹⁹⁸ Mr. Myers proposed the following conditions in his February 28, 2022 Closing Brief:

- Towers must be constructed to withstand 150+ mph maximum wind load speeds.
- Towers built to the 500 kV standards but only operated at 230 kV voltages.
- The entire transmission line must be powered down (turned off) at a minimum from June 15 – July 15 each year. This allows wheat harvesting (and other dryland cropping) to proceed throughout Morrow County without any possibility of electric discharge events from occurring.
- The entire transmission line must be powered down (turned off) during any Red Flag Warnings issued where B2H traverses.
- IPC must classify the ground covered by the transmission line within Morrow County as a high-risk zone in its site plan.
- IPC must compensate financially landowners/tenants for any land use restrictions (ie: harvesting, aerial spraying, cropping limitations, etc.) both during construction and operation before final project certification is issued.
- IPC must agree to \$1000 per/acre paid to landowners/tenants for soil rehabilitation costs resulting from transition line fires.

Myers Closing Brief Issue LU-9 at 15-16.

¹⁹⁹ Because Mr. Myers did not submit the proposed site certificate conditions in accordance with the set schedule, the ALJ also declines to consider Ms. Gilbert's March 30, 2022 brief filed in support of Mr. Myers' proposed conditions.

Idaho Power moves to strike: (1) portions of Mr. Myers' brief referring to testimony in *Sunrise Powerlink Transmission Line*; (2) portions of the brief referring to an article by Wei Wei Zhaolin Gu; (3) portions of the brief referring to building codes and a building code website; (4) arguments not supported by evidence in the record; and (5) arguments outside the scope of Issue LU-9. Motion to Strike for Issue LU-9 at 4-7.

Because Mr. Myers did not timely offer testimony from the *Sunrise Powerlink* matter or the article by Zhaolin Gu into the hearing record, he may not rely on this evidence in his closing argument.²⁰⁰ Accordingly, gives these statements no weight. Although official notice may be taken of Oregon Building Code provisions, it is not clear from Mr. Myers' brief the provisions on which he seeks to rely. Furthermore, to the extent Mr. Myers raises concerns about suitable wind load design for transmission towers, that matter is outside the scope of the Land Use standard and Issue LU-9. Consequently, in accordance with Idaho Power's request, the ALJ gives no weight to arguments not supported by evidence in the record and/or arguments that are outside the scope of Issue LU-9.

Noise Control Rules

The General Standard of Review, OAR 345-022-0000(1)(b), mirrors the language in ORS 469.503(3). The rule requires that, to issue a cite certificate, the Council must determine that the preponderance of evidence on the record establishes that "the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility."

To that end, the Council has historically evaluated whether a proposed facility complies with, among other regulations, the Noise Control laws, set out in ORS 467.010 *et seq.* and OAR Chapter 340, Division 035.

ORS 467.010 sets out the legislative findings and policy behind the noise control laws:

The Legislative Assembly finds that the increasing incidence of noise emissions in this state at unreasonable levels is as much a threat to the environmental quality of life in this state and the health, safety and welfare of the people of this state as is pollution of the air and waters of this state. To provide protection of the health, safety and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions, it is hereby declared that the State of Oregon has an interest in the control of such pollution, and that a program of protection should be initiated. To carry out this purpose, it is desirable to centralize in the Environmental Quality Commission the authority to adopt reasonable statewide standards for noise emissions permitted within this state and to implement and enforce compliance with such standards.

²⁰⁰ *Second Amended List of Testimony and Exhibits* at 2 (noting that the B2H Project Record and documents listed in the Table of Additional Admitted Evidence are the only documents that the parties/limited parties may reference and/or rely upon in their closing briefs).

ORS 467.030 directs the Environmental Quality Commission (EQC) to adopt rules relating to noise control, and ORS 467.035 authorizes the EQC to adopt rules “exempt[ing] a class of activity within a category of noise emission sources from the application of a rule establishing maximum permissible levels of noise emission for that category of noise emission sources.” In determining whether to grant an exemption, ORS 467.035(2) directs the EQC to consider the following:

- (a) Protection of the health, safety and welfare of the citizens of this state;
- (b) Feasibility and cost of noise abatement; and
- (c) Past, present and projected patterns of land use and such state and local laws and regulations as are applicable thereto.

ORS 467.060 addresses variances and states in pertinent part:

(1) The Environmental Quality Commission by order may grant specific variances from the particular requirements of any rule or standard to such specific persons or class of persons or such specific noise emission source, upon such conditions as it may consider necessary to protect the public health, safety and welfare. The specific variance may be limited in duration. The commission shall grant a specific variance only if it finds that strict compliance with the rule or standard is inappropriate because:

- (a) Conditions exist that are beyond the control of the persons applying for the variance;
- (b) Special circumstances render strict compliance unreasonable, unduly burdensome or impractical due to special physical conditions or cause;
- (c) Strict compliance would result in substantial curtailment or closing down of a business, plant or operation; or
- (d) No other alternative facility or method of operating is yet available.

OAR 340-035-0035 sets out the DEQ’s Noise Control Regulations for Industry and Commerce. The rule provides, in pertinent part:

(1) Standards and Regulations:

* * * * *

(B) New Sources Located on Previously Unused Site:

- (i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit

the operation of that noise source *if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).*

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. * * *.

* * * * *

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

* * * * *

(6) Exceptions: Upon written request from the owner or controller of an industrial or commercial noise source, the Department may authorize exceptions to section (1) of this rule, pursuant to rule 340-035-0010, for:

(a) *Unusual and/or infrequent events*[.]

Emphasis added.

OAR 340-035-0010 states the exceptions to the DEQ's noise rules:

(1) Upon written request from the owner or controller of a noise source, the Department may authorize exceptions as specifically listed in these rules.

(2) In establishing exceptions, the Department shall consider the protection of health, safety, and welfare of Oregon citizens as well as the feasibility and cost of

noise abatement; the past, present, and future patterns of land use; the relative timing of land use changes; and other legal constraints. For those exceptions which it authorizes the Department shall specify the times during which the noise rules can be exceeded and the quantity and quality of the noise generated, and when appropriate shall specify the increments of progress of the noise source toward meeting the noise rules.

OAR 340-035-0100, addressing variances, parrots ORS 467.060, and provides:

(1) Conditions for Granting. The Commission may grant specific variances from the particular requirements of any rule, regulation, or order to such specific persons or class of persons or such specific noise source upon such conditions as it may deem necessary to protect the public health and welfare, if it finds that strict compliance with such rule, regulation, or order is inappropriate because of conditions beyond the control of the persons granted such variance or because of special circumstances which would render strict compliance unreasonable, or impractical due to special physical conditions or cause, or because strict compliance would result in substantial curtailment or closing down of a business, plant, or operation, or because no other alternative facility or method of handling is yet available. Such variances may be limited in time.

Identification of Noise Sensitive Properties – Issue NC-1

Issue NC-1: Whether the Department improperly modified/reduced the noise analysis area in Exhibit X from one mile of the proposed site boundary to ½ mile of the proposed site boundary and whether OAR 345-021-0010(1)(x)(E) requires notification to all owners of noise sensitive property within one mile of the site boundary.

Limited parties STOP B2H and Mr. Cooper have standing on Issue NC-1. STOP B2H filed testimony and closing arguments on this issue but Mr. Cooper did not submit testimony or argument. STOP B2H contends that the Department erred in modifying the requirements of OAR 345-021-0010(1)(x)(E)²⁰¹ to require that Idaho Power provide a list of NSR property owners within a half-mile (as opposed to one mile) of the site boundary. STOP B2H also argues that OAR 345-021-0010(1)(x)(E) requires Idaho Power to notify all NSR property owners and evaluate all NSRs within one mile of the site boundary and therefore the Department’s reduction of the identification area boundary violates due process rights created by the rule. STOP B2H Closing Argument at 3-5.

Modification of the requirements in OAR 345-021-0010(1)(x)(E). Both the Department and Idaho Power respond to STOP B2H’s first contention by asserting that OAR 345-021-0010(1) specifically authorizes the Department to modify the contents of the ASC in the project order to fit the circumstances of the proposed project. OAR 345-021-0010(1) states as follows:

²⁰¹ As previously noted, OAR 345-021-0010(1)(x)(E) states that the applicant “must include * * * [a] list of the names and addresses of all owners of noise sensitive property, as defined in OAR 340-035-0015, within one mile of the proposed site boundary.”

The project order described in OAR 345-015-0160(1) identifies the provisions of this rule applicable to the application for the proposed facility, *including any appropriate modifications to applicable provisions of this rule*. The applicant must include in its application for a site certificate information that addresses each provision of this rule *identified in the project order*.

Emphasis added.

The ALJ agrees that the Department's project order governs the application requirements applicable to the proposed facility and that the Council's rules authorize the Department to modify the provisions of OAR 345-021-0010(1). As a matter of law, the Department has the authority to modify the ASC requirements, including the authority to reduce the area referenced in OAR 345-021-0010(1)(x)(E) from one mile to one-half mile.

In its Response Brief, STOP B2H argues that although OAR 345-021-0000(4)²⁰² authorizes the Department to waive the requirements in OAR 345-021-0010 that are not applicable to the proposed facility, the Department may do so only when the applicant submits a written request for waiver or modification of the requirements. STOP B2H contends that there is no evidence in the record establishing that Idaho Power submitted such a request and no evidence of the Department's determination that the one mile requirement is not applicable, and therefore the Department acted outside its authority in modifying the requirements of OAR 345-021-0010(1)(x)(E). STOP B2H Response Brief at 2-3.

The ALJ disagrees with STOP B2H's contention that OAR 345-021-0000(4) serves to limit the Department's authority to modify the ASC content provisions. Rather, the ALJ finds that while OAR 345-021-0000(4) authorizes the Department to modify the requirements of OAR 345-021-0010 on an applicant's written request, the rule does not prohibit the Department from making appropriate modifications to the application contents in the project order on its own accord. ORS 469.330 requires the Department to "issue a project order establishing the statutes, administrative rules, council standards, local ordinances, application requirements and study requirements for the site certificate application." OAR 345-015-0160(1) directs the Department to send the applicant a project order establishing, among other things, "all application requirements in OAR 345-021-0010 applicable to the proposed facility." Thus, it is the project order that identifies the applicable provisions of the content rule, including any appropriate modifications to applicable provisions of the rule. OAR 345-021-0010(1).

The Department has the inherent authority to modify the provisions of OAR 345-021-0010(1) via the project order, including the requirements of subparagraph (1)(x)(E). The Department does not need to produce evidence of an applicant's written request for waiver or modification to justify the change. Moreover, the Department is not required to document its determination to waive or modify the application content requirements anywhere other than in

²⁰² OAR 345-021-0000(4) states: "If the applicant submits a written request for waiver or modification of requirements in OAR 345-021-0010 to the Department, the Department may waive or modify those requirements that the Department determines are not applicable to the proposed facility."

the project order.²⁰³ Consequently, in this matter, the Department lawfully reduced the property owner identification area in Exhibit X from one mile to one-half mile of the proposed site boundary.

Notification/analysis area. STOP B2H next contends that by modifying the ASC requirements, the Department also improperly reduced the project's NSR notification and/or analysis area to one-half mile from the project site boundary.²⁰⁴ However, as both the Department and Idaho Power correctly note, OAR 345-021-0010(1)(x)(E) does not establish notification requirements. All this provision requires is that the applicant provide a list of the names and addresses of all owners of noise sensitive property, which Idaho Power provided in ASC Exhibit X, Attachment X-7.²⁰⁵ The requirements for public notice of a proposed project are set out elsewhere in the Council's rules, including OAR 345-015-0110(1), OAR 345-015-0220 and OAR 345-021-0010(1)(f). Consequently, contrary to limited parties' contention, OAR 345-021-0010(1)(x)(E) does not address notice. OAR 345-021-0010(1)(x) does not require that the Department or Idaho Power provide notice of potential noise impacts to owners of noise sensitive properties within a mile of the proposed site boundary.

Similarly, OAR 345-021-0010(1)(x)(E) does not establish or define the noise analysis area. Rather, the Department established the minimum required analysis areas for potential impacts from the project in the project order (*see* Second Amended Project Order, Section IV, Table 2).²⁰⁶ In this instance, the Department acted well within its authority in setting the minimum required analysis area purposes of the Noise Control rules as the area within the site boundary and one-half mile from the site boundary, based on the linear nature of the proposed facility. The limited parties have not demonstrated any unlawful or erroneous action by the Department in this context.

Variance/Exception to the Noise Rules – Issue NC-2

Issue NC-2: Whether the Department erred in recommending that Council grant

²⁰³ In the Second Amended Project Order, with regard to Exhibit X, the Department states: "All paragraphs apply. However, *because of the linear nature of the proposed facility*, the requirements of paragraph E are modified." (Emphasis added.)

²⁰⁴ In the context of the Noise Control issues, STOP B2H presented testimony from Fuji Kreider asserting that Idaho Power's March 24, 2020 letter to landowners along the Mill Creek Route in Union County was misleading and "undermined the public participation in and the credibility of this entire process." Kreider Dec. on NC-1, 2, 3, 4 at 1. In its closing briefs STOP B2H asserts that this letter (which states, in part, that Idaho Power is pursuing the Morgan Lake Alternative instead of the Mill Creek Route) served to mislead property owners along the proposed Mill Creek Route into believing that they no longer needed to participate in the contested case process. STOP B2H Response at 4-5. The ALJ finds that STOP B2H's claims regarding Idaho Power's March 24, 2020 letter to landowners fall outside the scope of this contested case and outside the scope of the Noise Control issues in particular. Accordingly, the ALJ declines to further address this particular issue.

²⁰⁵ *See* ODOE - B2HAPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, page 334 of 371.

²⁰⁶ ODOE - B2HAPDoc15 ApASC Second Amended Project Order 2018-07-26, page 25 of 29.

a variance/exception from the Oregon DEQ's Noise Rules, OAR 340-035-0035, and whether the variance/exception is inconsistent with ORS 467.010.

Several limited parties have standing on this issue: STOP B2H, Ms. Gilbert, Ms. Gray, Mr. Horst, Ms. Cavinato, and Mr. Myers. In challenging the Department's recommendation that Council authorize a variance and/or exception to the Noise Control rules, the limited parties' argue that: (1) neither the Department nor the Council have the authority to grant a variance; (2) even if the Council could grant a variance, Idaho Power has not demonstrated that the project meets the requirements for the variance; (3) Idaho Power is not entitled to an exception because it has not demonstrated that noise exceedances would be unusual or infrequent and; (4) Idaho Power has not demonstrated that the project is consistent with the policy in ORS 467.010. *See* STOP B2H Closing Argument; Gilbert Closing Brief on Issue NC-2; STOP B2H Response Brief.

Authority to grant the variance. Limited parties argue that the Council lacks the authority to grant a variance under the Noise Rules because, by statute, that authority rests solely with the EQC. In response, the Department and Idaho Power assert that the Council has comprehensive authority over energy facility siting matters, including the authority to apply the DEQ noise rules, assess a proposed facility's compliance with noise standards, and where appropriate, authorize an exception and/or variance.

For the reasons that follow, the ALJ agrees the Council has the jurisdiction and authority to determine whether the proposed facility meets the requirements for an exception and/or a variance from the ambient antidegradation standard, and is not required to consult with the EQC or DEQ in making its determination. First, pursuant to ORS 469.310, the very purpose of the energy facility statutes is to establish "a *comprehensive system* for the siting, monitoring and regulating of the location, construction and operation of all energy facilities in this state." (Emphasis added.) Second, as specified in ORS 469.370(7), the Council must determine whether the proposed facility complies with "the standards adopted under ORS 469.501 *and any additional statutes, rules or local ordinances determined to be applicable to the facility by the project order, as amended.*" Emphasis added. As the Department notes, these statutes recognize that the energy facility siting process is essentially a "one-stop" permitting process because the Council's decision to approve an application binds other state agencies and local governments to the construction and operation of the facility.

Indeed, to that end, ORS 469.401 provides in pertinent part:

Subject to the conditions set forth in the site certificate or amended site certificate, any certificate or amended certificate signed by the chairperson of the council shall bind the state and all counties and cities and political subdivisions in this state as to the approval of the site and the construction and operation of the facility. After issuance of the site certificate or amended site certificate, any affected state agency, county, city and political subdivision shall, upon submission by the applicant of the proper applications and payment of the proper fees, but without hearings or other proceedings, promptly issue the permits, licenses and certificates addressed in the site certificate or amended site

certificate, subject only to conditions set forth in the site certificate or amended site certificate. * * * Each state or local government agency that issues a permit, license or certificate shall continue to exercise enforcement authority over the permit, license or certificate.

Taken together, these statutes establish the authority of the Department and the Council to evaluate whether a proposed facility complies with statutes, rules, and standards normally administered by other agencies, and that the Council's findings and determination of compliance is binding on those agencies. When assessing whether a proposed facility complies with the Noise Control rules, the Council need not obtain approval from, or consult with, the EQC or the DEQ. This is especially true since the EQC and the DEQ suspended their responsibilities for administering the noise program. As stated in OAR 340-035-0110:

[T]he Commission and the Department have suspended administration of the noise program, *including but not limited to processing requests for exceptions and variances*, reviewing plans, issuing certifications, forming advisory committees, and responding to complaints. Similarly, the public's obligations to submit plans or certifications to the Department are suspended.

(Emphasis added.)

Furthermore, as set out in the findings, when the DEQ suspended its responsibilities on noise control matters, the agency specifically contemplated that local governments and in some cases, other agencies, would take over enforcement. The DEQ also recognized that the Department and the Council would continue to review site certificate applications to ensure that proposed facilities meet the State noise requirements.²⁰⁷ Considering that the DEQ has lacked the ability to process requests for exceptions and variances to the noise standards for the last 30 plus years,²⁰⁸ it would be absurd to conclude that the Council lacks the authority to make findings and rule on an applicant's request for a variance and/or exception under ORS 467.060, OAR 340-035-0010 and OAR 340-035-0100.²⁰⁹

In short, the ALJ rejects limited parties' argument that the authority to administer the noise control program and grant a variance under ORS 467.060 and OAR 340-035-0100 rests with EQC and EQC alone. Based on the provisions of ORS Chapter 469, OAR 340-035-0110, the DEQ's interpretation of administration and enforcement authorities under the noise standards, past practice by the Council, and common sense, the ALJ finds that the Council has

²⁰⁷ Rowe Dec., Attachment 1.

²⁰⁸ The Oregon Legislative Assembly withdrew all funding for implementing and administering ORS Chapter 467 and the noise program in 1991. OAR 340-035-0110.

²⁰⁹ As the Department notes, the Council has previously recognized that it has the authority to consider a variance under ORS 467.060 and OAR 340-035-0100 if a proposed facility would not otherwise comply with the noise standards. *See In the Matter of the Request for Amendment #2 of the Site Certificate for the Stateline Wind Project*, EFSC Final Order on Amendment #2, June 6, 2003 at 100.

the authority to make findings and to approve a variance from (and/or exception to) the requirements of OAR 340-035-0035.

Basis for granting a variance. The limited parties next argue that even if the Council has authority to grant a variance, the variance is improper because the project does not meet any of the special circumstances described in ORS 467.060(1) and OAR 340-035-0100(1). STOP B2H Closing at 8-9.

In the Proposed Order, the Department set out the bases for its recommendations that the Council grant both a variance and an exception from the strict application of the DEQ's ambient antidegradation standard. With regard to Idaho Power's request for a variance, the Department found that, although an applicant only needs to establish one of the listed criteria in the rule, Idaho Power actually demonstrated multiple bases for the variance. Specifically, the Department found that the Company demonstrated that conditions where exceedances could occur along the transmission line would be beyond Idaho Power's control because the Company cannot be accountable for foul weather conditions that may cause audible corona noise.²¹⁰ The Department also found that other legal constraints involved in the siting process were beyond Idaho Power's control and constituted special circumstances rendering strict compliance with the ambient antidegradation standard unreasonable, unduly burdensome and impractical.²¹¹ Finally, the Department found that strict compliance would result in the substantial curtailment or closing down (never building) the proposed transmission line and that there is not another alternative facility available.²¹² Consequently, the Department concluded that strict compliance with the noise rules was inappropriate under all four criteria set out in the statute and rule. The Department recommended that the Council impose Recommended Noise Control Condition 5 granting a variance to compliance with the ambient antidegradation standard established in OAR 340-035-0035(1)(b)(B).²¹³

The limited parties present argument, but no persuasive evidence establishing that the Department erred in its evaluation of the requested variance and/or in its recommendation to the Council to grant the variance as set out in Recommended Noise Control Condition 5. The limited parties argue, in essence, that the project is not entitled to a variance because, on occasion, the project will exceed the ambient antidegradation standard at noise sensitive

²¹⁰ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 664 of 10016.

²¹¹ *Id.* at 664-66 of 10016.

²¹² *Id.* at 666 of 10016. The limited parties' claims that Idaho Power could have routed the transmission line to avoid exceedances or should have selected the BLM preferred route (*see, e.g.*, STOP B2H Closing Arguments at 5-2, 25) fall outside the scope of the Council's review. Moreover, routes that may have avoided NSRs presented other siting problems. As noted in the findings, in selecting the proposed and alternative route segments, Idaho Power needed to balance a myriad of competing constraints and opportunities in addition to avoiding potential exceedances at NSRs along the route. *See Stippel Rebuttal Test.* at 10-12.

²¹³ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 666-67 of 10016.

properties, especially along the Morgan Lake Alternative route. However, that is the very reason why the legislature created the variance in the first place – where special circumstances and physical conditions (such as those that exist with a linear energy facility) render strict compliance with the noise standards “inappropriate.” ORS 467.060(1). The Department’s findings, *i.e.*, that foul weather conditions are beyond Idaho Power’s control, that transmission lines are dispersed throughout a large area and common noise mitigation measures are not feasible, and that strict compliance would preclude the project from going forward, are supported by a preponderance of the evidence and justify the variance.

Basis for finding an exception. The limited parties also argue that the proposed facility is not entitled to an exception because foul weather is neither infrequent nor unusual in the region. STOP B2H Closing Argument at 7. In recommending that the Council exempt the proposed facility from the noise control standards, the Department found as follows:

Given that the policy [of the noise rules] is to protect citizens from excessive noise emissions which, under typical meteorological conditions for the region, is not expected from the proposed facility, it appears contrary not to consider foul weather events - the contributing factors of excessive noise emissions - unusual or infrequent under OAR 340-035-0035(6)(a). Therefore, based on the Department’s review, technical review and recommendations of its third-party consultant, Golder Associates, and the analysis presented above, the Department recommends Council find that exceedances of the ambient antidegradation standard during foul weather events would be infrequent or unusual under OAR 340-035-0035(6)(a) and that Council grant an exception to the proposed facility.

ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 652 of 10016.

The limited parties dispute the Department’s determination. The limited parties base their challenge to the approval of an exception on John Hector’s opinion that potential exceedances occurring 48 days per year “does not meet the criteria of unusual or infrequent.”²¹⁴ However, as both the Department and Idaho Power note, Mr. Hector’s focus on this data point is misguided because the potential exceedances would not occur throughout those 48 days, but rather for a small portion of the day. When all hours of the year are considered (8,760 hours versus 365 days per year), foul weather is predicted to occur only 1.3 percent of the time over the

²¹⁴ STOP B2H Direct Ex. 5 at 13. On this point, Mr. Hector, a retired professional engineer who managed DEQ’s noise control program between 1973 and 1986, reported as follows:

ODOE recommends an exception to the ambient degradation rule be allowed because the exceedance events would be “unusual or infrequent”. However, the proposed order indicates exceedances could occur 48 days per year. This does not meet the criteria of unusual or infrequent. Thus, the basis of the request appears to be flawed.

Id.

course of a year.²¹⁵ Moreover, Mr. Hector’s opinion has no context, no measurement criteria, nor any explanation as to what number or percentage of exceedances he would consider infrequent. Therefore, Mr. Hector’s assertion is not persuasive.

In summary, a preponderance of the evidence establishes that, because corona sound from the transmission line will result in occasional exceedances of the ambient antidegradation standard, strict compliance with the DEQ’s noise rules is not possible. However, because exceedances are only expected to occur during foul weather,²¹⁶ foul weather events are infrequent in the project area, and other circumstances need to occur simultaneously to result in an exceedance (*i.e.*, low ambient noise environment and transmission line operating at full capacity), the ALJ finds that exceedances along the transmission line will be an infrequent event (occurring less than 2 percent of the time). Even singling out the La Grande area, which has a higher frequency of foul weather conditions than Flagstaff Hill, Owyhee Ridge or Umatilla, Idaho Power’s modeling indicates that exceedances are predicted to occur only 2.66 percent of the time.²¹⁷ Furthermore, it is important to note that even during foul weather conditions, the proposed facility will not generate noise in excess of 50 dBA maximum allowable sound level for industrial sources.²¹⁸ For these reasons, the Department appropriately determined that the proposed facility is entitled to an exception under OAR 340-035-0035(6)(a).

Consistency with ORS 467.010. Finally, the limited parties contend that the proposed variance and/or exception to strict compliance with the noise rules is inconsistent with the provisions of ORS 467.010. As set out above, ORS 467.010 establishes the legislative policy behind the noise control rules, *i.e.*, “[t]o provide protection of the health, safety and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions.”

Contrary to the limited parties’ contentions, a preponderance of the evidence demonstrates that the proposed facility will not present a threat to the environmental quality of life in this state and the health, safety and welfare of the people of Oregon. As discussed above, in the Proposed Order, in its determination whether the proposed facility was entitled to a variance and/or exception to the noise rules, the Department specifically considered the factors

²¹⁵ ASC Exhibit X, at X-24, ODOE – B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, page 28 of 371.

²¹⁶ Although corona sound may occur in high humidity conditions, the sound level associated with humidity-caused corona sound is significantly quieter than corona triggered by rain or foul weather, and will not result in exceedances. Bastasch Rebuttal Test. at 82. Moreover, corona sound resulting from nicks, scratches, and debris are most likely to occur during the burn-in period, which is temporary and not regarded as “typical operations” that would serve as the basis for an “infrequency” definition. *Id.*, see also Miller Cross-Exam. Test., Tr. Day 1 at 37.

²¹⁷ See ASC Exhibit X, Table X-6, ODOE - B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, page 28 of 371.

²¹⁸ See ASC Exhibit X, Table X-5, ODOE - B2HAPPDoc3-41 ASC 24_Exhibit X_Noise_ASC 2018-09-28, pages 24-25 of 371.

set out in OAR 340-035-0010(2): protection of public health and safety, feasibility and cost of noise abatement, land use patterns and changes, and other legal constraints.

The Department found that by developing and implementing site-specific mitigation plans (Recommended Noise Control Condition 1) and developing and implementing a complaint response plan (Recommended Noise Control Condition 2), the construction and operation of the proposed facility would not preclude the protection of health, safety, and welfare of Oregon citizens otherwise afforded through compliance with DEQ's noise control regulation.²¹⁹ Moreover, the Department's and Idaho Power's proposed revisions and amendments to Noise Control Conditions 1 and 2 (discussed below in connection with Issue NC-4) provide further protections for owners and residents of NSRs near the project.

Based on the anticipated infrequent and minimal noise impacts and the site certificate conditions meant to protect the health and safety of nearby residents, a preponderance of the evidence establishes that the project is protective of human health. The record also demonstrates that, given the nature of the proposed facility, typical noise abatement technologies are not feasible.²²⁰ Additionally, as the Department appropriately found, future land use changes are unlikely to occur at or near the relevant NSRs and other legal constraints directed the placement of the proposed transmission line with respect to NSRs.²²¹

In short, the limited parties raised arguments, but have not provided any persuasive evidence to support their position that the Department erred in recommending that the Council grant the proposed facility a variance and/or exception. A preponderance of the evidence establishes that the Department's recommendations in this regard are consistent with the legislative policy established in ORS 467.010. The construction and operation of the proposed facility does not threaten the environmental quality of life in this state and the health, safety and welfare of the people of Oregon.

Ruling on Idaho Power's Motion to Strike Portions of Ms. Gilbert's Closing Argument on Issue NC-2:

Idaho Power moves to strike, or in the alternative asks that no weight be given to, statements in Ms. Gilbert's Closing Argument on Issue NC-2 that are not relevant to, and outside the scope of, this issue including her challenges to Idaho Power's methodologies for measuring baseline noise levels and potential exceedances. Motion to Strike, Issue NC-2 at 7.

The ALJ agrees that the challenged statements in Ms. Gilbert's Closing Brief are outside the scope of Issue NC-2. Issue NC-2 asks whether the Department erred in recommending that the Council grant a variance or exception to the Noise Control Rules. Issue NC-2 does not concern Idaho Power's methods for monitoring and measuring sound. Issues NC-3 and NC-6

²¹⁹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 655 of 10016.

²²⁰ *Id.* at page 656 of 10016.

²²¹ *Id.* at pages 656-61 of 10016.

involve challenges to Idaho Power's methodology, but Ms. Gilbert does not have standing on either of those issues. Accordingly, in resolving Issue NC-2, the ALJ gives no weight to the statements and arguments in Ms. Gilbert's brief that are not pertinent to the variance/exception question.

Ruling on Idaho Power's Motion to Strike Portions of Mr. Myers' Closing Argument on Issue NC-2:

Idaho Power moves to strike, or in the alternative asks that no weight be given to, statements in Mr. Myers' Closing Argument on Issue NC-2 that pertain to wildfire concerns and statements that rely on evidence that is not included in the evidentiary record in this contested case. Motion to Strike, Issue NC-2 at 7-8.

The ALJ agrees that the challenged statements in Mr. Myers' Closing Argument are outside the scope of Issue NC-2. As previously noted, Issue NC-2 asks whether the Department erred in recommending that the Council grant a variance or exception to the Noise Control Rules. Issue NC-2 does not concern the proposed project's potential to ignite wildfires. Accordingly, in resolving Issue NC-2, the ALJ gives no weight to the statements in Mr. Myers' brief that are not pertinent to the noise rules issue.

Methodology for the acoustical analysis – Issues NC-3 and NC-6

Issue NC-3: Whether the methodologies used for the noise analysis to evaluate compliance with OAR 340-035-0035 were appropriate and whether the ODOE erred in approving the methodology used to evaluate compliance with OAR 340-035-0035.

Limited party STOP B2H has standing on Issue NC-3. STOP B2H argues, in essence, that Idaho Power's methodology for measuring baseline ambient sound at NSRs was flawed and not appropriate for measuring the proposed facility's impacts to public health, safety, or welfare. Specifically, STOP B2H contends that: (1) MP 11 is not representative of the relevant NSRs; (2) Idaho Power's analysis did not account for conditions other than foul weather that can result in corona noise; and (3) the Department erred in approving Idaho Power's methodology and in approving an exception/variance for the entire transmission line, as opposed to particular NSRs. STOP B2H Closing Arguments at 10-15.

Both the Department and Idaho Power contend that Idaho Power's methodologies for assessing compliance with the Noise Control rules are appropriate and that the Department did not err in concurring with Idaho Power's noise analysis methods. For the reasons that follow, the ALJ also finds that Idaho Power's multi-step methodology is a reasonable and appropriate approach to evaluating the proposed facility's compliance with the Noise Control rules.

MP 11 as representative of NSRs in Union County. As noted above, STOP B2H challenges Idaho Power's choice to use MP 11 as representative of the NSRs along the Morgan Lake Alternative route. STOP B2H asserts that MP 11's proximity to I-84, Highway 30, and the Union Pacific train service means it is not representative of the quieter rural NSRs in Union

County near Morgan Lake. Based on witness testimony and Mr. Standlee's sound monitoring at Mr. Larkin's property near Morgan Lake, STOP B2H argues that Idaho Power should have assigned a much lower baseline sound level than 32 dBA to represent the NSRs along the Morgan Lake Alternative. STOP B2H Closing Argument at 11-12. STOP B2H also argues that Idaho Power's supplemental sound monitoring at MPs 100, 101, and 102 was compromised and also not representative of the baseline sound levels of NSRs near Morgan Lake. *Id.* at 12-14.

Idaho Power responds to these challenges to MP 11 by explaining that the sounds of passing trains at MP 11 are not likely to have influenced the calculation of the ambient sound level because train noise does not persist for at least 30 minutes out of each hour. Idaho Power also explains that even if there was an instance where a very long train or several trains passed close in time causing the noise spike to persist for 30 minutes or more, this would not impact the average ambient sound level. This unique sound spike would effectively be filtered out over the long-term (one month) sampling period, because the L_{50} is an average of all total hours.²²² Given this persuasive evidence, STOP B2H has not demonstrated that MP 11's proximity to train tracks distinguishes it from other NSRs in Union County and makes it an unsuitable proxy.

Furthermore, STOP B2H has not established its claim that Idaho Power's supplemental monitoring at MP 100, MP 101, MP 102 and MP 103 was faulty and/or not representative of the Morgan Lake NSRs. As set out in the findings, Idaho Power monitored and measured sound at these MPs for three weeks in October 2021.²²³ Idaho Power selected these monitoring points to represent NSRs nearer to Morgan Lake and, for MP 103, in the La Grande valley closer to I-84. Idaho Power used the same conservative approach used in its initial monitoring, and established the baseline noise levels based on the quiet late-night period of midnight to 5:00 a.m. with calm winds. In this supplemental monitoring, the mean L_{50} was 31 dBA at MP 100; 36 dBA at MP 101; 32 dBA at MP 102; and 43 dBA at MP 103.²²⁴ The one decibel difference between MP 100 and MP 11 (31 dBA vs 32 dBA) is so subtle that it is not perceivable by the human ear.²²⁵ Consequently, the sound levels measured at MP 100 do not invalidate Idaho Power's initial selection of MP 11, nor should the supplemental monitoring results impact or alter the Council's evaluation of the proposed facility's compliance with the Noise Rules.²²⁶ Rather, the results of

²²² Bastasch Rebuttal Test. at 61-63; *see also* Bastasch Cross-Exam. Test., Tr. Day 1 at 124-25.

²²³ STOP B2H faults Idaho Power for not re-monitoring ambient sound at MP 11 in its supplemental monitoring in 2021. *See* STOP B2H Surrebuttal Exhibit A. However, the purpose of this supplemental monitoring was to collect data at positions that were closer to the NSRs along the proposed routes in Union County and not to verify the results of the prior monitoring at MP 11. Bastasch Cross-Exam. Test., Tr. Day 1 at 70-71. Therefore, there was no reason for Idaho Power to re-monitor the sound levels at MP 11.

²²⁴ Bastasch Sur-surrebuttal Test Ex. I; Bastasch Cross-Exam. Test., Tr. Day 1 at 58-60.

²²⁵ Bastasch Cross-Exam. Test., Tr. Day 1 at 65.

²²⁶ As Idaho Power notes, even if the Company's initial selection of MP 11 was not reasonable, the relevant question still remains whether the 32 dBA ambient sound level that Idaho Power used to determine exceedances in the Morgan Lake area (for NSRs along both the Mill Creek and Morgan Lake Alternative routes) was in fact representative. Given the results of Idaho Power's supplemental

the supplemental monitoring serve to confirm that the 32 dBA ambient baseline measured at MP 11 is fairly representative of other NSRs in Union County.²²⁷

Mr. Standlee's monitoring at Mr. Larkin's residence is not persuasive evidence that the ambient sound levels at NSRs in the vicinity of Morgan Lake are likely 10 to 12 decibels lower than the 32 dBA measured at MP 11 (or the 31 dBA measured at MP 100). As Mr. Standlee conceded in his Surrebuttal Report (STOP B2H Surrebuttal Exhibit A at 7), the results from one night of measurements at the residence should not be used to determine representative ambient noise levels for the residence. Simply stated, the dataset from the Larkin residence is simply too small to prove anything with regard to the average ambient sound levels for NSRs along the Mill Creek or the Morgan Lake Alternative routes. Similarly, the data from the Larkin residence does not establish that Idaho Power's methodology for determining average ambient sound levels was flawed or otherwise inappropriate.

In its Closing Arguments, Idaho Power noted that because MP 100 is significantly closer to the Morgan Lake Alternative than MP 11, it is appropriate to use the MP 11 ambient sound level (31 dBA) to calculate exceedances for the NSRs along the Morgan Lake Alternative. Accordingly, Idaho Power proposed revising Recommended Noise Control Condition 1 to include the two additional potential exceedances (at NSR 118 and NSR 132), thereby requiring the Company to work with the property owners for appropriate mitigation. Idaho Power Closing Arguments, Issues NC-1, NC-2, NC-4 and NC-6 at 87-88. The ALJ accepts Idaho Power's proposal and, as discussed below, recommends revising Recommended Noise Control Condition 1 accordingly.

Other causes of corona noise. In its Closing Argument, STOP B2H also asserts that Idaho Power's analysis of frequency of exceedances did not account for other conditions that can create corona noise, such as fog, snow, humidity, condensation and physical issues, such as nicks, scrapes and debris on the conductors. STOP B2H Closing at 14-15.

As discussed above in connection with Issue NC-2, Idaho Power has acknowledged that corona noise can result from other conditions. However, a preponderance of the evidence also

monitoring (with results ranging from 31 dBA at MP 100 to 45 dBA at MP 103) a preponderance of the evidence demonstrates that Idaho Power's use of 32 dBA was reasonable and fairly representative of the NSRs in the Morgan Lake area. Furthermore, even when the ambient sound level is assumed to be 31 dBA for all NSRs in the area of Morgan Lake, the analysis results in only two more exceedances at residential NSRs along the Morgan Lake Alternative (NSR 119 and 132), and no additional exceedances along the Mill Creek Route. Bastasch Sur-surrebuttal Ex. B at 3-4; Bastasch Cross-Exam. Test., Tr. Day 1 at 62.

²²⁷ STOP B2H's claims that MP 100 is windier than other NSRs along the Morgan Lake Alternative and therefore not representative of the other NSRs are unsupported by evidence and not persuasive. Also not persuasive are STOP B2H's claims that Idaho Power's supplemental monitoring results may be invalid because of data gaps at certain locations from when the monitoring equipment temporarily shut down due to a loss of solar battery power. As Mr. Bastasch testified, there is no reason to believe these data gaps would influence the sound levels recorded late at night on subsequent dates. See Bastasch Cross-Exam. Test., Tr. Day 1 at 58.

establishes that corona noise from other weather conditions (such as humidity) is significantly less than corona noise caused by precipitation, and will not result in exceedances of the ambient antidegradation standard. Additionally, corona sounds that result from nicks, scratches, or debris would be a temporary issue, not regarded as typical operations and, after the burn-in period, promptly remedied with maintenance.²²⁸ Therefore, STOP B2H has not demonstrated that Idaho Power's noise analysis underestimated the number of, or potential for, exceedances of the ambient antidegradation standard.

Variance/Exception for the entire project. Finally, STOP B2H contends that the Department erred in approving Idaho Power's methodology and the request for a variance/exception for the entire line, as opposed to specified NSRs where exceedances are anticipated. STOP B2H Closing at 15-16.

On this first point, STOP B2H has presented no persuasive evidence or argument to establish that Idaho Power's methodology for assessing noise impacts was flawed or invalid, and no persuasive evidence that the Department erred or exceeded its authority in approving Idaho Power's sound measurement procedures. Indeed, OAR 340-035-0035(3)(a) expressly authorizes the reviewing agency to approve sound measurement procedures and, as explained in the Proposed Order, the Department and its noise consultants (Golder Associates) appropriately vetted and concurred with Idaho Power's methodology.²²⁹

Similarly, on the second point, STOP B2H provided no persuasive evidence or argument that the Department erred in recommending that the Council grant an exception from compliance with the ambient antidegradation standard for the entire line. As discussed in the Proposed Order, the ambient degradation standard does not address the difference between a non-linear or linear facility. However, the Council should acknowledge those differences in its evaluation of the project's compliance with the noise rules. In the Proposed Order, the Department acknowledged the extent of exceedances predicted to occur in each of the five counties crossed by the proposed facility, including alternate segments. The Department concurred with Idaho Power's request to interpret the ambient antidegradation standard under OAR 340-035-0035(1)(b)(B)(i) as applying to the transmission line as the noise source, where identified NSRs represent the appropriate measurement points for which to determine overall compliance of the transmission line.²³⁰ This is a much more practical approach than evaluating the request for an exception at each of the more than 40 identified NSR locations where exceedances could potentially occur.

In summary, a preponderance of the evidence establishes that Idaho Power's methodologies for evaluating compliance with OAR 340-035-0035 were appropriate and the Department did not err in approving Idaho Power's methodology.

²²⁸ See Bastasch Rebuttal Test. at 43.

²²⁹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 634-635 of 10016.

²³⁰ *Id.* at page 650 of 10016.

STOP B2H proposed site certificate conditions related to Issue NC-3:

STOP B2H proposed that Idaho Power be required to conduct new baseline sound measurements to determine the extent of potential exceedances of the ambient antidegradation standard. *See* STOP B2H Proposed Site Conditions at 1, 3. Both the Department and Idaho Power object to this proposal as unnecessary.

The ALJ agrees with the Department and Idaho Power that a new baseline study is unnecessary. As discussed above, a preponderance of the evidence establishes that Idaho Power's methodology was appropriate and that the original and supplemental monitoring adequately represents the baseline ambient sound levels. Consequently, STOP B2H's proposed condition is rejected.

Issue NC-6: Whether Applicant's methodology to assess baseline noise levels reflect reasonable baseline noise estimates for residents of the Morgan Lake area.

Limited party Dianne Gray has standing on Issue NC-6. Like STOP B2H's arguments under issue NC-3, Ms. Gray contends that MP 11 is not representative of the NSRs near Morgan Lake, and that Idaho Power erred in using 32 dBA as its baseline ambient sound level for the Union County NSRs. Specifically, Ms. Gray asserts that measurements taken at MP 11 in 2012 should not apply to Morgan Lake area properties in 2021; that highway and train traffic near MP 11 influenced the L₅₀ measurement at that location; and that Idaho Power's supplemental monitoring sites (MPs 100, 101, 102 and 103) are not reliable or representative of Morgan Lake NSRs. Gray Closing Brief at 12-13; Gray Response Brief at 2-4.

As discussed above, a preponderance of the evidence establishes that Idaho Power's methodology for assessing baseline noise levels was appropriate and allowable under OAR 340-035-0035(3). In addition, a preponderance of the evidence establishes that Idaho Power's initial use of MP 11 (and the baseline ambient sound level of 32 dBA), as well as its supplemental consideration of MP 100 (and the baseline ambient sound level of 31 dBA) are reasonably representative of the NSRs near Morgan Lake.

Ms. Gray presents no persuasive evidence to support her assertion that measurements taken at MP 11 in 2012 should not apply to Morgan Lake area properties. On the other hand, Idaho Power has shown through its supplemental monitoring at MPs 100, 101, 102, and 103, that the measurements taken at MP 11 in 2012 are fairly representative of the NSRs near Morgan Lake. Second, Ms. Gray presents argument, but no persuasive evidence that highway and train traffic near MP 11 affected the L₅₀ noise level at that location. As discussed above in connection with Issue NC-3, the sounds of passing trains at MP 11 are not likely to have influenced the calculation of the ambient sound level because train noise does not persist for at least 30 minutes out of each hour. Furthermore, to the extent that Ms. Gray challenges Idaho Power's use of the L₅₀ standard, this statistical noise level is specifically authorized in OAR 340-035-0035 to determine exceedances of the antidegradation standard.

Finally, Ms. Gray presents no persuasive evidence to support her contention that the

results of Idaho Power's supplemental monitoring are unreliable or not representative of NSRs near Morgan Lake. For the same reasons discussed above in connection with Issue NC-3, the ALJ finds that the supplemental monitoring results serve to confirm Idaho Power's use of 32 dBA (or 31 dBA) as the ambient baseline noise level for NSRs near Morgan Lake.

Gray proposed site certificate conditions related to Issue NC-6:

In her Closing Brief, Ms. Gray proposed three site certificate conditions related to Issue NC-6.²³¹ However, because Ms. Gray did not submit these proposed conditions in connection with her direct testimony and in accordance with the schedule set by the ALJ in the *Case Management Order*, the Department and Idaho Power had no opportunity during the contested case hearing to present evidence in response. Because Ms. Gray did not offer these proposed conditions in a timely manner, the ALJ declines to address them.

Sufficiency of proposed mitigation – Issue NC-4

Issue NC-4: Whether the mitigation/proposed site conditions adequately protect the public health, safety and welfare.

STOP B2H has standing on Issue NC-4. On this issue, STOP B2H asserts that, in the event the site certificate is approved, the Recommended Noise Control Conditions in the Proposed Order do not go far enough to protect the public health, safety, and welfare from project-related noise. Specifically, STOP B2H contends that, as set out in the Proposed Order, Recommended Noise Control Condition 1 does not adequately protect potentially impacted NSRs or the people who reside on those properties. STOP B2H asks Idaho Power's obligation to work with all owners of NSRs where exceedances are predicted be expanded to include notification to all NSR property owners within one mile of the proposed facility. STOP B2H also requests that Idaho Power be required to update the list of NSRs in Attachment X-7. STOP B2H Closing Argument at 17-18. Additionally, STOP B2H requests revisions to Recommended Noise Control Condition 2 to improve the noise complaint procedure and response plan and revisions to Noise Control Condition 3 to include additional mitigation measures. *Id.* at 19-20.

In their respective Closing and Response briefs, both the Department and Idaho Power proposed revisions to the Recommended Noise Control Conditions incorporating many of STOP B2H's suggestions and clarifying Idaho Power's obligations for working with NSR property owners, implementing mitigation measures, and addressing noise complaints. In its Response Brief, STOP B2H also proposed revisions to each Noise Control Condition. To the extent that the revisions proposed in STOP B2H's Response Brief are consistent with the proposals set out in STOP B2H's Proposed Site Conditions (filed September 17, 2021), they are addressed below. However, to the extent that STOP B2H proposes new conditions and provisions, the ALJ declines to address them because they are untimely and the Department and Idaho Power did not

²³¹ In her Closing Brief, Ms. Gray proposed that Idaho Power be required to: (1) monitor every NSR where exceedances could occur; (2) provide more detailed information about the NSRs along the proposed route(s); and (3) offer noise mitigation measures (home retro-fits and window treatments) to all NSRs regardless of predicted exceedances at the location. Gray Closing Brief at 13-15.

have any opportunity to respond.

As for Issue NC-4, a preponderance of the evidence establishes that the proposed mitigation measures and the Recommended Noise Control Conditions (as amended in the section below) adequately protect the public health, safety, and welfare.

Proposed revisions to Recommended Noise Control Conditions:

Noise Control Condition 1. In its rebuttal testimony, Idaho Power proposed revisions to Recommended Noise Condition 1 to address limited parties' concerns regarding mitigation for corona noise impacts.²³² In its Closing Brief, the Department agreed that setting out the specific mitigation measures would improve Noise Control Condition 1, as would clarifying the timeline for mitigation and incorporating a dispute resolution process. The Department proposed revisions to the condition to address these concerns. ODOE Closing Brief at 112-13. In its Response Brief, Idaho Power agreed with the Department's proposals and added provisions to clarify Idaho Power's mitigation obligations. Idaho Power proposed that, as a condition of the granting of the variance and exceedance, the Company be required to offer mitigation measures to minimize the impacts of those exceedances, including exceedances that are currently predicted and new exceedances that might be established through the complaint procedure contained in Noise Control Condition 2. Idaho Power's Response at 59. In its Response Brief, STOP B2H recommended adding detail to the notice requirement and removing some specific remedies to preserve flexibility. STOP B2H Response at 24-26.

Based on the Department's and Idaho Power's stipulations, the ALJ recommends that Noise Control Condition 1 state as follows:

Amended Recommended Noise Control Condition 1:

Prior to construction, the certificate holder will **initiate discussions** with the following 41 NSR property owners at which it has estimated exceedances of the ambient antidegradation standard may occur identified in Attachment X-5 and/or Attachment X-4 of the Final Order on the ASC (NSR: 8, 9, 10, 11, 5002, 69, 70, 5004, 46, **118**, 125, 5010, 5011, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 518, 111, 112, **132**, 133, 5008, 5009, 113, and 115) to develop mutually agreed upon Noise Exceedance Mitigation Plans, specific to each NSR location. The site-specific Noise Exceedance Mitigation Plans will include agreed upon measures that would be implemented at the NSR location to minimize or mitigate the ambient antidegradation standard noise exceedance.

a. If the certificate holder and the NSR property owner **agree upon a specific Noise Mitigation Plan**, the certificate holder will submit a signed acknowledgement from the property owner to the Department for its records.

²³² Bastasch Rebuttal Test. at 55-56.

b. If an agreement between certificate holder and NSR property owner is not obtained, the certificate holder shall concurrently notify the Department and NSR property owner of the dispute and of Council review of the dispute to occur at the next regularly scheduled Council meeting, to the extent possible, from the date of the certificate holder's notice. The notice shall explain that the NSR property owner will be given an opportunity to provide comments to the Council on the dispute, unless the Council Chair defers the dispute review to the Department. Review of the dispute will be based on the information per sub(i) below, and any other relevant facts provided by the NSR property owner and will result in a determination of the appropriate mitigation measure(s), proportional to the facility operational noise levels in excess of the ambient degradation standard, as determined to occur at the NSR property. The Council or Department's determination of appropriate mitigation is not binding on the NSR property owner or certificate holder if the NSR property owner opts not to accept the mitigation.

i. At the time of issuance of the notice per (b) above, certificate holder will submit to the Department: (1) the mitigation measures it offered the NSR property owner, the mitigation measures that the NSR property owner requested and an explanation of the dispute; (2) a list of the dates that the certificate holder communicated with, or attempted to communicate with, the NSR property owners; and (3) the names, addresses, and phone numbers of the NSR owners.

c. In working with NSR property owners under this condition, certificate holder will propose corona-noise mitigation of installation of sound-attenuating windows for residential structures as follows:

i. For NSRs where an 11 to 14 dBA sound level increase above ambient noise levels are expected, certificate holder will purchase and install sound attenuating windows with an STC rating of 25-40.

ii. For NSRs where a 15 dBA or greater sound level increase is expected, certificate holder will purchase and install sound attenuating windows with an STC rating of above 40.

iii. If an owner of an NSR where an 11 dBA or greater sound level increase is expected provides a letter from a health care provider indicating that health care provider's belief that the owner has a health condition that is exacerbated by increased sound levels, upon request, certificate holder will purchase and install sound attenuating windows with an STC rating of over 40 and would work with the NSR property owner to consider other mitigation options, as appropriate. During landowner consultations required under this condition, the certificate holder will specifically ask each landowner whether that landowner has a health condition that the landowner believes is

exacerbated by elevated sound levels.

iv. At the request of an NSR property owner, certificate holder will offer alternative mitigation proposals, such as performing air-sealing of the NSR residence, planting trees, or installing insulation.

d. Prior to operation, the certificate holder will implement the mitigation measures agreed upon with the NSR property owners and/or as determined by EFSC or the Department to be the appropriate mitigation measures.

Noise Control Condition 2. In its Closing Argument, the Department proposed extensive revisions to Recommended Noise Control Condition 2 to set out the processes for addressing complaints. ODOE Closing Brief at 116-18. In its Response Brief, Idaho Power agreed with the Department's proposals, and proposed further revisions for clarification (in part to implement STOP B2H's requests) and to ensure consistency with the other Noise Control conditions. In its Response Brief, STOP B2H also proposed changes to streamline the notification and complaint processes. STOP B2H Response at 27-30.

Based on the parties' stipulations, Noise Control Condition 2 should state as follows:

Amended Recommended Noise Control Condition 2:²³³

a. After the Site Certificate has been issued and before landowner consultations contemplated in Condition 1, the certificate holder will prepare a new version of Attachment X-7, which will update landowner information and correct any errors (Updated Attachment X-7). The certificate holder will send notices to all landowners listed in Updated Attachment X-7, which notice shall inform the recipient: (a) that the recipient is the owner of an NSR; and (b) the requirements of Noise Control Conditions 1 and 2 as adopted by the Council. In addition, prior to construction, the certificate holder shall develop and submit to the Department an operational noise complaint response plan.

b. The plan shall specify that it is intended to address complaints filed by persons falling into one of the following categories: (1) the owner of an NSR property identified in Noise Control Condition 1, and for whom has received mitigation under Noise Control Condition 1, but who believes that exceedances (as measured at their NSR property) are occurring in a manner not otherwise allowed under Noise Control Condition 4 or Noise Control Condition 5; or (2) An owner of an NSR property within one mile of the site boundary who was not identified under Noise Control Condition 1 and who has not received mitigation from the certificate holder, but who nevertheless believes that

²³³ Given the Department's extensive revisions to this condition in its Closing Brief and Idaho Power's concurrence with those revisions, the Department's revisions are in normal font and Idaho Power's subsequent changes (as set out in the Response Brief) are in bold.

exceedances above the ambient degradation standard have occurred at their NSR property.

c. The plan shall include the following: Scope of the complaint response plan, including process for complaint filing, receipt, review and response. The scope shall clearly describe how affected persons will be provided necessary information for filing a complaint and receiving a response, **and will specify the information that the complainant must include in its complaint, including the date the certificate holder received the complaint, the nature of the complaint, weather conditions of the date for which the complaint is based (including wind speed, temperature, relative humidity, and precipitation), duration of perceived noise issue, the complainant's contact information, and the location of the affected property.**

d. The plan shall require that the certificate holder notify the Department within three working days of receiving a noise complaint related to the facility. The notification shall include the date the certificate holder received the complaint, the nature of the complaint, weather conditions of the date for which the complaint is based (including wind speed, temperature, relative humidity, and precipitation) as described by the complainant, duration of perceived noise issue, the complainant's contact information, the location of the affected property, and a schedule of any actions taken or planned to be taken by the certificate holder (including inspection and maintenance actions, or actions taken or planned to be taken pursuant to the processes described in subsection (e) of this condition).

e. The plan shall identify the following process if a noise complaint is received:

i. The certificate holder shall assess possible causes of the corona noise. If the complaint is received within the first 12 months of operation, the certificate holder will assess whether the corona noise is typical of noise that occurs during the transmission line "burn in period" (the first 12 months of operation) and ensure that it **already** has taken appropriate measures near that NSR to minimize corona noise that may occur during the burn in period (e.g., use conductors with a nonspecular finish/sandblasting of conductors to make them less reflective and clean them of manufacturing oils, protect the conductors to minimize scratching and nicking during construction). **If the exceedance occurs during the burn-in period, and if the certificate holder complies with the requirements of this condition, then the certificate holder will not be found to be in violation of its site certificate because of the exceedance.**

ii. If it is determined the corona noise is not typical burn in period noise, the certificate holder will assess whether the noise exceeds the ambient antidegradation standard in a manner not otherwise allowed under Noise Control Condition 4 or Noise Control Condition 5. If the complainant's noise sensitive property or properties are included in Attachment X-5 of

the Final Order on the ASC, the modeled sound level increases as presented in Attachment X-4 of the Final Order on the ASC may be relied upon to determine whether the corona noise exceeds the ambient antidegradation standard, unless the complainant voluntarily provides alternative noise data.

iii. If the complainant's NSR property or properties are not included in Attachment X-5 of the Final Order on the ASC, the certificate holder shall model the sound level increases using the methods set forth in ASC Exhibit X, unless the complainant voluntarily provides alternative noise data.

iv. If the complainant voluntarily provides alternative noise data and the data suggests an exceedance that had not previously been identified and mitigated, and/or an exceedance not otherwise allowed under Noise Control Condition 4 or Noise Control Condition 5, the complaint shall be verified through site specific sound monitoring conducted by an Oregon registered Professional Engineer, Board Certified by the Institute of Noise Control Engineering noise specialist, employed or contracted by the certificate holder, in accordance with NPCS-1 unless otherwise approved by the Department. If site specific sound monitoring is not authorized by the complainant, the certificate holder's modeling results may be relied upon to determine compliance.

v. In the event of a dispute regarding complainant's noise data and the certificate holder's data from site specific sound monitoring, certificate holder shall request that EFSC, in consultation with the Department's noise consultant, if necessary, make the final determination regarding which data will be used to determine whether corona noise exceeds the ambient antidegradation standard and/or in a manner not allowed under Noise Control Condition 4 or Noise Control Condition 5. The EFSC Chair may direct the Department to make this determination.

f. The plan shall specify that, if it is determined pursuant to the process described in subsection (e) of this condition that corona noise at the complainant's NSR property exceeds the ambient antidegradation standard in a manner not allowed under Noise Control Condition 4 or Noise Control Condition 5, and/or exceeds the ambient antidegradation standard at an NSR property that had not previously been predicted to experience exceedances under Noise Control Condition 1, the certificate holder shall work with the NSR property owner to develop a mutually agreed upon mitigation plan to include agreed upon measures that would be implemented at the NSR location to minimize or mitigate the ambient antidegradation standard noise exceedance. **To be clear, the fact that the certificate holder has received an exception or variance under Noise Control Conditions 4 and 5 does not excuse the certificate holder from providing mitigation under this condition.**

i. If the NSR property was identified in Noise Control Condition 1 and has previously received mitigation by the certificate holder, and if it has been determined that the NSR property experiences exceedances not allowed under Noise Control Condition 4 or Noise Control Condition 5, the certificate holder will work with the complainant to identify supplemental mitigation measures, which may include any of the measures discussed in **Noise Control Condition 1** or the ASC, or other measures requested by the complainant.

ii. If the NSR property was not identified in Noise Control Condition 1 and has not been provided with mitigation by the certificate holder, certificate holder will work with the NSR property owner to identify appropriate mitigation measures, which may include any of the measures discussed in **Noise Control Condition 1** or the ASC, or other measures requested by the landowner.

iii. If, through the efforts described above, the certificate holder executes an agreement with the NSR property owner, the certificate holder will submit a signed acknowledgement from the property owner to the Department for its records. If an agreement between certificate holder and NSR property owner is not obtained, the certificate holder shall concurrently notify the Department and NSR property owner of the dispute and of Council review of the dispute to occur at the next regularly scheduled Council meeting, to the extent possible, from the date of the certificate holder's notice. The notice shall explain that the NSR property owner will be given an opportunity to provide comments to the Council on the dispute, unless the Council defers the dispute review to the Department. Review of the dispute will be based on the information per (iv) below, and any other relevant facts provided by the NSR property owner and will result in a determination of the appropriate mitigation measure(s), proportional to the facility operational noise levels in excess of the ambient degradation standard, as determined to occur at the NSR property. The Council or Department's determination of appropriate mitigation is not binding on the NSR property owner or certificate holder if NSR property owner opts not to accept the mitigation.

iv. At the time of issuance of the notice per (iii) above, certificate holder will submit to the Department: (1) the mitigation measures it offered the NSR property owner, the mitigation measures that the NSR property owner requested and an explanation of the dispute; (2) a list of the dates that the certificate holder communicated with, or attempted to communicate with, the NSR property owners; and (3) the names, addresses, and phone numbers of the NSR owners.

g. The certificate holder shall provide necessary information to the complainant to

support understanding of corona noise, corona noise levels and effects, and of the process to verify actual noise levels of events resulting in complaints. If the complainant opts not to authorize the certificate holder to conduct monitoring, and it is otherwise determined pursuant to the process described in subsection (e) of this condition that corona noise does not exceed the ambient antidegradation standard, the noise complaint shall be considered fully resolved and no mitigation shall be required.

Noise Control Condition 3. Neither the Department nor Idaho Power proposed revisions to Recommended Noise Condition 3. However, STOP B2H has proposed new language clarifying mitigation measures and requiring that Idaho Power “inspect, monitor, and implement necessary maintenance throughout the operational life of the project.” STOP B2H Response at 32. In addition, STOP B2H proposed a new provision requiring that Idaho Power develop a monitoring plan for corona noise on a periodic basis for the life of the project and update noise mitigation measures as new technologies are developed. STOP B2H Response at 32-33.

The Department and Idaho Power contend that these proposed revisions/additions are unnecessary, and the ALJ agrees. Recommended Noise Control Condition 3 already requires Idaho Power to use a triple bundled conductor configuration and to protect the conductor surface to minimize scratching or nicking.²³⁴ Other recommended site certificate conditions (*e.g.*, Recommended Organizational Expertise Condition 1, addressing the Transmission Maintenance Inspection Plan)²³⁵ already require Idaho Power to inspect, monitor, and maintain the facility. Therefore, it is not necessary to add this requirement to Noise Control Condition 3. Furthermore, given the recommended revisions to Noise Control Condition 1 (noise mitigation plans) and Noise Control Condition 2 (noise complaint response plan) discussed above, and considering that exceedances of the antidegradation standard are predicted to occur only infrequently, the ALJ finds it unnecessary to require Idaho Power to monitor for corona noise at key NSRs on a periodic basis for the life of the project. For these reasons, the ALJ declines to adopt STOP B2H’s proposed revisions to Noise Control Condition 3.

Noise Control Condition 4. In its Closing Brief, the Department also proposed revisions to Noise Control Conditions 4 and 5 to clarify terms relating to the granting of the variance and the exception to the ambient antidegradation standard. ODOE Closing Brief at 101-102. In its Response Brief, Idaho Power concurred with the proposed revisions to Noise Control Condition 4 (granting an exception). Idaho Power also agreed the proposed revisions to Noise Control Condition 5 (granting a variance) with the clarification that the Company would not be in violation of the site certificate for exceedances during the burn-in period, as long as the Company is otherwise in compliance with Noise Control Condition 2. Idaho Power Response Brief at 28-29.

Based on the parties’ stipulation, the ALJ recommends that Noise Control Condition 4 be revised to state as follows:

²³⁴ ODOE - B2HAPPDoc2-1 Proposed Order on ASC w Hyperlink Attachments 2019-07-02, page 656 of 699.

²³⁵ *Id.* at page 71 of 699.

Amended Recommended Noise Control Condition 4:

During operation:

a. **Pursuant to OAR 340-035-0010**, an exception to compliance with the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) (which prohibits an increase of more than 10 dBA above ambient sound pressure levels) is granted during facility operation **when there is foul weather (a rain rate of 0.8 to 5 millimeters per hour), which Council finds constitutes an infrequent event** under OAR 340-035-0035(6)(a).

b. The ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) may be exceeded by the transmission line at any time of day or night during foul weather events (**defined as a rain rate of 0.8 to 5 millimeters per hour**). [OAR 340-035-0010(2)]

c. The quantity and quality of noise generated in exceedance of the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B), during foul weather events (**defined as a rain rate of 0.8 to 5 millimeters per hour**), shall not be more than 10 dBA (i.e., ambient plus 20 dBA). [OAR 340-035-0010(2)]

Finally, considering the parties' stipulations and acknowledging Idaho Power's clarification,²³⁶ the ALJ recommends that Noise Control Condition 5 be amended as follows:

Amended Recommended Noise Control Condition 5:

During operation:

a. A variance to compliance with the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) (which prohibits an increase of more than 10 dBA above ambient sound pressure levels) is granted pursuant to OAR 340-035-0100(1) for the transmission line **at any time of day or night during foul weather events (defined as a rain rate of 0.8 to 5 millimeters per hour)**.

b. The quantity and quality of noise generated in exceedance of the ambient antidegradation standard shall not be more than 10 dBA (*i.e.*, ambient plus 20 dBA), as measured at any NSR location.

Public Services Standard: Traffic Safety concerns – Issues PS-1 and PS-6

As pertinent to Issues PS-1 and PS-6, the Public Services Standard requires that Council find that “the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within

²³⁶ As set out above in Amended Recommended Noise Control Condition 2, the ALJ recommends incorporating into Noise Control Condition 2 the following clarification: “If the exceedance occurs during the burn-in period, and if the certificate holder complies with the requirements of this condition, the certificate holder will not be found to be in violation of its site certificate because of the exceedance.”

the analysis area * * * to provide * * * traffic safety.” OAR 345-022-0110(1).

Issue PS-1: Traffic Safety: Whether Applicant was required to evaluate traffic safety impacts from construction-related use of Morgan Lake Road.

Limited party Susan Badger-Jones has standing on Issue PS-1, and bears the burden of producing evidence to support her claim. Ms. Badger-Jones did not file any written direct testimony or exhibits in support of her position on Issue PS-1, nor did she submit written closing argument regarding this issue. Because Ms. Badger-Jones failed to submit evidence and/or argument in support of her contention that Idaho Power was required to evaluate traffic safety impacts from construction-related use of Morgan Lake Road, the ALJ considers the claim unsubstantiated.²³⁷ The findings in the Proposed Order pertaining to this issue constitute *prima facie* evidence of Idaho Power’s compliance with the traffic safety requirements under the Public Services Standard.

Issue PS-6: Whether Applicant adequately evaluated the potential traffic impacts and modifications needed on Hawthorne Drive and Modelaire Drive (the Hawthorne Loop).²³⁸

Limited parties Dale and Virginia Mammen, Joe Horst and Anna Cavinato have standing on Issue PS-6. The limited parties contend that Idaho Power did not adequately evaluate the potential traffic impacts on the paved portion of Hawthorne Drive and Modelaire Drive (the Hawthorne Loop) and the unpaved, privately owned portion of Hawthorne Drive.²³⁹ Specifically, the limited parties contend that Idaho Power’s evaluation is inadequate given the roadway characteristics (road widths, grade, curves and blind corners) and the geologic hazards in the area (potentially unstable soils). *See* Horst Closing Statement at 2-6; Mammen Closing Brief at 1-8. In addition, the limited parties assert that Idaho Power’s Traffic Plan does not provide adequate safety measures to protect pedestrians and pet animals. *See* Horst Closing Statement at 4-5, 8.

First, it is important to distinguish between the roads comprising the Hawthorne Loop (Modelaire Drive and the paved portion of Hawthorne Drive) and the unpaved, private access portion of Hawthorne Drive. The Hawthorne Loop roads are paved and maintained by the City

²³⁷ Because Issue PS-1 is deemed unsubstantiated, there is no need to address the merits of the claim in this order. *See Ruling on Motion to Dismiss* at 11.

²³⁸ As noted previously, although Issue PS-6, as written, references “the Hawthorne Loop” (*i.e.*, the paved portion of Hawthorne Drive and Modelaire Drive), this issue also includes the limited parties’ challenge to Idaho Power’s evaluation of traffic impacts on the unpaved, private access portion of Hawthorne Drive.

²³⁹ In his Closing Statement on Issue PS-6, Mr. Horst also challenges Idaho Power’s selection of the Mill Creek Route, arguing that the La Grande City Council strongly opposes this proposed route, that Idaho Power did not sufficiently coordinate and consult with the City regarding this route, and that the Company did not provide sufficient site-specific information in the ASC. Horst Closing Statement at 2-4. These arguments fall outside the scope of Issue PS-6. Further, Idaho Power’s route selection falls outside Council’s jurisdiction.

of La Grande. Although these existing roads may be used to access construction sites, the roads comprising the Hawthorne Loop are outside the site boundary and Idaho Power does not propose any modifications to these roads.

Because the Hawthorne Loop roads are outside the project site boundary, the Council does not have jurisdiction or authority to address the limited parties' claims that these roads will require substantial modification for safety (such as sidewalks) and/or are inadequate for construction vehicle use because of geological hazards. See *In re the Application for a Site Certificate for the Wheatridge Wind Energy Facility*, Final Order, April 28, 2017 at page 7, n. 22 ("It is the Council's responsibility to review, evaluate and issue orders either approving or denying ASCs as put forth by an applicant; the Council does not have authority to propose alternatives[.]").²⁴⁰ *Boardman to Hemingway Transmission Line Proposed Order* at page 51, n. 58 ("The Council does not have jurisdiction over matters that are not included in and governed by the site certificate or amended site certificate.")²⁴¹

Additionally, as to the limited parties' claims that traffic resulting from the construction and operation of the facility presents a safety risk to pedestrians and animals in the Hawthorne Loop neighborhood, Idaho Power's Traffic Plan (required by Recommended Public Services Condition 2) adequately addresses these concerns. Idaho Power proposes using traffic control measures such as pilot vehicles, traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety, minimize localized traffic congestion, and avoid accidents due to limited visibility.²⁴² After final route selection and prior to construction of the transmission line, these safety measures will be fully vetted by the Department, in consultation with Union County and the City of La Grande where applicable.²⁴³

As to the limited parties' concerns regarding the unpaved, privately owned portion of Hawthorne Drive, Idaho Power has shown that substantial modifications (modifications involving repairs to more than 20 percent of the road surface area) may potentially be, but are not likely to be, necessary to support construction vehicle traffic.²⁴⁴ The evidence persuasively

²⁴⁰ See also, *Wheatridge Final Order* at 31:

It is the Council's responsibility to review, evaluate and issue orders either approving or denying ASCs submitted by an applicant. *The Council does not have authority to evaluate structures that are not proposed by the applicant. An amendment to the site certificate would be required if a certificate holder proposes related and supporting facilities to the energy facility not included in or evaluated in the ASC.*

Emphasis added.

²⁴¹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 58 of 10016.

²⁴² Grebe Rebuttal Test. at 38.

²⁴³ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 8460 of 10016 (Road Classification Guide and Access Control Plan at 10).

²⁴⁴ Grebe Rebuttal Test. at 39.

establishes that the width, slope and curves of this gravel road are within typical construction vehicle parameters,²⁴⁵ and therefore it is unlikely that substantial modifications such as widening the road or reinforcing the slope will be necessary. The road meets the minimum requirements for width and turning surface, and does not exceed the maximum grade for construction vehicles.²⁴⁶ Idaho Power determined that this portion of roadway would likely need non-substantial maintenance activities such as blading to maintain the surface and water to mitigate dust emissions,²⁴⁷ but not substantial modification. Furthermore, if necessary to avoid tight turning conditions and possible traffic congestion issues, Idaho Power could and likely would air-lift materials and equipment by helicopter.²⁴⁸

As noted above, Idaho Power's Traffic Plan (required by Recommended Public Services Condition 2) adequately addresses traffic safety concerns. Idaho Power's proposal to use traffic control measures such as pilot vehicles, traffic control flaggers, warning signs, lights, and barriers during construction is completely appropriate and reasonable to protect other traffic, pedestrians and pets. Finally, if it is later determined that the roadway needs substantial modification in connection with the proposed facility construction or operation because of potential geologic hazards in the area, Idaho Power has committed to protect public safety. Idaho Power will, prior to construction or road modification, complete appropriate engineering due diligence and consult with a licensed civil engineer to ensure that the design of the road modification accounts for these potential hazards and protects the public.²⁴⁹

In summary, the preponderance of the evidence establishes that Idaho Power adequately evaluated the potential traffic impacts and modifications needed on the Hawthorne Loop as well as the unpaved, private-access portion of Hawthorne Drive. The limited parties have failed to provide persuasive evidence or testimony supporting their claims.

Proposed site certificate conditions related to Issue PS-6:

In their Closing Argument, the Mammens propose a cite certificate requiring Idaho Power to "complete engineering due diligence before moving forward with any construction" in the Hawthorne Loop/Hawthorne Drive area. Mammen Closing Argument at 8-9. The Mammens did not submit this proposed condition in a timely manner in accordance with the schedule set in the *Case Management Order*.

Notwithstanding the untimeliness of the proposed condition, Idaho Power has, as discussed above, agreed that, prior to construction or road modification in a geologic hazard

²⁴⁵ Grebe Rebuttal Test. at 39-41.

²⁴⁶ *Id.* at 26-29; *see also* Grebe Rebuttal Exs. B and D.

²⁴⁷ Grebe Rebuttal Test. at 27, 32, 41.

²⁴⁸ Grebe Rebuttal Test. at 26-27.

²⁴⁹ Grebe Rebuttal Test. at 42.

zone, it will consult with a licensed civil engineer to assess the proposed construction or road design in relation to potential geologic hazards.²⁵⁰ In its Response Brief on Issue PS-6, Idaho Power also proposed a new Public Services Condition to formalize this agreement:

Prior to construction or road modification in any area designated as a geologic hazard zone by Oregon Department of Geology and Mineral Industries (DOGAMI) data and maps (e.g., as landslide or debris flow fan), or by relevant local zoning ordinances and maps, the site certificate holder and/or its construction contractors will consult with a licensed civil engineer to assess the proposed construction or road design in relation to potential geologic hazards.

Idaho Power's Response Brief and Motion to Strike for Contested Case Issues PS-1 and PS-6 at 22.

Ruling on Idaho Power's Motion to Strike portions of the Mammens' Closing Argument:

In its Response Brief for Issue PS-6, Idaho Power moves to strike, or in the alternative give no weight to, the portions of the Mammens' Closing Argument that reference or rely upon Mammen Exhibit 5, as this document was excluded from the evidentiary record pursuant to the *Rulings on Objections to Direct Testimony and Exhibits*, issued October 15, 2021.²⁵¹ The ALJ acknowledges that Mammen Exhibit 5 is not part of the evidentiary record,²⁵² and that the Mammens' concerns about slope instability in the Hawthorne Loop area are not directly relevant to Issue PS-6, which focuses on the evaluation of potential traffic impacts in that area. While the ALJ finds it inefficient and unnecessary to strike the challenged portions of the Mammens' Closing Argument referencing or relying upon Mammen Exhibit 5, these statements are not material to this issue. Therefore, the ALJ grants Idaho Power's alternative request and gives these statements no evidentiary weight.

Idaho Power also moves to strike portions of the Mammens' Closing Arguments that reference and rely on a June 22, 2021 letter from Scott Hartell, Union County Planning Director, because this document is not part of the evidentiary record.²⁵³ For the reasons stated above, the ALJ declines to strike this portion of the Mammens' brief. However, because the statements are not pertinent to the resolution of Issue PS-6 they have no evidentiary weight in this context.

²⁵⁰ Grebe Rebuttal Test. at 42-43.

²⁵¹ Mammen Exhibit 5 is a June 2021 study/report by Barlow Environmental Consulting and a letter dated October 8, 2018 from Mark Stokes to the La Grande City Manager and others. In the *Rulings on Objections to Direct Testimony and Exhibits*, the ALJ found that these documents were not relevant or material to Issue PS-6 and excluded them from the evidentiary record.

²⁵² As set out in Appendix 2, Mammen Exhibit 5 is, however, part of the administrative record as a document submitted in opposition to Idaho Power's Motion for Summary Determination on Issue SS-4.

²⁵³ As set out in Appendix 2, this letter is part of the administrative record as Mammen Response Exhibit 3, a document submitted in opposition to Idaho Power's Motion for Summary Determination on Issue SS-4.

Ruling on Idaho Power's Motion to Strike portions of Mr. Horst's Closing Argument:

Idaho Power also moves to strike a statement in Mr. Horst's closing brief asserting that the project does not help Oregonians' energy supply as unsupported and outside the scope of Issue PS-6. While the ALJ declines to strike this statement for logistical reasons, the claim is unsupported, outside the scope of Issue PS-6, and entitled to no weight.

Ruling on Idaho Power's Motion to Strike Portions of Mr. Horst's Response Brief regarding Issue PS-6:

In the motion, Idaho Power moves to strike, or in the alternative give no weight to, statements in Mr. Horst's Response Brief pertaining to granting Idaho Power access to his property as unsupported by evidence in the record. Motion at 11. The ALJ agrees that this portion of Mr. Horst's brief is testimonial in nature, unsupported by evidence in the record, and not material to Issue PS-6. Therefore, the challenged statements are given no weight.

Public Services Standard: Fire Protection concerns – Issues PS-2, PS-3, PS-4, PS-5, PS-8, PS-9 and PS-10

As pertinent to Idaho Power's Issues PS-8 and PS-9, and limited parties' Issues PS-2, PS-3, PS-4, PS-5, and PS-10, the Public Services Standard requires that Council find that "the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area * * * to provide * * * fire protection." OAR 345-022-0110(1).

Applicant's Issues – Issues PS-8 and PS-9

Issue PS-8: Whether Department-proposed revisions to Public Services Condition 7 are redundant with Attachment U-3 and existing condition requirements.

Idaho Power raised this issue to clarify certain provisions of Recommended Public Services Condition 7, which requires the Company provide its Wildfire Mitigation Plan to the Department and affected counties prior to and annually during facility operations. Idaho Power contends that some of the language in the recommended condition is redundant. As set out in the Proposed Order, Recommended Public Services Condition 7(a) requires that the Wildfire Mitigation Plan "address facility and emergency contacts, agency coordination and responsibilities, necessary fire-fighting equipment, and long-term agreements with service providers, as needed."²⁵⁴ However, these same requirements are already addressed elsewhere in Recommended Public Services Condition 7 and in the draft FPS Plan. Recommended Public Services Condition 7(c) requires Idaho Power to "provide to each of the fire districts and rural fire protection a contact phone number to call in the event a district needs to request an outage as part of a fire response."²⁵⁵ Section 1.4 of the draft FPS Plan addresses agency coordination and

²⁵⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 590 of 10016,

²⁵⁵ *Id.*

responsibilities, necessary fire-fighting equipment, and long-term agreements with service providers.²⁵⁶ Idaho Power proposed revisions to Recommended Public Services Condition 7, specifically deletion of the last sentence of paragraph 7(a) to address these redundancies.

The Department agrees that the challenged portion of Recommended Public Services Condition 7 is redundant of other provisions and therefore should be removed.²⁵⁷ Given the parties' stipulation on this issue, the ALJ finds a preponderance of the evidence supports removal of the redundant language (the second sentence of paragraph 7(a)) from Department Recommended Public Services Condition 7. Consequently, in the final order, Public Services Condition 7 should state as follows:

Amended Recommended Public Services Condition 7: The certificate holder shall:

- a. Prior to operation, provide a copy of its Wildfire Mitigation Plan to the Department and each affected county which provides a wildfire risk assessment and establishes action and preventative measures based on the assessed operational risk from and of wildfire in each county affected by the facility.
- b. During operation, the certificate holder shall update the Wildfire Mitigation Plan on an annual basis, or frequency determined acceptable by the Department in consultation with the Oregon Public Utilities Commission.
- c. During operation, for the service territories the facility would be located within, the certificate holder shall provide to each of the fire districts and rural fire protection a contact phone number to call in the event a district needs to request an outage as part of a fire response.
- d. Any Wildfire Mitigation Plan required by the Oregon Public Utilities Commission shall be considered by EFSC as meeting the requirements of this condition.

Issue PS-9: Whether Department-proposed revisions to the Fire Prevention and Suppression Plan (Public Services Condition 6, Proposed Order Attachment U-3) incorrectly reference applicability to facility operations.

Idaho Power raised Issue PS-9 in response to revisions the Department made to the draft FPS Plan in the Proposed Order. In the Proposed Order, the Department added Section 1.4, Fire Response Agreements, to the draft FPS Plan. This new section requires that Idaho Power attempt to negotiate agreements with relevant fire response organizations or federal agencies outlining communication and response procedures for potential fires within their boundaries during facility construction and operation. While Idaho Power agrees that this requirement is

²⁵⁶ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9780 of 10016.

²⁵⁷ ODOE Rebuttal to Direct Testimony, Evidence and Response to Proposed Site Certificate Conditions at 89; ODOE Closing Brief at 135.

appropriate during the construction phase of the project, the Company disagrees that the same obligations should apply during operation, because the risk of fire is much lower and Idaho Power will generally not have personnel on site to respond to a fire more quickly than fire response organizations in the area. Idaho Power proposed revisions to Section 1.4 of the draft FPS Plan to address the Company's concern.

In light of the persuasive expert testimony explaining that a 500 kV transmission line is unlikely to cause wildfires and therefore the risk of a project-related fire during operation is very low, the Department agreed with Idaho Power's proposed revisions to Section 1.4 of the draft FPS Plan. The Department agreed that the actions Idaho Power will take to ensure fire protection in areas outside designated fire districts, along with the low risk of a project-related fire during operation, were sufficient to ensure that the project would not result in a significant adverse impact to the ability to provide fire protection services within the analysis area.²⁵⁸ The Department also recommended a revision to Recommended Public Services Condition 6 to clarify that the condition and the FPS Plan apply during construction and operation of the proposed facility.²⁵⁹ Idaho Power agrees with this recommendation.

Given the parties' stipulation, the ALJ finds a preponderance of the evidence supports Idaho Power's proposed revisions to Section 1.4 of the draft FPS Plan and the Department's proposed revision to Public Services Condition 6. Accordingly, Section 1.4 of the draft FPS Plan should state as follows (revisions in bold):

1.4 Fire Response Agreements

In areas not covered by a fire response organization or located on federal land, the certificate holder will attempt to negotiate an agreement with the relevant fire response organization or federal agencies as presented in Table 2 above, outlining communication and response procedures for potential fires within their boundaries during facility construction and operation. In those areas not covered by a fire response organization and not located on federal land, the certificate holder will attempt to negotiate an agreement with nearby fire response organizations or the federal agencies to provide fire response. If no such agreements can be reached **during construction**, the certificate holder will propose alternatives such as contracting with a private fire response company or providing additional firefighting equipment at those sites. **If no such agreements can be reached during operation, the certificate holder will consult with the local dispatch centers and report to the ODOE the dispatch center's procedures for responding to wildfires in those areas without fire district coverage.** The certificate holder shall provide documentation to the Oregon

²⁵⁸ ODOE Rebuttal to Direct Testimony, Evidence and Response to Proposed Site Certificate Conditions at 97; ODOE Closing Brief at 136.

²⁵⁹ The Department recommended the following revision (in bold) to paragraph 6(c): All work must be conducted in compliance with the approved plan during construction **and operation, as applicable**, of the facility. ODOE Rebuttal at 98; ODOE Closing Brief at 137.

Department of Energy, demonstrating the final agreements or alternative contract agreements for fire response, or dispatch center procedures as applicable.

Furthermore, Public Services Condition 6, paragraph 6(c) should be revised as follows (revisions in bold):²⁶⁰

c. All work must be conducted in compliance with the approved plan during construction **and operation, as applicable**, of the facility.

Limited parties' Fire Protection Issues – Issues PS-2, PS-3, PS-4, PS-5 and PS-10

Issue PS-2: Fire Protection: Whether the site certificate should require that the public have the opportunity to review and comment on the final Wildfire Mitigation Plan; whether the Wildfire Mitigation Plan should include remote cameras to detect wildfire, safety procedures during red flag conditions, and the requirement that firefighting equipment be present on-site during construction.

Limited parties Miller and Carbiener, acting in both his personal capacity and as a representative of OCTA, and have standing on Issue PS-2. Mr. Carbiener filed direct testimony on this issue, combined with Issue PS-3. Neither Ms. Miller nor Mr. Carbiener filed closing briefs. In his direct testimony, Mr. Carbiener argues that Idaho Power has not been aggressive in its proposed wildfire prevention plans and have not incorporated remote cameras or weather stations in its Wildfire Mitigation Plan. Carbiener Direct Test. at 5. Mr. Carbiener does address the claim regarding public review and comment on the Wildfire Mitigation Plan in his testimony.

Idaho Power developed its Wildfire Mitigation Plan to comply with Public Utility Commission rules, not the Council's siting rules.²⁶¹ As both the Department and Idaho Power note, no applicable statute or rule requires Idaho Power to submit its Wildfire Mitigation Plan for public review and comment as part of the Council's ASC review process. Therefore, there is no need for a site certificate condition requiring such a process. ORS 469.402 authorizes the Council to delegate the approval of a future action and plan finalization to the Department. Furthermore, OAR 345-025-0016 requires that a certificate holder develop proposed monitoring and mitigation plans in consultation with the Department and, as appropriate, other state agencies, local governments and tribes. Consistent with those requirements, Recommended Public Services Condition requires Idaho Power to submit the Wildfire Mitigation Plan to the Department and the affected counties.²⁶² Although Idaho Power is also required to submit the

²⁶⁰ As discussed *infra* under Issue PS-4, the Department proposed additional amendments to Recommended Public Services Condition 6 to inform the scope of review during the agency finalization process of the FPS Plan.

²⁶¹ Dockter Direct Test. at 2-3. As set out in the findings, the primary objectives of the Wildfire Mitigation Plan are to identify and implement strategies that reduce wildfire risk associated with Idaho Power's transmission and distribution facilities and improve Idaho Power's transmission and distribution system's resiliency to any wildfire event, independent of the fire's ignition source. Dockter Direct Ex. A at 11.

²⁶² See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 590 of 10016.

Plan to the OPUC for approval under ORS 757.963, that process falls outside the Council's jurisdiction.

As to the second part of Issue PS-2, Mr. Carbiener has presented no evidence or persuasive legal argument in support of his contention that the Wildfire Mitigation Plan should include provisions requiring the installation of cameras, firefighting equipment on-site during construction and/or specific safety procedures during red flag conditions. Furthermore, as discussed in the findings, Idaho Power's 2022 Wildfire Mitigation Plan specifically addresses Red Flag Warnings as a consideration in the PSPS Plan. If the Company determines a combination of critical conditions indicate the transmission and distribution system at certain locations is at an extreme risk of being an ignition source and wildfire conditions are severe enough for the rapid growth and spread of wildfire, then it will initiate a power shutoff plan.²⁶³

In summary, there is no requirement under the Council's review process that the public have the opportunity to review and comment on the final Wildfire Mitigation Plan. Furthermore, there is no requirement under the Council's rules that the Wildfire Mitigation Plan include specific fire protection or fire suppression tools, such as remote cameras, a shut off plan, and on-site firefighting equipment and personnel during construction. As the Department notes in its Closing Arguments, the evidence in the record coupled with the recommended conditions in the Proposed Order requiring finalization and implementation of the FPS Plan, the Vegetation Management Plan, the Right of Way Clearing Assessment, and the Wildfire Mitigation Plan provide a preponderance of evidence to support a Council finding of compliance with OAR 345-022-0110.²⁶⁴

Proposed site certificate conditions related to Issues PS-2 and PS-3:

In his direct testimony, Mr. Carbiener timely proposed two site certificate conditions related to Issues PS-2 and PS-3.

Carbiener Proposed Fire Protection Condition 1: Prior to the start of construction, Idaho Power will complete any Wildfire Prevention Plan or Wildfire Mitigation Plan even if the Public Utilities Commission has not yet developed their plan requirements. If OPUC rules are completed, then Idaho Power must obtain acknowledgement from OPUC that they are acceptable.

Both the Department and Idaho Power oppose this condition as unnecessary. The ALJ agrees. First, since Mr. Carbiener proposed this condition on September 1, 2021, Idaho Power has submitted both its 2021 and 2022 Wildfire Mitigation Plans into the contested case record. Second, as noted above, the recommended conditions in the Proposed Order require Idaho Power to finalize and implement its FPS Plan, Vegetation Management Plan, Right of Way Clearing Assessment, and Wildfire Mitigation Plan, which will further minimize the risk of a project-related fire and the potential impacts to public and private fire protection providers under OAR

²⁶³ Dockter Sur-surrebuttal Test., Ex. B at 75.

²⁶⁴ See ODOE Closing Brief at 121. See also ODOE Response Brief at 91.

345-022-0110. Therefore, this proposed condition is denied.

Carbiener Proposed Fire Protection Condition 2: Prior to the start of Operation (2026), Idaho Power will conduct and publish for all to know, an analysis of their potential investment in cameras and weather stations and other preventive wildfire solutions.

Both the Department and Idaho Power also oppose this condition as unnecessary. Again, the ALJ agrees. First, as discussed above, Mr. Carbiener has provided no persuasive evidence or argument to establish why an applicant must invest in cameras, weather stations, and other preventive wildfire solutions to establish compliance with the Public Services standard. Furthermore, while in the future OPUC may require utilities to include such information in their Wildfire Mitigation Plans, that requirement is a matter outside the scope of the Council's ASC review. Accordingly, this proposed condition is denied.

Issue PS-3: Fire Protection: Whether Council's reliance on the Wildfire Mitigation Plan (Public Services Condition 7) prepared by Applicant for the Oregon Public Utility Commission (OPUC) is adequate to address wildfire response consistent with the Public Services standard.

As with Issue PS-2 above, limited parties Miller and Carbiener, acting in both his personal capacity and as a representative of OCTA, have standing on Issue PS-3. Mr. Carbiener filed direct testimony on this issue. Neither limited party filed closing briefs. In his direct testimony, Mr. Carbiener notes, "it appears the OPUC plans will be general in nature and not specific to B2H." Carbiener Direct Test. Issues PS-2 and PS-3 at 4. He also challenged the fact that, in an OPUC meeting, Idaho Power only identified two areas along the project route as potential fire risk. *Id.* at 3.

As the Department notes in its brief on Issue PS-3, the Public Services standard is not a wildfire or risk assessment standard. It is a standard that evaluates whether the level of demand for services by a proposed facility would significantly impact service providers' ability to continue providing their services. For fire protection service providers, the standard involves an assessment of whether the proposed facility is located within the fire service provider's service territory and whether the proposed facility would significantly impact the provider's level of service (demand) and resources (employees, volunteers and equipment) in the event fire protection services are required during facility construction and operation.

A Wildfire Mitigation Plan is not an essential element of compliance with the Public Services standard. To the extent that Idaho Power's Wildfire Mitigation Plan (which, as discussed above, was developed to satisfy OPUC rules), reduces the proposed facility's potential to cause or contribute to the spread of a wildfire, this reduced potential can be applied to the potential resource demand of the proposed facility under the Public Services standard. However, whether the Wildfire Mitigation Plan is adequate to address wildfire response is not relevant to the Council's determination of whether the proposed facility complies with the Public Services standard.

Mr. Carbiener is correct that the Wildfire Mitigation Plan is general and nature and not specific to the project (although the 2022 Plan discussed the wildfire risk along the proposed project route). However, that is because the Plan's objective is to reduce wildfire risk for Idaho Power's entire transmission and distribution system, and not just the proposed project. For purposes of the proposed project, the evidence in the record, coupled with the recommended conditions requiring implementation of the FPS Plan, the Vegetation Management Plan, the Right of Way Clearing Assessment and Wildfire Mitigation Plan provide a preponderance of evidence to support a Council finding of compliance with the Public Services standard. In other words, the Council may rely on Public Services Condition 7 and the OPUC-approved Wildfire Mitigation Plan, along with conditions requiring implementation of other mitigation and management plans, to find that that construction and operation of the facility are not likely to result in significant adverse impact to fire protection services within the analysis area.

Issue PS-4: Fire Protection: Whether Applicant adequately analyzed the risk of wildfire arising out of operation of the proposed facility and the ability of local firefighting service providers to respond to fires.

Limited parties Cooper and Winters have standing on Issue PS-4. Mr. Cooper filed testimony and argument in support of his position on this issue. Mr. Winters did not submit either. Mr. Cooper contends that Idaho Power did not adequately analyze the risk of a project-related wildfire and that the Company seriously understated the response times of local fire protection agencies to respond to a project-related fire, especially the ability of the La Grande Rural Fire Protection District (LGRFPD) to respond to such a fire. Cooper Closing Brief on Issue PS-4; Cooper Response Brief on Issue PS-4.

Idaho Power responds that it has adequately analyzed the risk of wildfire during operation of the facility and has presented substantial evidence establishing that the risk of a project-related fire is extremely low. Idaho Power also asserts that it has adequately analyzed the response capabilities of fire response organizations near the project site. The Department agrees that Idaho Power adequately analyzed the risk of a project-related wildfire and that the proposed facility is not likely to result in a significant adverse impact to public and private firefighters' ability to provide fire protection service. However, to address concerns about the accuracy of the response time information presented in ASC Exhibit U, Table U-10, the Department recommended amendments to Recommended Public Services Condition 6. ODOE Rebuttal to Direct Testimony at 84; ODOE Closing Brief at 127; ODOE Response Brief at 98.

Risk of project-related fire. Mr. Cooper argues that Idaho Power has not established compliance with OAR 345-022-0110 because: (1) 500 kV transmission lines can ignite, and have ignited, fires; (2) the La Grande area in Union County has a history of catastrophic fires; and (3) the winds, weather conditions, topography, and vegetation in the region already pose a significant fire threat, which the proposed facility will only exacerbate.²⁶⁵ Cooper Closing Brief

²⁶⁵ To the extent Mr. Cooper argues that portions of the transmission line should be buried underground (*see, e.g.*, Cooper Closing Brief on Issue PS-4 at 2, 26-27; Cooper Response Brief on Issue PS-4 at 10), the argument falls outside the scope of Issue PS-4 and outside of the Council's jurisdiction. This is because the Council does not have the authority to evaluate structures and alternative routes that are not

on Issue PS-4 at 1-15. For the reasons that follow, Mr. Cooper's challenges are not persuasive.

First, it is important to note that Idaho Power does not need to prove that the proposed facility cannot or will not cause a fire. Rather, to demonstrate compliance with the Public Services standard, the Company needs to show by a preponderance of the evidence that the proposed facility is not likely to result in a significant adverse impact to public and private firefighters' ability to provide fire protection service. OAR 345-022-0110(1). On this record, Idaho Power has provided substantial evidence demonstrating that 500 kV transmission lines are much less likely to ignite fires than lower voltage lines.²⁶⁶ Idaho Power has also shown that the winds, weather conditions, topography, and vegetation along the project route (including the Mill Creek and Morgan Lake Alternative segments) do not significantly increase the risk of a large, project-related wildfire.²⁶⁷ The persuasive evidence establishes that although fires are not uncommon in the project area, the fire protection agencies are able to contain the fires quickly, while they are still small.²⁶⁸ Moreover, the FSP Plan, the Right of Way Clearing Assessment, and the Vegetation Management Plan all include measures the Company will take to minimize the risk of project-related fires.

The fire history data for the project area demonstrates that, although fires occur in the area frequently, the fire protection agencies are able to contain those fires at small sizes. The fact that there has been two large wildfires near La Grande in the last 150 years (one in 1858 and the Rooster Peak fire in 1973), is not an adequate predictor of the likelihood of a large project-related fire in the future. Putting aside the very low probability of the proposed facility igniting a fire in Union County or elsewhere along the route, both fire prevention measures and firefighting capabilities have improved over the past 50 years. Indeed, there is now an aerial firefighting dispatch center located at the La Grande Airport.²⁶⁹ Mr. Cooper has not overcome the persuasive evidence demonstrating that the proposed facility is not likely to result in a significant adverse impact public and private firefighters' ability to provide fire protection service.

Local agency response times. As noted above, Mr. Cooper maintains that Idaho Power understated the response times of local fire agencies in general, and in particular the response time of the LGRFPD. Mr. Cooper asserts that it would take the LGRFPD significantly longer than four to eight minutes to respond to a fire in the area Morgan Lake Park, because of the time needed to muster a crew and the travel time to the area. Cooper Closing Brief at 15-18; Cooper Response Brief at 8-9.

Although Mr. Cooper is correct that it would likely take the LGRFPD more than four to

included in, and governed by, the site certificate application. *See In re the Application for a Site Certificate for the Wheatridge Wind Energy Facility*, Final Order, April 28, 2017, page 7 n.22.

²⁶⁶ Lautenberger Direct Test. at 54; Lautenberger Rebuttal Test. at 58-62.

²⁶⁷ Lautenberger Rebuttal Test. at 25-27.

²⁶⁸ Lautenberger Rebuttal Test. at 25-27.

²⁶⁹ Dockter Sur-surrebuttal Exhibit B; Dockter Cross-Exam. Test., Tr. Day 3 at 17.

eight minutes to respond to a fire near Morgan Lake, that does not change the analysis of the proposed facility's compliance with OAR 345-022-0110(1). In ASC Exhibit U, Idaho Power acknowledged that response times to fires in the analysis area will vary depending on the time of day, the priority of the emergency/call and the location of the emergency and the type of available access.²⁷⁰ In ASC Exhibit U, Table U-10, Idaho Power provided a response time of four to eight minutes for the LGRFPD based on information provided by the LGRFPD. At the time LGRFPD provided this information (in 2017), neither Morgan Lake Park nor surrounding properties were within the district's protection jurisdiction.²⁷¹

Furthermore, although LGRFPD has since added several properties in the vicinity of Morgan Lake to its protection area, the fact remains that the LGRFPD has mutual aid agreements with both the City of La Grande and the ODF. The City and the ODF are primarily responsible for the Morgan Lake area. They are located closer to Morgan Lake than the LGRFPD and would likely respond more quickly to the area than the LGRFPD.²⁷² Moreover, in the event of a large wildfire in the Morgan Lake area, there are other resources, including aerial resources, available to deploy to combat the fire.²⁷³

In summary, a preponderance of the evidence establishes that Idaho Power adequately analyzed both the risk of wildfire arising out of operation of the proposed facility and the ability of local firefighting service providers to respond to fires in or near the project area. Mr. Cooper has not demonstrated otherwise.

Proposed site certificate conditions related to Issue PS-4:

In his direct testimony for Issue PS-4, Mr. Cooper timely proposed a fire protection site certificate condition. He requested that the line be "undergrounded through all five counties in Oregon, since they are categorized as Fire Weather Hazard 3." Cooper Direct Test. Issue PS-4 at 16. This proposed condition is inappropriate because it falls outside the Council's jurisdiction. Idaho Power did not propose an underground transmission line and the Council cannot require that the project be constructed underground. Therefore, this proposed condition is denied.

In his closing brief for Issue PS-4, Mr. Cooper proposes additional site certificate conditions, including a request that Idaho Power "fully fund a Multi-Agency Fire and Emergency Response Station to be located at the Baker City Municipal Airport." Cooper Closing Brief on Issue PS-4 at 28. Because Mr. Cooper did not submit this proposed condition in a timely manner, the ALJ declines to address its necessity or appropriateness.

As noted above, the Department recommended amending Recommended Public Services Condition 6 to address concerns about the accuracy of the response time information presented in

²⁷⁰ ODOE - B2HAPPDoc3-38 ASC 21_Exhibit U_PublicServices_ASC 2018-09-28, page 20 of 143.

²⁷¹ Kretschmer Dep. at 6-8, 31, 40, Cooper Direct Ex. 6.

²⁷² Dockter Cross-Exam. Test., Tr. Day 3 at 17.

²⁷³ *Id.*

ASC Exhibit U, Table U-10. Specifically, the Department recommended adding a provision requiring Idaho Power to:

Identify specific seasonal work restrictions, onsite fire-fighting equipment and necessary fire protection resources based on: 1) documented evaluation of reasonably available sources related to wildfire risk and sensitive seasonal conditions such as high temperatures, drought and high winds; and, 2) updated information obtained from the LGRFPD on the number of full-time and volunteer employees, number and type of equipment/vehicles, and response times to the facility. Response time must consider LGRFPD crew mobilization time and access limitations (e.g., road condition, level of service and impact of multi-users from Morgan Lake Park, residents and emergency services).

ODOE Closing Brief at 127.

Idaho Power maintains this revision to Recommended Public Services Condition 6 is not necessary because the seasonal work restrictions, onsite fighting equipment, and fire protection considerations are already addressed in the FPS Plan. Idaho Power notes that Section 2.2 of the draft FPS Plan requires the Company to restrict construction operations in specified locations during fire season at the direction of a land-management agency. Idaho Power also notes that it already identified the firefighting equipment it will keep onsite during construction and will coordinate with land-management agencies to implement any additional measures required to allow construction to continue. In addition, Idaho Power asserts that additional fire prevention measures based on fire protection districts' response times is unnecessary because the Company's FPS Plan, including the requirement to take additional precautions during periods of high fire risk, will adequately address the potential fire risk, thereby ensuring that the project does not result in a significant adverse impact to the ability of public and private providers to provide fire protection. Idaho Power Closing Argument at 43-46; Idaho Power Response Brief at 30-31.

In its Response to Closing Arguments, the Department notes that the Public Services standard is neither a risk assessment nor wildfire mitigation standard. The purpose and legal parameters of the Public Services standard is to evaluate the proposed facility's demand on existing service capacity, and not forecast the project's potential demand based on wildlife risk assessment. Upon considering Idaho Power's objections to the proposed amendments to Recommended Public Services Condition 6, the Department acknowledged that Idaho Power's contentions have merit. The Department agreed that land-management agencies such as the ODF and/or the BLM must be given deference during the finalization of the Company's FPS Plan as to the factors that should be considered, work restrictions and process for establishing high-fire risk/no-work days and type of fire-fighting equipment that Idaho Power should have onsite during construction. ODOE Response to Closing Arguments at 95-97.

The Department proposed further revisions to Recommended Public Services Condition 6 to clarify its position regarding the scope of review during finalization of the FPS Plan. The Department proposed clarifying language to allow consideration of the listed factors, while also allowing flexibility for the land management agencies that participate in the finalization process

to weigh in and determine the factors to be addressed in the FPS Plan, particularly in the lands the agencies manage. The Department proposed a Second Amended Recommended Public Services Condition 6 as follows (revisions in bold):

Second Amended Recommended Public Services Condition 6: Prior to construction of a facility phase or segment, in accordance with the OAR 345-025-0016 agency consultation process outlined in the plan (Attachment U-3 of the Final Order on the ASC), the certificate holder shall submit final Fire Prevention and Suppression Plan(s) to the Department. **The plan finalization process shall consider (a)(i) and (a)(ii) unless otherwise identified by a land management agency or other participating review agency:**

a) The protective measures as described in the draft Fire Prevention and Suppression Plan as provided in Attachment U-3 of the Final Order on the ASC **and:**

i. Wildfire training for onsite workers and facility personnel be conducted by individuals that are National Wildfire Coordination Group and Federal Emergency Management Agency certified.

ii. **Specific seasonal work restrictions, onsite fire-fighting equipment and necessary fire protection resources based on: 1) documented evaluation of reasonably available sources related to wildfire risk and sensitive seasonal conditions such as high temperatures, drought and high winds; and 2) update Table PS-9 of the Proposed Order based on information obtained from the LGRFPD on the number of full-time and volunteer employees, number and type of equipment/vehicles, and response times to the facility. Response time must consider LGRFPD crew mobilization time and access limitations (e.g., road condition, level of service and impact of multi-users from Morgan Lake Park, residents and emergency services).**

b) A description of the fire districts and rural fire protection districts that will provide emergency response services during construction and copies of any agreements between the certificate holder and the districts related to that coverage.

c) All work must be conducted in compliance with the approved plan during construction **and operation** of the facility.

The ALJ finds the Department's proposed revisions to Recommended Public Services Condition are necessary and appropriate to meet the requirements of the Public Services standard. Therefore, the ALJ recommends that, in the Final Order, the Council modify this condition accordingly.

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Ruling Mr. Cooper's Motion to Strike Portions of Idaho Power's Response Brief on Issue PS-4:

Following receipt of Idaho Power's Response Brief, Mr. Cooper moved to strike the following assertion in Idaho Power's brief: "Mr. Cooper's testimony demonstrates that firefighters in La Grande had to rely on bucket brigades to fight the Rooster Peak Fire."²⁷⁴ Cooper Motion to Strike at 1. Mr. Cooper asserts that this assertion is false, or at the very least misleading, because the evidence actually demonstrates that in 1973, firefighters used a variety of measures, including helicopters and air tanker drops, to combat the Rooster Peak Fire. *Id.* at 1-2.

The ALJ declines to strike the statement from Idaho Power's brief. The ALJ notes, however, the evidence shows that about 300 firefighters fought the lightning-caused Rooster Peak fire with the assistance of approximately 1500 community volunteers, and using a variety of fire suppression measures, including bucket brigades, digging fire lines, helicopter water drops, and airplane flame retardant drops.²⁷⁵ Consequently, to the extent Idaho Power's argument suggests that firefighters had to rely solely on bucket brigades to fight the 1973 fire, the contention is given no weight.

Issue PS-5: Fire Protection: Whether the Wildfire Mitigation Plan is adequately developed and includes sufficient detail to allow for public participation.

Ms. Gilbert has standing on Issue PS-5, and bears the burden of producing evidence to support her challenges to the Wildfire Mitigation Plan. Ms. Gilbert did not timely file any written direct testimony or exhibits in support of her position on Issue PS-5, nor did she submit written closing argument on this issue. Because Ms. Gilbert failed to submit evidence and/or argument in support of her claim, the ALJ considers the claim unsubstantiated.²⁷⁶ The findings in the Proposed Order constitute *prima facie* evidence of Idaho Power's compliance with the Public Service standard as it relates to Issue PS-5.

Issue PS-10: Whether the draft Fire Prevention and Suppression Plan (Attachment U-3) is adequate and whether local service providers would be able to respond to a facility-related fire.

Limited parties Charles Lyons and Stacia Webster have standing on Issue PS-10. In his direct testimony, Mr. Lyons argues that the FPS Plan is inadequate because Idaho Power seriously underestimates the risk of fires caused by 500 kV transmission lines in the Blue Mountain and Morgan Lake Alternative segments of the proposed facility. Lyons Direct Test. at

²⁷⁴ Idaho Power's Response Brief for Issue PS-4 at 15, citing Cooper Direct Test. Issue PS-4 at 6.

²⁷⁵ *See, e.g.*, Cooper Direct Test. at 3-6; Cooper Direct Ex. 3.

²⁷⁶ *See Ruling on Motion to Dismiss* at 12-13 ("absent timely filed written closing argument from Ms. Gilbert, the ALJ will consider the claim asserted as unsubstantiated, and will not address the merits of Issue PS-5 in the Proposed Contested Case Order.").

2-4. Mr. Lyons also contends the draft PPS Plan lacks clear criteria for emergency de-energizing the proposed line, that it fails to mitigate fire danger by burying portion of the line, and that it does not provide specific information about points of access for firefighters along the route nor contingency plans for emergencies when resources are scarce.²⁷⁷ *Id.* at 5-6.

In her testimony, Ms. Webster offers evidence of the 1973 Rooster Peak wildfire in the forested mountains west of La Grande. Ms. Webster argues that the draft FPS Plan misstates local fire protection agencies' ability to respond to a project-related fire and the estimated response times. Webster Direct Test. at 3-6. Ms. Webster also contends that the draft FPS Plan should incorporate an amended version of Proposed Order Table PS-9, setting out the fire protection agencies and associations within the analysis area and accurate estimates of the agencies' response times to a project-related fire in their service area. *Id.*

First, as discussed above in connection with Issue PS-4, persuasive evidence in the record belies the limited parties' claims that Idaho Power has seriously underestimated the risk of a project-related fire. A preponderance of evidence in the record establishes that 500 kV power lines are unlikely to ignite a fire, that operation of the proposed facility will not significantly increase the risk of wildfire in the project area,²⁷⁸ and that the construction and operation of the facility will not result in significant adverse impact providers' ability to provide fire protection. The evidence also demonstrates that, in the unlikely event of a project-related fire, fire response agencies would be able to promptly respond to and suppress the fire.

Local agency response. Both Mr. Lyons and Ms. Webster raised concerns that local agencies would be delayed in their response until Idaho Power de-energized the line. However, the record establishes that the Company will be able to de-energize the line remotely in a matter of seconds. Therefore, any delay in this regard would be minimal.²⁷⁹ Ms. Webster also argued that local agency response times are incorrect in the Proposed Order Table PS-9²⁸⁰ because they do not include time that may be needed to muster a crew of volunteers. However, the record demonstrates that local fire districts and adjacent fire protection agencies have established mutual aid agreements to pool resources, ensure cooperation between these entities, and prevent

²⁷⁷ In his Closing Brief, Mr. Lyons mistakenly asserts that the Wildfire Mitigation Plan is an update to the draft FPS Plan. He then questions the sufficiency of the Wildfire Mitigation Plan under the Council's standards and the Oregon PUC's rules. Lyons Closing Brief on Issue PS-10. First, the FPS Plan and the Wildfire Mitigation Plan are separate plans that serve different purposes. The latter is not a replacement for, or update of, the former. Second, Mr. Lyons' challenges to the Wildfire Mitigation Plan fall outside the scope of Issue PS-10. Issue PS-10 is limited to the adequacy of the draft FPS Plan and the ability of local service providers to respond to a facility-related fire. Because Mr. Lyons does not have standing to challenge Idaho Power's Wildfire Mitigation Plan, the ALJ declines to address these arguments in any substantive manner.

²⁷⁸ Lautenberger Rebuttal Test. at 25-27, 54-62.

²⁷⁹ Dockter Rebuttal Test. at 13.

²⁸⁰ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 579-581 of 10016.

fires on a county and state level instead of isolating efforts to local districts.²⁸¹ Therefore, in the unlikely event that a local volunteer fire response organization needed several minutes to muster a crew to respond to a project-related fire, other agencies in the area would respond in accordance with the mutual aid agreements.

Ms. Webster also questions whether local fire responders have been adequately trained to fight transmission line fires. However, there is no evidence indicating such specialized training is necessary.²⁸² The evidence establishes that the response to a project-related fire would be similar to a wildland fire, because a fire's cause of ignition does not lead to different fire behavior or require different suppression methods to contain the fire perimeter.²⁸³ Finally, Mr. Lyons asserts that Idaho Power has not adequately assessed access points for first responders to reach the project but, as Idaho Power notes, the Company identified vehicle access points for all routes in the ASC.²⁸⁴

In summary, notwithstanding the limited parties' evidence and argument, a preponderance of evidence in the record establishes that the draft FPS Plan is adequate and that local services providers would be able to respond to and suppress a facility-related fire. In addition, as required by OAR 345-022-0110(1), a preponderance of the evidence demonstrates that the construction and operation of the facility will not result in significant adverse impact providers' ability to provide fire protection.

Proposed site certificate conditions related to Issue PS-10:

Mr. Lyons proposed two site certificate conditions related to fire protection for the first time in his Closing Brief.²⁸⁵ For the reasons previously explained, the ALJ declines to address

²⁸¹ ODOE - B2HAPPDoc3-38 ASC 21_ Exhibit U_PublicServices_ASC 2018-09-28, page 20 of 143.

²⁸² Moreover, as provided in the draft FPS Plan, Idaho Power offers a training course for emergency responders that addresses potential hazards involving electricity and necessary guidelines that help ensure the safety of responders and the general public. ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 9785 of 10016.

²⁸³ Dockter Rebuttal Test. at 19-20.

²⁸⁴ See generally Proposed Order, Attachment B-5, Road Classification Guide and Access Control Plan, ASC Exhibit B, Attachment B-5, ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 8504-8646 of 10016.

²⁸⁵ Mr. Lyons proposed the following:

- (1) Before siting can be approved, Idaho Power should consult with each county along the proposed route about their wildfire protection plans and meet with local forestry, government, and fire authorities in order to revise their fire risk assessment to conform to that specified in OAR 860-300-0002, and to insure that county and industry risk ratings are in agreement; and

these late submitted proposed conditions, other than to summarily note that, based on the findings herein, the proposed conditions are unnecessary.

The Department's proposed amendments to Recommended Public Services Condition 6, Attachment U-3 of the Proposed Order (addressing finalization of the draft FPS Plan), are addressed above in connection with Issue PS-4.

Ruling on Idaho Power's Motion to Strike portions of Mr. Lyons' Closing Brief on Issue PS-10:

In the motion, Idaho Power moves to strike, or alternatively give no weight to, portions of Mr. Lyons' Closing Brief challenging the adequacy of the Wildfire Mitigation Plan on the grounds that Mr. Lyons' arguments fall outside the scope of Issue PS-10. Motion to Strike at 3. Mr. Lyons opposes Idaho Power's motion as procedurally inappropriate. Lyons Opposition to Motion to Strike at 1.

The ALJ agrees that Mr. Lyons does not have standing to challenge the sufficiency of the Wildfire Mitigation Plan and therefore his arguments in that regard fall outside the scope of Issue PS-10. Accordingly, as noted above, the ALJ grants Idaho Power's alternative request and declines to consider Mr. Lyons' statements and arguments regarding the sufficiency of the Wildfire Mitigation Plan.

Recreation Standard

As pertinent here, OAR 345-022-0100, the Recreation standard states:

(1) [T]o issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:

- (a) Any special designation or management of the location;
- (b) The degree of demand;
- (c) Outstanding or unusual qualities;
- (d) Availability or rareness;
- (e) Irreplaceability or irretrievability of the opportunity.

Recreation activities at Morgan Lake Park – Issue R-1

Issue R-1: Whether Applicant adequately evaluated the potential adverse impact

(2) If reliable fire ratings then indicate high fire risk in the Morgan Lake area, the proposed transmission line should be buried underground through the area of elevated risk, or re-routed, preferably to the original BLM-approved route.

Lyons Closing Brief at 11-12.

of the proposed facility on recreational opportunities at Morgan Lake Park.

Limited party Colin Andrew has standing on Issue R-1. Mr. Andrew provided direct testimony in support of his claim that Idaho Power did not adequately evaluate the potential adverse impacts the proposed facility will have on recreational opportunities at Morgan Lake Park. Mr. Andrew asserts that Idaho Power did not evaluate the visual impacts of a proposed communication station near Morgan Lake Park, viewers' subjective perceptions, or potential noise impacts to users near the edge of Twin Lake.²⁸⁶ Andrew Direct Test. at 7-11. Mr. Andrew also submitted testimony from other La Grande residents, frequent visitors to Morgan Lake Park, who testified to their belief that construction and operation of the proposed transmission line will destroy the beauty and serenity of Morgan Lake Park and have an adverse impact their ability to use and enjoy recreation opportunities at the Park.²⁸⁷ Mr. Andrew did not file closing argument on this issue.

As set out in the findings, Idaho Power evaluated potential impacts to Morgan Lake Park under the Recreation standard because the park is an important recreational opportunity within the project analysis area. Morgan Lake Park is not a scenic resource described in the Scenic Resources standard or a protected area under the Protected Areas standard, and therefore Idaho Power was not required to evaluate the park under those standards. Contrary to Mr. Andrew's claims, a preponderance of the evidence in the record establishes that, taking into account mitigation, the proposed facility is not likely to result in a significant adverse impact to the recreational opportunities at Morgan Lake Park.²⁸⁸ More specifically, a preponderance of the evidence establishes that, with the proposed design modifications set out in Recommended Recreation Condition 1, the proposed Morgan Lake Alternative route will have a less than significant visual impact to the recreational opportunities at Morgan Lake Park.²⁸⁹

²⁸⁶ Mr. Andrew also contends that the proposed site boundary for the Morgan Lake Alternative route runs through Morgan Lake Park. Andrew Direct Test. at 5-6. This is incorrect. Idaho Power does not propose any project facilities within the Park boundary, and no portion of the site boundary overlaps with the Park boundary. Stippel Rebuttal Test. at 1; Kling Rebuttal Test. at 86. In addition, Mr. Andrew asserts that Morgan Lake Park is a State Game Refuge. Andrew Direct Test. at 3. There is no persuasive evidence in the record establishing that the park is currently designated as a wildlife refuge. However, even if the park was so designated, that fact would not invalidate Idaho Power's analysis of the project's impacts on recreational opportunities at the park. Finally, Mr. Andrew contends that the project would "ruin" stargazing opportunities at the junction of Morgan Lake Road and the park entrance road. Andrew Direct Test. at 2. This argument falls outside the scope of Issue R-1 because the referenced junction is not within the park boundaries and the road itself is not an important recreational opportunity subject to review under the Recreation standard. See OAR 345-022-0100(1) (discussing factors to be considered in judging the importance of a recreational opportunity).

²⁸⁷ See Carper Direct Test., Edvalson Direct Test., Griffith Direct Test., Jones Direct Test., McAllister Direct Test., and Witek Direct Test.

²⁸⁸ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 530-31 of 10016.

²⁸⁹ *Id.*

As demonstrated by ASC Exhibit T, Idaho Power's November 2019 supplemental analysis of impacts at Morgan Lake Park, and the November 2021 Revised Supplemental Analysis,²⁹⁰ Idaho Power has adequately evaluated the potential adverse impacts of the proposed facility on the recreational opportunities at Morgan Lake Park. Contrary to Mr. Andrew's contention, Idaho Power was not required to collect data on how the "typical visitor" to Morgan Lake Park would perceive the facility as part of its impact assessment. The evidence establishes that recreational opportunities will continue in a natural setting throughout a vast majority of the park, because no project component will be visible from approximately 84 percent of the park area.²⁹¹ Rather, high-intensity visual impacts will only occur in about 16 percent of the park, mostly in the southern portion, where the project will be close to the park and vegetation will provide little or no screening.²⁹² Nevertheless, although visible from certain locations within the park, the project will not preclude recreational opportunities and recreation will continue to occur in a natural setting throughout the vast majority of the park.²⁹³ The project's potential visual impacts to Morgan Lake Park will be less than significant, as that term is defined by Council rule.

In addition, contrary to Mr. Andrew's assertions, a preponderance of the evidence establishes that Idaho Power adequately evaluated the potential noise impacts on recreation resources at Morgan Lake Park. As detailed in the Morgan Lake Park Revised Supplemental Analysis, Idaho Power analyzed potential noise impacts resulting from construction and operation by discussing the predicted noise levels at various camping and recreation locations in the park.²⁹⁴ Idaho Power found that noise impacts during construction would be short-term. During facility operation, noise impacts would come from periodic vegetation maintenance, inspections, and corona noise from the transmission line. Noise from maintenance and inspections would be short term, occurring about once a year. Corona noise from the transmission lines would be low-level, exceed ambient levels only infrequently during foul weather events, and would not preclude recreational opportunities. Accordingly, the proposed facility will result in a less than significant noise impact to recreation at Morgan Lake Park.²⁹⁵ Mr. Andrew has not presented any persuasive evidence demonstrating otherwise.

Visual impacts at Morgan Lake Park – Issues R-2, R-3, and R-4

Issue R-2: Whether the visual impacts of the proposed facility structures in the viewshed of Morgan Lake Park are inconsistent with the objectives of the Morgan

²⁹⁰ Kling Rebuttal Ex. E.

²⁹¹ Kling Rebuttal Test. at 102.

²⁹² *Id.* at 102; Kling Rebuttal Ex. E at 17.

²⁹³ *Id.*

²⁹⁴ Kling Rebuttal Ex. E at 3-5.

²⁹⁵ Kling Rebuttal Ex. E at 6.

Lake Park Recreational Use and Development Plan and should therefore be reevaluated.

Limited parties Lois Barry and Michael McAllister have standing on Issue R-2. The limited parties provided direct testimony asserting that the construction and operation of the proposed transmission line will have an adverse impact on visitors' ability to use and enjoy recreation opportunities at the Morgan Lake Park. In her Closing Argument on Issue R-2, Ms. Barry asserts that the Morgan Lake Plan "should prevail" and that Idaho Power erred rating the proposed facility's visual impacts to Morgan Lake Park as less than significant. L. Barry Closing Argument at 28-30. In his Closing Brief, Mr. McAllister argues that, in evaluating Morgan Lake Park as an important recreational resource, Idaho Power did not give sufficient weight to the management objectives of the Morgan Lake Plan. Mr. McAllister asserts that, had Idaho Power given sufficient weight to the Park Plan's objectives of minimum development to preserve the maximum natural setting, it would have determined that the proposed facility will result in a significant adverse visual impact.²⁹⁶ McAllister Closing Brief at 4-6.

As set out in the findings, the Policy Statement in the Morgan Lake Plan states, in pertinent part:

Morgan Lake Park shall be managed and improved in a manner consistent with the objective of providing a quality outdoor recreational experience harmonious with a natural forest and lake area (as opposed to typical city park activities). Example activities consistent with this objective include fishing, bird watching, nature study, boating, but do not include baseball, motorbike trails, hunting, shooting, or playground activities using swings, merry-go-rounds, slides, etc.

McAllister Ex. 4 at 6. The limited parties contend that Idaho Power did not sufficiently consider the proposed facility's visual impacts on recreational opportunities in undeveloped areas of the park and should have given more weight to the Morgan Lake Plan's policy of preserving the park's natural forest and lake setting.

First, the record establishes that Idaho Power is not required to demonstrate compliance with the Morgan Lake Plan for purposes of the Scenic Resources standard because there are no proposed project components located within the park boundary. Second, the record demonstrates that Idaho Power did consider the objectives and values of the Morgan Lake Plan in its analysis.

²⁹⁶ Mr. McAllister makes several arguments in his Closing Brief that are outside the scope of Issue R-2. Because these arguments are outside the scope of Issue R-2 and Mr. McAllister's standing in this matter, they are not considered. For example, Mr. McAllister argues that the project site boundary crosses into Morgan Lake Park. McAllister Closing Brief at 6-10. Not only is this claim outside the scope of Issue R-2, but a preponderance of the evidence establishes otherwise. Mr. McAllister also argues that Idaho Power's assessment of the proposed facility's impact on Morgan Lake Park, including the November 2021 Revised Supplemental Analysis is "deeply flawed and based on unsupported assumptions." McAllister Closing Brief at 10-22. Issue R-2 asks whether the proposed facility's visual impacts should be reevaluated because they are *inconsistent with the objectives of the Morgan Lake Park Plan*, and not whether Idaho Power's impact assessment was flawed in other respects. Furthermore, that contention is addressed above in connection with Issue R-1.

In all three evaluations (ASC Exhibit T, the November 2019 supplemental analysis, and the November 2021 Revised Supplemental Analysis), Idaho Power referenced the Morgan Lake Plan's goals and objectives. In its November 2019 supplemental analysis, Idaho Power noted that although Morgan Lake Park is an important recreation opportunity, the Morgan Lake Plan did not identify any specific scenic views or values as particularly important providing a quality outdoor recreational experience.²⁹⁷ In the Proposed Order, the Department included Recommended Recreation Condition 1 to mitigate the overall potential visual impacts to visitors Morgan Lake Park and users of the park's recreational opportunities.²⁹⁸

In response to the limited parties' ongoing claims that Idaho Power did not sufficiently consider the proposed facility's potential impact to recreational opportunities in the undeveloped areas in the park, the Company revisited its impact analysis of the park. Idaho Power provided additional evidence of the project's potential adverse impacts to Morgan Lake Park in Kling Rebuttal Exhibits E, F and G.²⁹⁹ Idaho Power specifically addressed disbursed recreation opportunities in undeveloped areas of the park such as bird watching and nature study (both of which are referenced in the Morgan Lake Plan Policy Statement). The Revised Supplemental Analysis acknowledged that scenery is a valued attribute of the recreational opportunities at Morgan Lake Park.³⁰⁰ The Revised Supplemental Analysis also recognized that the proposed facility would be visible from approximately 16 percent of the park, primarily from the access road and day-use parking areas located to the south of Morgan Lake, and undeveloped areas west and south of Little Morgan Lake. Idaho Power acknowledged that in those areas of the park, where the towers are not screened, the visual contrast will be high. Idaho Power also acknowledged that at certain observation points within that 16 percent area of visibility, scenic integrity would be reduced to low and viewer perception could be high.³⁰¹ Nevertheless, Idaho Power concluded (and the Department concurred³⁰²) that impacts to the park *overall* would be less than significant, and that the proposed mitigation (including the proposal to expand use of the H-frame structures to all tower locations between mileposts 5 to 8) would further reduce the potential visual impacts in that 16 percent of the park.

To summarize, Issue R-2 asks, in essence, whether the proposed facility's visibility from certain vantage points within the boundary of Morgan Lake Park are inconsistent with the

²⁹⁷ See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7702 of 10016.

²⁹⁸ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 530-31 of 10016.

²⁹⁹ Exhibit E is the Revised Morgan Lake Park Supplemental Analysis (Nov. 12, 2021); Exhibits F1, F2, and F3 are video simulations of potential visual impacts in Morgan Lake Park; and Exhibit E is a study of tree heights and locations at Morgan Lake Park.

³⁰⁰ Kling Rebuttal Ex. B at 17.

³⁰¹ *Id.* at 14-17.

³⁰² See ODOE Response to Closing Arguments at 109.

Morgan Lake Plan and whether Idaho Power should reevaluate those visual impacts. A preponderance of the evidence establishes that, although the proposed facility will not be built within the park boundaries, the park is nevertheless an important recreational opportunity in the project's analysis area. For that reason, Idaho Power looked to the objectives and values of the Morgan Lake Plan to determine that scenery is a valued attribute of Morgan Lake Park. The Company incorporated that determination in its analysis of the proposed facility's potential impacts to the park. Contrary to the limited parties' contentions, the Revised Supplemental Analysis confirms that, taking into account mitigation, the proposed facility's impact on recreational opportunities at Morgan Lake Park will be less than significant. Indeed, as the Department notes, the Recreation standard does not require the Council to find that there will be *no* impact on a recreational opportunity, only that there is sufficient mitigation to ensure that impacts will be avoided, minimized, corrected or compensated so the impact is less than significant.³⁰³

Ruling on Mr. McAllister's Request to Exclude Kling Rebuttal Exhibit E:

In his Closing Brief, Mr. McAllister asks that the ALJ strike Idaho Power's Revised Supplemental Analysis (Kling Rebuttal Ex. E) from the evidentiary record because it is a "new study and opinion" to which the limited parties were "denied the opportunity to respond." McAllister Closing Brief at 20. As explained below, Mr. McAllister's argument is not persuasive and his request to exclude the exhibit is denied.

Idaho Power timely submitted the Revised Supplemental Analysis (Kling Rebuttal Exhibit B) in support of its position on Issues SR-2, SR-3, SR-7, R-1, R-2, R-3, and R-4. The limited parties with standing on those issues had the opportunity to object to this evidence following its filing in November 2021,³⁰⁴ but did not do so. The limited parties also had the opportunity to respond to the substance of the revised analysis in their surrebuttal testimony and the opportunity to question Ms. Kling about the revised analysis during the cross-examination hearing.³⁰⁵ Kling Rebuttal Ex. E was properly admitted into the evidentiary record (*see* Appendix 1, Table of Additional Admitted Evidence) and is properly considered herein. Therefore, the ALJ denies the request to strike or exclude this evidence.

Ruling on Idaho Power's Motion to Strike Portions of Mr. McAllister's Closing Arguments on Issue R-2:

Idaho Power moves to strike, or in the alternative requests that the ALJ give no weight to, statements in Mr. McAllister's closing arguments that address issues outside the scope of Mr. McAllister's standing on Issue R-2 and/or that were already addressed and resolved on summary determination. Specifically, Idaho Power challenges:

³⁰³ *Id.*

³⁰⁴ *See Second Case Management Order* at 10 (setting November 22, 2021 as the deadline for filing objections to rebuttal testimony).

³⁰⁵ Ms. Barry timely filed a request to cross-examine Ms. Kling regarding Issue R-2. Mr. McAllister did not file a similar request.

1. All statements relating to Idaho Power’s development of the Morgan Lake Alternative;
2. Mr. McAllister’s arguments that Idaho Power was required to survey subjective evaluations of visual impacts to Morgan Lake Park;
3. Mr. McAllister’s argument that a portion of the Project site is located within the boundaries of Morgan Lake Park;
4. All statements relating to the route analyzed in the federal National Environmental Policy Act (“NEPA”) process, including any assertions that Idaho Power identified the Proposed Route as the same route analyzed in the federal process;
5. Mr. McAllister’s arguments that Idaho Power must analyze wetlands located within Morgan Lake Park as Habitat Category 1; and
6. Mr. McAllister’s statements regarding compliance with Oregon’s Wildlife Diversity Program, the 1986 Emergency Wetlands Resources Act, and/or Oregon’s Comprehensive Outdoor Recreation Plan.

Idaho Power’s Motion to Strike, Issue R-2 at 9. Mr. McAllister filed an opposition to the motion, asserting that the motion is procedurally improper and substantively incorrect. McAllister Opposition to Motion to Strike, Issue R-2 at 1-4.

Although the *Case Management Order* does not address motions to strike, the Council’s procedural rules specifically allow parties, including limited parties, to submit motions seeking an order or other relief. OAR 345-015-0054(1). Therefore, the ALJ rejects Mr. McAllister’s procedural challenge to the motion. The ALJ also agrees with Idaho Power that Mr. McAllister’s closing brief includes arguments that fall outside the scope of Issue R-2, outside the scope of Mr. McAllister’s standing in this matter, and/or outside the Council’s jurisdiction.³⁰⁶

As discussed above, Issue R-2 asks whether the proposed facility’s visibility from certain vantage points within the boundary of Morgan Lake Park are inconsistent with the Morgan Lake Plan and whether Idaho Power should reevaluate those visual impacts. Mr. McAllister’s assertion that Idaho Power did not adequately study the Morgan Lake Alternative falls outside the narrow scope of Issue R-2. Mr. McAllister’s challenge to Idaho Power’s methodology for assessing visual impacts and his claim that the Company should have surveyed typical visitors to

³⁰⁶ Mr. McAllister appears to acknowledge as much in his Closing Brief, where he states:

It bears mention that the narrow issue R-2 as articulated by this body does not accurately reflect the issue Petitioner McAllister raised in public comment and his Petition for Party Status: the failure to conduct site certificate review in a manner consistent with federal agency review[.] * * * Petitioner McAllister was precluded from challenging this core issue—properly raised during public comment—during the contested case. Petitioner McAllister intends to appeal the exclusion of this issue at the conclusion of the contested case.

McAllister Closing Brief at 3.

Morgan Lake Park is also outside the narrow scope of Issue R-2.³⁰⁷ Additionally, Mr. McAllister's claims regarding the project site boundary in relation to Morgan Lake Park were conclusively resolved on summary determination. Mr. McAllister's arguments regarding federal agency review and the BLM's recommended preferred route are not only outside the scope of Issue R-2 but also outside Council's jurisdiction. Finally, Mr. McAllister's arguments pertaining to the Morgan Lake Alternative and compliance with the Fish and Wildlife Habitat standard are outside the scope of Issue R-2. The arguments were already resolved on summary determination (Issue FW-13). Accordingly, in the context of Issue R-2, the ALJ grants Idaho Power's alternate request and gives the challenged statements no weight.

Issue R-3: Whether the mitigation proposed to minimize the visual impacts of the proposed facility structures at Morgan Lake Park (\$100,000 for recreational facility improvements) is insufficient because the park's remote areas will not benefit from the proposed mitigation.

Limited parties Lois Barry, Peter Barry, Colin Andrew, Kathryn Andrew, and Irene Gilbert have standing on Issue R-3. Lois Barry and Peter Barry filed written testimony and exhibits in support of their positions on the issue, along with closing arguments. The limited parties argue that Idaho Power's agreement with the City of La Grande to pay \$100,000 for park improvements as further mitigation for potential impacts to Morgan Lake Park is insufficient because the offered funds will not address impacts to the undeveloped areas in the park.³⁰⁸ L. Barry Direct Test.; P. Barry Direct Test. Ms. Barry and Mr. Barry also contend this proposed mitigation is inadequate because the project will still be visible from certain areas of the park. *Id.* In her Closing Arguments, Ms. Barry asserts that the agreement is improper because the La Grande City Council did not comply with the Morgan Lake Plan and did not consult with the Morgan Lake Advisory Committee and/or the Director of City Parks and Leisure. L. Barry Closing Arguments at 14.

First, it is important to note that the MOA agreement between Idaho Power and the City of La Grande is a matter outside of the siting process and therefore outside the Council's jurisdiction and scope of review. As the Department explained in the Proposed Order, the MOA is only material to the Council's review under the Land Use standard, because Idaho Power's commitment to provide \$100,000 for improvements to the facilities at Morgan Lake Park (if the Company selects the Morgan Lake Alternative route) provides evidence of the project's compliance with Goal 8 (Recreation Needs).³⁰⁹ The promised payment of \$100,000 to the City is not designed or intended to provide mitigation for the project's visual impacts at Morgan Lake Park under the Recreation standard. Rather, as discussed above, the proposed mitigation for the project's visual impacts at the park is Recommended Recreation Condition 1, requiring the use

³⁰⁷ However, this same argument is addressed above in the context of Issue R-1.

³⁰⁸ Ms. Barry also argues that undergrounding the project segment near Morgan Lake Park is the only acceptable mitigation for visual impacts. L. Barry Direct Test. at 2. Not only is this argument outside the scope of Issue R-3 but also, as discussed elsewhere in this order, undergrounding is outside the Council's jurisdiction in this matter, because Idaho Power did not propose to underground any facility segments.

³⁰⁹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 250 of 10016.

of smaller, H-frame towers along the visible segment.

Because Idaho Power and the City of La Grande executed the MOA outside of the Council's site certificate review process, the limited parties' challenges to the City's actions or the agreement itself are outside the Council's purview. Idaho Power has committed to pay the funds for recreational improvements to the park (if the Company selects the Morgan Lake Alternative route), but how the funds are used, *i.e.*, the improvement projects selected, are the City's prerogative. The City may choose to improve the developed areas, refresh the natural areas, or do both. Neither Idaho Power nor the Council have any say in that matter.

Moreover, because the MOA is not intended as mitigation for visual impacts, it is immaterial whether the park's remote areas will benefit from these funds. As previously discussed, to mitigate for the potential visual impacts Idaho Power has proposed micrositing so that project components are not visible from the vast majority of the park and, for those components that will be visible from certain remote areas in the park, the Company has proposed design changes to minimize the visible impact. Also as previously discussed, the Recreation standard does not require the Council to find that the project will have no impacts to Morgan Lake Park, only that overall the project has a less than significant impact on the recreational activities at the park. Here, a preponderance of the evidence supports Idaho Power's conclusion (and the Department's concurrence) that, with Recommended Recreation Condition 1, the impacts from the proposed facility at Morgan Lake Park will be less than significant.

Ruling on Mr. Barry's Motion to Strike the ASC:

In the context of his standing on Issue R-3, on March 30, 2022, Mr. Barry filed a letter requesting that the ALJ strike the entire ASC. In the letter, Mr. Barry argues that the ASC is flawed, does not comply with the Council's standards, and therefore should be discarded. Mr. Barry also asserts that the citizens of Oregon oppose the project and the ALJ should give this opposition significant weight in evaluating the ASC.

For the following reasons, Mr. Barry's request is denied. First, Mr. Barry's general request to strike, discard, or deny the ASC exceeds the scope of Issue R-3, and Mr. Barry's standing as a limited party in this matter. As set out in the *Amended Order on Party Status*, Mr. Barry's participation in the contested case is limited to the discrete issue of proposed mitigation for visual impacts at Morgan Lake Park. Second, even if Mr. Barry had standing to challenge the ASC in its entirety, he does not identify or reference any specific evidence in support of his contentions. Finally, as set out in the *Case Management Order*, the ALJ's authority and obligations in this contested case are governed by the Model Rules of Procedure for Contested Cases (OAR 137-003-0000 through 137-003-0092) and the Council's procedural rules governing site certificate contested case hearings (OAR 345-015-0001 through OAR 345-015-0240). The ALJ must apply the burden of proof and standards of evidence in accordance with these rules. In other words, and contrary to Mr. Barry's request, it is not appropriate or acceptable for the ALJ to "weigh the efforts and arguments heavily on the side of the citizens"³¹⁰ simply because the applicant is an energy corporation.

³¹⁰ P. Barry March 30, 2022 Letter to Judge Webster at 1.

Issue R-4: Whether Applicant’s visual impact assessment for Morgan Lake Park adequately evaluates visual impacts to the more than 160 acres of undeveloped park land and natural surroundings, as visual simulations were only provided for high-use areas.

Lois Barry has standing on Issue R-4. Ms. Barry provided written testimony and exhibits in support of her contentions along with written argument. In response to Ms. Barry’s claim that Idaho Power did not provide a sufficient visual impact analysis of the remote, undeveloped areas in the park, Idaho Power conducted an additional analysis of potential visual impacts in both the developed and undeveloped areas of the park where visitors engage in dispersed recreation activities. Idaho Power submitted its Revised Supplemental Analysis of Morgan Lake Park as Kling Rebuttal Exhibit E.

In her closing argument, Ms. Barry argues that the visual impact assessment of the natural and undeveloped areas of Morgan Lake Park is incomplete and inadequate. She contends that the valued natural scenery near Little Morgan Lake “would be the most intensely impacted” and that, even if the project would be visible from only 16 percent of the park in the undeveloped natural areas, these natural areas are nevertheless worth protecting. L. Barry Closing Arguments at 2-3. Ms. Barry also argues that Idaho Power’s methodology for assessing visual impacts is flawed because the Company: (a) developed its own methodology (instead of using the USFS SMS); (b) did not consider constituent information; and (c) did not specifically assess visitors’ enjoyment of the park. *Id.* at 3-11. As explained below, Ms. Barry’s challenges to Idaho Power’s evaluation of impacts to Morgan Lake Park are not persuasive. Furthermore, Ms. Barry’s challenges to Idaho Power’s methodology for assessing visual impacts fall outside the scope of Issue R-4.

As explained in the Revised Supplemental Analysis, Idaho Power used a video simulation model to assess potential impacts of the project from undeveloped areas where visitors may engage in dispersed recreation opportunities. The Company’s evaluation showed potentially high intensity impacts in areas where there is no vegetation screening, and that there would be low or no visibility of the project from areas where trees will screen views of the towers.³¹¹ Idaho Power acknowledged in its analysis that there could be high magnitude impacts in areas south of Morgan Lake and Little Morgan Lake due to the project’s proximity and the lack of screening.³¹² The Company determined that “viewer perception will range from low to high throughout Morgan Lake Park” and that because of this range, “viewer perception for the park as a whole will be medium.”³¹³

Although Ms. Barry does not agree with Idaho Power’s analysis of and conclusions regarding the project’s potential impacts to recreation opportunities at Morgan Lake Park, she

³¹¹ Kling Rebuttal Ex. E at 11.

³¹² *Id.* at 12.

³¹³ *Id.* at 15.

has not demonstrated that the analysis is inadequate, incomplete, or that it fails to demonstrate the proposed facility's compliance with the Recreation standard.³¹⁴ Ms. Barry argues, in essence, that because the project will have a high-intensity viewer perception in some areas of the park, the project will have a significant adverse impact on the enjoyment of those who engage in recreation activities at the park. However, as previously stated, the Recreation standard does not require finding that the project will have no or only minimal impacts on recreational opportunities at Morgan Lake Park. Rather, the standard requires the applicant to demonstrate that, with mitigation, the impacts on recreational opportunities will be less than significant. As discussed above in connection with Issues R-1 and R-2, Idaho Power has provided a preponderance of evidence to establish that, with the proposed mitigation (design features) the project will have a less than significant adverse impact to recreational opportunities at Morgan Lake Park.

Ms. Barry also argues that Idaho Power should have applied the USFS SMS to assess the magnitude of impact and/or should have surveyed visitors to Morgan Lake Park to determine viewer perception. As noted above, Ms. Barry's challenges to the methodology for assessing visual impacts fall outside the scope of Issue R-4. Issue R-4 asks whether Idaho Power adequately evaluated visual impacts "to the more than 160 acres of undeveloped park land and natural surroundings." In other words, this issue concerns the scope of the Morgan Lake Park evaluation and the Company's conclusions regarding magnitude of impact, but it does not encompass challenges to Idaho Power's methodology for assessing impacts to visual resources. Moreover, the ALJ previously considered and rejected these same contentions in the *Ruling and Order on Summary Determination of Issue SR-6*.³¹⁵ While not addressed in connection with Issue SR-6, Ms. Barry's assertions that Idaho Power's methodology was inappropriate and not properly vetted or peer-reviewed also exceed the scope of Issue R-4.³¹⁶

In summary, Idaho Power's supplemental analysis of Morgan Lake Park adequately evaluates the proposed project's visual impacts in the undeveloped areas of the park. A preponderance of evidence establishes that although the project will result in long-term visual impacts of varying intensity in Morgan Lake Park, these visual impacts will not preclude visitors from engaging in recreational opportunities in the park. Hence, the project's impacts to the park will be less than significant.

³¹⁴ Like Mr. McAllister, Ms. Barry argued that Idaho Power provided the Revised Analysis "late in the game," thereby denying the limited parties the opportunity to assess its validity. L. Barry Response to Closing Arguments at 3. However, as previously discussed, Idaho Power properly offered the Revised Analysis, video simulations, and tree study as evidence in response to limited parties' claims that the Company did not adequately evaluate the park's undeveloped areas. The evidence was admitted without objection; it is relevant and material to the Council's review under the Recreation standard and is entitled to evidentiary weight.

³¹⁵ In the *Ruling and Order on Summary Determination of Issue SR-6*, the ALJ found that the Council's rules do not require an applicant to employ a specific methodology to assess visual impacts and do not require that the applicant collect constituent information. *Ruling on Issue SR-6* at 12-13.

³¹⁶ Furthermore, even if Ms. Barry had standing to raise these other challenges to Idaho Power's visual impact assessment methodology, she has not demonstrated that the methodology is flawed, incomplete or insufficient to establish the project's compliance with the Council's siting standards.

Proposed site certificate condition related to Issue R-4:

In her Closing Arguments, Ms. Barry asserts the proposed mitigation for visual impacts (lower H-frame towers with a natina finish) is inadequate. She proposes, as a site certificate condition, that Idaho Power “bury the parts of the transmission line that would in any way obstruct the irreplaceable top-of-the-world views from the Park” or that the Company select the BLM Preferred Route instead of the Morgan Lake Alternative route. L. Barry Closing Argument at 20.

Ms. Barry’s proposed condition is both untimely and inappropriate. The proposed condition is untimely because Ms. Barry did not submit it in accordance with the established schedule. It is inappropriate because the Council cannot consider other routes or the undergrounding of segments that Idaho Power did not propose in the ASC. Accordingly, the proposed condition is denied.

Ruling on Idaho Power’s Motion to Strike Portions of Ms. Barry’s Closing Arguments on Issue R-4:

Idaho Power moves to strike, or in the alternative requests that the ALJ give no weight to, statements in Ms. Barry’s closing arguments on Issue R-4 that address issues outside the scope of Ms. Barry’s standing in this contested case and/or issues that were already addressed and resolved on summary determination.³¹⁷ Specifically, Idaho Power challenges Ms. Barry’s assertions that the Company should have applied the USFS SMS to assess visual impacts and should have surveyed visitors to the park to determine viewer perception. Motion to Strike, Issues R-2, R-3 and R-4 at 6-7. Ms. Barry filed an opposition to the motion.

As noted above, in the *Ruling and Order on Summary Determination of Issue SR-6*, the ALJ determined that the fact that Idaho Power did not collect constituent information in accordance with the USFS SMS did not invalidate the Company’s chosen methodology for assessing visual impacts. *Ruling on Issue SR-6* at 12-13. Insofar as Ms. Barry argues, in connection with Issue R-4, that Idaho Power should have applied the USFS SMS and should have surveyed visitors to Morgan Lake Park to determine viewer perception, the ALJ agrees that these legal arguments were already considered and rejected in connection with Issue SR-6. Consequently, in the context of Issue R-4, the ALJ gives Ms. Barry’s arguments regarding the USFS SMS methodology no weight.

Retirement and Financial Assurance Standard

OAR 345-022-0050, the Retirement and Financial Assurance standard provides:

To issue a site certificate, the Council must find that:

- (1) The site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or

³¹⁷ See Idaho Power’s Motion to Strike, Issue R-4, Attachment B.

operation of the facility.

(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

Bond amount – Issue RFA-1

Issue RFA-1: Whether the \$1 bond amount adequately protects the public from facility abandonment and provides a basis for the estimated useful life of the facility.

Limited parties Carbiener, in his personal capacity and on behalf of the OCTA, and Gilbert have standing on this issue. They both challenge the recommended phased-in bonding approach described in the Proposed Order and the Department’s recommendation to reduce the bond/letter of credit to \$1 during the first 50 years of operation (Recommended RFA Conditions 4 and 5). The limited parties assert that the \$1 bond amount does not protect the public from the likelihood of facility abandonment. They also challenge the Department’s finding that it is highly unlikely the proposed facility will be decommissioned any time in the first 50 years of operation. Both Mr. Carbiener and Ms. Gilbert propose that Idaho Power be required to secure a bond for the full retirement/restoration cost of \$140 million for the life of the facility. (Carbiener Direct Test. at 3; Gilbert Opening Argument on Issue RFA-1 at 10-15; Gilbert Closing Brief on Issue RFA-1.)

In the Proposed Order, based on information presented in the ASC, the Department found that a 100-year lifetime is a reasonable estimated useful life for the proposed facility. The Department also found that, while some level of risk exists, the likelihood that Idaho Power would abandon the proposed facility during the first 50 years of operation is very low. The Department agreed that the risk of facility abandonment or retirement will increase after the first 50 years, as future unforeseen technological and electricity market changes could affect Idaho Power’s financial condition or the facility’s continued viability.³¹⁸ The Department also agreed that Idaho Power’s proposed financial assurance methodology, *i.e.*, incrementally increasing the bond/letter of credit on an annual basis after the facility has been in service for 50 years, is a reasonable approach to accounting for the possibility that the facility may eventually be retired. Furthermore, as provided in Recommended RFA Condition 5, and to account for conditions that could impact the facility’s viability in the first 50 years of operation, the Department adopted Idaho Power’s proposal to report on the facility’s continued viability and the Company’s financial condition on the fifth anniversary of the in-service date and every five years thereafter.³¹⁹

The limited parties have presented no evidence to support their claims that the \$1 bond for the first 50 years of facility operation is insufficient, that the facility is likely to become

³¹⁸ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 309 of 10016.

³¹⁹ *Id.*, pages 307-311 of 10016.

obsolete or unnecessary in that time frame, and/or that Idaho Power will become insolvent during that time. They have not countered Idaho Power's evidence that a 500 kV transmission line is an extremely valuable asset and the Company is developing and constructing the facility with the expectation that it will operate in perpetuity.³²⁰ The limited parties also have not shown that Wells Fargo's letter of willingness (updated as of October 2021 for a period not to exceed five years) to arrange a syndicated letter of credit in an amount up to \$141 million during the construction phase fails to satisfy the Council's RFA requirements.³²¹ Furthermore, to the extent the limited parties compare the financing and operation of the proposed transmission line to recent solar projects (*i.e.*, Bakeoven Solar and Obsidian Solar Center), these comparisons are misplaced. As Idaho Power's expert Randy Mills testified, the financial and operational risks associated with these solar facilities are entirely distinct from those associated with a major transmission line proposed by a regulated utility.³²²

Additionally, Ms. Gilbert's legal challenge to the proposed phased-in bonding approach misconstrues the Council's rules. Ms. Gilbert argues that, under OAR 345-022-0000(3)(c), the Council lacks the ability to apply a balancing determination to the RFA standard, there is no room for flexibility, and therefore the Council must require Idaho Power to maintain a bond for the full amount of restoration costs throughout construction and the operational life of the facility. Gilbert Opening Argument on Issue RFA-1 at 3; Gilbert Closing Brief on Issue RFA-1 at 7.

Contrary to Ms. Gilbert's contention, the Council's rules require the certificate holder to have a bond/letter of credit "in a form and amount satisfactory to the Council" to restore the site. OAR 345-022-0050(2); OAR 345-025-0006(8). Accordingly, the rules give the Council the discretion to approve a bond/letter of credit in an amount less than the full cost of site restoration as long as that amount is *satisfactory to the Council*. The plain text of the rules allows the Council to exercise reasonable judgment in determining the appropriate form and amount of the bond/letter of credit. Indeed, OAR 345-025-0006(8) (Mandatory Condition 8), specifically authorizes the Council to "specify different amounts for the bond or letter of credit during construction and during operation of the facility." Had the Council intended to require that a certificate holder maintain a bond/letter of credit for the full decommissioning cost at all times, then it could and would have so stated in its rules.

Furthermore, while the General Standard of Review prohibits the Council from applying "the balancing determination"³²³ to the RFA standard (*see* OAR 345-022-0000(3)(c)), the

³²⁰ *See* Ellsworth Rebuttal Test. at 4-7.

³²¹ Mills Rebuttal Test., Ex. B.

³²² *See* Mills Rebuttal Test. at 7-13 (explaining why the Bakeoven and Obsidian solar projects differ from the B2H project and are not comparable to B2H in organizational expertise, financing, and likelihood of retirement).

³²³ Under OAR 345-022-0000(2), the Council may issue a site certificate for a facility that does not meet one or more applicable Council standards "if the Council determines that the overall public benefits of the facility outweigh any adverse effects on a resource or interest protected by the applicable standards the facility does not meet. * * *."

discretion granted to the Council under the RFA standard to determine the appropriate form and amount of the bond/letter of credit is not the same as the balancing determination. Also, a balancing determination is not necessary here because, as explained in the Proposed Order, Idaho Power has met the RFA standard by demonstrating a reasonable likelihood of obtaining a bond/letter of credit in an amount sufficient to restore the site to a useful, non-hazardous condition.³²⁴

In short, limited parties Carbiener and Gilbert stated concerns, but they provided no evidence or persuasive legal argument to contradict the findings in the Proposed Order and the testimony of Idaho Power's expert witnesses explaining why it is highly unlikely that the facility would be retired before the end of its useful life. The limited parties also provided no evidence that Idaho Power would be unable to bear the costs of decommissioning the facility and restoring the site to a useful, non-hazardous condition. Idaho Power, on the other hand, persuasively explains why it is not necessary, and in fact inappropriate, to require that it maintain a bond/letter of credit at the full decommissioning cost (approximately \$141 million) for the life of the project.³²⁵

A preponderance of the evidence establishes that the proposed \$1 bond amount for the first 50 years of operation, with a phased-in increase over the next 50 years of operation until the bond covers the full decommissioning cost, adequately protects the public from facility abandonment and provides a basis for the estimated useful life of the facility.

Proposed site certificate conditions related to Issue RFA-1:

Mr. Carbiener timely proposed two conditions, which are addressed below. Ms. Gilbert also timely proposed a condition related to Issue RFA-1 also addressed below.³²⁶ In her closing argument on Issue RFA-1, Ms. Gilbert proposed three new conditions purportedly related to compliance with OAR 345-022-0050.³²⁷ Because Ms. Gilbert did not submit these latter proposed conditions to the ALJ in a timely manner in accordance with the schedule set in the

³²⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 305-06 of 10016.

³²⁵ As set out in ASC Exhibit M, Idaho Power estimates that the cost to maintain a bond/letter of credit to guarantee the full decommissioning cost would be approximately \$880,000 annually, based on 2018 interest rates and market conditions. Because Idaho Power is a regulated utility, the cost incurred by Idaho Power to maintain such a bond/letter of credit would be built into the rates of the Company's utility customers and would be in addition to the decommissioning costs that are normally built into utility rates. See ODOE - B2HAPPDoc3-21 ASC 13_Exhibit M_Financial Capability_ASC 2018-09-28, page 8 of 19.

³²⁶ Another condition proposed by Ms. Gilbert related Idaho Power's financial ability to pay for construction costs, but not directly related to Issue RFA-1, is addressed *infra* under the heading, *Gilbert Additional Proposed Site Certificate Conditions*.

³²⁷ See Gilbert Closing Brief on Issue RFA-1 at 9-11.

Case Management Order,³²⁸ the ALJ declines to address their necessity or appropriateness.

Carbiener Proposed RFA-1 Condition 1: During the four years of construction Idaho Power will secure a bond for the full estimated amount of \$140 million.

Carbiener Proposed RFA-1 Condition 2: When [the facility is] operational, Idaho Power will provide full amount of bond, \$140 million.

Carbiener Direct Test. 3.

Both the Department and Idaho Power oppose Mr. Carbiener's proposed conditions as unnecessary. Although the Council could impose these conditions, the Council's rules do not require that it do so.

As discussed above, the RFA standard requires that Idaho Power produce evidence that it can obtain a bond or letter of credit in an "amount satisfactory to the Council." OAR 345-022-0050(2). The standard does not require that the certificate holder obtain a bond or letter of credit for the full amount of decommissioning/site restoration. As discussed above, Idaho Power proposed, and the Department approved, the phased-in approach to the bond/letter of credit. As a practical matter, there is no need for Idaho Power to secure a bond for the full decommissioning cost at the outset of construction. Furthermore, given the very low risk that the facility would be retired after construction and before 50 years of service, there is no need for a bond/letter of credit for the full amount of decommissioning/site restoration during that period. Consequently, Mr. Carbiener's proposed RFA conditions are denied.

Gilbert Proposed RFA-1 Condition: Prior to acceptance of a bond in an amount less than the amount identified in OAR 345-02[5]-0006(9), Idaho Power will document that they have established dedicated additional funds which combined with the bond amount will equal the amount identified as being required to restore the site to a useful, non-hazardous condition based upon the calculations in the site certificate and annual adjustments. These funds will be placed in trust and dedicated specifically for use in the restoration of the transmission line site and will not be made available for other uses including those resulting from bankruptcy or actions of Ida-Corp.

Gilbert Opening Arguments Regarding Issue RFA-1 at 16.

Both the Department and Idaho Power oppose this condition as unnecessary. First, there is no obligation under the Council's rules for the certificate holder to document that it has established dedicated additional funds to cover the full cost of site restoration in addition to a bond/letter of credit in a satisfactory amount. Second, as Idaho Power notes, the Council rules

³²⁸ Pursuant to OAR 345-015-0085(1), "parties shall submit proposed site certificate conditions to the hearing officer in writing according to a schedule set by the hearing officer." In this matter, the deadline for submitting written direct testimony, evidence, and any proposed site certificate conditions was September 17, 2021. *Case Management Order* at 16, 18.

do not contemplate placing decommissioning funds in escrow and there is no precedent for such a requirement. Third, Ms. Gilbert offered no evidence to support her proposal. Because there has been no showing that this proposed RFA condition is necessary or appropriate, the proposed condition is denied.

Removal of concrete footings – Issue RFA-2

Issue RFA-2: Whether, in the event of retirement of the proposed transmission line, removal of concrete footings to a depth of one foot below the surface is sufficient to restore the site to a useful, non-hazardous condition.

Mr. Carbiener, on his own behalf and on behalf of OCTA, has standing on Issue RFA-2. He asserts that, in the event the facility is retired, Idaho Power should be required to remove the foundations for each support structure (concrete tower footings) to a depth of three feet below ground, because one foot is insufficient to restore the soil to a useful, non-hazardous condition. Mr. Carbiener contends that three feet below ground is necessary because remaining fragments of concrete can damage soil. (Carbiener Direct. Test on Issue RFA-2 at 4.)

Mr. Carbiener presents no evidence in support of his contention that removal of concrete foundations to a depth of three feet on non-EFU land is necessary to protect soils and return the land to a useful non-hazardous state. Idaho Power, on the other hand, presented testimony establishing that, except within EFU zones, removal of concrete footings to a depth of one foot below grade is appropriate. Jared Ellsworth, a licensed professional engineer, explained that it is more environmentally impactful to remove the concrete footings than it is to leave in place the portion of the footing below a one-foot depth. Increasing the removal depth from one foot to three feet would result in significantly more disturbance to the surrounding ground.³²⁹ Mr. Ellsworth also explained the exception for EFU zoned land, because removing the footings to three feet below ground allows sufficient clearance for farming equipment and installation of irrigation.³³⁰

In the Proposed Order, the Department included Recommended RFA Condition 2, requiring that, if Idaho Power permanently ceases construction or operation of the facility, then it must retire the facility in accordance with a Council-approved retirement plan. The Department also concurred with Idaho Power's retirement plan proposal of removing the footings to a depth of three feet below grade in EFU zoned lands, and to one foot below grade, depending on ground slope, on all other lands. Mr. Carbiener has not shown that Idaho Power must remove all concrete footings to a depth of three feet below ground surface to restore the site to a useful, non-hazardous condition.

Proposed site certificate conditions related to Issue RFA-2:

Carbiener Proposed RFA-2 Condition 1: The completed application and

³²⁹ Ellsworth Rebuttal Test. at 38-39.

³³⁰ *Id.* at 39.

project order will remove tower concrete footings to a depth of three feet below surface of ground. This will be included in EFSC Retirement Plan for action 100 years from today or sooner.

Both the Department and Idaho Power oppose this proposed condition. The Department asserts this condition is unnecessary, because in the unlikely event of facility retirement Recommended RFA Condition 4 will ensure that Idaho Power restores the site to a useful, non-hazardous condition. Idaho Power asserts that the proposal is both unnecessary and inappropriate, because (as discussed above) requiring that concrete footings be removed to a depth of three feet below ground surface on all lands will result in excessive disturbance of existing ground surrounding the footings.

Mr. Carbiener has not provided any evidence indicating that Idaho Power would fail to restore the project site to a useful, non-hazardous condition unless it removed all footings to a depth of three feet below ground surface. Idaho Power has explained why such a requirement is problematic and unnecessary. Accordingly, this proposed condition is denied.

Carbiener Proposed RFA-2 Condition 2: Idaho Power will clean the surrounding soil from any remaining concrete contamination.³³¹

Both the Department and Idaho Power oppose this proposed condition. The Department notes that this proposal is outside the scope of Issue RFA-2, which is limited to the appropriate depth for foundation removal. Idaho Power asserts that, in the event of facility retirement, it will perform concrete footing removal in accordance with industry standards and a Council-approved final retirement plan as required by OAR 345-025-0006(9).

Mr. Carbiener has not provided evidence showing that this proposed condition is necessary or appropriate under the Council's RFA standard. Idaho Power has explained why the proposed condition is unnecessary. Accordingly, this proposed condition is also denied.

Ruling on Idaho Power's Motion to Strike Portions of Mr. Carbiener's Response Brief on Issue RFA-2: In its motion, Idaho Power moves to strike statements in Mr. Carbiener's Response Brief for Issue RFA-2 relating to the process of removing reinforced concrete pillars. Motion at 15-16. The ALJ agrees that the challenged statements are not supported by evidence in the record. Accordingly, in lieu of striking this portion of Mr. Carbiener's argument, the ALJ gives the unsupported statements no evidentiary weight.

Scenic Resources and Protected Areas Standards

OAR 345-022-0080, the Scenic Resources standard, states in pertinent part:

³³¹ In his March 30, 2022 Response Brief on Issue RFA-2, at page 2, Mr. Carbiener changed the wording of this proposed condition to "Idaho Power will remove the surrounding soil from any remaining concrete contamination." This new version is substantively the same as the prior version, and does not change the determination.

[T]o issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.

Also, as pertinent here, OAR 345-022-0040, the Protected Area standard, states: “To issue a site certificate * * * the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the [listed protected areas].”³³²

Feasibility of undergrounding – Issue SR-2

Issue SR-2: Whether Applicant satisfied the Scenic Resources and Protected Area standards at Flagstaff Hill/NHOTIC and whether Applicant adequately analyzed the feasibility of undergrounding the transmission line as mitigation for potential visual impacts.

Limited parties Miller and Carbiener, in his personal capacity and on behalf of the OCTA, have standing on Issue SR-2. Mr. Carbiener provided evidence and argument in support of his position on this issue. Mr. Carbiener challenges Idaho Power’s visual impact assessment at the Flagstaff Hill/NHOTIC ACEC and the sufficiency of the Company’s visual depictions (photo simulations) of the proposed facility components in that area. Specifically, he argues that the visual depictions prepared by his witness, Ms. Lingenfelter, demonstrate that the proposed facility will have a significant adverse impact to the scenic resource. In addition, Mr. Carbiener argues that the Company did not adequately assess the feasibility of undergrounding the transmission line as mitigation for its visual impacts to the Flagstaff Hill/NHOTIC area. Carbiener Direct Test. Issue SR-2 at 3-12; Carbiener Closing Brief Issue SR-2 at 2-7.

Both Idaho Power and the Department contend that Idaho Power has provided sufficient evidence for the Council to find that the proposed facility, taking into account the proposed mitigation, will comply with the Scenic Resources and Protected Area standards. Ms. Lingenfelter’s video does not establish otherwise, *i.e.*, that the facility will have a significant adverse impact at the Flagstaff Hill/NHOTIC ACEC. Additionally, both the Department and Idaho Power noted that Idaho Power was not required to propose, nor the Council required to consider additional mitigation, including undergrounding the transmission line. Department Closing Brief at 181-188; ODOE Response Brief at 122-23; Idaho Power Closing Brief at 29-44; Idaho Power Response Brief at 29-36.

Extent of adverse impact. Mr. Carbiener asserts that Idaho Power’s video simulation of the proposed facility at the Flagstaff Hill/NHOTIC ACEC are inaccurate, not based on actual

³³² The Protected Areas standard is addressed in this section with the Scenic Resources standard because the Oregon Trail ACEC-NHOTIC parcel is a protected area located 123.4 feet NE of the project’s proposed route. ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 281 of 10016.

photographs of the area, and “all make believe.” Carbiener Closing Brief Issue SR-2 at 2. Mr. Carbiener also asserts that Idaho Power’s photo simulations showing the proposed project in relation to the existing 230 kV towers actually show that the proposed project would dominate the landscape. *Id.* at 3. He contends that Ms. Lingenfelter’s model also demonstrates that the proposed project would significantly impact the view from NHOTIC and the Oregon Trail. *Id.* at 4.

Contrary to Mr. Carbiener’s contention, Ms. Lingenfelter’s video simulations do not invalidate or outweigh the other evidence in the record demonstrating that, with the proposed mitigation, the proposed project will have a less than significant adverse impact on the scenic value of the NHOTIC and surrounding area. As the Department notes in its Response Brief, both Ms. Lingenfelter’s and Idaho Power’s video simulations have strengths and weaknesses. Both video models help to better understand the proposed project’s potential visual impact at the NHOTIC, but neither realistically depicts the existing landscape and other context necessary to assess the visual impact of the proposed facility in the Flagstaff Hill/NHOTIC area.³³³

The Scenic Resource standard requires Idaho Power to demonstrate that, taking into account mitigation, no significant impacts are likely to result at the NHOTIC. As explained in the findings, Idaho Power developed its own methodology specifically to apply the Council’s definition of “significant.” To be considered significant, a potential impact must: (1) be high intensity; (2) preclude the impacted resource’s ability to provide the scenic value for which the resource was designated or recognized in the applicable land management plan; and (3) last for a duration of at least 10 years.³³⁴

As for the Flagstaff Hill/NHOTIC area, Idaho Power has demonstrated (and the Department concurred) that the visual impacts of the proposed project would be less than significant. Taking into account mitigation via tower design (H-frame towers with a weathered steel finish) the impact would be of medium intensity and would not preclude the resource’s ability to provide the scenic value for which the resource was designated or recognized.³³⁵ In applying its methodology, Idaho Power assumed that viewer sensitivity would be high. However, taking into consideration other characteristics and the landscape context (other developments and the already existing transmission line), the project will be co-dominant with the existing viewshed.³³⁶ Consequently, with mitigation, both viewer perception and the

³³³ Also, as Idaho Power notes in its Response Brief, Ms. Lingenfelter’s model (which includes 129-foot tall towers spaced 900 feet apart) is not an accurate depiction of the proposed project. Near NHOTIC Idaho Power will use towers that range in height from 105 feet to 129 feet, will vary the spans between towers and will microsite tower locations to further reduce the magnitude of visual impacts. Idaho Power Response Brief at 33-34; *see also* Kling Rebuttal Test. at 107-08.

³³⁴ Kling Rebuttal Test. at 49.

³³⁵ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 283-87 of 10016.

³³⁶ As Ms. Kling explained, codominance is not simply a question of the size of the transmission towers relative to other features in the landscape. The project is codominant with other features because, as the viewer looks out on the landscape, the viewer is seeing all of the features as a collective. The viewer’s

resource change would be medium.³³⁷

Undergrounding. Mr. Carbiener also argues that Idaho Power did not sufficiently consider undergrounding the transmission line in the area of NHOTIC and that doing so would make the visual impact less than significant. Carbiener Closing Brief Issue SR-2 at 5-7. As both the Department and Idaho Power correctly note, Idaho Power did not propose undergrounding the transmission line as mitigation for visual impacts at Flagstaff Hill/NHOTIC. The Council is tasked with determining whether the facility, as proposed by Idaho Power, complies with applicable standards, laws and rules. Idaho Power proposed design modifications to mitigate the visual impact of the facility in that area. Because Idaho Power did not propose undergrounding the transmission line, the question of whether undergrounding is a better mitigation option is outside the Council's jurisdiction and, accordingly, outside the scope of this contested case.³³⁸

eye is not selecting one feature, *i.e.*, the proposed facility, to the exclusion of the others in the landscape. Kling Cross-Exam. Test., Tr. Day 6 at 160-163.

³³⁷ Kling Rebuttal Test. at 66-69.

³³⁸ In the Proposed Order, in addressing the visual impact assessment of the Oregon Trail ACEC-NHOTIC parcel, the Department noted that, in response to comments and concerns about the visual impacts at NHOTIC, Idaho Power provided an engineering report and cost estimate for undergrounding the transmission line in this area. The study concluded that the costs would be very high (approximately \$100 million more than the traditional overhead configuration) and that the ground disturbance for installation would be substantially greater than for an above ground line. ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 285-86 of 10016. The Department also noted that information about undergrounding is not required in the ASC and, "more importantly," Idaho Power did not propose undergrounding any portion of the facility as an alternative or as potential mitigation to reduce visual impacts. *Id.* at page 286 of 10016. The Department acknowledged that the Council is not authorized to evaluate alternatives not proposed by the applicant, but then addressed whether the Council could impose undergrounding as a mitigation measure, even if not proposed by the applicant. The Department concluded as follows:

Undergrounding could be considered as "minimizing" impacts of the action if it was found that undergrounding did, in fact, minimize the visual impact of the proposed facility to the extent that the mitigation reduced a potentially significant adverse impact to a level that was less than significant, in compliance with an applicable Council standard.

However, to the extent that undergrounding is viewed as mitigation for potentially significant adverse visual impacts at NHOTIC, the Department emphasizes that the technology and infrastructure needed to underground a transmission line would themselves create visual impacts as well as potential impacts to other resources protected under the Council's standards and not evaluated in the ASC. As described here, therefore, the Department does not find that undergrounding, if a viable mitigation option, is necessary for the proposed facility to comply with the Council's Protected Areas standard. For the reasons described here, the Department does not conclude that the visual impacts of the proposed facility (including recommended Scenic Resources Condition 3) to NHOTIC are significant, and does not find that additional mitigation in the form of undergrounding are necessary to comply with the Council's Protected Area standard.

Proposed site certificate conditions related to Issue SR-2:

In his direct testimony, Mr. Carbiener timely proposed two site certificates related to Issue SR-2.³³⁹

Carbiener Proposed Scenic Resources Condition 1: During construction certificate holder will not construct any new roads or improve any existing roads between Flagstaff Gulch and Highway 86. Access to tower sites will be performed by wide-balloon tired vehicles. Materials (re-bar and concrete) will be delivered by helicopter, tower and conductor placement will be by helicopter. In front of ACEC, no cuts into hillsides, and tower footings made to hill contour. All above ground tower footings to have concrete colored to match sage, or light grey.

Both the Department and Idaho Power object to this proposed condition as unnecessary. The ALJ agrees. First, Mr. Carbiener did not present any evidence or argument in support of these proposed construction-related provisions. Second, the proposed condition is not necessary because any new and/or improved roads will not result in significant visual impacts and Idaho Power's design already includes light grey concrete footings. Accordingly, this proposed condition is denied.

Carbiener Proposed Scenic Resources Condition 2: Idaho Power will provide compensation in the amount of \$3.5 million due to permanent visual impact to the National Historic Oregon Trail and Flagstaff Hill Interpretive Center to comply with the required mitigation as described by the Energy Facilities Siting Council in their site certificate at Attachment S-9; HPMP, p, 22.

Both the Department and Idaho Power also object to this proposed condition as unnecessary. Again, the ALJ agreed with this assessment. This proposed condition is not necessary because a preponderance of the evidence in the record establishes that the design, construction, and operation of the proposed facility, with the mitigation proposed to reduce visual impacts, will have a less than significant adverse impact to the scenic resource and protected area, and therefore satisfies the Scenic Resources and Protected Area standards. Consequently, this proposed condition is also denied.

NHOTIC/Oregon Trail visual impact assessment – Issues SR-3 and SR-7

Issue SR-3: Whether Applicant adequately assessed the visual impact of the proposed project in the vicinity of the NHOTIC and properly determined the impact would be “less than significant.”

Id. pages 286-87 of 10016.

³³⁹ Carbiener Direct Test at 12-13.

Limited party Deschner has standing on Issue SR-3. Mr. Deschner provided direct testimony and signed statements in support of his position that the proposed facility would have a significant adverse visual impact at the NHOTIC. Deschner Direct Test. at 4. Mr. Deschner argued that the proposed mitigation via design features (including shorter, H-frame towers) is insufficient because the project will still be visible from the NHOTIC parcel. *Id.* at 5-10. In addition, Mr. Deschner challenged the Council's definition of the term "significant" in OAR 345-001-0010(52)³⁴⁰ and Idaho Power's methodology for assessing visual impacts. *Id.* at 7-8.

Both the Department and Idaho Power contend that Idaho Power used the appropriate definition of "significant" in evaluating visual impacts at the NHOTIC, and that Idaho Power appropriately applied that definition in its visual impact assessment. In addition, as discussed above with regard to Issue SR-2, the Department and Idaho Power assert that the evidence in the record is sufficient for the Council to determine that the proposed facility, taking into account the proposed mitigation, will comply with the Scenic Resources and Protected Area standards. ODOE Closing Brief at 196-97; Idaho Power Closing Arguments at 45-54.

Definition of "significant." Contrary to Mr. Deschner's contention, the Council's definition of "significant" does not muddy the meaning of the word. Where, as here, the Council has provided a specific definition for a term used in its rules, it is not appropriate to look to a dictionary to interpret that term. Indeed, OAR 345-001-0010 specifically states, "the following definitions apply unless the context requires otherwise or a term is specifically defined within a division or rule." With regard to the phrase "significant adverse impact" as used in the Scenic Resources standard, the Protected Areas standard, and other standards, the context does not require a different definition of "significant" than what is set out in the Council rule.

Furthermore, the evidentiary record belies Mr. Deschner's claim that Idaho Power bent or manipulated the meaning of "significant" to justify the proposed facility's placement in the area of the NHOTIC. The evidence establishes that the Company refined its impact assessment approach in response to the Department's request to consider the Council's definition of significant in its analysis.³⁴¹ Idaho Power also submitted its refined methodology to the Department for review and approval. In the Proposed Order, the Department set out its reasons for concurring with the Company's methodology for assessing visual impacts and recommended

³⁴⁰ OAR 345-001-0010(52) states:

"Significant" means having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resource affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.

³⁴¹ ODOE - B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, page 140 of 570.

that the Council do the same.³⁴² Consequently, Mr. Deschner has not shown that Idaho Power and/or the Department misconstrued the meaning of significant in evaluating the proposed facility's visual impacts.

Extent of adverse impact. Also contrary to Mr. Deschner's claim, Idaho Power has demonstrated, and the Department properly found, that the proposed facility's visual impacts at Flagstaff Hill/NHOTIC will be "less than significant." First, the fact that the proposed facility will be visible from the NHOTIC parcel does not, in and of itself, mean the proposed facility runs afoul of the Council's siting standards. Idaho Power does not need to demonstrate that the project is not likely to result in *any* adverse impact to scenic resources, only that with mitigation, the project is not likely to have a significant adverse impact. See OAR 345-022-0080(1); OAR 345-022-0040(1).

Second, as discussed above in connection with Issue SR-2, a preponderance of the evidence establishes that, taking into account mitigation, the proposed facility is likely to result in a medium adverse impact, rather than a significant adverse impact. After assessing potential impacts of the project at the NHOTIC parcel, taking into account the baseline conditions including the prior development within the landscape, Idaho Power determined that, absent mitigation, the project's visual impacts could potentially be significant.³⁴³ However, taking into account the proposed mitigation in the form of design changes (required by recommended Scenic Resources Condition 3),³⁴⁴ micro-siting and tower placement, these potential impacts will be reduced to less than significant.

In summary, Idaho Power accurately assessed the visual impact of the proposed project in the vicinity of the NHOTIC and properly determined that the impact would be medium, meaning less than significant as defined by Council rule.

Ruling on Idaho Power's Motion to Strike Portions of Mr. Deschner's Closing Arguments:

In its Response Brief, Idaho Power moves to strike, or in the alternative, give no weight to certain statements and arguments in Mr. Deschner's Closing Argument on Issue SR-3. Idaho Power challenges portions of the brief that rely on evidence not in the record and/or that address an issue on which Mr. Deschner does not have standing. Specifically, Idaho Power challenges statements regarding the Company's visual impacts assessment methodology and statements relying on Idaho Power's Response to Mr. Deschner's Discovery Request No. 4. Idaho Power Motion to Strike for Issue SR-3 at 7-9.

Because Mr. Deschner did not timely offer Idaho Power's response to Discovery Request

³⁴² ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 279-280 of 10016.

³⁴³ ODOE - B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, page 122 of 570.

³⁴⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 424 of 10016.

No. 4 into the evidentiary record, he may not rely on it as evidence in his closing argument. Furthermore, the ALJ agrees that Mr. Deschner's challenges to Idaho Power's visual assessment methodology are outside the scope of Issue SR-3, because Mr. Deschner did not raise the issue in his comments on the DPO.³⁴⁵ Consequently, in accordance with Idaho Power's request, the ALJ gives no weight to those statements in Mr. Deschner's closing brief that are not supported by evidence in the record and/or arguments that are outside the scope of Issue SR-3.

Issue SR-7: Whether the methods used to determine the extent of an adverse impact of the proposed facility on scenic resources, protected area and recreation along the Oregon Trail were flawed and developed without peer review and/or public input. Specifically, whether Applicant erred in applying numeric values to the adverse impact and whether Applicant used unsatisfactory measurement locations/observation points in its visual impact assessment.

Limited parties Lois Barry and STOP B2H have standing on Issue SR-7. In her direct testimony, Ms. Barry challenged Idaho Power's methodology for assessing the proposed facility's visual impacts at scenic resources. She argued that Idaho Power did not follow the procedures and methods in the USFS 1995 publication, *Landscape Aesthetics: A Handbook for Scenery Management (SMS)*, and did not consider constituent users' subjective evaluations of the resource. STOP B2H/Barry Direct Test. at 1-2. In the Closing Argument, STOP B2H also argued that Idaho Power's visual impact assessment for the NHOTIC fails to meet the requirements of the Scenic Resources and Protected Areas standards. STOP B2H asserts that Idaho Power's methodology was flawed because it did not include any constituent information and/or consider the impact on the affected human population. STOP B2H Closing Argument at 22. STOP B2H further argues that the Department "has not been appropriately attentive" in its review and erred in approving Idaho Power's methodology for assessing visual impacts.³⁴⁶ *Id.* at 23-24.

The Department and Idaho Power assert that Idaho Power used acceptable methods to assess visual impacts to scenic resources, protected areas, and recreation resources. Idaho Power adds that, contrary to the limited parties' contention, the Company could not apply the SMS methodology under the Council's standards, because the Department specifically requested that the Company use a methodology that applied the Council's definition of "significance." Idaho Power Response Issue SR-7 at 17.

For the reasons that follow, the ALJ finds that methods Idaho Power used to determine the extent of adverse impact of the proposed facility on scenic resources, protected areas, and recreation along the Oregon Trail were reasonable and appropriate. First, the Council's rules do

³⁴⁵ The ALJ notes that other limited parties' challenges to Idaho Power's visual assessment methodology are addressed in the *Ruling and Order on Motion for Summary Determination of Contested Case Issue SR-6* as well as Issue SR-7 below.

³⁴⁶ Neither STOP B2H nor Ms. Barry submitted evidence or argument in support of the second part of Issue SR-7, *i.e.*, whether Idaho Power used unsatisfactory key observation points in its visual impact assessment. Because the limited parties did not present evidence or argument on their challenge to the sufficiency of the selected KOP locations, the ALJ considers this sub-issue waived.

not require that an applicant employ a specific methodology for assessing visual impacts. The Council's standards simply require that the applicant demonstrate that the proposed facility is not likely to result in significant adverse impacts to identified resources. Therefore, Idaho Power had no legal obligation to collect constituent information in accordance with the SMS to demonstrate compliance with the Scenic Resources, Protected Areas, and/or Recreation standard.

Second, and contrary to STOP B2H's assertion, Idaho Power explained its methodology for assessing visual impacts in detail in ASC Exhibit R, Attachment R-1. As discussed above, Idaho Power developed this methodology following the Department's request that Idaho Power consider the Council's definition of significant in assessing visual impact.³⁴⁷ In the ASC, Idaho Power explained that its methodology incorporated relevant elements from the SMS to assess the baseline scenic conditions in forested areas and elements from the BLM's VRM to assess baseline scenic conditions in non-forested areas. Idaho Power also incorporated the BLM visual "sensitivity level" criterion and the SMS visual "concern" criterion into its methodology, both of which measure the degree to which viewers subjectively value a visual resource.³⁴⁸ Instead of collecting data on viewers' subjective perceptions of the proposed facility's potential impacts, Idaho Power assumed that all viewers (including all visitors to the NHOTIC) would be highly sensitive to the resource change.

The ALJ finds that because Idaho Power attached the highest viewer sensitivity value to all of the resources evaluated, data collection on viewers' subjective evaluations is unnecessary. Indeed, because Idaho Power assumed a high sensitivity among all viewer groups, additional constituent information would not add to, but could potentially reduce, the value that Idaho Power attributed to the affected resources. By assuming the highest viewer sensitivity, Idaho Power's methodology adequately addressed the impacts "on the affected human population" as required by OAR 345-001-0010(53). Consequently, contrary to the limited parties' contentions, Idaho Power's methodology for assessing the project's visual impacts does not run afoul of the Council's Scenic Resources, Protected Areas, and Recreation standards.

To the extent the limited parties assert that Idaho Power's methodology is "a self-serving piecemeal approach," and that the Company manipulated the methodology to yield desired results, the ALJ notes that, with regard to the Oregon Trail ACEC – NHOTIC parcel, the Company's assessment determined that *without mitigation*, the project could result in potentially significant visual impacts at various points.³⁴⁹ However, Idaho Power also determined, and the

³⁴⁷ ODOE - B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, page 140 of 570.

³⁴⁸ *Id.* at page 147 of 570.

³⁴⁹ *See* ODOE - B2HAPPDoc3-35 ASC 18_Exhibit R_Scenic Resources_ASC 2018-09-28, pages 122 and 228-232 of 570. In ASC Exhibit R, Idaho Power stated as follows:

In evaluating various alternatives for Project siting, IPC concluded that potentially significant visual impacts from facility structures located directly west of the NHOTIC (corresponding to the Flagstaff Alternative) could result. To address potential impacts, IPC analyzed three design options aimed at reducing adverse impact to less than significant: To address potential impacts, IPC analyzed three design options aimed at reducing adverse impact to less than significant: (1) applying a natina finish to the lattice

Department concurred, that *with mitigation*, visual impacts to the NHOTIC will be medium intensity, resulting from both medium resource change and viewer perception.³⁵⁰

Finally, the limited parties have not shown that the Department was “inattentive” in its review of Idaho Power’s methodology for determining the extent of the proposed facility’s impacts on scenic, protected, or recreational resources. As discussed above, the Department thoroughly reviewed Idaho Power’s methodology for consistency with the Council’s standards and provided feedback, asking that the Company consider the Council’s definition of significant in its analysis. In the Proposed Order, the Department outlined the methodology, expressed concurrence with the methodology, and stated the reasons for its concurrence.³⁵¹ There is no Council rule that requires an applicant to have its impact assessment methodologies peer reviewed and/or subjected to public input during development. As the Department noted in its Closing Brief, although the limited parties may have preferred that Idaho Power adopt a different methodology to assess visual impacts of the proposed facility, the Council’s standards do not require that the Company do so.

In summary, the methodology Idaho Power used to determine the extent of adverse impact of the proposed facility on scenic resources, protected areas, and recreation along the Oregon Trail was reasonable and appropriate. The limited parties have not shown that the methodology was flawed, that Idaho Power erred in applying numeric values to the adverse impact, and/or that the Company used unsatisfactory measurement locations/observation points in its visual impact assessment.

Proposed site certificate conditions related to Issue SR-7:

In its Closing Argument on Issue SR-7, STOP B2H proposes a site certificate condition requiring Idaho Power to underground the transmission line for 1.7 miles in the area the NHOTIC as a mitigation measure to ensure compliance with the Scenic Resources standard. Because STOP B2H did not submit this proposed condition in accordance with the set schedule, it is untimely. Moreover, even if STOP B2H had submitted this proposal in a timely fashion, it is neither necessary nor appropriate. As discussed above in connection with Issue SR-2, the Council lacks jurisdiction to require Idaho Power to underground the project segment near the NHOTIC. Consequently, this proposed site certificate condition is denied.

structure; (2) using an H-frame structure with galvanized finish; or, (3) using an H-frame structure with a natina finish. These mitigation strategies were considered for six transmission tower structures located directly west and within 1,200 feet of the NHOTIC boundary. Because of the terrain backdrop, IPC selected the H-frame structure with the weathered steel surface treatment, as it was expected to reduce the visual contrast below that of the standard galvanized structures.

Id. at 122-23 of 570.

³⁵⁰ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 283-84 of 10016.

³⁵¹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 279-280 of 10016.

Ruling on Idaho Power's Motion to Strike Portions of STOP B2H's Closing Arguments on Issue SR-7:

In its Response Brief, Idaho Power moves to strike, or in the alternative, give no weight to certain statements in STOP B2H's Closing Argument on Issue SR-7. Idaho Power challenges portions of the brief that address an issue outside the scope of Issue SR-7 and/or that seek to relitigate an issue already resolved through summary determination. Specifically, Idaho Power challenges statements asserting that the Company should have applied federal scenic resource inventorying methods to assess visual impacts and all statements asserting that Idaho Power was required to survey visitor's subjective evaluations of visual impacts. Idaho Power Motion to Strike for Issue SR-7 at 3-6. In opposing the motion, STOP B2H asserts that the heart of Issue SR-7 is whether Idaho Power's methodology for evaluating scenic resources was flawed, and therefore the challenged statements are within the scope of the issue. STOP B2H Opposition at 1-2.

As discussed above, there is significant overlap between Issue SR-6,³⁵² which was resolved in Idaho Power's favor, and Issue SR-7. Both issues boil down to the same question—whether the Council's standards require that Idaho Power incorporate viewers' subjective evaluation of their resources. The ALJ agrees with STOP B2H that Issue SR-7 includes a challenge to the validity of Idaho Power's methodology for assessing visual impacts. Because the challenged statements in STOP B2H's closing arguments fall within the scope of Issue SR-7, Idaho Power's motion to strike these statements is denied.

Soil Protection Standard

OAR 345-022-0022, the Soil Protection standard, states:

To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.

Issue SP-1: Whether the Soil Protection Standard and General Standard of Review require an evaluation of soil compaction, loss of soil structure and infiltration, and loss of stored carbon in the soil and loss of soil productivity as a result of the release of stored carbon in soils.

³⁵² Issue SR-6 asked, in part, "whether Applicant's visual impact assessments are invalid because Applicant did not incorporate Oregonians' subjective evaluation of their resources." In the *Ruling and Order on Motion for Summary Determination of Contested Case Issue SR-6*, the ALJ found that: (1) the Council's rules do not require an applicant to employ a specific methodology for assessing visual impacts and (2) the lack of specific constituent information (the failure to incorporate viewers' subjective evaluations) does not invalidate the visual impact assessments.

Limited parties Dr. Suzanne Fouty and STOP B2H have standing on Issue SP-1.³⁵³ Dr. Fouty contends that the Soil Protection standard is broader in scope than impacts to soils from erosion and chemical factors and that the Council's rules require that the applicant do an in-depth, detailed analysis of the project's impacts on soil productivity.³⁵⁴ She also argues that Idaho Power's analysis of the project's impacts to soil is insufficient to demonstrate compliance with the Soil Protection standard and that Idaho Power has failed to show the effectiveness of its proposed mitigation strategies. Fouty Closing Brief at 2-3, 14, 29, 40, 45-50.

Both the Department and Idaho Power maintain that the Council's review under the Soil Protection standard is not as broad, or as granular, as Dr. Fouty asserts. Both the Department and Idaho Power contend that Dr. Fouty is demanding more information and analysis than what is required under the Council's rules.³⁵⁵ Both the Department and Idaho Power also assert that Idaho Power has presented in ASC Exhibit I sufficient evidence and information to demonstrate that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils.³⁵⁶ Additionally, Idaho Power asserts that, in her Closing Brief, Dr. Fouty raises other concerns that are outside the scope of Issue SP-1.³⁵⁷ For the reasons that follow, the ALJ agrees with the Department and Idaho Power. The Council's standards do not require the impact evaluations proposed by Dr. Fouty.

Scope of the Soil Protection standard. Dr. Fouty argues that "the intent of the Soil Protection standard is to protect soil productivity" and therefore the standard requires an applicant to address any and all impacts that may adversely impact soils. Fouty Closing Brief at 22. However, contrary to Dr. Fouty's contention, the purpose of the Soil Protection standard is not to protect soil productivity. Rather, the standard requires the Council to find that, taking into account mitigation, the design, construction and operation of the proposed energy facility are not likely to result in a significant adverse impact to soils.

Dr. Fouty argues that because the Soil Protection standard states "significant adverse impacts to soils *including, but not limited to, * * **" the Council must evaluate any and all types of impacts the proposed facility may potentially have on soils within the analysis area. However, there is no support in law or in fact for Dr. Fouty's broad reading of OAR 345-022-0022. Where, as here, the text of a statute or rule includes a list that begins with "including, but not

³⁵³ In lieu of filing duplicative documents, STOP B2H adopted Dr. Fouty's testimony and arguments as its own with regard to Issue SP-1. *See, e.g.*, STOP B2H Coalition: Notice of Adoption of Testimony on Issue SP-1, filed September 17, 2021 and December 3, 2021.

³⁵⁴ Dr. Fouty asserts that other impacts to soil that can have a significant adverse impact to the productivity of a soil are soil compaction, loss of stored carbon, and loss of topsoil. *See* Fouty Closing Brief at 2-3, 10-11; *see also* Fouty Direct Test. at 10.

³⁵⁵ *See* ODOE Response to Closing Arguments at 128-31; Idaho Power's Closing Argument on Issue SP-1 at 2, 9-29; Idaho Power's Response Brief at 33-34.

³⁵⁶ ODOE Closing Brief at 203-05; Idaho Power's Closing Argument on Issue SP-1 at 6-9.

³⁵⁷ Idaho Power's Response Brief at 14-34.

limited to,” a court tasked with interpreting that statute or rule should look to the listed examples that follow to find a common characteristic in defining the scope of the general term.³⁵⁸ Therefore, in this context, the scope of “impact to soils” must be considered in light of basic characteristics of the specific examples that follow that term, *i.e.*, erosion and deposition or application of chemical substances. In other words, applying accepted principles of statutory construction, the Soil Protection standard requires the Council to evaluate “impacts to soils” that are typically assessed and addressed as part of the construction and operation of energy facilities. Those impacts include wind and rain erosion resulting from ground disturbing construction activities, application of effluent on surrounding soils during facility operation, chemical or hazardous substance spills, and salt deposition from cooling towers.

While the Department or the Council *may* request in the project order that an applicant provide information and evaluations of other impacts to soil (such as soil compaction, loss of structure and infiltration, loss of stored carbon, and/or loss of productivity), the plain language of the Soil Protection standard does not require the applicant to provide such detail and analysis in every site certificate application.³⁵⁹ Indeed, OAR 345-021-0010(1)(i) simply directs the applicant to provide “information from reasonably available sources regarding soil conditions and uses in the analysis area.” Neither the ASC content rule nor the Soil Protection standard require that the applicant present the highest level of detail, from the most current sources, or the best available science. The Council rules also do not require the applicant provide site-specific mitigation in the ASC.

Sufficiency of ASC Exhibit I and Idaho Power’s analysis of impacts to soil. Dr. Fouty makes three arguments in challenging the sufficiency of ASC Exhibit 1. First, she contends that Idaho Power incorrectly identified the soil analysis area to minimize the facility’s impacts. Fouty Closing Brief at 16-18. Second, she asserts that Idaho Power incorrectly used STATSGO (as opposed to SSURGO) as its primary database for identifying soil types. *Id.* at 18-20. Third, she argues that Idaho Power failed to identify and analyze the dynamic soil properties of the soil that would be disturbed and describe the mitigation needed to restore the soil to preconstruction condition. *Id.* at 20-21, 33-38.

Contrary to Dr. Fouty’s contention, Idaho Power correctly identified the soil analysis area for purposes of ASC Exhibit 1 as the area within the site boundary in accordance with the Project Order. The areas of disturbance, *i.e.*, the soil potentially impacted by the construction and

³⁵⁸ See, e.g., *State v. Kurtz*, 350 Or 65, 75-76 (2011); *Schmidt v. Mt. Angel Abbey*, 347 Or 389, 404-06 (2009) (“when using the principle of *ejusdem generis*, the court seeks to find, if it can, a common characteristic among the listed examples. We then determine whether the conduct at issue, even though not one of the listed examples, contains that characteristic and, thus, falls within the intended meaning of the general term.”)

³⁵⁹ Indeed, in the Second Amended Project Order, the Department directed Idaho Power to “[d]escribe all measures proposed to maintain soil productivity during construction and operation” and to include the required evidence related to the NPDES 1200-C permit application. ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 14.

operation of the facility, are subsets within the site boundary/soil analysis area.³⁶⁰ Second, there is nothing in the Council's rules requiring the applicant to use a specific methodology for identifying soil types within the analysis area. In ASC Exhibit 1, Idaho Power explained its methods for identifying soil properties and its use of the STATSGO database to characterize soil erosion and soil reclamation properties.³⁶¹ Idaho Power also explained its use of the SSURGO soils data to identify soils within the analysis area the potential for agricultural use. Idaho Power acknowledged that SSURGO data includes more detailed soil properties information based on smaller map units than the STATSGO data; however the SSURGO data did not provide complete coverage of the site boundary. Idaho Power also explained that it used the SSURGO database only if similar data were not available in STATSGO.³⁶² On this record, Dr. Fouty has not demonstrated that Idaho Power was required to use the SSURGO database to determine soil properties and/or that the Company failed to use information from reasonably available sources to identify and describe the major soil types in the analysis area.

Dr. Fouty also has not shown that Idaho Power's soil data analysis was flawed because the Company did not identify and analyze the dynamic properties of the soil that would be disturbed and describe the mitigation needed to restore the soil to preconstruction condition. As previously discussed, the ASC content rule requires the "identification and description of the major soil types in the analysis area." OAR 345-021-0010(1)(i)(A). In ASC Exhibit 1, Idaho Power not only identified and described the major soil types per county within the analysis area, but also presented soil mapping units along the entire transmission line corridor within the analysis area.³⁶³ Furthermore, in response to Dr. Fouty's request, Idaho Power provided an updated Table I-2-1, presenting soils information by county with the soil order, soil ID, soil name, acreage, percent and acreage of disturbance area, and soil properties.³⁶⁴ Nothing in the Council's rules or in the Project Order requires Idaho Power to provide a more granular description and analysis of soil properties to demonstrate compliance with the Soil Protection standard.

Sufficiency of proposed mitigation. Finally, Dr. Fouty argues that Idaho Power has not shown the proposed mitigation will be "effective and rapid" in returning the disturbed soil to preconstruction condition.³⁶⁵ She asserts that Idaho Power must provide site-specific mitigation

³⁶⁰ See Madison Cross-Exam. Test. Tr. Day 2 at 31, lines 1-2, explaining, "the construction area is a subset of the site boundary."

³⁶¹ ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, page 7 of 115.

³⁶² ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 7-12 of 115.

³⁶³ ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 42-68 of 115; see also ODOE - B2HAPPDoc3-17 ASC 09b_ Exhibit I_Soil_ASC_Part 2 2018-09-28, pages 69-72 of 88 (original Table I-2-1, showing the soil mapping units per county).

³⁶⁴ Madison Rebuttal Test. at 52-53; Madison Rebuttal Exhibit D.

³⁶⁵ More specifically, Dr. Fouty argues that for the Council to find that, with mitigation, the facility is not likely to result in significant adverse impacts to soils, Idaho Power must demonstrate that the proposed mitigations "will be effective and rapid (*i.e.* seeding, ripping, soil amendments, etc.)." *Id.* at 46. She

information and a specific timeframe for reclamation. She also contends that Idaho Power's reliance on vegetative recovery is not an appropriate measure of soil productivity recovery. Fouty Closing at 22-24, 41-47, 58-59.

As an initial matter, Idaho Power responds, and the ALJ agrees, that these mitigation concerns are beyond the scope of Issue SP-1. Issue SP-1 focuses on the extent to which the Council's standards require an evaluation of soil properties and not on the nature or quality of proposed mitigation measures. Nevertheless, for the Council's benefit, the ALJ briefly addresses Dr. Fouty's concerns.

The Soil Protection standard does not prohibit impacts to soils, whether the soil is productive or non-productive. Nor does the standard require an applicant to establish a specific timeframe for recovery or to establish quantitative measures for soil reclamation to demonstrate compliance with the Soil Protection standard. Rather, the standard requires that an applicant demonstrate that it has evaluated the potential impacts to soils from proposed facility construction and operation and that it has methods to mitigate adverse impacts to less than significant. As discussed above, the ASC content rule requires that the applicant submit information from reasonably available sources *describing* any measures the applicant proposes to avoid or mitigate adverse impacts to soils. OAR 345-021-0010(1)(i)(D). The Soil Protection standard specifically allows consideration of an applicant's proposed mitigation to make findings of compliance, but it does not require the applicant to provide proof that the mitigation will be rapid and completely effective.

In ASC Exhibit A, Idaho Power described its proposed mitigation measures, which include the following: avoidance of sensitive soils; minimizing impacts with BMPs; minimizing impacts of spills; reseeded and watering to mitigate for wind erosion; applying BMPs to mitigate for soil compaction; replacing topsoil and reestablishing vegetation as appropriate for the locations; cooperating and consulting with agencies and landowners; applying BMPs to control weeds; and adhering to federal agency land use plans on impacted federal lands.³⁶⁶ Notwithstanding Dr. Fouty's arguments, it is reasonable, and consistent with industry standards, for Idaho Power to rely on agency-issued BMPs to mitigate adverse impacts. The Department reviewed ASC Exhibit I and concluded that it sufficiently described Idaho Power's avoidance and mitigation measures and that the described measures are not likely to result in a significant adverse impact to soils.³⁶⁷ Dr. Fouty has not established otherwise.

Moreover, the recommended site certificate conditions in the Proposed Order related to soil protection and the various mitigation plans addressed within those conditions require that

contends that Idaho Power did not provide documentation of the effectiveness of its proposed mitigations to recover lost soil productivity. *Id.*

³⁶⁶ ODOE - B2HAPPDoc3-16 ASC 09a_ Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 28-36 of 115; Madison Rebuttal Test. at 23-34.

³⁶⁷ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 109-10 of 10016.

Idaho Power provide site-specific mitigation information and that the Company have in place various finalized plans designed to ensure that temporary adverse impacts to soil are minimized. For example, Recommended Soil Protection Condition 1 requires Idaho Power to obtain a NPDES 1200-C permit and to have and comply with an approved Erosion and Sediment Control Plan. Recommended Soil Protection Conditions 2 and 3 require Idaho Power to have and comply with an approved SPCC Plan for construction and, if necessary, operation. Other recommended conditions require Idaho Power to have and comply with an approved Blasting Plan, to monitor and inspect facility components for soil impacts, and to have and comply with an approved Agricultural Impacts Mitigation Plan and an approved Reclamation and Revegetation Plan.³⁶⁸

The Department appropriately concluded that the mitigation plans that apply to agricultural restoration, revegetation and restoration, combined with the DEQ 1200-C permit, are more than adequate to ensure that appropriate measures are implemented pre- and post-construction to ensure soil restoration. Again, Dr. Fouty has not demonstrated otherwise.

*Proposed site certificate condition related to the Soil Protection Standard:*³⁶⁹

In her Closing Brief, Dr. Fouty proposed a site certificate condition requiring that “prior to approval of the site application a project level soils analysis must be done and then evaluated for compliance with the Soil Protection standard.”³⁷⁰ Dr. Fouty did not timely submit this proposed condition with her direct testimony, in accordance with the schedule set in the *Case Management Order*. Because the submission is untimely, there is no need to address the necessity or appropriateness of the proposed condition. That said, however, based on the discussion of Issue SP-1 above, it is evident that the proposed condition is unnecessary for compliance with the Soil Protection standard.

Ruling on Idaho Power’s Motion to Strike portions of Dr. Fouty’s Closing Brief on Issue SP-1:

As part of its Response Brief, Idaho Power moves to strike, or in the alternative asks that the ALJ give no weight to, statements from Dr. Fouty’s Closing Brief that are testimonial in

³⁶⁸ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 104-109 of 10016; *see also* Madison Rebuttal Test. at 23-29.

³⁶⁹ In its Rebuttal to Direct Testimony, the Department recommended a new soil protection condition (ODOE Proposed Soil Protection Condition XX) requiring Idaho Power to, at least 12 months prior to construction, develop and submit a Soil Impact Mitigation Protocol specific to temporary disturbance areas. ODOE Rebuttal to Direct Testimony at 116. However, in its Closing Brief, the Department withdrew this proposed condition and instead proposed that language be adopted into the draft Reclamation and Revegetation Plan designed to further support successful restoration of temporary soil impacts. *See* ODOE Closing Brief at 202-203. Because the Department withdrew its previous recommended condition, it is not addressed herein.

³⁷⁰ Dr. Fouty also proposed specific elements and methodology for the soils analysis. Fouty Closing Brief at 61.

nature and/or reference documents not admitted into the evidentiary record. Specifically, Idaho Power moves to strike: (a) statements referencing and relying on National Resources Conservation Services (NRCS) data that is not part of the evidentiary record; (b) statements referencing and relying on Federal Resource Management Plans (the 1990 Wallowa-Whitman National Forest Land Resource Management Plan, the 1989 BLM Baker Resource Management Plan Record of Decision, and the 2002 BLM Southeastern Oregon Resource Management Plan and Record of Decision) that are not part of the evidentiary record; and (c) statements of opinion or analysis that are not included in or supported by Dr. Fouty's direct or surrebuttal testimony.³⁷¹

Dr. Fouty filed an opposition to Idaho Power's motion, asserting that the motion was not authorized and without merit because (with the exception of Figure 1 in the brief) all the challenged information in her Closing Brief is accessible, fixed, and relevant to Issue SP-1 and the Soil Protection standard. Fouty Opposition to Late Motion to Strike at 1-2.

The ALJ rejects Dr. Fouty's procedural challenge to Idaho Power's motion. As previously discussed, the applicable procedural rules authorize parties, including limited parties, to submit motions seeking an order or other relief. OAR 345-015-0054(1). On the substance of the motion, the ALJ agrees that with Idaho Power the challenged portions of Dr. Fouty's Closing Brief are testimonial in nature and/or reference documents not admitted into the evidentiary record. The Table of Additional Admitted Evidence (Appendix 1), sets out the additional evidence admitted into the hearing evidentiary record as of January 31, 2022. The NRCS data and the Federal Resource Management Plans referenced in Dr. Fouty's Closing Brief are not part of the B2H Project Record or listed in the Table of Additional Admitted Evidence, and therefore are not part of the evidentiary record. However, considering the logistical challenges and inefficiency of carving up the brief, the ALJ declines to strike the challenged statements. Instead, because the evidentiary record does not support the challenged statements, the ALJ grants Idaho Power's alternate request and gives these statements no weight.

Ruling on Idaho Power's Motion to Strike Portions of Dr. Fouty's Response Brief on Issue SP-1:

In its Motion, Idaho Power moves to strike or, alternatively, asks that no weight be given to the following portions of Dr. Fouty's Response Brief: Figures A-1 and A-2 and statements made in reliance of NRCS data not in the record; statements made in reliance of Federal Resource Management Plans; statements made in reliance on the Third Oregon Climate Assessment Report; and any testimonial statements made with no reference to the existing record. Motion at 17-21.

In her opposition to Idaho Power's motion, Dr. Fouty asserts that the NRCS database, the Federal Resource Management Plans, and the Third Oregon Climate Assessment Report are part of the evidentiary record because these sources are cited in the ASC and/or referenced in the Proposed Order and attachments thereto. She argues that the references to these sources in the B2H Project Record documents makes the sources part of the record in their entirety. Fouty

³⁷¹ In Attachment A to Idaho Power's Response Brief and Motion to Strike for Issue SP-1, Idaho Power identifies approximately 20 pages of statements in Ms. Fouty's Closing Brief that are testimonial in nature and not supported by evidence in the record.

Response at 1. Dr. Fouty is incorrect on this point. A citation to, or excerpt from, a database, report, or management plan in the ASC or Proposed Order does not make the entirety of that database, report, or management plan part of the evidentiary record of the contested case. As discussed previously, the evidentiary record consists of the B2H Project Record (as marked with a Doc ID number assigned by the Department) and the documents listed in the Table of Additional Admitted Evidence. Contrary to Dr. Fouty's contention, if the referenced information from the database, report, or management plan is not included in the B2H Project Record or not listed as an exhibit in the Table of Additional Admitted Evidence, then that information is not part of the evidentiary record.

The ALJ agrees with Idaho Power that challenged statements in Ms. Fouty's Response Brief are based on information that is not part of the evidentiary record. For the reasons previously explained, the ALJ gives the challenged figures and statements no weight.

Structural Standard

OAR 345-022-0020, the Structural Standard states, in pertinent part:

[T]o issue a site certificate, the Council must find that:

- (a) The applicant, through appropriate site-specific study, has adequately characterized the seismic hazard risk of the site; and
- (b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site, as identified in subsection (1)(a);
- (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and
- (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Flooding risk – Issue SS-2

Issue SS-2: Whether Applicant adequately analyzed the risk of flooding in areas adjacent to the proposed transmission line arising out of the construction-related blasting. Whether Applicant should be required to evaluate hydrology, including more detailed and accurate mapping of existing creeks and ditches that drain into streets and private property, and core samples of sufficient variety and depth to determine the flooding risk to neighborhoods of south and west La Grande.

Limited party Cooper has standing on Issue SS-2. Mr. Cooper did not file any written direct testimony or supporting exhibits for this issue.³⁷² However, he submitted closing argument asserting that construction-related blasting and road building are likely to exacerbate problems with storm water drainage.³⁷³ Mr. Cooper also asserted that “road building, blasting, and earth moving activities threaten to cause erosion and sedimentation in the south and west hills, worsening the possibility of flooding in the Mill Creek, Miller Creek, and Deal Creek drainages.” Cooper Closing Brief on Issue SS-2 Flooding at 4.

As noted, Mr. Cooper did not present any facts or evidence to support his claim that construction related activities, including blasting, will result in significant flooding and property damage. The preponderance of the evidence in this record establishes otherwise. In the ASC, Idaho Power adequately characterized the risk of flooding and established that it can design, engineer, and construct the facility to avoid dangers posed by potential flooding hazards. As Idaho Power’s blasting consultant and expert Mr. Cummings explained, it is unlikely that construction-related blasting will reroute waterways and/or increase flooding risks. In the Proposed Order, the Department found that Recommended Structural Standard Condition 1 would require the pre-construction site specific geological and geotechnical investigation report to identify facility components within the 100-year flood zone, any related potential risk to the facility, and measures to mitigate the identified hazards. To require Idaho Power to take core samples prior to selection of the final route is not practical nor required by the Council’s rules.

Proposed Site Certificate Conditions related to Issue SS-2.

In his closing argument, Mr. Cooper proposed two new site certificate conditions. The first requires Idaho Power to conduct further analysis of storm water runoff from the proposed facility and the second requires further analysis of hydrology. Cooper Closing Brief on Issue SS-2 Flooding at 6. Mr. Cooper did not timely submit these proposed site certificate conditions to the ALJ in accordance with the schedule set in the *Case Management Order*³⁷⁴ nor did he timely present evidence in support of these proposed conditions. Because Mr. Cooper did not submit

³⁷² See *Ruling on Motion to Dismiss* at 14-15.

³⁷³ In his closing argument on Issue SS-2, Mr. Cooper also contends that the proposed project violates the Public Services Standard because that standard requires, among other things, a finding that the construction and operation “are not likely to result in a significant adverse impact to the ability of public and private providers within the analysis area * * * to provide * * * storm water drainage.” OAR 345-022-0110(1). This argument falls outside the scope of Issue SS-2, which is limited to concerns about Idaho Power’s identification and mitigation of soil-related and geologic hazards, including flooding, landslides, and erosion. Because Mr. Cooper was not granted limited party status on the issue of storm water drainage under the Public Services Standard, the ALJ declines to address this challenge. See *Amended Order on Party Status* at pages 37-38 (discussing the issues properly raised by Mr. Cooper).

³⁷⁴ Pursuant to OAR 345-015-0085(1), “parties shall submit proposed site certificate conditions to the hearing officer in writing according to a schedule set by the hearing officer.” In this matter, the deadline for submitting written direct testimony, evidence, and any proposed site certificate conditions was September 17, 2021. *Case Management Order* at 16, 18.

these proposed conditions in a timely manner, the ALJ declines to address their necessity or appropriateness.

Ruling on Idaho Power's Motion to Strike portions of Mr. Cooper's Closing Brief on Issue SS-2:

As part of its Response Brief, Idaho Power moves to strike statements from Mr. Cooper's Closing Brief on Issue SS-2 that reference or rely on documents not admitted into the evidentiary record. The ALJ acknowledges that Mr. Cooper did not timely file any direct testimony or exhibits in support of Issue SS-2, and that based on the *Ruling on Motion to Dismiss*, any references to evidence other than specified documents in the B2H Project Record "will not be excluded and considered."³⁷⁵ Instead of striking this testimony from the brief, the ALJ gives the challenged statements no weight.

Blasting concerns – Issues SS-1, SS-3 and SS-5

Issue SS-1: Whether Design Feature 32 of the Proposed Order Attachment G-5 (Draft Framework Blasting Plan) should be a site certificate condition to ensure repair of landowner springs from damage caused by blasting.

Limited party Stacia Webster has standing on Issue SS-1, and bears the burden of producing evidence to support her claim. Ms. Webster did not file any written direct testimony or exhibits in support of her position on Issue SS-1 nor did she submit written closing argument regarding this issue. Because Ms. Webster failed to submit evidence and/or argument in support of her contention that Design Feature 32 of the Framework Blasting Plan should be a site certificate condition, the ALJ considers the claim unsubstantiated.³⁷⁶ The findings in the Proposed Order pertaining to this issue constitute *prima facie* evidence of Idaho Power's compliance with the Structural standard.

Idaho Power's proposed site certificate condition related to Issue SS-1

Notwithstanding Ms. Webster's failure to substantiate this claim, Idaho Power has agreed to incorporate the requirements of Design Feature 32 into a site condition. Based on Idaho Power's agreement and the Department's concurrence, the ALJ recommends that Soil Protection Condition 4 be revised as follows:³⁷⁷

Amended Recommended Soil Protection Condition 4:

- a. Prior to construction, in accordance with the OAR 345-025-0016 agency consultation process outlined in the draft Framework Blasting Plan (Attachment

³⁷⁵ *Ruling on Motion to Dismiss* at 15.

³⁷⁶ Because Issue SS-1 is unsubstantiated, there is no need to address the merits of the claim in this order. See *Ruling on Motion to Dismiss* at 13.

³⁷⁷ Revisions in bold font.

20 G-5 of the Final Order on the ASC), the certificate holder shall finalize, and submit to the Department for approval, a final Blasting Plan. The final Blasting Plan shall meet all applicable federal, state and local requirements related to the transportation, storage, and use of explosives.

b. Prior to construction, the certificate holder will consult with landowners regarding right-of-way acquisition, and during these consultations, the certificate holder will discuss with the landowner any blasting that the certificate holder plans to conduct on the landowner's property. If the landowner identifies a natural spring or well on the property, the certificate holder will notify the landowner that at the landowner's request, the certificate holder shall conduct pre-blasting baseline flow and water quality measurements for turbidity. The certificate holder shall compensate the landowner for adequate repair or replacement if damages to the flow or quality of the natural spring or well occur solely as a result of blasting.

c. During construction, the certificate holder shall conduct all work in compliance with the final Blasting Plan approved by the Department.

Ms. Webster's proposed site certificate condition related to the Framework Blasting Plan:

In her direct witness testimony related to Issue PS-10, Ms. Webster proposed that the following condition be added to the Framework Blasting Plan (Proposed Order Attachment G-5) as well as the FSP Plan (Proposed Order, Attachment U-3): "During blasting Idaho Power will provide a water tender staffed by a crew of at least two personnel." Webster Direct Test. Issue PS-10 at 14-15. Ms. Webster asserted that during construction blasting, one person working a water tender will not be sufficient to alert the blasting crew, summon assistance, report the fire to the local fire agency, and suppress the fire. *Id.*

Ms. Webster presented no evidence in support of her claim that the Fire Safety provisions of the Framework Blasting Plan are insufficient, and that construction contractors must have a water tender staffed by a crew of at least two firewatch/fire suppression personnel during blasting activities. In the absence of such evidence, this proposed condition is denied.

Issue SS-3: Whether Applicant should be required to test the water quality of private water wells to ensure that construction-related activities are not impacting water quality and quantity.

Limited parties Horst and Cavinato have standing on Issue SS-3. As discussed previously, Mr. Horst and Ms. Cavinato reside in a home on an unpaved portion of Hawthorne Drive, just outside the city limits of La Grande. In Issue SS-3, they raise concerns about the impact that construction-related blasting (and construction-related traffic) could have on a deep water well on their property, located about 10 feet from a gravel road that contractors may use to access the power lines and a tensioning station. The limited parties request that Idaho Power test

the well water before, during and after construction and/or that the Company build a new road to detour construction-related traffic away from their property. Horst Closing Statement at 8-9.

Although Mr. Horst raised concerns that blasting and construction vehicles will damage the well on his property, he did not provide any evidence to support this concern. Idaho Power, on the other hand, presented evidence from a geological engineering expert and blasting consultant (Robert Cummings) that it is highly unlikely blasting or construction related traffic would cause damage to the well and therefore it is not necessary to test the well water before, during, and after construction of the facility.³⁷⁸ Based on the persuasive testimony provided by Mr. Cummings, there is no reason to conclude that blasting activities would impact well water quality on Mr. Horst's property given the geotechnical testing and site-specific reconnaissance to be undertaken prior to blasting and the safety measures required by the Framework Blasting Plan. Furthermore, as discussed previously, the requirements of the Framework Blasting Plan, Design Feature 32 are to be incorporated into a site condition. Accordingly, prior to construction, Idaho Power will be required to consult with landowners regarding any blasting to be conducted on the landowner's property. At the landowner's request, Idaho Power will conduct pre-blasting baseline flow and water-quality measurements, testing specifically for turbidity.

As to potential impacts from construction traffic, Mr. Cummings' testimony establishes that any seismic vibrations caused by heavy construction vehicles would be minimal and not at all likely to cause permanent damage to the well.³⁷⁹ Any turbidity in the well caused by seismic vibrations from construction vehicles would be temporary.

Consequently, on this record, limited parties Horst and Cavinato have not established that it is reasonable or necessary for Idaho Power to test the well water on their property before, during and after construction to ensure that construction-related activities do not adversely impact their well water quality and quantity. The requirements of Design Feature 32 (incorporated into Recommended Soil Protection Condition 4) will address their concerns about blasting activities. Other proposed mitigation measures, including reduced vehicle speeds, will address their concerns about impacts from construction traffic. Mr. Horst and Ms. Cavinato have also failed to establish a need for Idaho Power to build a new road to direct construction-related traffic away from the deep well on their property.

Issue SS-5: Whether Applicant has adequately evaluated construction-related blasting in Union County, City of La Grande, under the Structural Standard. Specifically, whether Applicant should be required to conduct site-specific geotechnical surveys to characterize risks from slope instability.

Limited party Jonathan White has standing on Issue SS-5. In his direct testimony, Mr. White asserted that because the Proposed Order does not provide specifics about where construction-related blasting may occur, the proposed facility does not comply with the

³⁷⁸ Cummings Rebuttal Test. at 13.

³⁷⁹ Cummings Rebuttal Test. at 45-46.

Structural Standard. Mr. White further argues that because the company has not yet conducted a site-specific study of the slope above his home or at proposed tower locations along the route in the hills above La Grande to characterize the potential geological and soils hazards at those locations, Idaho Power has not met the requirements of OAR 345-022-0020(1)(c). White Direct Test. at 1-2.

Contrary to Mr. White's contention, Idaho Power has already performed significant work to characterize the potential geological and soils hazards within the site boundary. *See, e.g.*, ASC Exhibit H, Attachment H-1, Engineering Geology and Seismic Hazards Supplement³⁸⁰ and ASC Exhibit I, Section 3.2.3 (Assessing Erosion Impacts).³⁸¹ Furthermore, as the Department noted in the Second Amended Project Order, a detailed site-specific geotechnical investigation for the entire site boundary is not practical in advance of completing the final facility design and obtaining full site access.³⁸² In the Proposed Order, the Department concluded that Idaho Power, in consultation with DOGAMI, adequately identified potential risks of slope stability and that the evaluation provided in Exhibit H was sufficient to inform the evaluation under the Structural Standard.³⁸³ The Department approved Idaho Power's two-phase plan and recommended that Council find that, subject to Idaho Power's compliance with the recommended Structural Standard conditions, the company Power can design, engineer, and construct the facility to avoid danger to human safety and the environment.³⁸⁴

Mr. White presented no new facts or exhibits to support his claim. In the ASC, and as supplemented by the testimony of Mr. Sorensen and Mr. Cummings, Idaho Power has provided sufficient evidence to evaluate compliance with the Structural Standard. In its Phase 2 Site-Specific Geotechnical Report, to be completed after issuance of the site certificate and prior to construction, Idaho Power will include the requisite site-specific information for sites that will be impacted by construction and operation of the project. Further, where appropriate and necessary, Idaho Power will employ appropriate slope instability mitigation techniques.

Based on its compliance with the pertinent site conditions (the Recommended Structural Standard Conditions and Recommended Soil Protection Condition 4), Idaho Power has demonstrated the ability to evaluate and avoid potential geologic and soils hazards, and blasting-related impacts, in accordance with the Structural Standard requirements.

Miscellaneous Issue - Hazardous materials management and monitoring

Issue M-6: Whether the Proposed Order fails to provide for a public review of

³⁸⁰ ODOE - B2HAPPDoc3-14 ASC 08a_Exhibit H_Geology_ASC_Part 1 2018-09-28, pages 42 to 243.

³⁸¹ ODOE - B2HAPPDoc3-16 ASC 09a_Exhibit I_Soil_ASC_Part 1 2018-09-28, pages 9-13 of 115.

³⁸² ODOE - B2HAPPDoc15 ApASC Second Amended Project Order 2018-07-26, page 14 of 29.

³⁸³ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 80 to 96.

³⁸⁴ *Id.* at pages 96-98.

final monitoring plans, fails to provide long-term hazardous materials monitoring, and improperly allows exceptions that substantially increase the likelihood of a hazardous material spill in violation of OAR 345-021-0010(w).

Limited party Marlette has standing on Issue M-6. In her direct testimony and closing argument, Ms. Marlette asserted that the Council should provide the public the opportunity to review and comment on final monitoring plans, including the SPCC Plan.³⁸⁵ Ms. Marlette also claimed that the SPCC Plan is inadequate because it does not require long-term monitoring for hazardous material contamination during operation of the proposed facility and is not consistent with the setbacks included in the federal B2H Final Environmental Impact Statement (FEIS).³⁸⁶ In addition, Ms. Marlette asserted that Idaho Power will use and store hazardous materials (including herbicides) during operation of the proposed facility, and for that reason, additional monitoring and safety precautions are necessary to protect the public and resources from hazardous materials spills. Marlette Closing Brief on Issue M-6 at 2-4. For the reasons that follow, Ms. Marlette's contentions lack merit.

Review of final plans. First, and contrary to Ms. Marlette's contention, the Council is not required to provide further public review and comment on draft plans, including the SPCC Plan, before approving a site certificate. As set out in the findings above, Idaho Power included a draft SPCC Plan in ASC Exhibit G.³⁸⁷ The public had the opportunity to review and comment on the SPCC Plan (and all other draft monitoring and mitigation plans in the ASC) during the public meetings and during the comment period following the issuance of the DPO. Idaho Power had the opportunity to respond to those comments, and the Department considered the public comments and responses thereto in making its findings in the Proposed Order.

In the Proposed Order, the Department discussed the substance of the draft SPCC Plan and recommended Soil Protection Condition 2, which requires Idaho Power to submit a final SPCC Plan to the Department prior to construction of the facility.³⁸⁸ This final review process for draft plans in the ASC is authorized by ORS 469.402.³⁸⁹ The statute allows the Council, in

³⁸⁵ As set out in the findings, the SPCC Plan (Attachment G-4 to ASC Exhibit G), outlines the preventive measures and practices that contractors will employ during construction of the proposed facility to reduce the likelihood of an accidental release hazardous or regulated liquid and the measures to be taken to expedite the response should such a spill occur.

³⁸⁶ Ms. Marlette did not submit the FEIS as an exhibit in this matter. Idaho Power attached a courtesy copy of Chapter 3 of this document as Attachment A to its Closing Arguments for Issue M-6.

³⁸⁷ ODOE - B2HAPPDoc3-13 ASC 07_Exhibit G_Materials_ASC 2018-09-28, page 14 of 102.

³⁸⁸ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 106 of 10016.

³⁸⁹ ORS 469.402 provides:

If the Energy Facility Siting Council elects to impose conditions on a site certificate or an amended site certificate, that require subsequent review and approval of a future action, *the council may delegate the future review and approval to the State Department of*

its discretion, to approve a site certificate based on draft plans and impose a condition delegating future review and approval of such plans to the Department without further public participation.

The Court of Appeals' decision in *Gould v. Deschutes County*, 216 Or App 150 (2007), referenced by Ms. Marlette, does not dictate a different result. The circumstances at issue in *Gould* are not analogous to Department and Council review of a site certificate application. *Gould* involved appellate review of a LUBA decision that upheld the county's conditional approval of a conceptual master plan (CMP) for a destination resort development near Redmond, Oregon. The *Gould* court noted that state and local law contain special standards for approving destination resort developments and that the proposed development at issue was subject to compliance with the Deschutes County Code (DCC) Chapter 18.113. The DCC requires a three-step process for approving a destination resort. The first step includes consideration and approval of the CMP at a public hearing where the developer must submit evidence of the CMP's compliance with the DCC. Under the DCC, any approval must be based on the record created at that public hearing. DCC 18.113.040(A). Then, once the CMP is approved, it becomes the standard for staff evaluation of a "final master plan," and any "substantial change" in the CMP must be reviewed and approved using the same process as the original plan approval pursuant to DCC 18.113.040(C). *Gould* at 153-54.

Petitioner Gould challenged LUBA's decision to uphold the county's approval of the CMP asserting, among other things, that the county acted contrary to DCC requirements when it approved a wildlife mitigation plan for the CMP outside of the public hearing process. The court agreed and found that, to adhere to the DCC approval process, the county should have postponed approval of the CMP to allow for a public hearing on a draft wildlife mitigation plan. In reversing and remanding the matter to LUBA, the court explained:

The county's decision is inconsistent with ORS 215.416(9)³⁹⁰ because the decision lacks a sufficient description of the wildlife impact mitigation plan, and justification of that plan based on the standards in DCC 18.113.070(D). Second, that code provision requires that the content of the mitigation plan be based on "substantial evidence in the record," not evidence outside the CMP record. In this case, the particulars of the mitigation plan were to be based on a future negotiation, and not a county hearing process. Because LUBA's opinion and order concluded that the county's justification was adequate despite those deficiencies, the board's decision was "unlawful in substance."

Energy if, in the council's discretion, the delegation is warranted under the circumstances of the case.

Emphasis added.

³⁹⁰ ORS 215.416(9), addressing county approval of land use permit applications, states:

Approval or denial of a permit or expedited land division shall be based upon and accompanied by a brief statement that explains the criteria and standards considered relevant to the decision, states the facts relied upon in rendering the decision and explains the justification for the decision based on the criteria, standards and facts set forth.

216 Or App at 159-60.

Gould does not govern this contested case because, as noted above, the resort development CMP review process established under the DCC is not analogous to the Department and Council review process for site certificate applications. In this matter, in accordance with the policy and procedures set out in ORS Chapter 469, the draft SPCC Plan and other monitoring and mitigation plans were submitted in the ASC and were subject to public review and comment in hearings following issuance of the DPO. There is nothing in the EFSC governing statutes or rules that require public review and comment prior to finalization of these plans. As noted above, ORS 469.402 authorizes the Council to delegate the approval of a future action to the Department. Furthermore, pursuant to OAR 345-025-0016, a certificate holder “must develop proposed monitoring and mitigation plans in consultation with the Department and, as appropriate, other state agencies, local governments and tribes,” but again, there is no requirement for additional public input prior to the finalization of such plans.

In short, there is no need for Idaho Power to finalize all draft mitigation and/or monitoring plans (including the SPCC Plan) prior to Council’s approval of a site certificate and there is no requirement for further public review and comment on the draft plans before issuance of a site certificate. Under ORS 469.402, Council may find that an applicant’s draft plans constitute sufficient evidence on which to base a finding of compliance with applicable standards, and may condition its approval on draft plans that are subject to future final review by the Department.

Sufficiency of the SPCC Plan. Second, a preponderance of the evidence establishes the SPCC Plan includes protective measures sufficient to demonstrate compliance with relevant Council standards. In the Proposed Order, the Department reviewed the SPCC Plan in connection with the Soil Protection standard³⁹¹ and the Retirement and Financial Assurances standard.³⁹² In its findings regarding the Soil Protection standard, the Department discussed the SPCC Plan’s spill prevention and emergency preparedness provisions and recommended site certificate conditions related to the plan. The Department agreed that a SPCC Plan would not be necessary during operation of the facility unless Idaho Power took over operation of the Longhorn Station. The Department included Recommended Soil Protection Condition 3 to address that contingency.³⁹³ The Department recommended that the Council find, subject to

³⁹¹ As discussed previously, under the Soil Protection standard, the Council must find that the construction and operation of the facility is not likely result in adverse impact to soils including “chemical factors such as * * * chemical spills.” OAR 345-022-0022.

³⁹² As discussed previously, the Retirement and Financial Assurance standard requires, among other things, that the Council find that the site “can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility.” OAR 345-022-0050(1).

³⁹³ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 106 of 10016 (“The applicant does not anticipate that it would be required to adhere to an SPCC Plan during operations unless it were to operate the Longhorn Station instead of BPA.”) The recommended condition provides that if, prior to construction, Idaho Power is required by DEQ statutes or rules to implement a SPCC Plan for operation of the facility, then the Company must submit to the Department a copy of a DEQ-approved

Idaho Power's compliance with the recommended site certificate conditions, the construction and operation of the proposed facility comply with the Soil Protection standard. Ms. Marlette did not present any persuasive evidence to the contrary.

With regard to the Retirement and Financial Assurances standard, the Department reviewed the information submitted in ASC Exhibit W,³⁹⁴ and determined that Idaho Power was not required to develop a hazardous materials monitoring plan because, after completing construction, there will be no hazardous materials used or stored on site.³⁹⁵ Ms. Marlette did not present any persuasive evidence to the contrary.

Third, the FEIS setbacks identified by Ms. Marlette are not relevant to the SPCC Plan, and are not necessary to ensure that SPCC Plan complies with Council standards. The SPCC Plan requires that transfer of liquids or refueling must occur at least 100 feet from any wetlands or surface waters. Ms. Marlette argues that Idaho Power should apply a 300-foot setback for such activities, based on FEIS Design Feature 15.³⁹⁶ However, the 300-foot setback discussed in FEIS Design Feature 15 applies only to surface-disturbing activities. The transfer of liquids and refueling is not a surface-disturbing activity. Design Feature 21 (Disposal of Hazardous Materials and Construction Waste) is the only provision FEIS pertinent to the SPCC Plan, and the SPCC Plan's 100-foot setbacks for on-site activities are more specific and conservative than those stated in FEIS Design Feature 21.³⁹⁷

operation-related SPCC Plan and maintain compliance with the plan during operations at Longhorn Station. *Id.*

³⁹⁴ Pursuant to OAR 345-021-0010(1)(w)(E), for proposed facilities that might produce site contamination by hazardous materials, the ASC must include a proposed monitoring plan or an explanation why a monitoring plan is unnecessary.

³⁹⁵ During the operations phase, all use and storage of gasoline and diesel will remain inside vehicles that will come and go from the site. Herbicides are not hazardous materials and will be managed by licensed contractors. *See Stippel Rebuttal Test., Issue M-6, at 9.*

³⁹⁶ Design Feature 15 of the FEIS (Reduce Impacts on Riparian Areas) states, in pertinent part:

Consistent with the BLM and USFS PACFISH/INFISH riparian management policies, surface-disturbing activities would be avoided in defined segments of RCAs, using the following delineation criteria, unless exception criteria defined by the BLM are met or with agency approval of acceptable measures to protect riparian resources and habitats by avoiding or minimizing stormwater runoff, sedimentation, and disturbance of riparian vegetation, habitats, and wildlife species:

- Fish-bearing streams: 300 feet slope distance on either side of the stream, or to the extent of additional delineation criteria—whichever is greatest.
- Perennial non-fish-bearing streams: 150 feet slope distance on either side of the stream, or to the extent of additional delineation criteria—whichever is greatest.

Idaho Power Closing Arguments for Issue M-6, Attachment A at 3-4.

³⁹⁷ Design Feature 21 of the FEIS states:

In summary, Ms. Marlette has failed to present evidence to substantiate her claims with regard to Issue M-6. There is no Council standard requiring public review and comment of final monitoring plans. The evidence in the record persuasively establishes that there is no need for Idaho Power to have a long-term monitoring plan in place for purposes of the Soil Protection Standard or the RFA Standard. The SPCC Plan and recommended Soil Protection Condition 2 adequately address the management of hazardous substances to be used and stored during construction of the proposed facility. Because Idaho Power does not anticipate using and storing hazardous materials during facility operation and the facility is not one that will produce contamination by hazardous materials, there is no need for a long-term monitoring plan.

Proposed Site Certificate Conditions Unrelated to Identified Issues on Which the Limited Parties Have Standing in the Contested Case

In addition to the proposed conditions discussed previously in this order, two limited parties, Ms. Gilbert and Ms. Geer, timely proposed site certificate conditions pertaining to matters unrelated to the identified issues on which they have standing in the contested case. Idaho Power objected to these proposed conditions and requested that the ALJ exclude them from further consideration in the contested case because they are not within the scope of the issues properly raised by the limited parties in this matter.³⁹⁸ Idaho Power asserted that the ALJ and Council should read OAR 345-015-0085(1)³⁹⁹ narrowly and in conjunction with OAR 345-015-0016,⁴⁰⁰ to preclude a limited party from proposing site conditions that are outside the scope

Hazardous material would not be discharged onto the ground or into streams or drainage areas. Enclosed containment would be provided for all waste. All construction waste (i.e., trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials) would be removed to a disposal facility authorized to accept such materials within one month of B2H Project completion, except for hazardous waste which would be removed within one week of B2H Project completion.

Refueling and storing potentially hazardous materials would not occur within a 200-foot radius of all identified private water wells, and a 400-foot radius of all identified municipal or community water wells. Spill prevention and containment measures would be incorporated as needed.

Idaho Power Closing Arguments for Issue M-6, Attachment A at 5.

³⁹⁸ See Idaho Power Company's Response to Limited Parties' Proposed Site Certificate Conditions, filed November 18, 2021, at 36-39.

³⁹⁹ OAR 345-015-0085(1) states, in pertinent part: "The hearing officer shall allow *any party, including any limited party, to propose site certificate conditions* that the party believes are necessary or appropriate to implement the policy of ORS 469.310 or to meet the requirements of any other applicable statute, administrative rule or local government ordinance."

⁴⁰⁰ OAR 345-015-0016(3) states, in pertinent part: "If a person has not raised an issue at the public hearing with sufficient specificity to afford the decision maker an opportunity to respond to the issue, the hearing officer may not consider the issue in the contested case proceeding."

of the contested case issues and/or outside the scope of the matters on which the limited party has standing.

Idaho Power argued, in pertinent part, as follows:

[I]nterpreting OAR 345-015-0085(1) to allow all parties to propose conditions on all issues—without any limitation as to whether the limited party properly raised the issue in this case—would frustrate the intent to limit issues raised in the contested case to those raised with sufficient specificity in DPO comments. Additionally, it would achieve an absurd result, in which a limited party could sandbag the contested case by proposing *entirely new conditions on entirely new issues* without having raised them below, thus entirely undermining the Council’s framework for conducting contested cases.

Idaho Power Company’s Response to Limited Parties’ Proposed Site Certificate Conditions at 38, emphasis in original,

In light of Idaho Power’s request to exclude these proposed conditions from consideration, the ALJ certified the following two questions to Council for its consideration and disposition:⁴⁰¹

1. Should OAR 345-015-0085(1) be read to restrict a limited party’s authorization to propose site certificate conditions to those that relate to and are within the scope of the issue(s) on which the limited party was granted standing in the contested case?
2. Should OAR 345-015-0085(2) be read to restrict a limited party to presenting evidence and argument relating to the appropriateness, scope or wording of another party’s proposed site certificate condition to those proposed conditions that relate to and are within the scope of the issue(s) on which the limited party was granted standing in the contested case?

Certified Questions to Council Regarding Interpretation of OAR 345-015-0085(1) and (2), issued December 14, 2021. The Council declined to provide answers to these two questions,⁴⁰² thereby leaving it up to the ALJ to determine the Council’s intention.

The ALJ appreciates Idaho Power’s arguments on this issue. The ALJ also agrees that

⁴⁰¹ OAR 345-015-0023(5)(k) authorizes the ALJ, in her discretion, to “certify any question to the Council for its consideration and disposition.”

⁴⁰² See Ratcliffe email to ALJ Webster, December 23, 2021 (“The Council received legal advice on the questions and deliberated extensively on the legal and policy issues involved. The Council took several motions on both sides of the questions, but none of the motions received a majority. As a result, the Council cannot provide answers to your questions at this time.”)

allowing a limited party to propose *any* site certificate conditions that the limited party believes are necessary or appropriate notwithstanding the limitations on that limited party's standing and participation in the contested case tends to frustrate the intent of ORS 469.370 and OAR 345-015-0016. Both the statute and rule specify that the contested case shall be limited to those issues properly raised on the record of the DPO.⁴⁰³

On the other hand, the broad language of OAR 345-015-0085(1) ("the hearing officer shall allow any party, including any limited party, to propose site certificate conditions"), cannot be ignored. *See, e.g., Papas v. OLCC*, 213 Or App 369 (2007) (an agency interpretation of a rule that is inconsistent with the wording of the rule and its context is not plausible and is not entitled to deference). If the Council intended to limit a party/limited party's ability to propose site certificate conditions to those within the scope of the issues on which the party/limited party has standing in the contested case, then it could and would have so stated in the rule.

Based on the plain language of OAR 345-015-0085(1) and the Council's unwillingness to answer the certified questions in the affirmative, the ALJ declines Idaho Power's request to exclude these proposed site certificate conditions from further consideration based on the limited party's lack of standing. In other words, the ALJ relies on the broad language of the rule and declines to insert limitations on standing that the Council and Department did not specifically include in the rule. Accordingly, what follows is a determination whether the additional proposed conditions submitted by Ms. Gilbert⁴⁰⁴ and Ms. Geer⁴⁰⁵ are necessary or appropriate to implement the policy of ORS 469.310 or meet the requirements of any other applicable law.

Gilbert Additional Proposed Site Certificate Conditions

1. Gilbert Proposed Financial Assurance Condition: Prior to the start of construction, the developer will document that they have the financial ability to pay for construction costs they will be assuming that exceed the 21% amount reflected in the application and provide documentation regarding any other party

⁴⁰³ Both ORS 469.370 and OAR 345-015-0016 state that issues that may be the basis for the contested case shall be limited to those raised with sufficient specificity on the record of the public hearing. *See also* OAR 345-015-0083(2), which requires the ALJ to issue a prehearing order stating the issues to be addressed in the contested case and "limiting parties to those issues they raised on the public hearing." The rule also prohibits the ALJ from "receiv[ing] evidence or hear[ing] legal argument on issues not identified in the prehearing order."

⁴⁰⁴ Ms. Gilbert submitted 20 total proposed site certificate conditions. She proposed 17 new conditions in a document named "Site Certificate Conditions and statutes to use" (Gilbert Proposed Conditions). She also submitted the following proposed conditions: a "Request Regarding B2H Site Certificate Condition Related to the Need for the Traffic Plan to Be Completed and Approved by Counsel Prior to Start of Construction;" a "Request Regarding B2H Site Certificate Impacts to Quiet Areas;" and a "Request Regarding B2H Site Certificate Condition Related to Statutory Requirement that Citizens Impacted by a State Action Receive Notice as Specified in ORS 183.415."

⁴⁰⁵ Ms. Geer submitted two conditions outside the scope of her Fish and Wildlife Habitat/Noxious Weed Plan issues: one related to Sandhill Cranes and one related to Trifolium Douglasii.

which will be assuming the costs not being covered by Idaho Power.

Ms. Gilbert submitted this proposed condition asserting that it is required by ORS 469.501(1)(d).⁴⁰⁶ Ms. Gilbert did not submit any evidence in support of this proposed condition or any further explanation as to why she believes it is necessary or appropriate to meet the requirements of OAR 345-022-0050 (the RFA Standard).

Both the Department and Idaho Power oppose this proposed condition and recommend that it be rejected. Idaho Power also notes that the Proposed Order recommends that Idaho Power be required to carry a bond or letter of credit during construction equal to the amount required to decommission the line and restore the site to a useful condition.

Because there has been no showing that this proposed RFA condition is necessary or appropriate, the proposed condition is denied.

2. Gilbert Proposed Water Quality Condition: Prior to starting construction the developer will provide results of testing of all wells or springs within 2,000 feet of the transmission line corridor to document pre-construction condition. The testing will be repeated within the first and second years of operation to determine if there has been a reduction in quantity or quality of water available.

Ms. Gilbert submitted this proposed condition without specifying the applicable statute or Council standard, without supporting evidence, and without explaining why she believes this condition is necessary or appropriate to implement the policy of ORS 469.310 or satisfy an applicable statute, standard, or rule.

Both the Department and Idaho Power assert this proposed condition is unsupported and unnecessary, and recommend that it be rejected. Idaho Power also notes that to the extent this proposed condition relates to the Structural Standard and to limited parties' concerns that construction-related blasting could impact well water quality, the Company has agreed to incorporate a modified version of Design Feature 32 from the Framework Blasting Plan into Recommended Soil Protection Standard Condition 4. Consequently, if Idaho Power plans to conduct blasting on a landowner's property, the condition requires that Idaho Power, at the landowner's request, conduct pre-blasting baseline flow and water quality measurements for turbidity.

Ms. Gilbert has not established that this proposed condition for pre-construction water quality testing is necessary or appropriate. Idaho Power has explained why the proposed condition is not necessary. Accordingly, this proposed condition is denied.

3. Gilbert Proposed Condition Regarding Fish Passage: Starting with year 6 and for the remainder of the life of the development all fish passage sites will be

⁴⁰⁶ ORS 469.501(1)(d) states: "(1) The Energy Facility Siting Council shall adopt standards for the siting, construction, operation and retirement of facilities. The standards may address but need not be limited to the following subjects: * * * (d) The financial ability and qualifications of the applicant."

monitored and maintained every other year to assure fish continue to be able to pass through the locations requiring fish passage. Results of the monitoring will be provided to the department.

Ms. Gilbert argues that this Fish and Wildlife Habitat/Fish Passage site certificate condition is necessary because Idaho Power must maintain mitigation for the life of the development and continue monitoring to assure compliance with the site certificate conditions.

Both the Department and Idaho Power oppose this proposed condition and assert it is unnecessary. In its opposition to this proposed condition, Idaho Power explains that, it submitted fish passage plans and designs for seven temporary road crossing structures that require review by ODFW.⁴⁰⁷ Idaho Power will permanently remove these structures once construction activities are completed.⁴⁰⁸ ODFW approved the proposed fish passage designs, contingent on Idaho Power maintaining, monitoring, evaluating, and reporting on these fish passages as required by ORS 509.610.⁴⁰⁹ ODFW's approval requires Idaho Power to provide written reports annually for the first three years after project completion, and then a final report at year five, or as determined by ODFW.⁴¹⁰ ODFW is the agency with the expertise to determine the appropriate monitoring and reporting period and, at this point, ODFW has approved the proposed fish passage plans with a final report in year five (or as otherwise determined by ODFW). For this reason, Ms. Gilbert's proposed condition is neither necessary nor appropriate. As Idaho Power notes, if ODFW determines based on the year five final report that impacts from the temporary structures have not been rectified, then ODFW may require additional actions from Idaho Power.

Ms. Gilbert has not established that this proposed condition to maintain and monitor fish passage sites for the life of the project is necessary or appropriate. Idaho Power has explained why the proposed condition is unnecessary and excessive. Therefore, this proposed condition is denied.

4. Gilbert Proposed Forest Practices Act Condition: Prior to the start of construction, the developer must survey all streams where timber will be removed within 300 feet of the stream during construction of the transmission line. If fish are present and impacts will occur within 100 feet of the transmission line or Threatened and Endangered species are present, [a] written plan of action must be developed for the approval of the Oregon Department of Forestry and the Council.

⁴⁰⁷ As found above, in the Proposed Order, the Department recommended that Council find Idaho Power's proposed fish passage compliance plan "is sufficient to demonstrate compliance with the ODFW Fish Passage rule, that the plan should be finalized prior to construction based on final facility design, and that the plan should be implemented during construction." ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 351 of 10016

⁴⁰⁸ ODOE - B2HAPPDoc3-45 ASC 28_Exhibit BB_Other_Info_ASC 2018-09-28, pages 75-98 of 209.

⁴⁰⁹ ODOE - B2HAPPDoc3-45 ASC 28_Exhibit BB_Other_Info_ASC 2018-09-28, page 98 of 209.

⁴¹⁰ *Id.*

Ms. Gilbert argues that this condition is necessary because ORS 527.670⁴¹¹ requires a written plan of operation prior to any forestry operation, including clearing of an area to build a transmission line within 100 feet of a stream used by fish or within 300 feet of a stream containing state or federally threatened or endangered species. Gilbert Proposed Conditions at 3-4.

Both the Department and Idaho Power oppose this proposed condition as inappropriate and unnecessary. In the Proposed Order, the Department addressed the proposed facility's compliance with the Oregon Forest Practices Act (FPA) as follows:

In ASC Exhibit BB, the applicant requests Council review of compliance with the requirements of the Oregon Forest Practices Act (FPA) as implemented under ORS 527.610 to 527.770, 527.990(1) and 527.992, and the implementing rules at OAR Chapter 629. More specifically, the applicant requests Council grant an exemption from FPA's reforestation requirements and approve a Plan for an Alternative Practice, as in forest lands for uses not meeting reforestation requirements.

The requirements of the FPA include providing notification to the State Forester prior to commencement of operation; submitting a request for a permit to operate power driven machinery; submittal of a written plan; and obtaining approval of a Plan for Alternative Practice, if a use would not meet reforestation requirements. While compliance with these requirements supports minimization of impacts to forest lands, as evaluated in IV.E. Land Use and IV.M. *Public Services* of this order, the Department recommends Council not assert jurisdiction of the FPA and refer the applicant to submit its request for exemption directly to the Oregon Department of Forestry, consistent with the approach described in ASC Exhibits K and BB where the applicant represents it would work directly with the state agency on FPA requirements.

ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 622-23 of 10016. The Department also noted that Idaho Power's compliance with FPA requirements would reduce potential impacts evaluated under the Council's Land Use and Protected Area standards. *Id.* at n. 645.

Based on the above recommendations in the Proposed Order (*i.e.*, that Idaho Power work directly with the Oregon Department of Forestry), Idaho Power contends that Ms. Gilbert's proposed condition is redundant and unnecessary. The ALJ agrees, and rejects this proposed condition.

5. Gilbert Proposed Condition Regarding Wetlands: Prior to the start of construction, the developer must complete a compatibility analysis regarding the impacts of the proposed development on surrounding wetlands.

⁴¹¹ ORS 527.670, part of the Oregon Forest Practices Act, requires the State Board of Forestry to, among other things, designate the types of operations for which notice shall be required and identify the types of operations that require a written plan.

Referencing *Foland v. Jackson County*, LUBA 2009109, 2009112, 2009113, *affirmed* 239 Or App 60 (2010), Ms. Gilbert asserts that a “compatibility analysis [is] needed for proposed development with the surrounding wetlands.” Gilbert Proposed Conditions at 4. Ms. Gilbert offered no further explanation or argument as to the *Foland* decision is relevant,⁴¹² why she believes this a compatibility analysis of surrounding wetlands is necessary, or even what constitutes surrounding wetlands.

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. Idaho Power notes that, in the ASC, it addressed project related impacts to waters of the state, including wetlands. It included its Joint Permit Application to the Department of State Lands (DSL) and the U.S. Army Corps of Engineers, which addressed construction activities occurring in waters of the state. Idaho Power also recommended, and the Proposed Order includes, Recommended Removal-Fill conditions.⁴¹³ The Recommended Removal-Fill Conditions require, among other things, that prior to construction of a phase or segment of the facility, Idaho Power: submit updated wetland delineation reports to the Department and DSL; receive a Letter of Concurrence from DSL; and submit a final Site Rehabilitation Plan addressing mitigation and restoration of impacted waters of the state, including wetlands.⁴¹⁴ Recommended Removal-Fill Condition 2 also requires that following construction and during operation, Idaho Power ensure that temporary impacts to wetlands and non-wetland waters of the state are restored in accordance with the final Site Rehabilitation Plan.⁴¹⁵

Because Ms. Gilbert’s proposed condition regarding surrounding wetlands is vague, unsupported, and unnecessary in light of the Recommended Removal-Fill Conditions, it is denied.

6. Gilbert Proposed Conditions Relating to Historic Properties: (a) Prior to construction, the developer must complete a cumulative effects assessment of the impacts the development will have on historic properties referenced in 36 CFR 800.5 and provide appropriate mitigation for the impacts.

(b) Idaho Power must identify and provide mitigation for both direct and indirect impacts of the proposed transmission line to Historical Properties located within 5 miles or to the visual horizon of the transmission line as required by the

⁴¹² *Foland* involved review of a LUBA decision remanding Jackson County’s decision to approve a Department of Transportation application to site an interstate highway rest area and welcome center on land south of Ashland zone for exclusive farm use. The Court of Appeals upheld the LUBA’s determination that, “Goal 11 prohibits the extension of city water services to serve that urban use on rural land without an exception to Goal 11.” 239 Or App at 72.

⁴¹³ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 668 to 677 of 10016.

⁴¹⁴ *Id.* at 671-673.

⁴¹⁵ *Id.* at 673.

Boardman to Hemingway Programmatic Agreement required to meet the requirements of Section 106 of NEPA.

Ms. Gilbert argues that these proposed conditions are appropriate because they are required under the B2H Programmatic Agreement. As for proposed condition (a) above, Ms. Gilbert asserts that the Programmatic Agreement “requires on Page 6 that the assessment of impacts include direct and/or indirect, or reasonably foreseeable effects caused by the undertaking that may occur overtime, be farther removed in distance or be cumulative.” Gilbert Proposed Conditions at 4. As for proposed condition (b) above, Ms. Gilbert asserts that Idaho Power “only evaluated direct impacts to National Register of Historical Properties eligible sites” contrary to the provisions of the Programmatic Agreement. *Id.* at 5.

Both the Department and Idaho Power opposed these proposed conditions as unsupported and unnecessary. As for proposed condition (a) above, Idaho Power notes that it has already conducted a cumulative effects analysis and has proposed site-specific avoidance and mitigation plans in the HPMP.⁴¹⁶ Idaho Power also asserts that it is inappropriate to require that the analysis be conducted pursuant to 36 CFR 800.5, because Council’s role is limited to ensuring compliance with all applicable state and local laws, not federal law.

As for proposed condition (b), both the Department and Idaho Power note that the Proposed Order already requires Idaho Power to identify and provide proposed mitigation measures for both direct (permanent/ground disturbing) and indirect (visual) impacts.⁴¹⁷ Idaho Power adds that, by definition, direct impacts occur only within the site boundary, so a condition requiring the Company to identify and propose mitigation for direct impacts within five miles would be illogical. Idaho Power also notes that Council does not enforce compliance with federal laws (such as Section 106 of NEPA), and that Recommended Historic, Cultural and Archeological Resources Condition 2 requires Idaho Power to submit a final EFSC HPMP to the Department, the State Historic Preservation Office, and applicable Tribal Governments for review and Department approval.⁴¹⁸

Ms. Gilbert has not established that these proposed conditions relating to compliance with the Programmatic Agreement are necessary or appropriate. The Department and Idaho Power have shown that these proposals are unnecessary and either redundant or outside the Council’s jurisdiction. Therefore, these proposed conditions are denied.

7. Gilbert Proposed Condition Regarding Construction Helicopters:

Construction helicopters shall not impede emergency transports by flying above the helipad located on the roof of the Grande Ronde Hospital or flying across routes used by Life Flight Emergency transport leaving or returning to the helipad.

⁴¹⁶ See Ranzetta Rebuttal Testimony, Issues HCA-3, HCA-4, and HCA-7, pages 51-52.

⁴¹⁷ See e.g., ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 460 of 10016.

⁴¹⁸ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 513 of 10016.

Ms. Gilbert asserts that this condition is required under the Public Services Standard, OAR 345-022-0110, because construction and operation of the proposed facility could potentially interfere with the provision of emergency medical transport and treatment to citizens. Gilbert Proposed Conditions at 6.

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. Idaho Power notes that, in the Proposed Order, Recommended Public Services Condition 3 requires the Company to submit a Helicopter Use Plan to the Department and each affected county planning department prior to the use of a helicopter during construction.⁴¹⁹ Recommended Public Services Condition 4 requires the Company to submit appropriate notices to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation to determine if any facility structures or power lines within five miles of an airport will pose a hazard to aviation safety.⁴²⁰ Idaho Power asserts that helicopter operators must adhere to FAA regulations for low-flying aircraft, the FAA works with local air traffic control to communicate and track all planes and helicopters in their vicinity, and local air traffic control communicates with helicopter companies regarding routes to fly to avoid existing commercial airline patterns.

In the Proposed Order, the Department recommended that the Council find that construction and operation of the proposed facility is not likely to result in significant adverse impacts to the ability of the public and private air safety providers within the analysis area.⁴²¹ Ms. Gilbert has not established otherwise. Accordingly, Ms. Gilbert's proposed condition regarding construction helicopters is denied.

8. Gilbert Proposed Condition Regarding Visual Analysis for Historic

Places: The developer must complete a visual analysis and provide mitigation for visual impacts to the following locations within the City of La Grande and surrounding areas which are listed on the National Register of Historic Places in Union County, Oregon: Eastern Oregon University campus Administration Building; John Anthony House; Anthony-Buckley House; Folley Building; Hot Lake Resort; La Grande Commercial Historic District; La Grande Neighborhood Club; Liberty Theatre; Roesch Building; Slater Building; August J. Stange House; US Post Office and Federal Building; and A. B. Hudelson and Son Building in North Powder.

Ms. Gilbert contends, without further explanation or evidence, that under the HCA standard the above-listed places "require evaluation and mitigation for adverse impacts to their visual qualities." Gilbert Proposed Conditions at 7.

⁴¹⁹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 573-74 of 10016.

⁴²⁰ *Id.* at 574.

⁴²¹ *Id.*

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. In opposing this proposed condition, Idaho Power explained it addressed all of the buildings listed in the proposed condition in its Reconnaissance Level Survey (RLS) Visual Assessment of Historic Property Report, submitted as ASC Exhibit S, attachment S-7.⁴²² The RLS field study determined that these resources did not require additional evaluation for adverse impacts because of intervening vegetation and dense urban development, because the resources' historical significance was not based upon the respective views of the Blue Mountains, and/or because of the presence of an interstate highway between the resource and the proposed facility.

In the Proposed Order, subject to compliance with the recommended HCA conditions of approval, the Department recommended the Council find that, taking into account mitigation, the construction and operation of the proposed facility is not likely to result in significant adverse impacts to any historic, cultural, or archeological resources.⁴²³ Ms. Gilbert has not established otherwise. Accordingly, Ms. Gilbert's historic places proposed condition is denied.

9. Gilbert Proposed Condition Regarding Impacts to Wildlife: The developer must complete an assessment and provide mitigation for direct and indirect impacts to wildlife using habitat contained in three federal mitigation sites compensating for wildlife damages due to the Columbia River Dams and the Oregon Department of Transportation mitigation site located in the vicinity of the Ladd Marsh Wildlife Area.

Ms. Gilbert argues, without further explanation or evidence, that the mitigation sites referenced above are "afforded enhanced protection due to the role of compensating for damages" and that the proposed facility "is not to cause direct or indirect damages to these mitigation sites." Gilbert Proposed Conditions at 7.

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. Idaho Power notes that, as part of the ASC, it completed an assessment of the direct and indirect impacts to wildlife habitat for the project generally and in the vicinity of the Ladd Marsh Wildlife Area. In the Proposed Order, the Department addressed the Ladd Marsh Wildlife Area/State Natural Heritage Area, and recommended a Protected Areas Condition requiring Idaho Power to follow mitigation plans and best practices for Category 2 habitat and to coordinate construction activities in the Ladd Marsh Wildlife Area with the Wildlife Area Manager.⁴²⁴

Ms. Gilbert has not established that this proposed condition requiring additional wildlife habitat assessments is necessary or appropriate. Idaho Power has explained why the proposed

⁴²² ODOE - B2HAPPDoc3-36 ASC 19_Exhibit S_Cultural_ASC_Public 2018-09-28, page 419 of 783. This attachment was submitted as confidential to protect the location of archeological sites and objects. See also Proposed Order at page 431, n. 469; ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 438 of 10016.

⁴²³ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 515 of 10016.

⁴²⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 271 of 10016.

condition is unnecessary. Therefore, this proposed condition is denied.

10. Gilbert Proposed Condition Regarding Slickspot Peppergrass: The developer is to identify habitat that can or does support slickspot peppergrass and avoid all construction related impacts to this habitat.

Ms. Gilbert proposed this condition asserting that, in 2016, the US Fish and Wildlife Service reinstated slickspot peppergrass as a threatened species and indicated an intent to designate critical habitat. Ms. Gilbert argued that the proposed condition is necessary to avoid conflicts between Department actions and federal rules. Ms. Gilbert did not submit any evidence related to this proposed condition.

Both the Department and Idaho Power oppose this proposed condition. First, as Idaho Power notes, slickspot peppergrass is not an Oregon-listed threatened or endangered species and is not known to occur in Oregon. Second, as set out in the *Ruling and Order on Motion for Summary Determination on Contested Case Issue FW-4*, Idaho Power has no obligation under the Fish and Wildlife Habitat Standard (or the Threatened and Endangered Species Standard) to evaluate impacts to federally-listed threatened or endangered species and/or their habitats.

Because slickspot peppergrass habitat is outside the Council's jurisdiction and authority, and because the proposed condition is neither appropriate nor necessary, it is denied.

11. Gilbert Proposed Condition Regarding Road Design: Prior to the start of construction, the developer will provide to Council the final road design standards including providing for adequate access for fire fighting equipment and will include maximum grade, road width, turning radius, road surface, bridge design, culverts and road access for their approval, and amend the site certificate to incorporate the planning document.

Ms. Gilbert contends, without further explanation or evidence, that this proposed condition is required by OAR 660-006-0040.⁴²⁵ Gilbert Proposed Conditions at 8.

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. Idaho Power notes that at least 90 days prior to construction of a facility phase or segment it is required by Recommended Public Services Condition 2 to, among other things, prepare final Transportation and Traffic Plans that address the specific road improvements

⁴²⁵ OAR 660-006-0040, a Land Conservation and Development Department rule, addresses fire safety design standards for road. It provides as follows:

The governing body shall establish road design standards, except for private roads and bridges accessing only commercial forest uses, which ensure that public roads, bridges, private roads and driveways are constructed so as to provide adequate access for firefighting equipment. Such standards shall address maximum grade, road width, turning radius, road surface, bridge design, culverts, and road access taking into consideration seasonal weather conditions. The governing body shall consult with the appropriate Rural Fire Protection District and Forest Protection District in establishing these standards.

needed for transportation routes. These plans must be submitted to, and approved by, the appropriate federal, state, and local agencies before construction begins. The Proposed Order further requires that if Idaho Power must substantially modify a road that is not currently within the site boundary, then “it must submit an Amendment Determination Request or a Request for Amendment of the Site Certificate [and] receive Council approval via an amendment, if necessary, as provided Recommended Public Services Condition 2.”⁴²⁶

Ms. Gilbert has not established that this proposed condition regarding road design standards is required by OAR 660-006-0040, or that it is necessary or appropriate. Idaho Power has explained why the proposed condition unnecessary. Therefore, this proposed condition is denied.

12. Gilbert Proposed Condition Regarding Completion of Traffic Safety

Plans: The developer must complete the Traffic Safety Plans and the Energy Facility Siting Council must approve the plans for all areas outside the site boundary where facility related traffic will be using public roads. In addition, the approved plans are required to be included in the Site Certificate when it is issued.

In a separate filing, Ms. Gilbert states her concern that the Proposed Order does not require Idaho Power to complete, and the Council to approve, the Traffic Safety Plans prior to issuance of the site certificate, and does not include a provision for Council review of the final Traffic Safety Plans after the site certificate is issued. Gilbert Request Regarding B2H Site Certificate Condition Related to the Need for the Traffic Plan to Be Completed and Approved by Counsel Prior to Start of Construction at 1.

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. Idaho Power also notes that the Council does not have jurisdiction or authority to evaluate roads that are not included in, and governed by, the ASC. See Proposed Order at page 51, n. 58.⁴²⁷ Furthermore, as discussed previously, Recommended Public Services Condition 2 already provides a thorough and appropriate review process for the final Transportation and Traffic Plans prior to construction.

Because the Council does not have jurisdiction over roads outside the site boundary and because the proposed condition is not appropriate or necessary, it is denied.

⁴²⁶ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 569 of 10016.

⁴²⁷ The Proposed Order states:

The Council does not have jurisdiction over matters that are not included in and governed by the site certificate or amended site certificate. However, the Council may rely on the determinations of compliance and the conditions in the permits issued by these state agencies and local governments in deciding whether the facility meets other standards and requirements under its jurisdiction.

ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 58 (emphasis added).

13. Gilbert Proposed Condition Regarding Noise Sensitive Locations: Once [the] transmission line is energized, ORS 469.507 requires testing or sampling to show ongoing compliance with the Noise standard for noise sensitive locations along the transmission line.

Ms. Gilbert asserts, without additional explanation or supporting evidence that the procedure outlined in the Proposed Order when a noise exceedance is reported fails to comply with state statute. Gilbert Proposed Conditions at 8. She further argues that the Department must require Idaho Power to purchase a noise easement or reduce the noise level through mitigation or other means. *Id.*

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. Idaho Power argues that ORS 469.507⁴²⁸ does not specify the type of monitoring required to comply with Council standards, and does not require the testing and sampling described in Ms. Gilbert's proposed condition. Idaho Power further asserts that because the proposed facility will comply with the Noise Rules, either directly or through an exception or variance, it did not propose any monitoring.⁴²⁹ Rather, during operations, as required by Amended Recommended Noise Control Condition 2, Idaho Power will implement a complaint response plan to address noise complaints.⁴³⁰

⁴²⁸ ORS 469.507 states as follows:

(1) The site certificate holder shall establish programs for monitoring the environmental and ecological effects of the construction and operation of facilities subject to site certificates to assure continued compliance with the terms and conditions of the certificate. The programs shall be subject to review and approval by the Energy Facility Siting Council.

(2) The site certificate holder shall perform the testing and sampling necessary for the monitoring program or require the operator of the plant to perform the necessary testing or sampling pursuant to guidelines established by the Energy Facility Siting Council or its designee. The council and the Director of the State Department of Energy shall have access to operating logs, records and reprints of the certificate holder, including those required by federal agencies.

(3) The monitoring program may be conducted in cooperation with any federally operated program if the information available from the federal program is acceptable to the council, but no federal program shall be substituted totally for monitoring supervised by the council or its designee.

(4) The monitoring program shall include monitoring of the transportation process for all radioactive material removed from any nuclear fueled thermal power plant or nuclear installation.

⁴²⁹ See ODOE - B2HAPPDoc3-41 ASC 24_ Exhibit X_ Noise_ ASC 2018-09-28, page 60 of 371.

⁴³⁰ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 655-55 of 10016.

Ms. Gilbert has not established that this proposed condition requiring ongoing monitoring at noise sensitive locations is necessary or appropriate. Idaho Power has explained why the proposed condition is unnecessary. Accordingly, this proposed condition is denied.

14. Gilbert Proposed Condition Regarding Construction: Prior to starting construction on any segment of the B2H transmission line, Idaho Power must provide convincing documentation that the portion would be constructed even if the remainder of the development were not built per OAR.345-025-0006(5). If the certificate holder does not have construction rights on all parts of the site, the certificate holder may [n]evertheless begin construction as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and:

(a) The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line or pipeline occurs during the certificate holder's negotiations to acquire construction rights on another part of the site.

Ms. Gilbert proposed this condition without further explanation or supporting evidence. Gilbert Proposed Conditions at 9.

Both the Department and Idaho Power oppose this proposed condition as unsupported and unnecessary. The Proposed Order already incorporates the mandatory site certificate conditions of OAR 345-025-0006(5) in Recommended General Standard of Review Condition 7. The Department modified this recommended condition to maintain the portions applicable to proposed transmission line facilities:

The certificate holder may begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and the certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of transmission line occurs during the certificate holder's negotiations to acquire construction rights on another part of the site. [Mandatory Condition OAR 345-025-0006(5)]⁴³¹

As Idaho Power notes, the only meaningful difference between the Department-recommended condition and Ms. Gilbert's proposed condition is that Ms. Gilbert inserts a requirement for Idaho Power to provide "convincing documentation that the portion would be constructed." Ms. Gilbert offers no justification for this provision. Idaho Power maintains it is unnecessary because Idaho Power retains the burden of demonstrating compliance with the conditions in the site certificate. Ms. Gilbert's proposal, as written, also needlessly requires Idaho Power to continue constructing a segment of the facility even if the remainder of the project is not built.

⁴³¹ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 65 of 10016.

Ms. Gilbert has not established that this proposed condition is necessary or appropriate. Idaho Power has explained why the proposed condition is unnecessary. Accordingly, this proposed condition is denied.

15. Gilbert Proposed Condition Regarding Finalization of Monitoring and Mitigation Plans: Prior to the start of construction, the developer will complete all final monitoring and mitigation plans including, but not limited to the “Fire Protection Plan, Travel Management Plan, Blasting Plan, Noise Mitigation Plan, Historic Resources Mitigation Plan, and all other required plans. The plans must be approved by the Energy Facility Siting Council and an Amended Site Certificate must be requested to incorporate these final plans as a part of the Site Certificate.

Ms. Gilbert contends, without further explanation or supporting evidence, that this condition is appropriate under OAR 345-025-0016.⁴³² Gilbert Proposed Conditions at 9-10.

Both the Department and Idaho Power oppose this proposed condition. Idaho Power asserts the proposed condition is unnecessary and redundant for several reasons. The Proposed Order includes many recommended site certificate conditions that require the Company to finalize the draft version of plans prior to facility construction, these final plans will already be subject to the Council’s approval pursuant to OAR 345-025-0016, and the Council must incorporate the individual approved plans into the applicable site certificate conditions. Idaho Power also notes that nothing in OAR 345-025-0016 requires Idaho Power to apply for an amended site certificate. Rather, the activities and/or changes that require a site certificate amendment are specified in OAR 345-027-0350 (Changes Requiring an Amendment).

Ms. Gilbert has not established that this proposed plan finalization condition is necessary or appropriate. Idaho Power has explained why it is unnecessary. Consequently, this proposed condition is denied.

16. Gilbert Proposed Condition Regarding Site Restoration: Developer must remove all concrete footings and support structures to [a] depth of 3 feet below ground level.

Ms. Gilbert argues that the site certificate condition requiring removal of transmission

⁴³² OAR 345-025-0016 states:

In the site certificate, the Council must include conditions that address monitoring and mitigation to ensure compliance with the standards contained in OAR Chapter 345, Division 22 and Division 24. The site certificate applicant, or for an amendment, the certificate holder, must develop proposed monitoring and mitigation plans in consultation with the Department and, as appropriate, other state agencies, local governments and tribes. Monitoring and mitigation plans are subject to Council approval. The Council must incorporate approved monitoring and mitigation plans in applicable site certificate conditions.

line concrete footings to a depth of one foot is too shallow, and will not suffice to return the site to a useful, non-hazardous condition as required by the RFA Standard, OAR 345-022-0050(1). Gilbert Proposed Conditions at 10.

Both the Department and Idaho Power oppose this proposed condition. This is essentially the same condition proposed by limited party Carbiener. For the reasons discussed previously in connection with Issue RFA-2, this proposed condition is not necessary or appropriate.

17. Gilbert Proposed Conditions Regarding Compliance with Site

Conditions: Prior to the start of construction the certificate holder shall develop and implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. Certificate holder must document compliance with the site certificate terms and conditions and applicable statutes and rules. Prior to the start of construction, all plans must be finalized, approved by Council, and an amended site certificate must be issued including the final plans.

Ms. Gilbert asserts, without further explanation or supporting evidence, that this proposed condition is required by OAR 345-026-0048.⁴³³ Gilbert Proposed Conditions at 11-12.

Both the Department and Idaho Power oppose this proposed condition. Idaho Power asserts that the proposed condition conflicts with the timing established in Council's rule, which requires the certificate holder to implement a plan that verifies compliance "following receipt of a site certificate or an amended site certificate." OAR 345-026-0048.

Ms. Gilbert has not established that this proposed condition is necessary or appropriate. Idaho Power has explained why the proposed condition conflicts with the provisions of OAR 345-026-0048. Consequently, this proposed condition is rejected.

18. Gilbert Proposed Condition Regarding Special Status Species: Prior to

⁴³³ OAR 345-026-0048 states:

Following receipt of a site certificate or an amended site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Department of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Department or the Council.

the start of construction on any phase/segment of the development surveys must be performed to identify all Special Status Species having potential habitat within the route as listed in the Revised Final Biological Survey Work Plan to identify habitat impacts and determine required mitigation amounts.

Ms. Gilbert asserts that allowing the proposed facility to “use and cross water resources on Bureau of Reclamation land will place water resources as well as agricultural lands of the state at risk.” Gilbert Proposed Conditions at 12. She further asserts, “Swanson’s hawks have shown difficulty in replacing lost nesting habitat.” *Id.*

Both the Department and Idaho Power oppose this proposed condition as unnecessary and unsupported. Idaho Power further contends that pre-construction field surveys will be conducted in accordance with the Revised Final Biological Survey Work Plan (ASC Exhibit P1, Attachment P1-2), which includes protocols that were reviewed by the Department, ODFW, USFS, FWS, NOAA Fisheries and the BLM.⁴³⁴ Idaho Power consulted with these agencies to determine the appropriate list of special status species to be field surveyed prior to construction, and these expert agencies approved Idaho Power’s approach of field surveying a select prioritized list of special status species, instead of all of the special status species, in the preconstruction surveys.⁴³⁵ Idaho Power contends that a condition proposing field surveys of all special status species within the analysis area goes beyond the scope established by the expert agencies.

Ms. Gilbert has not established that this proposed condition is necessary or appropriate. Idaho Power has explained why the proposed condition is unnecessary and contrary to the field survey plan approved by the Department and consulting expert agencies. Consequently, this proposed condition is denied.

19. Gilbert Proposed Condition Regarding Quiet Areas: Idaho Power will determine if the protected areas, national parks, game preserves and wildlife breeding areas within ½ mile of the proposed transmission line comply with the “quiet areas” standard for noise impacts prior to starting construction on any section of the transmission line and provide the results to the Counsel for review and approval.

In a separate pleading, Ms. Gilbert argues that this condition is necessary because even though the DEQ suspended administration of the Noise Control Rules and can no longer authorize “quiet areas,” this does not negate the fact that such areas exist. Ms. Gilbert further asserts that the areas listed in the proposed condition meet the definition of “quiet areas,” and the Department and Council are required to apply the Noise Control Rules as written. Gilbert Request Regarding B2H Site Certificate Impacts to Quiet Areas at 1-2.

⁴³⁴ ODOE - B2HAPPDoc3-25 ASC 16A_Exhibit P1_Wildlife_ASC_Part 1_Main thru Attach P1-6 rev 2018-09-28, pages 125-550 of 940.

⁴³⁵ See ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 313-16 of 10016.

Both the Department and Idaho Power oppose this condition as unnecessary and unsupported. Idaho Power asserts that DEQ does not maintain a list of quiet areas in the state, and there is no evidence that the agency ever did so.⁴³⁶ Idaho Power also notes that Ms. Gilbert provided no support to her claim that there are designated quiet areas within ½ mile of the proposed transmission line.

In short, Ms. Gilbert has not established that this proposed quiet areas condition is necessary or appropriate. Idaho Power has explained why the proposed condition is not needed. Consequently, this proposed condition is denied.

20. Gilbert Proposed Condition Regarding Notice: All landowners impacted by the decision for the Oregon Department of Energy and Energy Facility Siting Council to issue a Site Certificate to allow the Boardman to Hemmingway Transmission Line to impact the project will have on their health, noise levels, views, property values, recreational value, and other qualities of their property must be provided notice as required by ORS 183.415 due to the impact the development will have on their ability to live and work on their property.

Ms. Gilbert submitted this proposed site certificate condition asserting that ORS 183.415 requires the Department and Council to notify owners of identified noise sensitive properties that “the agency intends to allow an exception and variance to allow noise impacts to occur in violation of Oregon Noise standards.”⁴³⁷ Ms. Gilbert did not present any evidence related to this proposed condition, nor did she explain why she believes that the Department’s notice in this contested case proceeding was inadequate or otherwise failed to comply with applicable law. Ms. Gilbert also failed to explain why she believes ORS 183.415 applies to “all landowners impacted by the decision.” Both the Department and Idaho Power oppose this condition.

ORS 183.415 applies to contested cases and sets out the requirement for state agencies to provide “all parties” notice of their right to a hearing in a contested case. “Contested case” is defined in ORS 183.310(2).⁴³⁸ “Party” is defined in ORS 183.310(7).⁴³⁹ Council procedural rule

⁴³⁶ Declaration of Lisa Rackner Regarding Noise Control Issues, Nov. 12, 2021, at 3 and Ex. B.

⁴³⁷ Gilbert Site Certificate Request Regarding B2H Site Certificate Condition Related to Statutory Requirement that Citizens Impacted by a State Action Receive Notice as Specified in ORS 183.415, at 1.

⁴³⁸ As pertinent here, ORS 183.310(2)(a) states:

“Contested case” means a proceeding before an agency:

(A) In which the individual legal rights, duties or privileges of specific parties are required by statute or Constitution to be determined only after an agency hearing at which such specific parties are entitled to appear and be heard;

(B) Where the agency has discretion to suspend or revoke a right or privilege of a person;

OAR 345-015-0014 requires the Department to issue contested case notices for Council contested case proceedings in accordance with ORS 183.415 and OAR 137-003-0001. OAR 345-015-0014(2) requires the Department to send “a contested case notice * * * to the applicant or certificate holder, and to each party or limited party to the contested case.” The notice requirements of ORS 183.415, OAR 137-003-0001, and OAR 345-015-0014(2) do not attach until the matter becomes a contested case.⁴⁴⁰ Consequently, the Department has no obligation *under ORS 183.415* to send notice to all landowners potentially impacted by the proposed facility. The Department’s notice obligation under ORS 183.415 is limited to the parties in the contested case. Accordingly, this proposed condition is denied.

21. Gilbert Proposed Revisions to Recommended Amended Fish and Wildlife Condition 16: Requiring species-specific surveys for bats and post-construction surveys for all species listed in Recommended Fish and Wildlife Condition 16.

On February 28, 2022, the due date for written closing arguments, Ms. Gilbert submitted a “Closing Brief Regarding Idaho Power Site Certificate Recommendation Submitted with FW-9 Summary Determination Request,” proposing changes to Recommended Amended Fish and Wildlife Condition 16.⁴⁴¹ Ms. Gilbert proposed returning state sensitive bat species to the list of

(C) For the suspension, revocation or refusal to renew or issue a license where the licensee or applicant for a license demands such hearing; or

(D) Where the agency by rule or order provides for hearings substantially of the character required by ORS 183.415, 183.417, 183.425, 183.450, 183.460 and 183.470.

⁴³⁹ ORS 183.310(7) states:

“Party” means:

(a) Each person or agency entitled as of right to a hearing before the agency;

(b) Each person or agency named by the agency to be a party; or

(c) Any person requesting to participate before the agency as a party or in a limited party status which the agency determines either has an interest in the outcome of the agency’s proceeding or represents a public interest in such result. * * *.

⁴⁴⁰ The Council’s obligation to provide public notice upon receipt of a notice of intent to file an application for site certificate or an application for site certificate are set out in ORS 469.330 through 469.370, and OAR chapter 345, division 015. Pursuant to OAR 345-015-0230(3), following issuance of a proposed order, the Department must issue a public notice of the proposed order. That public notice must include certain information, including a summary of the recommendations in the proposed order and a description of the process and deadline for requests to participate as a party or limited party in the contested case under OAR 345-015-0016.

⁴⁴¹ As discussed previously herein, in the August 17, 2021 *Ruling on Issues FW-9, FW-10, FW-11 and LU-10*, the ALJ recommended that, in Recommended Fish and Wildlife Condition 16, “State Sensitive

required preconstruction surveys and proposed requiring post-construction surveys for all species listed in the condition. Ms. Gilbert argued that she could not object to Idaho Power's Motion for Summary Determination on Issue FW-9 because of a lack of standing on that issue, but she is nevertheless entitled under the Council's rules to propose conditions and to present evidence and argument regarding Recommended Amended Fish and Wildlife Condition 16.

Ms. Gilbert is correct that, under OAR 345-015-0085, a party or limited party may propose site certificate conditions and may present evidence and argument concerning proposed conditions. However, pursuant to OAR 345-015-0085(1), the proposed conditions, evidence and argument must be submitted in accordance with the schedule set by the ALJ. As previously discussed, the deadline for submitting proposed site certificate conditions was September 17, 2021 and the deadline for submitting responses to proposed conditions was November 11, 2021. Regardless of her lack of standing on Issue FW-9 (which was resolved in Idaho Power's favor on summary determination), Ms. Gilbert did not submit her proposed changes/revisions to Recommended Amended Fish and Wildlife Condition 16 until February 28, 2022. This means that the Department and Idaho Power had no opportunity during the contested case hearing to present evidence in response to the appropriateness of Ms. Gilbert's proposed changes to this condition. Because Ms. Gilbert did not submit her proposed revisions to Recommended Amended Fish and Wildlife Condition 16 in accordance with OAR 345-015-0085(1), the *Case Management Order*, and the *Second Case Management Order*, the ALJ declines to further address the necessity and appropriateness of Ms. Gilbert's proposals on this matter.

Geer Additional Proposed Site Conditions

1. Geer Proposed Condition Regarding Trifolium Douglasii Request that Idaho Power revise its plans to completely bypass Morgan Lake Park property and to avoid *Trifolium douglasii* (rare plant) occurrences wherever they are found.

Ms. Geer timely submitted this proposed condition in connection with her direct testimony on Issues FW-3 and FW-6, but did not offer any further explanation or evidence in support of this proposal.

Both the Department and Idaho Power oppose the proposed condition. The Department asserts that the proposed condition is not necessary to meet the requirements of ORS Chapter 569. Idaho Power asserts (1) the project site boundary does not cross any portion of Morgan Lake Park and (2) there is no applicable Council standard requiring Idaho Power to avoid *Trifolium douglasii* because the plant is not on the State List of Threatened and Endangered Species (OAR 603-073-0070).

Because Ms. Geer has not provided evidence to support the proposed condition and Idaho Power has explained why it is not necessary, the proposed condition is denied.

2. Geer Proposed Condition Regarding Sandhill Cranes: The developer will provide UV lights on the B2H transmission lines from central Baker County to

bat species" be removed from the list of required surveys and that footnote 373 of the Proposed Order be deleted.

the Umatilla County Line.

Ms. Geer contends that sandhill cranes are protected by the Migratory Bird Treaty Act of 1918, they are an Oregon Conservation Strategy Species, and are listed as Sensitive by the ODFW. She argues that because the sandhill crane is a federally protected species, because ODFW is to make recommendations regarding the protection of federally protected species when necessary, and because the proposed transmission line is in the migratory pathway of the sandhill crane, it is appropriate to require this mitigation to minimize the likelihood of fatalities to the cranes. Geer Requested Site Certificate Condition be Included in the Final Order at 1.

Both the Department and Idaho Power oppose this proposed condition. Idaho Power adds that its Avian Protection Plan guides the Company's efforts to protect raptors and other large birds from harm from transmission lines and poles. Idaho Power asserts that its Avian Protection Plan is sufficient to satisfy the Council's Fish and Wildlife Habitat Standard as it relates to the sandhill crane and that no additional measures (such as flight diverters or UV lights) are required.⁴⁴² Idaho Power adds that in the event ODFW identifies specific sites along the completed project that result in elevated risks of crane collisions, it will consider potential actions to address those risks.⁴⁴³

In the Proposed Order, the Department discussed Idaho Power's Avian Protection Plan (Attachment P1-9 to the Proposed Order) in connection with the risk of bird electrocutions along the proposed transmission lines. Noting that the risk of avian mortalities resulting from electrocutions is very low for high-voltage transmission lines, the Department nevertheless included Recommended Fish and Wildlife Condition 10 requiring Idaho Power to construct the transmission line to avian-safe design standards, consistent with the Avian Protection Plan.⁴⁴⁴ The Department also noted as follows:

ODFW has historically provided guidance to ODOE that its Fish and Wildlife Habitat Mitigation Policy, implemented under Council's standard, applies to terrestrial (land-based) environments, and has not developed guidance to date supporting or recommending assessment of airspace (or bird flight corridors) as habitat, for which to then assign a habitat category and evaluate impacts and mitigation goal obligations. Therefore, the Department does not consider imposing a requirement for specific technology (UV light technology) appropriate under the Council's standard, but considers it consistent with OAR 345-025-0016 to require agency consultation during implementation of the Avian Protection

⁴⁴² See Idaho Power's Responses to DPO Comments, ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, page 7602 of 10016 (responding to ODFW's comments regarding sandhill crane migration and flight diversion technology).

⁴⁴³ *Id.*

⁴⁴⁴ ODOE - B2HAPPDoc2 Proposed Order on ASC and Attachments 2019-07-02, pages 338-41 of 10016.

Plan.⁴⁴⁵

Ms. Geer has not provided evidence to support the proposed condition. Furthermore, there is evidence in the B2H Project Record to the contrary. The Department opted not to require UV lighting technology on the transmission lines. Accordingly, Ms. Geer's proposed condition regarding sandhill crane protection is denied.

ORDER

I propose the Oregon Department of Energy, Energy Facility Siting Council, issue a Final Order granting the requested site certificate consistent with the Department's Proposed Order dated July 2, 2020, including the recommended site certificate conditions, and incorporating the following amendments to recommended conditions:

Noise Control

Amended Recommended Noise Control Condition 1:

Prior to construction, the certificate holder will initiate discussions with the following 41 NSR property owners at which it has estimated exceedances of the ambient antidegradation standard may occur identified in Attachment X-5 and/or Attachment X-4 of the Final Order on the ASC (NSR: 8, 9, 10, 11, 5002, 69, 70, 5004, 46, 118, 125, 5010, 5011, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 518, 111, 112, 132, 133, 5008, 5009, 113, and 115) to develop mutually agreed upon Noise Exceedance Mitigation Plans, specific to each NSR location. The site-specific Noise Exceedance Mitigation Plans will include agreed upon measures that would be implemented at the NSR location to minimize or mitigate the ambient antidegradation standard noise exceedance.

a. If the certificate holder and the NSR property owner agree upon a specific Noise Mitigation Plan, the certificate holder will submit a signed acknowledgement from the property owner to the Department for its records.

b. If an agreement between certificate holder and NSR property owner is not obtained, the certificate holder shall concurrently notify the Department and NSR property owner of the dispute and of Council review of the dispute to occur at the next regularly scheduled Council meeting, to the extent possible, from the date of the certificate holder's notice. The notice shall explain that the NSR property owner will be given an opportunity to provide comments to the Council on the dispute, unless the Council Chair defers the dispute review to the Department. Review of the dispute will be based on the information per sub(i) below, and any other relevant facts provided by the NSR property owner and will result in a determination of the appropriate mitigation measure(s), proportional to the facility operational noise levels in excess of the ambient degradation standard, as

⁴⁴⁵ *Id.* at 341 of 10016.

determined to occur at the NSR property. The Council or Department's determination of appropriate mitigation is not binding on the NSR property owner or certificate holder if the NSR property owner opts not to accept the mitigation.

i. At the time of issuance of the notice per (b) above, certificate holder will submit to the Department: (1) the mitigation measures it offered the NSR property owner, the mitigation measures that the NSR property owner requested and an explanation of the dispute; (2) a list of the dates that the certificate holder communicated with, or attempted to communicate with, the NSR property owners; and (3) the names, addresses, and phone numbers of the NSR owners.

c. In working with NSR property owners under this condition, certificate holder will propose corona-noise mitigation of installation of sound-attenuating windows for residential structures as follows:

i. For NSRs where an 11 to 14 dBA sound level increase above ambient noise levels are expected, certificate holder will purchase and install sound attenuating windows with an STC rating of 25-40.

ii. For NSRs where a 15 dBA or greater sound level increase is expected, certificate holder will purchase and install sound attenuating windows with an STC rating of above 40.

iii. If an owner of an NSR where an 11 dBA or greater sound level increase is expected provides a letter from a health care provider indicating that health care provider's belief that the owner has a health condition that is exacerbated by increased sound levels, upon request, certificate holder will purchase and install sound attenuating windows with an STC rating of over 40 and would work with the NSR property owner to consider other mitigation options, as appropriate. During landowner consultations required under this condition, the certificate holder will specifically ask each landowner whether that landowner has a health condition that the landowner believes is exacerbated by elevated sound levels.

iv. At the request of an NSR property owner, certificate holder will offer alternative mitigation proposals, such as performing air-sealing of the NSR residence, planting trees, or installing insulation.

d. Prior to operation, the certificate holder will implement the mitigation measures agreed upon with the NSR property owners and/or as determined by EFSC or the Department to be the appropriate mitigation measures.

Amended Recommended Noise Control Condition 2:

a. After the Site Certificate has been issued and before landowner consultations contemplated in Condition 1, the certificate holder will prepare a new version of Attachment X-7, which will update landowner information and correct any errors 18 (Updated Attachment X-7). The certificate holder will send notices to all landowners listed in Updated Attachment X-7, which notice shall inform the recipient: (a) that the recipient is the owner of an NSR; and (b) the requirements of Noise Control 21 Conditions 1 and 2 as adopted by the Council. In addition, prior to construction, the certificate holder shall develop and submit to the Department an operational noise complaint response plan.

b. The plan shall specify that it is intended to address complaints filed by persons falling into one of the following categories: (1) the owner of an NSR property identified in Noise Control Condition 1, and for whom has received mitigation under Noise Control Condition 1, but who believes that exceedances (as measured at their NSR property) are occurring in a manner not otherwise allowed under Noise Control Condition 4 or Noise Control Condition 5; or (2) An owner of an NSR property within one mile of the site boundary who was not identified under Noise Control Condition 1 and who has not received mitigation from the certificate holder, but who nevertheless believes that exceedances above the ambient degradation standard have occurred at their NSR property.

c. The plan shall include the following: Scope of the complaint response plan, including process for complaint filing, receipt, review and response. The scope shall clearly describe how affected persons will be provided necessary information for filing a complaint and receiving a response, and will specify the information that the complainant must include in its complaint, including the date the certificate holder received the complaint, the nature of the complaint, weather conditions of the date for which the complaint is based (including wind speed, temperature, relative humidity, and precipitation), duration of perceived noise issue, the complainant's contact information, and the location of the affected property.

d. The plan shall require that the certificate holder notify the Department within three working days of receiving a noise complaint related to the facility. The notification shall include the date the certificate holder received the complaint, the nature of the complaint, weather conditions of the date for which the complaint is based (including wind speed, temperature, relative humidity, and precipitation) as described by the complainant, duration of perceived noise issue, the complainant's contact information, the location of the affected property, and a schedule of any actions taken or planned to be taken by the certificate holder (including inspection and maintenance actions, or actions taken or planned to be taken pursuant to the processes described in subsection (e) of this condition).

e. The plan shall identify the following process if a noise complaint is received:

i. The certificate holder shall assess possible causes of the corona noise. If the complaint is received within the first 12 months of operation, the certificate holder will assess whether the corona noise is typical of noise that occurs during the transmission line “burn in period” (the first 12 months of operation) and ensure that it already has taken appropriate measures near that NSR to minimize corona noise that may occur during the burn in period (e.g., use conductors with a nonspecular finish/sandblasting of conductors to make them less reflective and clean them of manufacturing oils, protect the conductors to minimize scratching and nicking during construction). If the exceedance occurs during the burn-in period, and if the certificate holder complies with the requirements of this condition, the certificate holder will not be found to be in violation of its site certificate because of the exceedance.

ii. If it is determined the corona noise is not typical burn in period noise, the certificate holder will assess whether the noise exceeds the ambient antidegradation standard in a manner not otherwise allowed under Noise Control Condition 4 or Noise Control Condition 5. If the complainant’s noise sensitive property or properties are included in Attachment X-5 of the Final Order on the ASC, the modeled sound level increases as presented in Attachment X-4 of the Final Order on the ASC may be relied upon to determine whether the corona noise exceeds the ambient antidegradation standard, unless the complainant voluntarily provides alternative noise data.

iii. If the complainant’s NSR property or properties are not included in Attachment X-5 of the Final Order on the ASC, the certificate holder shall model the sound level increases using the methods set forth in ASC Exhibit X, unless the complainant voluntarily provides alternative noise data.

iv. If the complainant voluntarily provides alternative noise data and the data suggests an exceedance that had not previously been identified and mitigated, and/or an exceedance not otherwise allowed under Noise Control Condition 4 or Noise Control Condition 5, the complaint shall be verified through site specific sound monitoring conducted by an Oregon registered Professional Engineer, Board Certified by the Institute of Noise Control Engineering noise specialist, employed or contracted by the certificate holder, in accordance with NPCS-1 unless otherwise approved by the Department. If site specific sound monitoring is not authorized by the complainant, the certificate holder’s modeling results may be relied upon to determine compliance.

v. In the event of a dispute regarding complainant’s noise data and the certificate holder’s data from site specific sound monitoring, certificate holder shall request that EFSC, in consultation with the Department’s

noise consultant, if necessary, make the final determination regarding which data will be used to determine whether corona noise exceeds the ambient antidegradation standard and/or in a manner not allowed under Noise Control Condition 4 or Noise Control Condition 5. The EFSC Chair may direct the Department to make this determination.

f. The plan shall specify that if it is determined pursuant to the process described in subsection (e) of this condition that corona noise at the complainant's NSR property exceeds the ambient antidegradation standard in a manner not allowed under Noise Control Condition 4 or Noise Control Condition 5, and/or exceeds the ambient antidegradation standard at an NSR property that had not previously been predicted to experience exceedances under Noise Control Condition 1, the certificate holder shall work with the NSR property owner to develop a mutually agreed upon mitigation plan to include agreed upon measures that would be implemented at the NSR location to minimize or mitigate the ambient antidegradation standard noise exceedance. To be clear, the fact that the certificate holder has received an exception or variance under Noise Control Conditions 4 and 5 does not excuse the certificate holder from providing mitigation under this condition.

i. If the NSR property was identified in Noise Control Condition 1 and has previously received mitigation by the certificate holder, and if it has been determined that the NSR property experiences exceedances not allowed under Noise Control Condition 4 or Noise Control Condition 5, the certificate holder will work with the complainant to identify supplemental mitigation measures, which may include any of the measures discussed in Noise Control Condition 1 or the ASC, or other measures requested by the complainant.

ii. If the NSR property was not identified in Noise Control Condition 1 and has not been provided with mitigation by the certificate holder, certificate holder will work with the NSR property owner to identify appropriate mitigation measures, which may include any of the measures discussed in Noise Control Condition 1 or the ASC, or other measures requested by the landowner.

iii. If, through the efforts described above, the certificate holder executes an agreement with the NSR property owner, the certificate holder will submit a signed acknowledgement from the property owner to the Department for its records. If an agreement between certificate holder and NSR property owner is not obtained, the certificate holder shall concurrently notify the Department and NSR property owner of the dispute and of Council review of the dispute to occur at the next regularly scheduled Council meeting, to the extent possible, from the date of the certificate holder's notice. The notice shall explain that the NSR property owner will be given an opportunity to provide comments to the Council on

the dispute, unless the Council defers the dispute review to the Department. Review of the dispute will be based on the information per (iv) below, and any other relevant facts provided by the NSR property owner and will result in a determination of the appropriate mitigation measure(s), proportional to the facility operational noise levels in excess of the ambient degradation standard, as determined to occur at the NSR property. The Council or Department's determination of appropriate mitigation is not binding on the NSR property owner or certificate holder if NSR property owner opts not to accept the mitigation.

iv. At the time of issuance of the notice per (iii) above, certificate holder will submit to the Department: (1) the mitigation measures it offered the NSR property owner, the mitigation measures that the NSR property owner requested and an explanation of the dispute; (2) a list of the dates that the certificate holder communicated with, or attempted to communicate with, the NSR property owners; and (3) the names, addresses, and phone numbers of the NSR owners.

g. The certificate holder shall provide necessary information to the complainant to support understanding of corona noise, corona noise levels and effects, and of the process to verify actual noise levels of events resulting in complaints. If the complainant opts not to authorize the certificate holder to conduct monitoring, and it is otherwise determined pursuant to the process described in subsection (e) of this condition that corona noise does not exceed the ambient antidegradation standard, the noise complaint shall be considered fully resolved and no mitigation shall be required.

Amended Recommended Noise Control Condition 4:

During operation:

a. Pursuant to OAR 340-035-0010, an exception to compliance with the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) (which prohibits an increase of more than 10 dBA above ambient sound pressure levels) is granted during facility operation when there is foul weather (a rain rate of 0.8 to 5 millimeters per hour), which Council finds constitutes an infrequent event under OAR 340-035-0035(6)(a).

b. The ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) may be exceeded by the transmission line at any time of day or night during foul weather events (defined as a rain rate of 0.8 to 5 millimeters per hour). [OAR 340-035-0010(2)]

c. The quantity and quality of noise generated in exceedance of the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B), during foul weather events (defined as a rain rate of 0.8 to 5 millimeters per hour), shall not be more than 10 dBA (i.e., ambient plus 20 dBA). [OAR 340-035-0010(2)]

Amended Recommended Noise Control Condition 5:

During operation:

- a. A variance to compliance with the ambient antidegradation standard at OAR 340-035-0035(1)(b)(B) (which prohibits an increase of more than 10 dBA above ambient sound pressure levels) is granted pursuant to OAR 340-035-0100(1) for the transmission line at any time of day or night during foul weather events (defined as a rain rate of 0.8 to 5 millimeters per hour).
- b. The quantity and quality of noise generated in exceedance of the ambient antidegradation standard shall not be more than 10 dBA (*i.e.*, ambient plus 20 dBA), as measured at any NSR location.

Public Services

Second Amended Recommended Public Services Condition 6: Prior to construction of a facility phase or segment, in accordance with the OAR 345-025-0016 agency consultation process outlined in the plan (Attachment U-3 of the Final Order on the ASC), the certificate holder shall submit final Fire Prevention and Suppression Plan(s) to the Department. The plan finalization process shall consider (a)(i) and (a)(ii) unless otherwise identified by a land management agency or other participating review agency:

a) The protective measures as described in the draft Fire Prevention and Suppression Plan as provided in Attachment U-3 of the Final Order on the ASC and:

i. Wildfire training for onsite workers and facility personnel be conducted by individuals that are National Wildfire Coordination Group and Federal Emergency Management Agency certified.

ii. Specific seasonal work restrictions, onsite fire-fighting equipment and necessary fire protection resources based on: 1) documented evaluation of reasonably available sources related to wildfire risk and sensitive seasonal conditions such as high temperatures, drought and high winds; and, 2) update Table PS-9 of the Proposed Order based on information obtained from the LGRFPD on the number of full-time and volunteer employees, number and type of equipment/vehicles, and response times to the facility. Response time must consider LGRFPD crew mobilization time and access limitations (e.g., road condition, level of service and impact of multi-users from Morgan Lake Park, residents and emergency services).

b) A description of the fire districts and rural fire protection districts that will provide emergency response services during construction and copies of any agreements between the certificate holder and the districts related to that

coverage.

c) All work must be conducted in compliance with the approved plan during construction and operation, as applicable, of the facility.

Amended Recommended Public Services Condition 7: The certificate holder shall:

a. Prior to operation, provide a copy of its Wildfire Mitigation Plan to the Department and each affected county which provides a wildfire risk assessment and establishes action and preventative measures based on the assessed operational risk from and of wildfire in each county affected by the facility.

b. During operation, the certificate holder shall update the Wildfire Mitigation Plan on an annual basis, or frequency determined acceptable by the Department in consultation with the Oregon Public Utilities Commission.

c. During operation, for the service territories the facility would be located within, the certificate holder shall provide to each of the fire districts and rural fire protection a contact phone number to call in the event a district needs to request an outage as part of a fire response.

d. Any Wildfire Mitigation Plan required by the Oregon Public Utilities Commission shall be considered by EFSC as meeting the requirements of this condition.

New Recommended Public Services Condition:

Prior to construction or road modification in any area designated as a geologic hazard zone by Oregon Department of Geology and Mineral Industries (DOGAMI) data and maps (e.g., as landslide or debris flow fan), or by relevant local zoning ordinances and maps, the site certificate holder and/or its construction contractors will consult with a licensed civil engineer to assess the proposed construction or road design in relation to potential geologic hazards.

Soil Protection/Blasting Plan

Amended Recommended Soil Protection Condition 4:

a. Prior to construction, in accordance with the OAR 345-025-0016 agency consultation process outlined in the draft Framework Blasting Plan (Attachment 20 G-5 of the Final Order on the ASC), the certificate holder shall finalize, and submit to the Department for approval, a final Blasting Plan. The final Blasting Plan shall meet all applicable federal, state and local requirements related to the transportation, storage, and use of explosives.

b. Prior to construction, the certificate holder will consult with landowners

regarding right-of-way acquisition, and during these consultations, the certificate holder will discuss with the landowner any blasting that the certificate holder plans to conduct on the landowner's property. If the landowner identifies a natural spring or well on the property, the certificate holder will notify the landowner that at the landowner's request, the certificate holder shall conduct pre-blasting baseline flow and water quality measurements for turbidity. The certificate holder shall compensate the landowner for adequate repair or replacement if damages to the flow or quality of the natural spring or well occur solely as a result of blasting.

c. During construction, the certificate holder shall conduct all work in compliance with the final Blasting Plan approved by the Department.

Fish Passage

Amended Recommended Fish Passage Condition 1(a):

a) Prior to construction, the certificate holder shall finalize, and submit to the Department for its approval in consultation with ODFW, a final Fish Passage Plan. As part of finalizing the Fish Passage Plan, the certificate holder shall request from ODFW any new information on the status of the streams within the site boundary and shall address the information in the final Fish Passage Plan. In addition, the certificate holder shall seek concurrence from ODFW on the fish-presence determinations for non-fish bearing streams within the Ladd Creek watershed, as presented in ASC Exhibit P1-7B Table 3. If the certificate holder in consultation with ODFW, determines any of the previously identified non-fish bearing streams within the Ladd Creek Watershed to be fish-bearing, the certificate holder shall complete a crossing risk evaluation and obtain concurrence from ODFW on applicability of fish passage requirements. If fish passage requirements apply, certificate holder shall seek approval from the Energy Facility Siting Council of a site certificate amendment to incorporate ODFW approval of new crossings and fish passage design/plans and conditions. The protective measures described in the draft Fish Passage Plan in Attachment BB-2 to the Final Order on the ASC, shall be included as part of the final Fish Passage Plan, unless otherwise approved by the Department.

[The remainder of Fish Passage Condition 1, paragraphs (b) and (c), remain unchanged from the Proposed Order.]

Alison Greene Webster

Senior Administrative Law Judge
Office of Administrative Hearings

Exceptions to the Administrative Law Judge's Proposed Order

EXCEPTIONS. Pursuant to OAR 345-015-0085(5) parties and limited parties may file exceptions to this proposed contested case order. Any party or limited party filing an exception must: a) in the exception(s) specifically identify the finding of fact, conclusion of law or recommended site certificate conditions to which the party excepts and state the basis for the exception; and b) email the exception(s) to Jesse Ratcliffe, legal counsel to EFSC in this contested case at Jesse.D.Ratcliffe@state.or.us and to the other parties/limited parties and the Office of Administrative Hearings no later than 5:00 p.m. Pacific Time on **June 30, 2022**.

RESPONSES. Pursuant to OAR 345-015-0085(6), parties and limited parties may file responses to exceptions. All responses must be emailed to Mr. Ratcliffe, the other parties/limited parties and the Office of Administrative Hearings no later than 5:00 p.m. Pacific Time on **July 15, 2022**.

EFSC HEARING ON PROPOSED CONTESTED CASE ORDER AND EXCEPTIONS. The Council will conduct a hearing to review the Proposed Contested Case Order and the parties' and limited parties' exceptions and responses. Parties and limited parties will be provided notice of that hearing once scheduled.

APPENDIX 1
TABLE OF ADDITIONAL ADMITTED EVIDENCE

Issue	Offered By	Testimony/Exhibit	Document Description	
M-6	Marlette	JoAnn Marlette Declaration	Written testimony	
	Marlette	Irene Gilbert Declaration	Written testimony	
	Marlette	Marlette Exhibit 5	IPC Response to Discovery Request No. 2	
	Marlette	Marlette Exhibit 6	IPC Response to Discovery Request No. 1	
	Idaho Power	Joseph Stippel Rebuttal Testimony	Rebuttal testimony	
	Idaho Power	Stippel Rebuttal Exhibit A	Curriculum Vitae	
	Idaho Power	Stippel Rebuttal Exhibit B	Final Environmental Impact Statement excerpt	
FW-3	Gilbert	Irene Gilbert Declaration	Written testimony	
	Gilbert	Joann J. Harris Rode Declaration	Written testimony	
	Gilbert	Gilbert Exhibit 4	Union County Weed Control Comments	
	Gilbert	Gilbert Exhibit 9	ODOE Response to Discovery Request	
	Gilbert	Gilbert Exhibit 11	ODA - Economic Impact From Selected Noxious Weeds in Oregon	
	Gilbert	Gilbert Exhibit 12	ODA – Invasive Noxious Weed Control Program Annual Report 2020	
	Gilbert	Gilbert Exhibit 15	ODFW – Oregon Conservation Strategy, Chapter 2: Key Conservation Issues	
	Geer	Susan Geer Declaration	Written testimony	
	Geer	Karen Antell Declaration	Written testimony	
	Geer	Mark Darrach Declaration	Written testimony	
	Geer	Bryan Endress Declaration	Written testimony	
	Idaho Power	Jessica Taylor Rebuttal Testimony	Written testimony	
	Idaho Power	Taylor Rebuttal Exhibit A	Curriculum Vitae	
	Idaho Power	Taylor Rebuttal Exhibit B	Updated Draft Noxious Weed Plan, 11-12-21	
	Idaho Power	Taylor Rebuttal Exhibit C	ODA – Noxious Weed Policy and Classification System 2020	
	Idaho Power	Taylor Rebuttal Exhibit D	Union County Noxious Weed List - 2019	
	Idaho Power	Taylor Rebuttal Exhibit E	ODFW – Oregon Conservation Strategy, Chapter 1: Overview	
	ODOE	Tim Butler (ODA) Rebuttal Testimony	Written testimony	
	Gilbert	Irene Gilbert Surrebuttal Testimony	Written testimony	
	Geer	Susan Geer Surrebuttal Testimony	Written testimony	
	Geer	Ed Mosiman Surrebuttal Testimony	Written testimony	
	Idaho Power	Jessica Taylor Sur-surrebuttal Testimony	Written testimony	
	Idaho Power	Declaration of Jessica Taylor in Support of Idaho Power’s Response to ODOE’s Proposed Conditions	Written testimony	
	Idaho Power	Attachment 1 to Taylor Declaration	Malheur County Noxious Weeds List	
	Idaho Power	Attachment 2 to Taylor Declaration	Baker County Noxious Weeds List	
			Jessica Taylor Cross-Examination Hearing Testimony	Hearing Transcript – Day 4 (Jan. 14, 2022)
			Mark Porter (ODA) Cross-Examination Hearing Testimony	Hearing Transcript – Day 7 (Jan. 21, 2022)

	Idaho Power	Transcript Corrections to Cross-Examination Hearing Days 4 and 7	Corrections to Hearing Transcripts – Days 4 and 7
FW-5	N/A	(no additional evidence offered)	
FW-6	Geer	Susan Geer Declaration	Written testimony
	Geer	Karen Antell Declaration	Written testimony
	Geer	Mark Darrach Declaration	Written testimony
	Geer	Bryan Endress Declaration	Written testimony
	Geer	Geer Exhibit 3	ODA – Invasive Noxious Weed Control Program Annual Report 2020
	Geer	Geer Exhibit 6	Vegetation of Winn Meadow, Glass Hill, Union Co., Oregon, August 16, 2011
	Idaho Power	Jessica Taylor Rebuttal Testimony	Written testimony
	Idaho Power	Taylor Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Taylor Rebuttal Exhibit B	Updated Draft Noxious Weed Plan, 11-12-21
	Idaho Power	Taylor Rebuttal Exhibit C	ODA – Noxious Weed Policy and Classification System 2020
	Idaho Power	Taylor Rebuttal Exhibit D	Union County Noxious Weed List - 2019
	Idaho Power	Taylor Rebuttal Exhibit E	ODFW – Oregon Conservation Strategy, Chapter 1: Overview
	Geer	Susan Geer Surrebuttal Testimony	Written testimony
	Geer	Ed Mosiman Surrebuttal Testimony	Written testimony
	Geer	Geer Surrebuttal Exhibit 1S	Article: Managing Invasive Plants in Natural Areas: Moving Beyond Weed Control, 2009
	Geer	Geer Surrebuttal Exhibit 2S	Article: Management Strategies for Invasive Plants in Pacific Northwest Prairies, Savannas, and Oak Woodlands.
	Geer	Geer Surrebuttal Exhibit 3S	Safeguarding the Nation from Impacts of Invasive Species
	Geer	Geer Surrebuttal Exhibit 4S	Oregon Natural Areas Plan 2020
	Idaho Power	Jessica Taylor Sur-surrebuttal Testimony	Written testimony
	Idaho Power	Declaration of Jessica Taylor in Support of Idaho Power’s Response to ODOE’s Proposed Conditions	Written testimony
	Idaho Power	Attachment 1 to Taylor Declaration	Malheur County Noxious Weeds List
	Idaho Power	Attachment 2 to Taylor Declaration	Baker County Noxious Weeds List
FW-7	March	Kevin and Anne March Testimony	Written testimony
	March	March Exhibit 1	ODFW Response to March Discovery Request
	March	March Exhibit 2	USDA B2H Record of Decision
	March	March Exhibit 3	Ladd Steelhead Habitat Map
	March	March Exhibit 4	2016 Ladd Creek Sts SGS Notes
	March	March Exhibit 5	2018 ODOT Ladd Canyon Project
	March	March Exhibit 6	ODOT News Release 12-18-20
	March	March Exhibit 7	ODFW Sensitive Species List
	March	March Exhibit 8	ODFW Fish Passage webpage
	March	March Exhibit 9	Ladd Marsh Wildlife Area Management Plan
	March	March Exhibit 10	Catherine Creek Tributary Assessment

	March	March Exhibit 11	ODOT Culvert Replacement Report
	March	March Exhibit 12	Endangered Species Act of 1973
	March	March Exhibit 13	NOAA – Snake River Basin Steelhead
	March	March Exhibit 14	ODFW Habitat Mitigation webpage
	March	March Exhibit 15	Article – Summer Steelhead fishing, 8-28-21
	March	March Exhibit 16	Article – Record Low Numbers of Steelhead Returning to Columbia River, 8-28-21
	March	March Exhibit 17	NOAA – Ladd Canyon Protected Resources
	ODOE	Greg Apke (ODFW) Rebuttal Testimony	Written testimony
	ODOE	Sara Reif (ODFW) Rebuttal Testimony	Written testimony
	Idaho Power	Chris James Rebuttal Testimony	Written testimony
	Idaho Power	James Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	James Rebuttal Exhibit B	Project Crossings in Upper Ladd Creek Watershed Proposed on Streams Identified in 2021 ODFW Summer Steelhead Distribution Map
	Idaho Power	James Rebuttal Exhibit C	Project Crossings in Upper Ladd Creek Watershed Proposed Outside Streams Identified in 2021 Summer Steelhead Distribution Map
	Idaho Power	James Rebuttal Exhibit D	Fish Habitat and Stream Crossing Assessment Summary Report, October 2014
	Idaho Power	James Rebuttal Exhibit E	Fish Habitat and Crossing Assessment Plan, May 2014
	Idaho Power	James Rebuttal Exhibit F	Fish Habitat and Stream Crossing Assessment Summary, December 2016
	Idaho Power	James Rebuttal Exhibit G	ODFW Responses to March Discovery Requests
	Idaho Power	James Rebuttal Exhibit H	ODFW Geodatabase Data
	March	Kevin and Anne March Surrebuttal Testimony	Written testimony
	March	March Surrebuttal Exhibit A	<u>ODFW Memo re: Clarification of Fish Passage Triggers and Guidelines for Bridges, March 28, 2008</u>
	March	March Surrebuttal Exhibit B	<u>ODFW Fish Passage Priority List, Feb. 1, 2013</u>
	March	March Surrebuttal Exhibit C	<u>ODFW Fish Passage Requirements</u>
		Greg Apke (ODFW) Cross-Examination Hearing Testimony	Hearing Transcript – Day 5 (Jan. 18, 2022)
		Sarah Reif (ODFW) Cross-Examination Hearing Testimony	Hearing Transcript – Day 5 (Jan 18, 2022)
		Chris James Cross-Examination Hearing Testimony	Hearing Transcript – Day 5 (Jan 18, 2022)
	<u>March</u>	<u>March Cross-Examination Exhibit 6A - video clip</u>	<u>ODOT Safety Projects Region 5 – video regarding ODOT’s I-84 fish passage improvements project (Aug. 18, 2020)</u>
	March	March Corrections to January 18, 2022 Hearing Transcript	Corrections to Hearing Transcript – Day 5
	Idaho Power	Idaho Power Transcript Corrections to Cross-Examination Hearing Transcript Day 5	Corrections to Hearing Transcript – Day 5

	ODOE	ODOE Corrections to Cross-Examination Hearing Transcript Day 5	Corrections to Hearing Transcript – Day 5
HCA-3	Marlette	JoAnn Marlette Affidavit	Written testimony
	Marlette	Marlette Exhibit 1-J	Sarah LeCompte letter, August 14, 2021
	Marlette	Marlette Exhibit 1	Chicago Tribune article, Follow the Footsteps – or Wagon Ruts – of Pioneer’s Historic Trail, June 18, 2018
	Marlette	Marlette Exhibit 2	Oregon VIA Magazine excerpt, page 6, July-August 2018
	Marlette	Marlette Exhibit 3	Baker City Herald article, Tourism Spending Continues to Rise, May 8, 2019
	Marlette	Marlette Exhibit 4	Baker City Herald article, Selling Baker County, May 10, 2019
	Marlette	Marlette Exhibit 5	Article, Electric Transmission Visibility and Visual Contrast Threshold Distances in Western Landscapes
	Marlette	Marlette Exhibit 8	B2H Historic Properties Management Plan, pages 20-22, September 2018
	Marlette	Marlette Exhibit 9	IPC’s Response to Gilbert’s Discovery Request No. 4, February 5, 2021
	Marlette	Marlette Exhibit 10	IPC’s Response to Gilbert’s Discovery Requests, March 12, 2021
	Marlette	Marlette Exhibit 11	IPC’s Response to Deschner’s Discovery Request No. 4, February 5, 2021
	Marlette	Marlette Exhibit 16	NHOTIC Overlay Zone
	Marlette	Marlette Exhibit 17	Photos taken at NHOTIC
	Gilbert	Irene Gilbert Testimony	Written testimony
	Gilbert	Gilbert Exhibit 4	IPC Supplemental Response to Gilbert’s Discovery Requests
	Idaho Power	Kirk Ranzetta Rebuttal Testimony	Written testimony
	Idaho Power	Ranzetta Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Ranzetta Rebuttal Exhibit B	BLM – Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM Lands, 2013
	Idaho Power	Ranzetta Rebuttal Exhibit C	National Registration of Historic Places Registration Form for Oregon Trail: La Grande to Hilgard Segment
	Idaho Power	Ranzetta Rebuttal Exhibit D	Letter from Tetra Tech to John Williams
HCA-4	Horst/Cavinato	Joe Horst Direct Testimony	Written testimony
	Horst/Cavinato	Horst Exhibit C	Arial photograph – Hawthorne Dr.
	Horst/Cavinato	Horst Exhibit I	State Historic Preservation Office letter to Joe Horst, July 28, 2021
	Idaho Power	Kirk Ranzetta Rebuttal Testimony	Written testimony
	Idaho Power	Ranzetta Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Ranzetta Rebuttal Exhibit B	BLM – Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM Lands, 2013
	Idaho Power	Ranzetta Rebuttal Exhibit C	National Registration of Historic Places Registration Form for Oregon Trail: La Grande to Hilgard Segment

	Idaho Power	Ranzetta Rebuttal Exhibit D	Letter from Tetra Tech to John Williams
HCA-6	N/A	(no additional evidence offered)	
HCA-7	Williams	John Williams Testimony	Written testimony
	Idaho Power	Kirk Ranzetta Rebuttal Testimony	Written testimony
	Idaho Power	Ranzetta Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Ranzetta Rebuttal Exhibit B	BLM – Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM Lands, 2013
	Idaho Power	Ranzetta Rebuttal Exhibit C	National Registration of Historic Places Registration Form for Oregon Trail: La Grande to Hilgard Segment
	Idaho Power	Ranzetta Rebuttal Exhibit D	Letter from Tetra Tech to John Williams
	Williams	John Williams Surrebuttal Testimony	Written testimony (second bullet point excluded)
LU-4	N/A	(no additional evidence offered)	
LU-7	N/A	(no additional evidence offered)	
LU-8	N/A	(no additional evidence offered)	
LU-9	Myers	Sam Myers Direct Testimony	Written testimony
	Idaho Power	Kurtis Funke Rebuttal Testimony	Written testimony
	Idaho Power	Funke Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Funke Rebuttal Exhibit B	Article, Assessing the Accuracy and Integrity of PTK GPS Beneath High Voltage Power Line (2001)_
	Idaho Power	Funke Rebuttal Exhibit C	Updated Table 5-7 from Idaho Power’s Agricultural Lands Assessment (Sept. 2005)
	Idaho Power	Mark Madison Rebuttal Testimony	Written testimony
	Idaho Power	Madison Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Madison Rebuttal Exhibit M	USDA, Wildland Fire in Ecosystems
	Idaho Power	Madison Rebuttal Exhibit N	Benefits of Prescribed Burning (Aug. 2013)
	Idaho Power	Christopher Lautenberger Rebuttal Testimony	Written testimony
	Myers	Sam Myers Surrebuttal Testimony	Written testimony
	Idaho Power	Mark Madison Sur-surrebuttal Testimony	Written testimony
LU-11	Gilbert	Irene Gilbert Testimony	Written testimony
	Gilbert	Gilbert Exhibit 8	Article, A Weedy Scourge: 20 Invasive Plant Species That Cost Oregon Millions
	Gilbert	Gilbert Exhibit 11	ODOE Response to Gilbert Discovery Requests
	Gilbert	Gilbert Exhibit 18	Article, Crop Duster Strikes Arizona T-Line
	Idaho Power	Douglas Dockter Rebuttal Testimony	Written testimony
	Idaho Power	Dockter Exhibit A	Curriculum Vitae
	Idaho Power	Jessica Taylor Rebuttal Testimony	Written testimony

	Idaho Power	Taylor Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Taylor Rebuttal Exhibit B	Updated Draft Noxious Weed Plan, 11-12-21
	Idaho Power	Taylor Rebuttal Exhibit C	ODA – Noxious Weed Policy and Classification System 2020
	Idaho Power	Taylor Rebuttal Exhibit D	Union County Noxious Weed List - 2019
	Idaho Power	Taylor Rebuttal Exhibit E	ODFW – Oregon Conservation Strategy, Chapter 1: Overview
	Idaho Power	Kurtis Funke Rebuttal Testimony	Written testimony
	Idaho Power	Funke Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Funke Rebuttal Exhibit B	Article, Assessing the Accuracy and Integrity of PTK GPS Beneath High Voltage Power Line (2001)_
	Idaho Power	Funke Rebuttal Exhibit C	Updated Table 5-7 from Idaho Power’s Agricultural Lands Assessment (Sept. 2005)
		Mark Porter (ODA) Cross-Examination Hearing Testimony	Hearing Transcript – Day 7 (Jan. 21, 2022)
	Idaho Power	Transcript Corrections to Cross-Examination Hearing Days 4 and 7	Corrections to Hearing Transcript – Days 4 and 7
NC-1, NC-2, NC-3, and NC-4	Stop B2H	Fuji Kreider Direct Testimony Regarding Issue NC-1	Written testimony
	Stop B2H	Fuji Kreider Direct Testimony on Issue NC-2	Written testimony
	Stop B2H	Fuji Kreider Direct Testimony on Issue NC-3	Written testimony
	Stop B2H	Fuji Kreider Direct Testimony on Issue NC-4	Written testimony
	Stop B2H	Kerrie Standlee Direct Testimony Regarding Issues NC-2, NC-3 and NC-4	Written testimony
	Stop B2H	Stop B2H Exhibit 1	Fuji Kreider Declaration, with attachment
	Stop B2H	Stop B2H Exhibit 2	Lois Barry Declaration on NC-1, NC-2 and NC-4
	Stop B2H	Stop B2H Exhibit 3	Colburn letter to BLM, July 10, 2015
	Stop B2H	Stop B2H Exhibit 4	Jim Kreider Declaration on NC-2
	Stop B2H	Stop B2H Exhibit 5	Standlee Report, September 15, 2021
	Stop B2H	Stop B2H Exhibit 6	Email exchanges between ODOE and Fuji Kreider
	Stop B2H	Stop B2H Exhibit 10	Irene Gilbert Declaration on Issues NC-2 and NC-3
	Stop B2H	Stop B2H Exhibit 11	Ashley O’Toole Declaration on NC-3
	Stop B2H	Stop B2H Exhibit 12	Greg Larkin Declaration
	Gilbert	Irene Gilbert Testimony Regarding Issue NC-2	Written testimony
	Gilbert	Gilbert Exhibit 1	US Dept. of the Interior, Director’s Order #47, Soundscape Preservation and Noise Management, December 1, 2000
	Gilbert	Gilbert Exhibit 7	Williams v. Invenergy LLC and Willow Creek Energy LLC, Complaint filed 8/9/13
	Gilbert	Gilbert Exhibits 14 - 17	Photographs of Larkin property

	Gilbert	Gilbert Exhibits 18 - 21	Photographs of MP 11 location
	Gilbert	Gilbert Exhibit 27	OHA, Strategic Health Impact Assessment on Wind Energy Development in Oregon, March 2013
	Horst	Joe Horst Direct Testimony	Regarding Issue NC-2
	Horst	Horst Exhibit Q	Gilbert and Kreider Discovery Requests to ODOE
	Myers	Sam Myers Direct Testimony	Regarding Issue NC-2
	ODOE	Ken Kosky, Golder Assoc. Rebuttal Testimony	Written testimony
	ODOE	Kosky Attachment 1	Resume, Kennard F. Kosky, PE
	ODOE	Kosky Attachment 2	Resume, Gage Miller
	ODOE	Kosky Attachment 3	Technical Memorandum, Review of Additional Baseline Data Collected in October 2021
	ODOE	Patrick Rowe Declaration	Written testimony explaining attachments
	ODOE	Rowe Attachment 1	Oregon DEQ Internal Management Directive re: Staff Guidance on Noise Control Issues
	ODOE	Rowe Attachment 2	Stop B2H Discovery Request to Oregon DEQ
	ODOE	Rowe Attachment 3	Oregon DEQ Response to Discovery Request
	ODOE	Rowe Attachment 4	A-Engrossed version of Oregon Senate Bill 951 (1995)
	ODOE	Rowe Attachment 5	Legislative History, SB 951 (1995)
	Idaho Power	Mark Bastasch Rebuttal Testimony	Written testimony
	Idaho Power	Bastasch Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Bastasch Rebuttal Exhibit B	Oregon DEQ, Staff Guidance on Noise Control Issues (July 2003)
	Idaho Power	Bastasch Rebuttal Exhibit C	Oregon DEQ, Sound Measurement Procedure Manual (Sept. 4, 1974)
	Idaho Power	Bastasch Rebuttal Exhibit D	Article, Sound Levels of Rain and of Wind in the Trees (Nov. – Dec. 1998)
	Idaho Power	Bastasch Rebuttal Exhibit E	Merriam-Webster Online Dictionary, Definition of “Infrequent”
	Idaho Power	Bastasch Rebuttal Exhibit F	BPA. I-5 Corridor Reinforcement Final EIS (Feb. 2016)
	Idaho Power	Bastasch Rebuttal Exhibit G	Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance (Dec. 2011)
	Idaho Power	Bastasch Rebuttal Exhibit H	Oregon DEQ, Adoption of Statewide Rules Related to Noise Pollution from Industrial and Commission Sources and Changes to the Sound Measurement Procedures Manuals, NPCS-1, 2 (Sept. 4, 1974)
	Idaho Power	Bastasch Rebuttal Exhibit I	Photo Log of Supplemental Monitoring Equipment Stations (October 10-11, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit J	Tabulated Hourly Data from Supplemental Monitoring (October 10, 2021-November 1, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit K	Extracted Sound Level Meter Files (October 10, 2021-November 1, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit L	Reanalysis of MP 11 Area (November 12, 2021)

	Idaho Power	Bastasch Rebuttal Exhibit M	BPA, Audible Noise Policy (October 2005)
	Idaho Power	Joseph Stippel Rebuttal Testimony Regarding Issues NC-1 and NC-2	Written testimony
	Idaho Power	Stippel Rebuttal Exhibit A	Oregon DEQ, Staff Guidance on Noise Control Issues (July 2003)
	Idaho Power	Lisa Rackner Declaration	Explaining attached exhibits regarding Noise Control Issues
	Idaho Power	Rackner Exhibit A	Email Correspondence between Stop B2H and Lisa Rackner
	Idaho Power	Rackner Exhibit B	Email Correspondence between Karl Juengling and Lisa Rackner
	STOP B2H	Fuji Kreider Surrebuttal Testimony	Regarding Issues NC-2, NC-3 and NC-4, with photographs embedded
	STOP B2H	Stop B2H Surrebuttal Exhibit A	Kerrie Standlee Review of Rebuttal Testimony
	STOP B2H	Stop B2H Surrebuttal Exhibit B	Supplemental Information Regarding Sound Monitoring Requests and Selection of Locations
	STOP B2H	Stop B2H Surrebuttal Exhibit C	Email Exchange between Jim Kreider and City of La Grande Officials (Nov. 30 – Dec. 1, 2021)
	STOP B2H	Stop B2H Surrebuttal Exhibit D	Video of Supplemental Monitoring Position MP 103
	STOP B2H	Stop B2H Cross-Examination Exhibit 1	Sound Level and Wind Speed Data graphs
	STOP B2H	Stop B2H Cross-Examination Exhibit 2	Measurement notes
	Idaho Power	Bastasch Sur-surrebuttal Exhibit A	MP 102 Analysis for October 15-16, 2021
	Idaho Power	Bastasch Sur-surrebuttal Exhibit B	Reanalysis of MP 11 Area – Morgan Lake Alternative
	Idaho Power	Bastasch Sur-surrebuttal Exhibit C	Reanalysis of MP 11 Area – Proposed Mill Creek Route – Map 1
	Idaho Power	Bastasch Sur-surrebuttal Exhibit D	Reanalysis of MP 11 Area – Proposed Mill Creek Route – Map 2
	Idaho Power	Bastasch Sur-surrebuttal Exhibit E	Statistical Distribution of October Windspeeds (2008-2021, La Grande National Weather Service Station)
	Idaho Power	Bastasch Sur-surrebuttal Exhibit F	Email Exchange between Lisa Rackner and Karl Anuta regarding equipment calibration
	Idaho Power	Bastasch Sur-surrebuttal Exhibit G	Annual Laboratory Calibration Records
	Idaho Power	Bastasch Sur-surrebuttal Exhibit H	Post-monitoring Field Calibration information
	Idaho Power	Bastasch Sur-surrebuttal Exhibit I	Corrected Tables 1 and 2 of Bastasch Rebuttal Testimony
	Idaho Power	Bastasch Sur-surrebuttal Exhibit J	Declaration of Rodrigo Gonzalez-Abraham regarding Noise Control Issues
		Mark Bastasch Cross-Examination Hearing Testimony	Hearing Transcript – Day 1 (Jan. 10, 2022)
		Gage Miller Cross-Examination Hearing Testimony	Hearing Transcript – Day 1 (Jan. 10, 2022)
		Kerri Standlee Cross-Examination Hearing Testimony	Hearing Transcript – Day 1 (Jan. 10, 2022)
	Idaho Power	Idaho Power Corrections to Cross-Exam Hearing Transcript Day 1	Corrections to Hearing Transcript Day 1

	ODOE	ODOE Corrections to Cross-Examination Hearing Day 1	Corrections to Hearing Transcript Day 1
	STOP B2H	STOP B2H Corrections to January 10, 2022 Hearing Transcript	Corrections to Hearing Transcript Day 1
NC-6	Gray	Dianne B. Gray Direct Testimony	Written testimony
	ODOE	Ken Kosky, Golder Assoc. Rebuttal Testimony	Written testimony
	ODOE	Kosky Attachment 1	Resume, Kennard F. Kosky, PE
	ODOE	Kosky Attachment 2	Resume, Gage Miller
	ODOE	Kosky Attachment 3	Technical Memorandum, Review of Additional Baseline Data Collected in October 2021
	Idaho Power	Mark Bastasch Rebuttal Testimony	Written testimony
	Idaho Power	Bastasch Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Bastasch Rebuttal Exhibit B	Oregon DEQ, Staff Guidance on Noise Control Issues (July 2003)
	Idaho Power	Bastasch Rebuttal Exhibit C	Oregon DEQ, Sound Measurement Procedure Manual (Sept. 4, 1974)
	Idaho Power	Bastasch Rebuttal Exhibit D	Article, Sound Levels of Rain and of Wind in the Trees (Nov. – Dec. 1998)
	Idaho Power	Bastasch Rebuttal Exhibit E	Merriam-Webster Online Dictionary, Definition of “Infrequent”
	Idaho Power	Bastasch Rebuttal Exhibit F	BPA. I-5 Corridor Reinforcement Final EIS (Feb. 2016)
	Idaho Power	Bastasch Rebuttal Exhibit G	Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance (Dec. 2011)
	Idaho Power	Bastasch Rebuttal Exhibit H	Oregon DEQ, Adoption of Statewide Rules Related to Noise Pollution from Industrial and Commission Sources and Changes to the Sound Measurement Procedures Manuals, NPCS-1, 2 (Sept. 4, 1974)
	Idaho Power	Bastasch Rebuttal Exhibit I	Photo Log of Supplemental Monitoring Equipment Stations (October 10-11, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit J	Tabulated Hourly Data from Supplemental Monitoring (October 10, 2021-November 1, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit K	Extracted Sound Level Meter Files (October 10, 2021-November 1, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit L	Reanalysis of MP 11 Area (November 12, 2021)
	Idaho Power	Bastasch Rebuttal Exhibit M	BPA, Audible Noise Policy (October 2005)
	Idaho Power	Joseph Stippel Rebuttal Testimony	Regarding Issues NC-1 and NC-2
	Idaho Power	Stippel Rebuttal Exhibit A	Oregon DEQ, Staff Guidance on Noise Control Issues (July 2003)
	Idaho Power	Lisa Rackner Declaration	Explaining attached exhibits regarding Noise Control Issues
	Idaho Power	Rackner Exhibit A	Email Correspondence between Stop B2H and Lisa Rackner
	Idaho Power	Rackner Exhibit B	Email Correspondence between Karl Juengling and Lisa Rackner
PS-1	N/A	(no additional evidence offered)	

PS-2 and PS-3	Carbiener/OCTA	Gail Carbiener Direct Testimony Regarding Issues PS-2 and PS-3	Written testimony
	Idaho Power	Christopher Lautenberger Rebuttal Testimony	Written testimony
	Idaho Power	Lautenberger Rebuttal Exhibit A	Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model, USDA, General Technical Report RMRS-GTR-153 (June 2005)
	Idaho Power	Lautenberger Rebuttal Exhibit B	Data from LANDFIRE (filed Nov.. 12, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit C	How to Generate and Interpret Fire Characteristics Charts for Surface and Crown Fire Behavior, USDA, General Technical Report RMRS-GTR-253 (Mar. 2011)
	Idaho Power	Lautenberger Rebuttal Exhibit D	Data from Fire Occurrence Database (filed Nov. 12, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit E	Data from Mesowest (filed Nov. 12, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit F	Article: Power Lines and Catastrophic Wildland Fire in Southern California (2009)
	Idaho Power	Lautenberger Rebuttal Exhibit G	NWS Text Products by Issuing Center by Date, Iowa Environmental Mesonet, Iowa State University (Mar. 18, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit H	USDA and Department of the Interior, "Urban Wildland Interface Communities Within the Vicinity of Federal Lands that Are at High Risk from Wildfire," Fed. Reg., 66: 753 (2001)
	Idaho Power	Lautenberger Rebuttal Exhibit I	Data from SILVIS Labs (filed Nov. 12, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit J	Exhibit J, Data from Wildland Fire Decision Support System (filed Nov. 12, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit K	Butte County District Attorney's Office, The Camp Fire Public Report: A Summary of the Camp Fire Investigation (June 16, 2020)
	Idaho Power	Lautenberger Rebuttal Exhibit L	Article: NBC Bay Area, PG&E Criminally Charged for Kincade Fire (Apr. 6, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit M	Article: PacifiCorp Agrees to Pay 3.4 Million for 2018 Ramsey Canyon Fire Near Sams Valley, KDRV (June 10, 2020)
	Idaho Power	Lautenberger Rebuttal Exhibit N	PG&E Fire Incident Data 2020
	Idaho Power	Lautenberger Rebuttal Exhibit O	Pacific Northwest Wildfire Coordinating Group, 2020 Northwest Area Fire Weather Annual Operating Plan" (July 1, 2020)
	Idaho Power	Lautenberger Rebuttal Exhibit P	Archived NWS Watch, Warnings, Advisories Iowa Environmental Mesonet (filed Nov. 12, 2021)
	Idaho Power	Lautenberger Rebuttal Exhibit Q	Executive Order No. 19-01 (Jan. 30, 2019)
	Idaho Power	Lautenberger Rebuttal Exhibit R	EFSC Staff Report, Agenda Item G (Action Item): Update on PUC Wildfire Mitigation Rulemaking and Initiation of Council Rulemaking for the October 22, 2021, EFSC Meeting (Oct. 8, 2021)

	Idaho Power	Lautenberger Rebuttal Exhibit S	Article: Fire Induced Flashovers of Transmission Lines: Theoretical Models, Institute of Electrical and Electronics Engineers, Africon (2002)
	Idaho Power	Lautenberger Rebuttal Exhibit T	“The 10% Wind Speed Rule of Thumb for Estimating a Wildfire’s Forward Rate of Spread in Forests and Shrublands,” Annals of Forest Science 76: 44 (2019)
	Idaho Power	Lautenberger Rebuttal Exhibit U	Oregon Natural Hazards Mitigation Plan (Sept. 24, 2020)
	Idaho Power	Lautenberger Rebuttal Exhibit V	Article: Using Expert Judgment to Model Initial Attack Fire Crew Effectiveness, Forest Science 44.4 (1998)
PS-4	Cooper	Matthew Cooper Direct Testimony	Written testimony
	Cooper	Lois Barry Direct Testimony	Written testimony
	Cooper	Corinne Dutto Direct Testimony	Written testimony
	Cooper	Joann Harris Direct Testimony	Written testimony
	Cooper	Jim Kreider Direct Testimony	Written testimony
	Cooper	Cooper Exhibit 1	Photograph
	Cooper	Cooper Exhibit 2	La Grande Observer articles on the Rooster Peak Fire (August 1973)
	Cooper	Cooper Exhibit 3	La Grande Observer article: “Recalling the Fire of August 1973” (August 18, 2003)
	Cooper	Cooper Exhibit 4	Union County Community Wildfire Protection Plan (2005)
	Cooper	Cooper Exhibit 5	Union County Community Wildfire Protection Plan (2016)
	Cooper	Cooper Exhibit 6	Deposition of Craig Kretschmer (May 13, 2021)
	Cooper	Cooper Exhibit 7	City of La Grande response to PRR on fire truck travel times to Morgan Lake Road
	Cooper	Cooper Exhibit 8	Table of fire truck travel time to Morgan Lake Road area
	Cooper	Cooper Exhibit 9	Wildfire Risk by County, Oregon Forestland-Urban Interface Fire Protection Act
	Cooper	Cooper Exhibit 17	NE Oregon Regional Natural Hazards Mitigation Plan (2014)
	Cooper	Cooper Exhibit 21	Article: Southern California Edison says its equipment may have caused Orange County fire
	Cooper	Cooper Exhibit 22	Baker City Herald article, Missing Mountains (Aug. 1, 2020)
	Cooper	Cooper Exhibit 23	Oregonian article: PacifiCorp could face substantial liability if downed power lines caused Oregon wildfires (Oct. 7, 2020)
	Cooper	Cooper Exhibit 24	Blue Mountain Times article (Aug. 22, 1868)
	Cooper	Cooper Exhibit 25	Tax Map of SW La Grande
	Idaho Power	Douglas Dockter Rebuttal Testimony	Written testimony
	Idaho Power	Dockter Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Dennis Johnson Rebuttal Testimony	Written testimony
	Idaho Power	Johnson Rebuttal Exhibit A	Curriculum Vitae

	Idaho Power	Johnson Rebuttal Exhibit B	Class 4 Cost Estimate Report for an Underground Installation Within the Viewshed of the NHOTIC
	Idaho Power	Johnson Rebuttal Exhibit C	Southern California Edison Company application concerning the Tehachapi Renewable Transmission Project (Segments 4 through 11) (Jan. 18, 2017)
	Idaho Power	Christopher Lautenberger Rebuttal Testimony	Written testimony
	Idaho Power	Lautenberger Rebuttal Exhibits A through V	(See descriptions for Lautenberger Rebuttal Exhibits A through V set out above with Issues PS-2 and PS-3)
	Cooper	Matt Cooper Surrebuttal to Christopher Lautenberger's Rebuttal Testimony	Written testimony
	Cooper	Matt Cooper Surrebuttal to Douglas Dockter's Rebuttal Testimony	Written testimony
	Cooper	Cooper Surrebuttal Exhibit A	USGS Topological Map, La Grande Quadrangle (2017)
	Cooper	Cooper Surrebuttal Exhibit B	Topo Graph and interval contour lines
	Cooper	Cooper Surrebuttal Exhibit C	Mountaineering: Freedom of the Hills (1997)
	Idaho Power	Dockter Sur-surrebuttal Exhibit A	Cooper response to discovery request, email thread
	Idaho Power	Dockter Sur-surrebuttal Exhibit B	Idaho Power Wildfire Mitigation Plan 2022 (Dec. 2021)
	Idaho Power	Dockter Sur-surrebuttal Exhibit C	Map of La Grande Area Fire Response Agencies
	Idaho Power	Dockter Sur-surrebuttal Exhibit D	Blue Mountain Interagency Fire Center Annual Report (2020)
		Douglas Dockter Cross-Examination Hearing Testimony	Hearing Transcript – Day 3 (Jan. 13, 2022)
		Christopher Lautenberger Cross-Examination Hearing Testimony	Hearing Transcript – Day 3 (Jan. 13, 2022)
	Cooper	Cooper Transcript Corrections to Hearing Transcript Day 3	Corrections to Hearing Transcript – Day 3
	Idaho Power	Idaho Power Transcript Corrections to Hearing Transcript Day 3	Corrections to Hearing Transcript – Day 3
PS-5	N/A	(no additional evidence offered)	
PS-6	Mammen	Dale and Virginia Mammen Direct Testimony on Issue PS-6	Written testimony
	Mammen	Mammen Exhibit 1	Excerpts from Idaho Power's summary determination pleadings on Issue SS-4, and Affidavit of Luke Grebe
	Mammen	Mammen Exhibit 2	Union County Warranty Deed with attachments
	Mammen	Mammen Exhibit 3	Union County May 1-3, showing West Hawthorne Drive
	Mammen	Mammen Exhibit 4	Union County Warranty Deed with attachments
	Mammen	Mammen Exhibit 6	City of La Grande Geologic Hazard Zone Map
	Mammen	Mammen Exhibit 7	Photographs, Declaration of Joe Horst,

			Declaration of Chris and Erin Stauffer
	Horst/Cavinato	Joe Horst Direct Testimony	Written testimony
	Horst/Cavinato	Horst Exhibits A-1, A-2 and A-3	Maps showing Hawthorne Drive location
	Horst/Cavinato	Horst Exhibit B	Arial photo of Hawthorne Drive
	Horst/Cavinato	Horst Exhibit C	Arial photo of Hawthorne Drive/Oregon Trail route
	Horst/Cavinato	Horst Exhibit D	Arial photo showing new development near Hawthorne Drive
	Horst/Cavinato	Horst Exhibit E-1 and E-2	Arial photo and ground level photo of Hawthorne Drive/Modelaire Loop
	Horst/Cavinato	Horst Exhibit E-2	Affidavit of Luke Grebe regarding Idaho Power's MSD on Issue SS-4
	Horst/Cavinato	Horst Exhibit F	Arial photo of Hawthorne Drive and creek
	Horst/Cavinato	Horst Exhibits G-1 and G-2	Arial photo and ground level photo of city boundary
	Horst/Cavinato	Horst Exhibit I	Letter re Oregon Trail, La Grande to Hilgard Segment (July 28, 2021)
	Horst/Cavinato	Horst Exhibit J-1 and J-2	Photos showing Hawthorne Drive width
	Horst/Cavinato	Horst Exhibit L	Excerpt from B2H Transportation and Traffic Plan
	Horst/Cavinato	Horst Exhibit M-1 and M-2	Photographs showing home, person on Hawthorne Dr.
	Horst/Cavinato	Horst Exhibit O	City of La Grande's Compliance Review of B2H ASC (Oct. 8, 2018)
	Horst/Cavinato	Horst Exhibit P	Excerpt Idaho Power's MSD Response on Issue SS-4
	Horst/Cavinato	Horst Exhibit R	Update Letter re Mill Creek Route (March 24, 2020)
	Idaho Power	Luke Grebe Rebuttal Testimony	Written testimony
	Idaho Power	Grebe Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Grebe Rebuttal Exhibit B	Access Road Field Review (August 18, 2021)
	Idaho Power	Grebe Rebuttal Exhibit C	ODOT, Transportation System Planning Guidelines (2008)
	Idaho Power	Grebe Rebuttal Exhibit D	BPA, Transmission Line Access Road Geometrics Design SDT-DT-000101 (Nov. 6, 2017)
	Idaho Power	Grebe Rebuttal Exhibit E	PAC, TA 501 Roads – Construction (April 7, 2008)
	Idaho Power	Grebe Rebuttal Exhibit F	Federal Highway Administration, Manual of Uniform Traffic Control Devices (Dec. 2009)
PS-8 and PS-9	Idaho Power	Declaration of Douglas J. Dockter	Written testimony
	Idaho Power	Dockter Exhibit A	Idaho Power's 2021 Wildfire Mitigation Plan
	Idaho Power	Dockter Exhibit B	In re Rulemaking for Risk-based Wildfire Protection Plans and Planned Activities Consistent with Executive Order 20-04, OPUC Docket AR 638, Docket Strategy Change Announcement (July 28, 2021)
	Idaho Power	Dockter Exhibit C	In re Wildfire Mitigation Rulemaking – Phase I, OPUC Docket AR 648, Staff's UPDATED AR 648 Draft Phase I Wildfire

			Mitigation Rules (Aug. 20, 2021)
	Idaho Power	Dockter Exhibit D	OPUC Docket AR 648, Notice of Proposed Rulemaking (Sept. 14, 2021)
	Idaho Power	Dockter Exhibit E	In re Risk-Based Wildfire Protection Plans and Planned Activities Consistent with Executive Order 20-04, OPUC Docket AR 638, Order No. 21-167 (May 27, 2021)
	Idaho Power	Dockter Exhibit F	In re Idaho Power Company Application for Waiver of OAR 860-024-0050 and OAR 860-024-0060 through OAR 860-024-0160 Wildfire Rules, OPUC Docket UM 2179, Order No. 21-269 (Aug. 26, 2021)
	Idaho Power	Dockter Exhibit G	In re Application of Idaho Power Company for an Accounting Order Authorizing the Deferral of Incremental Wildfire Mitigation and Insurance Costs, IPUC Case No. IPC-E-21-02, Order No. 35077 (June 17, 2021)
	Idaho Power	Christopher W. Lautenberger Direct Testimony	Written testimony
	Idaho Power	Lautenberger Exhibit A	Curriculum Vitae
	Idaho Power	Lautenberger Exhibit B	Application of San Diego Gas & Electric Company (U 902 E) for the Sunrise Powerlink Transmission Project, A.06-08-010, D.08-12-058 (Dec. 18, 2008)
	Idaho Power	Lautenberger Exhibit C	Application of San Diego Gas & Electric Company (U 902 E) for the Sunrise Powerlink Transmission Project, A.06-08-010, D.08-12-058, Appendix C (Dec. 24, 2008)
	Idaho Power	Lautenberger Exhibit D	Snow Fire Incident Information Fact Sheet (June 5, 2015)
	Idaho Power	Lautenberger Exhibit E	U.S. Attorney's Office, Dist. of Or., PacifiCorp to Pay \$3.4 Million in Civil Settlement for Ramsey Canyon Fire (June 9, 2020)
	Idaho Power	Lautenberger Exhibit F	Pacific Gas and Electric Fire Incident Report Data Compiled from 2014-2019
	Idaho Power	Lautenberger Exhibit G	Southern California Edison Fire Incident Report Data Compiled from 2014-2019
	Idaho Power	Lautenberger Exhibit H	San Diego Gas and Electric Fire Incident Report Data Compiled from 2014-2019
	Idaho Power	Lautenberger Exhibit I	Data from Department of Homeland Security Homeland Infrastructure Foundation-Level Data Regarding Transmission and Subtransmission Lines in the United States
PS-10	Lyons	Charles Lyons Direct Testimony	Written testimony
	Lyons	Lyons Exhibit 2a	Excerpt from Union County Wildfire Protection Plan, Chapter 6 (June 30, 2016)
	Lyons	Lyons Exhibit 2b	Union County Wildfire Protection Plan Appendix E Scoring Criteria 2016 Pages 1-5
	Lyons	Lyons Exhibit 2c	Union County Community Wildfire Protection Plan 8-10-05 Table 6 Pages 36-37
	Lyons	Lyons Exhibit 3	Idaho Power Response to Lyons Discovery

			Requests
	Lyons	Lyons Exhibit 4	Article Oregon's Emergency Responders and Utilities are Oregonian 6/4/2021
	Lyons	Lyons Exhibit 5	Oregonian Article: "Utility had plan in place, but didn't" (March 28, 2021)
	Webster	Stacia Webster Direct Testimony	Written testimony
	Webster	Lois Barry Testimony on Issue PS-10	Written testimony
	Webster	Webster Exhibit 3	Photograph
	Webster	Webster Exhibit 4	Photograph
	Webster	Webster Exhibit 5	Response times from LGRFPD to Morgan Lake Road
	Webster	Webster Exhibit 6	Deposition of Craig Kretschmer (May 13, 2021)
	Webster	Webster Exhibit 7	Adrian Fire Survey
	Webster	Webster Exhibit 8	Echo Fire Survey, page 1
	Webster	Webster Exhibit 9	Echo Fire Survey, page 2
	Webster	Webster Exhibit 11	Pilot Rock Fire Survey
	Webster	Webster Exhibit 12	Umatilla County Fire Survey, page 1
	Webster	Webster Exhibit 13	Umatilla County Fire Survey, page 2
	Webster	Webster Exhibits 14-16	La Grande Observer articles - Rooster Peak Fire (Aug. 1973)
	Webster	Webster Exhibits 17-19	La Grande Observer articles - Rooster Peak Fire (Aug. 1973)
	Webster	Webster Exhibits 20-24	La Grande Observer articles - Rooster Peak Fire (Aug. 1973)
	Webster	Webster Exhibit 27	Article: Evaluating 10% Wind Speed Rule of Thumb
	Webster	Webster Exhibit 28	Article on So Cal Edison and Orange County fires
	Idaho Power	Robert A. Cummings Rebuttal Testimony	Written testimony
	Idaho Power	Cummings Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Cummings Rebuttal Exhibit B	Video – Blasting (June 24, 2021)
	Idaho Power	Cummings Rebuttal Exhibit C	Survey of Blasting Effects on Ground Water Supplies in Appalachia, Volume 1 (1980)
	Idaho Power	Cummings Rebuttal Exhibit D	Impacts of Blasting on Domestic Water Wells (2000)
	Idaho Power	Cummings Rebuttal Exhibit E	Blasting Effects on Appalachian Water Wells (April 15, 1987)
	Idaho Power	Cummings Rebuttal Exhibit F	Blast Vibration Damage to Water Supply Well Water Quality and Quantity (1997)
	Idaho Power	Cummings Rebuttal Exhibit G	Idaho Power Company Wildfire Mitigation Plan (June 2021)
	Idaho Power	Douglas Dockter Rebuttal Testimony	Written testimony
	Idaho Power	Dockter Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Dennis Johnson Rebuttal Testimony	Written testimony
	Idaho Power	Johnson Rebuttal Exhibits A through C	(See descriptions for Johnson Rebuttal Exhibits A through C set out above with Issue PS-4)
	Idaho Power	Christopher Lautenberger Rebuttal Testimony	Written testimony

	Idaho Power	Lautenberger Rebuttal Exhibits A through V	(See descriptions for Lautenberger Rebuttal Exhibits A through V set out above with Issues PS-2 and PS-3)
R-1, R-2, R-3, and R-4	C. Andrew	Colin Andrew Direct Testimony on Issue R-1	Written testimony
	Andrew/McAllister/ Barry	Cynthia Carper Direct Testimony on Issues R-1 and R-2	Written testimony
	Andrew/McAllister/ Barry	Levi Edvalson Direct Testimony on Issues R-1 and R-2	Written testimony
	Andrew/McAllister/ Barry	Eric Griffith Direct Testimony Issues R-1 and R-2	Written testimony
	Andrew/McAllister/ Barry	Christopher Jones Direct Testimony on Issues R-1 and R-2	Written testimony
	Andrew/McAllister/ Barry	Michael McAllister Direct Testimony on Issues R-1 and R-2	Written testimony
	Andrew/McAllister/ Barry	Kyann Sholtes Direct Testimony	Written testimony
	Andrew/McAllister/ Barry	Geoffrey Witek Direct Testimony	Written testimony
	McAllister	McAllister Exhibit 1	City of La Grande Comments on the Amended Preliminary ASC (August 31, 2017)
	McAllister	McAllister Exhibit 2	Idaho Power Responses to City of La Grande Comments on the Amended Preliminary ASC (August 27, 2018)
	McAllister	McAllister Exhibit 3	City of La Grande Proclamation - Declaring and Clarifying Opposition to the Boardman to Hemingway Powerline Project (2019)
	McAllister	McAllister Exhibit 4	Morgan Lake Park Recreational Use and Development Plan
	McAllister	McAllister Exhibit 5	McAllister's Opposition to Idaho Power's MSD on Issue R-2
	McAllister	McAllister Exhibit 6	Photographs of Morgan Lake Park/Twin Lakes Wetland
	L. Barry	Lois Barry Testimony on Issue R-2	Written testimony
	L. Barry	Lois Barry Testimony on Issue R-3	Written testimony
	P. Barry	Peter Barry Testimony on Issue R-3	Written testimony
	L. Barry	Steve Antell Testimony on Issue R-3	Written testimony
	L. Barry	Susan Badger-Jones Testimony on Issue R-3	Written testimony
	L. Barry	Michael S. Daugherty Testimony on Issue R-3	Written testimony
	L. Barry	Jim Kreider Testimony on Issues R-2 and R-3	Written testimony
	L. Barry	Jennifer Williams Testimony on Issue R-3	Written testimony
	L. Barry	Barry Exhibit 6, Issue R-3	Visual Assessment Work Group Minutes

L. Barry	Barry Exhibit 10, Issue R-3	Excerpt from Landscape Aesthetics: A Handbook for Scenery Management USFS SMS (1995)
L. Barry	Barry Exhibit 16, Issue R-3	Article: From Overhead to Underground: It Pays to Bury Power Lines
L. Barry	Barry Exhibit 17, Issue R-3	Article: PG&E to Bury Transmission Lines at Cost of \$2 Million per Mile (Aug. 21, 2021)
L. Barry	Barry Exhibit 19, Issue R-3	Article: Burying High Voltage and Benefits of Burying Lines, RETA
L. Barry	Lois Barry Testimony on Issue R-4	Written testimony
L. Barry	Barry Exhibit 22	Photos of undeveloped areas of Morgan Lake Park
Idaho Power	Joseph Stippel Declaration	Written testimony
Idaho Power	Stippel Exhibit A	Morgan Lake Lattice vs. H-Frame (Nov. 11, 2021)
Idaho Power	Stippel Exhibit B	NHOTIC Lattice vs. H-Frame (Nov. 11, 2021)
Idaho Power	Dennis Johnson Rebuttal Testimony on Issue R-3	Written testimony
Idaho Power	Johnson Rebuttal Exhibit A	Curriculum Vitae
Idaho Power	Johnson Rebuttal Exhibit B	Class 4 Cost Estimate Report for an Underground Installation Within the Viewshed of the NHOTIC
Idaho Power	Johnson Rebuttal Exhibit C	Southern California Edison Company application concerning the Tehachapi Renewable Transmission Project (Segments 4 through 11) (Jan. 18, 2017)
Idaho Power	Louise Kling Rebuttal Testimony	Written testimony
Idaho Power	Kling Rebuttal Exhibit A	Curriculum Vitae
Idaho Power	Kling Rebuttal Exhibit B	Electric Transmission Visibility and Visual Contrast Threshold Distances in Western Landscapes (Apr. 2014)
Idaho Power	Kling Rebuttal Exhibit C	BLM Manual H-8410-1, Visual Resource Inventory (Jan. 17, 1986)
Idaho Power	Kling Rebuttal Exhibit D	Photosimulation of Project Components Near NHOTIC (filed Nov. 12, 2021)
Idaho Power	Kling Rebuttal Exhibit E	Revised Morgan Lake Park Supplemental Analysis (Nov. 12, 2021)
Idaho Power	Kling Rebuttal Exhibits F1, F2 and F3	Videos: Simulation of Potential Visual Impacts to Morgan Lake Park
Idaho Power	Kling Rebuttal Exhibit G	Tree Heights and Locations at Morgan Lake Park
Idaho Power	Kling Rebuttal Exhibit H	BLM, Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands (2013)
Idaho Power	Kling Rebuttal Exhibit I	NHOTIC Supplemental Analysis
Idaho Power	Kling Rebuttal Exhibits J1, J2, J3, and J4	Videos: Simulation of Potential Visual Impacts to the NHOTIC
L. Barry	Barry Cross-Examination Exhibit 4	Article: Changes and Challenges in USDA Forest Service Scenic Resource Management Under the 2012 Forest Planning Rule
L. Barry	Barry Cross-Examination Exhibits	B2H Visual Resources Workgroup Meeting

		1 and 2	Minutes (July 27, 2011)
		Dennis Johnson Cross-Examination Hearing Testimony	Hearing Transcript – Day 6 (January 19, 2022)
		Louise Kling Cross-Examination Hearing Testimony	Hearing Transcript – Day 6 (January 19, 2022)
	L. Barry	Barry Corrections to Hearing Transcript Day 6	Corrections to Hearing Transcript Day 6
	Idaho Power	Idaho Power Corrections to Hearing Transcript Day 6	Corrections to Hearing Transcript Day 6
RFA-1 and RFA-2	Carbiener	Gail Carbiener Direct Testimony on Issue RFA-1	Written testimony
	Carbiener	Gail Carbiener Direct Testimony on Issue RFA-2	Written testimony
	Gilbert	Irene Gilbert Opening Arguments Regarding Issue RFA-1	(Legal brief, not direct testimony)
	Gilbert	Gilbert Exhibit 1	Memo to EFSC from Christopher M. Clark, Siting Policy Analyst & Rules Coordinator, Surety Bond Template Update (August 13, 2021)
	Gilbert	Gilbert Exhibit 2	Memo to EFSC from Sarah Esterson, Senior Policy Advisor, Overview of the Energy Facility Siting Process Retirement and Financial Assurance Standard (August 13, 2021)
	Gilbert	Gilbert Exhibit 4	EFSC Meeting Minutes (January 23-24, 2020)
	Gilbert	Gilbert Exhibit 7	Excerpt from Bakeoven Final Order
	Gilbert	Gilbert Exhibit 9	Docket No. LC 74 for the 2019 Integrated Resource Plan staff report for the Oregon Public Utilities Commission (March 5, 2021)
	Gilbert	Gilbert Exhibit 11	WECC RPCG 2026 Common Case Transmission Assumptions Report (June 30, 2016)
	Gilbert	Gilbert Exhibit 12	Idaho Power’s 2019 10K and 10Q Securities and Exchange Commission reports
	Gilbert	Gilbert Exhibit 15	Report of the Independent Consultants on the Greenhat Default (March 26, 2019)
	Idaho Power	Jared Ellsworth Rebuttal Testimony	Written testimony
	Idaho Power	Ellsworth Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Ellsworth Rebuttal Exhibit B	Idaho Power Company’s Second Amended 2019 Integrated Resource Plan (Oct. 2020)
	Idaho Power	Ellsworth Rebuttal Exhibit C	Transmission Emerging as Major Stumbling Block for State Renewable Targets (Jan. 15, 2020)
	Idaho Power	Ellsworth Rebuttal Exhibit D	American Wind Energy Association, Grid Vision: The Electric Highway to a 21st Century Economy (May 2019)
	Idaho Power	Ellsworth Rebuttal Exhibit E	Department of Energy, Obama Administration Announces Job-Creating Grid Modernization Pilot Projects (Oct. 5, 2011)
	Idaho Power	Ellsworth Rebuttal Exhibit F	FERC Begins Reform Process to Build the Transmission System of the Future (July 15,

			2021)
	Idaho Power	Ellsworth Rebuttal Exhibit G	Idaho Power Company, 2019 Integrated Resource Plan, OPUC Docket LC 74, Order No. 21-184 (June 4, 2021)
	Idaho Power	Ellsworth Rebuttal Exhibit H	EFSC Meeting Minutes (January 23-24, 2020)
	Idaho Power	Ellsworth Rebuttal Exhibit I	National Renewable Energy Laboratory, The North American Renewable Integration Study: A U.S. Perspective (June 2021)
	Idaho Power	Ellsworth Rebuttal Exhibit J	Enrolled Senate Bill 589 (May 21, 2021)
	Idaho Power	Randy Mills Rebuttal Testimony	Written testimony
	Idaho Power	Mills Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Mills Rebuttal Exhibit B	Updated Letter of Willingness from Wells Fargo (Oct. 12, 2021)
	Idaho Power	Mills Rebuttal Exhibit C	EFSC 2021 Pre-approved List of Financial Institutions (Jan. 22, 2021)
	Idaho Power	Mills Rebuttal Exhibit D	Bakeoven Solar Project – Exhibit W Facility Retirement and Site Restoration (Nov. 2019)
	Idaho Power	Mills Rebuttal Exhibit E	Review of Bakeoven Solar Project, Exhibit W (Nov. 5, 2019)
	Idaho Power	Mills Rebuttal Exhibit F	Bakeoven Solar Project – Final Order on Application for Site Certificate (April 24, 2020)
	Idaho Power	Mills Rebuttal Exhibit G	Obsidian Solar Center – Proposed Order on Application for Site Certificate (Oct. 9, 2020)
	Idaho Power	Mills Rebuttal Exhibit H	IDACORP Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 (Dec. 11, 2020)
	Idaho Power	Mills Rebuttal Exhibit I	<i>In re Pacific Gas and Electric Corp and Pacific Gas Electric Co.</i> , Case No. 19-30088 (May 28, 2020)
	Idaho Power	Mills Rebuttal Exhibit J	Order to Show Cause and Notice of Proposed Penalty (May 20, 2021)
	Idaho Power	Mills Rebuttal Exhibit K	Federal Register Vol. 79, No. 141 (July 23, 2014)
SR-2, SR-3, and SR-7	Carbiener	Gail Carbiener Direct Testimony on Issue SR-2	Written testimony
	Carbiener	John Briggs Direct Testimony on Issue SR-2	Written testimony
	Carbiener	Isobel Lingenfelter Direct Testimony on Issue SR-2	Written testimony
	Carbiener	Lingenfelter Exhibits 1 through 35	3D model of NHOTIC and surrounding area, with videos and still shots
	Carbiener	Lingenfelter Exhibit 36	BLM Visual Resource Management Classes and Objectives
	Carbiener	Lingenfelter Exhibit 37	BLM Visual Resources Clearinghouse website
	Deschner	Whit Deschner Direct Testimony - Issue SR-3	Witness testimony (with embedded photographs and images)
	Deschner	George Venn statement	Written statement
	Deschner	Zea Young statement	Written statement

	STOP B2H	Lois Barry Direct Testimony	Written testimony
	Idaho Power	Dennis Johnson Rebuttal Testimony on Issue SR-2	Written testimony
	Idaho Power	Johnson Rebuttal Exhibits A through C	(See descriptions for Johnson Rebuttal Exhibits A through C set out above with Issue PS-4)
	Idaho Power	Louise Kling Rebuttal Testimony	Written testimony
	Idaho Power	Louise Kling Rebuttal Exhibits A through J	(See descriptions for Kling Rebuttal Exhibits A through J set out above with Issues R-1, R-2, R-3 and R-4)
	Idaho Power	Joseph Stippel Declaration	Written testimony
	Idaho Power	Stippel Rebuttal Exhibits A and B	(See descriptions for Stippel Rebuttal Exhibits A and B set out above with Issues R-1, R-2, R-3 and R-4)
		Dennis Johnson Cross-Examination Hearing Testimony	Hearing Transcript – Day 6 (January 19, 2022)
		Louise Kling Cross-Examination Hearing Testimony	Hearing Transcript – Day 6 (January 19, 2022)
		Isobel Lingenfelter Cross-Examination Hearing Testimony	Hearing Transcript – Day 6 (January 19, 2022)
	Idaho Power	Idaho Power Transcript Corrections to Cross-Examination Hearing Day 6	Corrections to Hearing Transcript – Day 6 (January 19, 2022)
	STOP B2H	STOP B2H’s Corrections to Cross-Examination Hearing Transcript, January 19, 2022	Corrections to Hearing Transcript – Day 6 (January 19, 2022)
SP-1	Fouty/STOP B2H	Suzanne Fouty Direct Testimony on Issue SP-1	Written testimony
	Idaho Power	Mark Madison Rebuttal Testimony	Written testimony
	Idaho Power	Madison Rebuttal Exhibit A	Curriculum Vitae of Mark Madison
	Idaho Power	Madison Rebuttal Exhibit B	Curriculum Vitae of Denny Mengel
	Idaho Power	Madison Rebuttal Exhibit C	Curriculum Vitae of Guerry Holm
	Idaho Power	Madison Rebuttal Exhibit D	Updated Table I-2-1
	Idaho Power	Madison Rebuttal Exhibit E	U.S. Dept. of Agriculture, Land-Capability Classification (Sept. 1961)
	Idaho Power	Madison Rebuttal Exhibit F	Madras Solar Energy Facility - Final Order on Application for Site Certificate (June 25,2021)
	Idaho Power	Madison Rebuttal Exhibit G	Northwest Natural South Mist Feeder Extension - Final Order on Site Certificate (Mar. 13, 2003)
	Idaho Power	Madison Rebuttal Exhibit H	Natural Resources Conservation Service, Custom Soil Resource Report for Morrow County Area, Oregon (Oct. 28, 2021)
	Idaho Power	Madison Rebuttal Exhibit I	Figures for Soil Orders and Productivity
	Idaho Power	Madison Rebuttal Exhibit J	Article: A Taxonomically Based, Ordinal Estimate of Soil Productivity for Landscape-Scale Analyses (Apr. 4, 2012)
	Idaho Power	Madison Rebuttal Exhibit K	Article: Long-Term Changes in Mollisol Organic Carbon and Nitrogen, Errata (Jan-Feb. 2010)
	Idaho Power	Madison Rebuttal Exhibit L	Article: Simulating Soil Organic Carbon Responses to Cropping Intensity, Tillage, and

			Climate Change in Pacific Northwest Dryland (Mar. 1,2018)
	Idaho Power	Madison Rebuttal Exhibit M	United States Department of Agriculture, Wildland Fire in Ecosystems (Sept. 2005)
	Idaho Power	Madison Rebuttal Exhibit N	Article: Benefits of Prescribed Burning (Aug. 2, 2013)
	Fouty/STOP B2H	Suzanne Fouty Surrebuttal Testimony on Issue SP-1	Written testimony
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit A	Article: Land use and climate change impacts on global soil erosion by water (2015-2070) (2020)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit B	Article: Organic Carbon in Soils of the World (chapter 3) in The Role of Terrestrial Vegetation in the Global Carbon Cycle: Measurement by Remote Sensing (1984)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit C	Article: Long-Term Effectiveness of Restoration Treatments on Closed Wilderness Campsites (2013)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit D	Article: Minimizing Soil Compaction in Pacific Northwest Forests (1983)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit E	Article: Influence of road reclamation techniques on forest ecosystem recovery (2013)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit F	Article: Effectiveness of Road Ripping in Restoring Infiltration Capacity of Forest Roads (1997)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit G	Article: Physical and Chemical Characteristics of Ash-influenced soils of Inland Northwest Forests (2007)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit H	Article: Soil physical property changes at the North American Long-Term Soil Productivity study sites: 1 and 5 years after compaction (2006)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit I	Article: The effect of sparse vegetative cover on erosion and sediment yield (1991)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit J	Article: Landscape-scale carbon storage associated with beaver dams (2013)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit K	Article: Land use types and geomorphic settings reflected in soil organic carbon distribution at the scale of watershed (2018)
	Fouty/STOP B2H	Fouty Surrebuttal Exhibit L	Article: Land-use/cover conversion affects soil organic-carbon stocks: A case study along the main channel of the Tarim River, China (2018)
	Idaho Power	Mark Madison Sur-surrebuttal Testimony	Written Testimony
	Idaho Power	Madison Sur-surrebuttal Exhibit A	Revised Exhibit D of Madison Rebuttal Testimony – Updated Table I-2-1
	Idaho Power	Madison Sur-surrebuttal Exhibit B	Annual Data Refresh of Soil Survey Data - NRCS
	Idaho Power	Madison Sur-surrebuttal Exhibit C	Idaho Power’s Supplemental Response to STOP B2H’s Request for Production No. 5 (March 5, 2021)
	Fouty	Fouty Cross-Examination Exhibit M	Idaho Power’s Responses to STOP B2H’s Discovery Requests (Feb. 5, 2021)

	Fouty	Fouty Cross-Examination Exhibit N	Forest Service Manual: FSM 2500-Watershed and Air Management, Chapter 2250 – Soil Management (2010)
		Mark Madison Cross-Examination Testimony	Hearing Transcript – Day 2 (January 11, 2022)
	Fouty	Fouty Transcript Corrections to Day 2 Hearing Transcript	Corrections to Hearing Transcript – Day 2
	Idaho Power	Idaho Power Transcript Corrections to Day 2 Hearing Transcript	Corrections to Hearing Transcript – Day 2
	ODOE	ODOE Corrections to Cross-Examination Hearing Day 2	Corrections to Hearing Transcript – Day 2
SS-1	N/A	(no additional evidence offered)	
SS-2	N/A	(no additional evidence offered)	
SS-3 and SS-5	Horst/Cavinato	Joe Horst Direct Testimony on Issue SS-3	Written testimony
	Horst/Cavinato	Horst Exhibit A-3	Map: City of La Grande Geologic Hazard Zone
	White	Jonathan D. White Direct Testimony on Issue SS-5	Written testimony
	Idaho Power	Robert A. Cummings Rebuttal Testimony	Written testimony
	Idaho Power	Cummings Rebuttal Exhibits A through G	(See descriptions for Cummings Rebuttal Exhibits A through G set out above with Issue PS-10)
	Idaho Power	Kekoa Cody Sorensen Rebuttal Testimony – Issues SS-3 and SS-5	Written testimony
	Idaho Power	Sorensen Rebuttal Exhibit A	Curriculum Vitae
	Idaho Power	Sorensen Rebuttal Exhibit B	Article: Electrical Resistivity Survey in Soil Science: A Review, 83 Soil & Tillage Rsch. 173 (2005)

APPENDIX 2
TABLE OF EXHIBITS ADMITTED – SUMMARY DETERMINATION PHASE

Issue	Offered By	Testimony/Exhibit	Document Description
M-1	Idaho Power	MSD Exhibit A	Wheatridge Wind Energy Facility Final Order
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
M-2	Idaho Power	MSD Exhibit A	Wheatridge Wind Energy Facility Final Order
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
	Gilbert	Response Exhibit 1	Gilbert Declaration (undated)
M-3	Idaho Power	MSD Exhibit A	Wheatridge Final Order
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit C	Jocelyn Pease Affidavit
	Idaho Power	MSD Exhibit C, Attachment 1	Discovery requests to Cooper
	Idaho Power	MSD Exhibit C, Attachment 2	Cooper Response to Interrogatories
M-4⁴⁴⁶	Idaho Power	MSD Exhibit A	Wheatridge Final Order
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit
M-5⁴⁴⁷	Idaho Power	MSD Exhibit A	Wheatridge Wind Energy Facility Final Order
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
M-7	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit C, Attachment 3	Discovery requests to Proesch
	Idaho Power	MSD Exhibit C, Attachment 4	Email from Rackner to Proesch, Feb. 11, 2021
	Idaho Power	MSD Exhibit C, Attachment 5	Email from Proesch, April 16, 2021
	Idaho Power	MSD Exhibit C, Attachment 6	Email from Pease to Proesch, April 19, 2021
	Idaho Power	MSD Exhibit C, Attachment 7	Email from Garcia to Proesch, April 19, 2021
	Idaho Power	MSD Exhibit D	Affidavit of Kurtis Funke
	Idaho Power	MSD Exhibit D, Attachment 1	Aston Property Title Report, May 17, 2018
	Idaho Power	MSD Exhibit D, Attachment 2	Warranty Deed from Wright to Aston
	Idaho Power	MSD Exhibit D, Attachment 3	Aston Property Supplemental Title Report, Jan. 21, 2021
FW-1	Idaho Power	MSD Exhibit A	EO 15-18, Adopting the Oregon Sage-Grouse Action Plan
		MSD Exhibit B	Sage-Grouse Conservation Partnership, 2015
		MSD Exhibit C	Greater Sage-Grouse Habitat Mitigation

⁴⁴⁶ Limited parties Jim and Jane Howell withdrew from the contested case after Issues M-4 and M-5 were dismissed on summary determination.

⁴⁴⁷ See note 1 above.

			Program Manual, Oct. 2019
		MSD Exhibit D	Zachary Funkhouser Affidavit, May 25, 2021
		MSD Exhibit E	ODFW Oregon Sage-Grouse Habitat Quantification Tool User Guide
	STOP B2H/Squire	(no additional evidence submitted with memos in opposition to MSD)	
FW-4	ODOE	(no evidence in addition to documents included in the B2H Project Record)	
	Gilbert	(no supporting documents submitted with Gilbert Objection and Response)	
FW-9, FW-10, and FW-11	Idaho Power	(no evidence in addition to documents included in the B2H Project Record)	
FW-12	Idaho Power	MSD Exhibit D	Zachary Funkhouser Affidavit, May 25, 2021
	March	(no supporting documents submitted with March Response to MSD Issue FW-12)	
	Idaho Power	Reply Exhibit A	Chris James Affidavit, July 8, 2021
FW-13	Idaho Power	MSD Exhibit A	Jocelyn Pease Affidavit, May 28, 2021
	Idaho Power	MSD Exhibit A, Attachment 1	Discovery Requests to McAllister
	Idaho Power	MSD Exhibit A, Attachment 2	McAllister Response to Interrogatory No. 4
	Idaho Power	MSD Exhibit A, Attachment 3	McAllister Response to Interrogatory No. 5
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
	ODOE	(no evidence in addition to documents included in the B2H Project Record)	
	McAllister	McAllister Affidavit 2	McAllister Affidavit in Opposition to MSDs, July 8, 2021
	McAllister	McAllister Affidavit 2, Exhibit 1	Supplemental discovery responses, May 8, 2021
	McAllister	McAllister Affidavit 2, Exhibit 2	Discovery Requests to Idaho Power
		McAllister Affidavit 2, Exhibit 3	Idaho Power Response to Discovery Requests, Feb. 5, 2021
	McAllister	McAllister Affidavit 2, Exhibit 4	Vascular Plants of Morgan Lake Park, 2021
	McAllister	McAllister Affidavit 2, Exhibit 5	Discovery Requests to ODOE
	McAllister	McAllister Affidavit 2, Exhibit 6	ODOE Response to Discovery Requests
	McAllister	McAllister Affidavit 2, Exhibit 7	McAllister Response to Idaho Power Discovery Requests, Feb. 5, 2021
	McAllister	Susan Geer Declaration	Geer Declaration in support of McAllister's Opposition to MSDs, Issue FW-13, July 9, 2021
HCA-2	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Carbiener	(no supporting documents submitted with Carbiener Response)	

		to MSD Issue HCA-2)	
HCA-5	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit B	Wheatridge Wind Energy Facility Final Order
LU-2 and LU-3	Idaho Power	MSD Exhibit A	Jocelyn Pease Affidavit, May 28, 2021
	Idaho Power	MSD Exhibit A, Attachment 1	Discovery Request to Kathryn Andrew
	Idaho Power	MSD Exhibit A, Attachment 2	Andrew Response to Interrogatories
	Idaho Power	MSD Exhibit C	Zachary Funkhouser Affidavit, May 25, 2021
	K. Andrew	Andrew Affidavit in Response to MSD Issue LU-3	Kathryn Andrew Affidavit, June 25m 2021
	K. Andrew	Andrew Response Exhibit 1	Potts v. Clackamas Co., LUBA 2001-201
	K. Andrew	Andrew Response Exhibit 2	Rogue Advocates v. Josephine Co, LUBA 2012
	K. Andrew	Andrew Response Exhibit	Scott Hartell Deposition transcript, June 10, 2021
	K. Andrew	Andrew Response Exhibit	Cattoche v. Lane Co., LUBA 2018-109
	K. Andrew	Andrew Response Exhibit	Wetherell v. Douglas Co., LUBA 2010-052
LU-5 and LU-6	Idaho Power	MSD Exhibit A	Jocelyn Pease Affidavit, May 28, 2021
	Idaho Power	MSD Exhibit A, Attachment 3	Discovery Request to Irene Gilbert
	Idaho Power	MSD Exhibit A, Attachment 4	Gilbert Response to Discovery Requests
	Idaho Power	MSD Exhibit C	Zachary Funkhouser Affidavit, May 25, 2021
	Gilbert	Gilbert Affidavit in Response to MSD Issue LU-5	Irene Gilbert Affidavit, June 25, 2021
	Gilbert	Gilbert Response Exhibit 1	Potts v. Clackamas Co., LUBA 2001-201
	K. Andrew	Gilbert Response Exhibit 2	Rogue Advocates v. Josephine Co, LUBA 2012
	K. Andrew	Gilbert Response Exhibit	Scott Hartell Deposition transcript, June 10, 2021
	K. Andrew	Gilbert Response Exhibit	Cattoche v. Lane Co., LUBA 2018-109
	K. Andrew	Gilbert Response Exhibit	Wetherell v. Douglas Co., LUBA 2010-052
LU-10	Idaho Power	(no evidence in addition to documents included in the B2H Project Record)	
N-1, N-2 and N-3	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit B	Lisa Rackner Affidavit, May 28, 2021
	Idaho Power	MSD Exhibit B, Attachment 1	Idaho Power Company Final Comments in OPUC Docket LC 74
	Idaho Power	MSD Exhibit B, Attachment 2	STOP B2H Final Comments in OPUC Docket LC 74
	ODOE	(no evidence in addition to documents included in the B2H Project Record)	
	STOP B2H	(no additional evidence in response to MSDs)	

	Idaho Power	Reply Exhibit A	OPUC Docket LC 74, Order No. 21-184, June 4, 2021
	Idaho Power	Reply Exhibit B	Jared Ellsworth Affidavit, July 8, 2021
NC-5	Idaho Power	MSD Exhibit A	ODEQ Internal Management Directive, July 2003
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
R-2	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit B	Morgan Lake Park Recreational Use and Development Plan
	McAllister	McAllister Affidavit in Opposition to MSD Issue R-2	Michael McAllister Affidavit, June 24, 2021
	McAllister	McAllister Response Exhibit 1	City of La Grande Comments on Amended Preliminary ASC, Aug. 31, 2017
	McAllister	McAllister Response Exhibit 2	Idaho Power Response to City of La Grande Comments, April 27, 2018
	McAllister	McAllister Response Exhibit 3	City of La Grande Proclamation, April 3, 2019
	McAllister	McAllister Response Exhibit 4	B2H ASC Union County Map 65
	McAllister	McAllister Response Exhibit 5	B2H Proposed Route and Morgan Lake Alternative, Map 3
	McAllister	McAllister Response Exhibit 6	McAllister Response to Idaho Power Ex Parte Communication with EFSC, May 28, 2021
	McAllister	Charles Gillis Affidavit in Opposition to MSD Issue R-2	Charles Gillis Affidavit, June 20, 2021
	McAllister	Kyann Sholtes Declaration in Opposition to MSD Issue R-2	Kyann Sholtes Declaration, June 21, 2021
	McAllister	Geoffrey Witek Declaration in Opposition to MSD Issue R-2	Geoffrey Witek Declaration, June 21, 2021
	L. Barry	Lois Barry Statement in Opposition to MSD Issue R-2	Lois Barry Statement, June 25, 2021
	Idaho Power	Reply Exhibit A	Zachary Funkhouser Affidavit, July 1, 2021
	Idaho Power	Reply Exhibit B	Scott Flinders Affidavit, July 8, 2021
	Idaho Power	Reply Exhibit B, Exhibit A to Flinders Affidavit	ASC Exhibit C, Attachment C-3, Map 8 Errata
	Idaho Power	Reply Exhibit B, Exhibit B to Flinders Affidavit	Detailed Map of Site Boundary near Morgan Lake Park
RFA-3	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Gillis	Charles Gillis Affidavit in Opposition to MSD Issue RFA-3	Charles Gillis Affidavit, June 25, 2021
	Gillis	Response Exhibit 1	News article re Wells Fargo Bank, Dec. 28, 2018
	Gillis	Response Exhibit 2	Washington Post article re former Wells Fargo Bank executive, Jan. 23, 2020
	Gillis	Response Exhibit 3	LA Times article re Wells Fargo CEO, March 28, 2019
	Idaho Power	Reply Exhibit A	Jocelyn Pease Affidavit, July 9, 2021
	Idaho Power	Reply Exhibit A, Attachment 1	EFSC Public Meeting Minutes, Jan. 22, 2021
	Idaho Power	Reply Exhibit A, Attachment 2	EFSC Staff Report, Jan. 8, 2021
	Idaho Power	Reply Exhibit A, Attachment 3	EFSC Staff Report, Attachment 3, Proposed

			2021 Pre-Approved Financial Institutions
SR-1	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit B	City of La Grande Comprehensive Plan
	Idaho Power	MSD Exhibit C	Morgan Lake Recreational Use and Development Plan
	ODOE	(no evidence in addition to documents included in the B2H Project Record)	
SR-4	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit D	Union County Land Use Plan, page 45
	ODOE	(no evidence in addition to documents included in the B2H Project Record)	
SR-5	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit E	Glass Hill Registration Confirmation Letter, Oct. 17, 2019
	Geer	(no additional evidence submitted in response)	
SR-6	Idaho Power	MSD Exhibit A	Zachary Funkhouser Affidavit, May 25, 2021
	Idaho Power	MSD Exhibit F	BLM Visual Resource Management System
	Idaho Power	MSD Exhibit G	USFS Landscape Aesthetics Handbook
	L. Barry	Lois Barry Affidavit	Lois Barry Affidavit, June 25, 2021
	L. Barry	Response Exhibit B	EFSC Order on Appeals,
	L. Barry	Response Exhibit C	USFS 1995 Agriculture Handbook
	L. Barry	Response Exhibit D	USFS 1974 Visual Management System
	STOP B2H	(no additional evidence submitted in response)	
SP-2	Idaho Power	MSD Exhibit A	Jocelyn Pease Affidavit, May 28, 2021
	Idaho Power	MSD Exhibit A, Attachment 1	Discovery Requests to McAllister
	Idaho Power	MSD Exhibit A, Attachment 2	McAllister Response to Interrogatory No. 4
	Idaho Power	MSD Exhibit A, Attachment 3	McAllister Response to Interrogatory No. 5
	Idaho Power	MSD Exhibit B	Zachary Funkhouser Affidavit, May 25, 2021
	ODOE	(no evidence in addition to documents included in the B2H Project Record)	
	McAllister	McAllister Affidavit 2	McAllister Affidavit in Opposition to MSDs, July 8, 2021
	McAllister	McAllister Affidavit 2, Exhibit 1	Supplemental discovery responses, May 8, 2021
	McAllister	McAllister Affidavit 2, Exhibit 2	Discovery Requests to Idaho Power
		McAllister Affidavit 2, Exhibit 3	Idaho Power Response to Discovery Requests, Feb. 5, 2021
	McAllister	McAllister Affidavit 2, Exhibit 4	Vascular Plants of Morgan Lake Park, 2021
	McAllister	McAllister Affidavit 2, Exhibit 5	Discovery Requests to ODOE
	McAllister	McAllister Affidavit 2, Exhibit 6	ODOE Response to Discovery Requests
	McAllister	McAllister Affidavit 2, Exhibit 7	McAllister Response to Idaho Power Discovery Requests, Feb. 5, 2021

SS-4	Idaho Power	MSD Exhibit A	Jocelyn Pease Affidavit, May 28, 2021
	Idaho Power	MSD Exhibit A, Attachment 1	Discovery Requests to Virginia and Dale Mammen
	Idaho Power	MSD Exhibit A, Attachment 2	Mammen Response to Discovery Requests, Feb. 4, 2021
	Idaho Power	MSD Exhibit B	Wheatridge Wind Energy Facility Final Order
	Idaho Power	MSD Exhibit C	Zachary Funkhouser Affidavit, May 25, 2021
	Mammen	Dale and Virginia Mammen Affidavit	Dale and Virginia Mammen Affidavit, June 25, 2021
	Mammen	Response Exhibit 1	Letter to EFSC, August 10, 2019C
	Mammen	Response Exhibit 2(a), (b), (c) and (d)	City of La Grande Official Record Documents
	Mammen	Response Exhibit 3	Scott Hartell letter, June 22, 2021
	Mammen	Response Exhibit 4	Bart Barlow report, June 23, 2021
	Idaho Power	Reply Exhibit A	Luke Grebe Affidavit, July 12, 2021
TE-1	ODOE	Patrick Rowe Affidavit	Patrick Rowe Affidavit, May 27, 2021
	ODOE	MSD Exhibit 1	ODA Responses to Geer Discovery Requests, Feb. 19, 2021
	Idaho Power	(no evidence in addition to documents included in the B2H Project Record)	
	Geer	(no additional evidence submitted in response to MSDs)	

CERTIFICATE OF MAILING

On May 31, 2022, I mailed the foregoing PROPOSED CONTESTED CASE ORDER issued on this date in OAH Case No. 2019-ABC-02833.

By: First Class Mail:

John C. Williams
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By: Electronic Mail:

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Anesia N Valihov
Hearing Coordinator

Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

IDAHO POWER COMPANY'S STANDARD DATA REQUEST NO. 15:

For each material concern raised such as impact on cultural resources; impact on environment; impact on agriculture (including high quality farmland); adjacency to irrigation and structures, impact on local residents' access to farms, businesses and homes; etc. explain how the petitioner has addressed said concerns and will work to minimize materialization of same.

RESPONSE TO IDAHO POWER COMPANY'S STANDARD DATA REQUEST NO. 15:

Idaho Power is required to obtain a site certificate from the EFSC to construct and operate the portions of the B2H project located in Oregon. To receive a site certificate, the B2H project must undergo a thorough review and meet the Council's siting standards. Those standards address issues such as soil protection; land use; protected areas; fish and wildlife habitat; threatened and endangered species; scenic resources; historic, cultural, and archaeological resources; recreation opportunities; public services; waste minimization; and others.¹

Idaho Power has addressed the EFSC standards, and the related resources, in the Company's EFSC Application for Site Certificate ("ASC"), where Idaho Power analyzes the B2H project's potential impacts on those resources and describes the measures the Company will employ to avoid, minimize, or mitigate the potential impacts.² The following are examples of potential impacts that have been analyzed in connections with Idaho Power's ASC and the actions Idaho Power has taken to identify the B2H project's potential impacts and the commitments the Company has made to address those potential impacts:

Historic, cultural, and archaeological resources: Idaho Power conducted extensive records research, literature review, and field surveys to inventory the historic, cultural, and archaeological resources that potentially will be impacted by the B2H project.³ For identified resources, Idaho Power will implement measures to avoid or minimize adverse impacts, including relocation of structures through the design process, realignment of the route, relocation of temporary workspace, or changes in the construction and/or operational design. Where impacts are unavoidable, Idaho Power will implement mitigation actions set forth in a Historic Properties Management Plan, which was developed in coordination with various governmental agencies, including environmental training, data recovery, analysis, documentation, curation, resource-specific treatments, restoration, public signage, publication, and interpretive planning.⁴

Fish and wildlife habitat: Idaho Power catalogued the various types of fish and wildlife habitat potentially impacted by the B2H project through desktop analysis and ground surveys.⁵ To avoid and minimize impacts to fish and wildlife habitat, the Company will implement seasonal work

¹ See OAR Chapter 345, Division 22.

² See [Idaho Power's Application for Site Certificate](#) (Sept. 28, 2018).

³ See [Exhibit S \(Historic, Cultural, and Archeological Resources\)](#) to Idaho Power's Application for Site Certificate, pages S-21 through S-28. See Attachment 1.

⁴ See [Historic Properties Management Plan](#), Attachment S-9 to the Oregon Department of Energy's Proposed Order (July 2, 2020) ("ODOE's Proposed Order"). See Attachment 2.

⁵ See [Exhibit P1 \(Fish and Wildlife Habitat\)](#) to Idaho Power's Application for Site Certificate, pages P1-21 through P1-31. See Attachment 3.

Certificate of Public Convenience and Necessity
Idaho Power Company's Standard Data Requests
Data Request Nos. 1-21

restrictions, map and flag sensitive resources, and implement various other measures set forth in the Company's Reclamation and Revegetation Plan, Vegetation Management Plan, and Noxious Weed Plan.⁶ Unavoidable impacts will be addressed through compensatory mitigation, as outlined in the Fish and Wildlife Habitat Mitigation Plan.⁷

Land use: Idaho Power analyzed, and demonstrated compliance with, the affected cities and counties' comprehensive plans and development codes.⁸ Idaho Power addressed potential impacts to agricultural operations in particular in the Company's Agricultural Lands Assessment.⁹ In that document, Idaho Power includes various measures the Company will undertake to avoid, minimize, and mitigate impacts to agricultural lands and operations, including locating towers outside cultivated fields where feasible, scheduling construction activities around agricultural operations, avoiding damage to drainage tiles, restoring compacted soils, noxious weed control, and other measures.

Idaho Power has made a tremendous effort to design the route of the transmission line to avoid irrigated areas and has sited towers along agricultural field boundaries where feasible. Of the approximately 1,461 transmission towers along the proposed route, only 26 are proposed to be located within an irrigated portion of an agricultural field, and Idaho Power may be able to further reduce this total number through micrositing. Idaho Power is committed to working with each land owner to try to minimize impacts to farming operations where feasible for the construction of the line, and will move structures out of cultivated fields where practical.

⁶ See [Exhibit P1 \(Fish and Wildlife Habitat\)](#) to Idaho Power's Application for Site Certificate, pages P1-86 through P1-90 (included as Attachment 3); [Reclamation and Revegetation Plan](#), Attachment P1-3 to ODOE's Proposed Order (included as Attachment 4); [Vegetation Management Plan](#), Attachment P1-4 to ODOE's Proposed Order (included as Attachment 5); and [Noxious Weed Plan](#), Attachment P1-5 to ODOE's Proposed Order (included as Attachment 6).

⁷ See [Fish and Wildlife Mitigation Plan](#), Attachment P1-6 to ODOE's Proposed Order. See Attachment 7.

⁸ See [Exhibit K \(Land Use\)](#) to Idaho Power's Application for Site Certificate. See Attachment 8.

⁹ See [Agricultural Lands Assessment](#), Attachment K-1 to ODOE's Proposed Order. See Attachment 9.

Exhibit S Historic, Cultural, and Archaeological Resources

Boardman to Hemingway Transmission Line Project



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Application for Site Certificate

September 2018

The direct analysis area encompasses the construction footprint of the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kilovolt (kV) electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuild of 0.9 mile of a 230-kV transmission line, and rebuild of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼-acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B and the Site Boundary for each Project feature is described in Exhibit C, Table C-24. The location of the Project features and the Site Boundary is outlined in Exhibit C.

The Visual Assessment analysis area was determined through a Geographic Information System viewshed analysis of the above project features. Areas within 5 miles or to the visual horizon, whichever is closer, on either side of the centerline of the Proposed Route and alternative routes were included in the Visual Assessment analysis area as well as the direct analysis area.

3.2 Cultural Resources Inventory Methodology

OAR 345-021-0010(1)(s)(D)(i): A description of any discovery measures, such as surveys, inventories, and limited subsurface testing work, recommended by the State Historic Preservation Officer or the National Park Service of the U.S. Department of Interior for the purpose of locating, identifying and assessing the significance of resources listed in paragraphs (A), (B) and (C).

The effort to complete IPC's cultural resources inventory is guided by four main goals aimed at ensuring compliance with the EFSC standards. These goals include (1) identification of historic, cultural, and archaeological resources within the analysis area; (2) interpretation of those identified resources within a regional context; (3) evaluation of identified resources for protection under the EFSC standard; and (4) assessment of potential Project impacts on protected resources. A description of the discovery measures, such as surveys, inventories, and limited subsurface testing work that IPC is undertaking for the purpose of locating, identifying, and assessing the significance of resources listed in paragraphs (A), (B), and (C) of OAR 345-021-0010(1)(s), is described in detail in the sections below. Studies that have and will be conducted are summarized in Table S-1. Those studies that have been completed are included as attachments to this Exhibit. While this Exhibit relies on surveys and studies completed in

compliance with the Section 106 process, the analyses here extract information pertinent to the EFSC process and present data here using EFSC process terminology (for instance, *analysis area* is used instead of *area of potential effect*).

Table S-1. Cultural Resource Studies Completed or To Be Completed

Study	Description	Completed/ To Be Completed
Archaeological Survey Plan (ASP)	Survey plan for archaeological studies.	Completed (2012)
Cultural Resources Technical Report (Technical Report)	Report of cultural resources identified in pedestrian survey area (i.e., Proposed and alternative routes, roads, and attendant facilities with buffers defined by the Programmatic Agreement [PA]). Preliminary report completed 2017. Will be amended with results of the Enhanced Archaeological Survey after the site certificate, prior to construction. To avoid unnecessary ground disturbance of archaeological resources, the enhanced archaeological survey will be conducted within the selected route only.	Completed (2017) / Amendment after site certificate, prior to construction
High Probability Areas Assessment	Identifies areas of high sediment deposition or poor ground surface visibility with increased likelihood of subsurface archaeological resources. High Probability Areas will be systematically probed subsurface during the Enhanced Archaeological Survey.	Completed (2017) Subject to change based on CTUIR and SHPO input.
Enhanced Archaeological Survey	Report of subsurface probing in high probability areas, archaeological site boundary probing, isolated find probing, and National Register of Historic Places (NRHP) eligibility testing. Anticipated to be presented as amendment to Technical Report. To avoid unnecessary ground disturbance of archaeological resources, the enhanced archaeological survey will be conducted within the selected route only.	After site certificate, prior to construction
Visual Assessment of Historic Properties Study Plan (VAHP)	Survey plan for aboveground/built environment sites.	Completed (2013)
Reconnaissance Level Survey – Visual Assessment of Historic Properties (RLS)	Report of previously recorded built environment sites (buildings, structures, and trails) as well as traditional cultural properties and archaeological sites with above-ground features (such as cairns, trails, and intact water conveyance features) within the Visual Assessment analysis area.	Completed (2015) (Additional RLS work required on CTUIR tribal lands, anticipated in September-November 2018.)

Study	Description	Completed/ To Be Completed
Intensive Level Survey – Visual Assessment of Historic Properties (ILS)	Report providing detailed analysis of those resources from the RLS that have sufficient integrity, for which an NRHP criterion might apply, and have the potential to be affected by the Project. Preliminary Report completed in 2017. Will be amended when RLS and ILS of CTUIR tribal lands are completed.	Completed (2017) (Additional ILS work required on CTUIR tribal lands, anticipated in September-November 2018.)
National Historic Trails Study (NHT Study)	Report of federally designated NHT resources on federal lands in Visual Assessment analysis.	Completed (2014). (Additional information on non-NHT trails presented in ILS Report).

The cultural resources studies were initiated by a record search and literature review to identify previous cultural resource surveys and previously recorded cultural resources within the analysis area. Following completion of the background research, the ASP and VAHP were prepared to guide the field surveys and documentation of cultural resources.⁵ The ASP and VAHP are provided as Attachments S-1 and S-2, respectively. Field surveys are being completed in a phased approach. A cultural resources pedestrian survey has been conducted in compliance with the ASP within the direct analysis area. Results of the survey are documented in the Cultural Resources Technical Report (confidential Attachment S-6). The RLS and ILS were completed, except for a portion located on CTUIR tribal lands, in compliance with the VAHP and focused on the Visual Assessment analysis area. Results of these surveys are documented in the RLS and ILS reports, confidential Attachments S-7 and S-10, respectively. RLS and ILS work on CTUIR tribal lands will be conducted pending access to the applicable parcels. Some of these parcels may not be accessible as not all owners have consented to the right-of-entry request. Additional resources may be identified and evaluated during that RLS and ILS work.

Continued survey efforts will focus on high probability areas, confirming archaeological site boundaries, confirming archaeological isolated finds, NRHP-eligibility testing, and 100 percent inventory of any Project modifications or alterations identified subsequent to the completed surveys. Future survey efforts will also focus on 100 percent inventory of project areas where landowner access was not granted during the completed surveys. These efforts will be conducted for the selected route only, in order to avoid unnecessary disturbance to cultural resources. For those resources that cannot be avoided by Project activities, a resource-specific management plan will be developed, consistent with the HPMP required by IPC’s site certificate conditions below (Section 4) and outlined in Attachment S-9.

The following discussions detail the methodologies used for the various cultural resource studies completed and to be completed for the Project.

⁵ Both the ASP and VAHP describe IPC’s discovery and analysis methods in support of BLM’s NHPA and NEPA processes, as well as the EFSC process. As a result, the plans may use terminology and/or references to study areas driven by the federal agency reviews. For Exhibit S, however, IPC has distilled relevant survey results to provide ODOE and EFSC with only the information required to demonstrate that the Project will meet EFSC standards.

3.2.1 Records Search and Literature Review

Record searches were conducted multiple times between January 2011 and December 2016. The purpose of the record searches was to establish a basis for the type and frequency of archaeological and historic sites to be encountered during the course of the Project surveys. Research was conducted at the Oregon SHPO, CTUIR THPO, USFS, and BLM offices to identify previous cultural resource surveys and previously recorded cultural resources within the analysis area. Oregon SHPO databases consulted include Oregon Archaeological Records Remote Access and Oregon Historic Sites Database. The Idaho Historic Sites Inventory and the Washington Information System for Architectural and Archaeological Records Data were also consulted for portions of the Project and records search area outside of Oregon. (Results applicable to Oregon only are presented here, however.) Additional information was provided by IPC, BPA, and FWS. These databases/sources provided information pertaining to previously conducted cultural resource surveys and previously recorded cultural resources within the analysis area. The searches gathered information on previously recorded cultural resources, NRHP-eligible or -listed properties, historic cemeteries, historic trails, and previously surveyed areas. Data were collected for both archaeological and historic sites and included site location, age, type, ownership, NRHP status, and a brief description of site attributes. Additional sources of information included the Oregon Historic Trails website (<http://www.oregonhistorictrailsfund.org>), U.S. Geological Survey (USGS) Mineral Resource Data System, General Land Office plats, early USGS and state maps, other historic maps and aerial photographs, ethnographic literature, and historical contexts. These sources provided information pertaining to potential resources and a context within which to understand the resources identified during the field surveys. The collected data form the foundation for the field studies.

The record searches focused on two unique study areas: a 2-mile study area and 5-mile study area. The 2-mile study area focused on collecting information pertaining to archaeological and aboveground resources, as well as any traditional cultural properties, within 2 miles of the Proposed Route and alternative routes centerline (4-mile-wide corridor). This study area was utilized for the cultural resources pedestrian field survey and is documented in the Cultural Resources Technical Report (confidential Attachment S-6). The 5-mile study area focused on collecting information pertaining to above ground resources and cultural resources that had the potential to be TCPs and/or HPRCSITs between the 2-mile study area and up to 5 miles from the Proposed Route and alternative routes centerline (10-mile-wide corridor). The Visual Assessment utilized this study area as well as applicable results from the 2-mile study area. The 5-mile study area is documented in the RLS and ILS (confidential Attachments S-7 and S-10, respectively) with the exception that these studies do not include complete RLS and ILS information for resources located on CTUIR tribal lands, pending completion of those studies once access can be obtained to the required parcels. In addition, the Visual Analysis incorporated resources with aboveground components (such as cairns, in-use historic water conveyance features, in-use historic roads, trails, standing buildings or structures, mining shafts or adits, etc.) identified by the cultural resources pedestrian survey.

3.2.2 Field Surveys

Cultural resources field surveys conducted for the Project have been completed consistent with applicable survey protocol plans. These include a cultural resources pedestrian survey of the direct analysis area and surveys in support of the VAHP within the Visual Assessment analysis area. An Enhanced Archaeological Survey has not been completed, but will be completed following issuance of the site certificate and prior to construction. This future survey will address archaeologically sensitive areas, parcels that were not accessible during the pedestrian survey, and impacted, unavoidable resources in the final design of the Project. The ASP outlines

archaeological field methodology, including archaeological survey methods and resource recordation procedures. The ASP was developed in cooperation with the BLM and the Section 106 Cultural Resources Work Group, of which ODOE is a party; a copy of the plan is included here as Attachment S-1. IPC also prepared a VAHP in consultation with the Section 106 Cultural Resources Working Group. The VAHP guided the Visual Assessment of aboveground resources potentially affected by the construction and operation of the facility, is provided as Attachment S-2.

3.2.2.1 Cultural Resources Pedestrian Survey

Upon completion of the literature review, a cultural resources pedestrian survey was initiated within the intent to identify cultural resources within the direct analysis area. The archaeological survey is being conducted in two phases. Phase 1 has been completed, and consisted of an intensive pedestrian inventory of the entire direct analysis area to which IPC has right of entry. Any additional surveys required to complete an inventory of 100 percent of the selected route, as well as any necessary subsurface inventory or evaluation efforts, will be conducted during Phase 2. Phase 2 is anticipated to occur after the site certificate has been issued, but prior to construction. All survey efforts are and will be carried out according to the methods and standards required by the Oregon SHPO *Guidelines for Conducting Field Archaeology in Oregon* (Oregon SHPO 2007). One exception is a more conservative definition of a historic archaeological site. The SHPO's guidelines define a historic archaeological site as a site that has been abandoned for at least 75 years. For the purposes of this Project and to maintain consistency with studies completed for federal regulatory compliance, a historic archaeological site must have been constructed or created 50 years ago or more. On state and private lands, statutes and regulations may apply, including but not limited to ORS 97.740-760 (Indian Graves and Protected Objects), ORS 358.905-955 (Archaeological Objects and Sites), and ORS 390.235. All inventory methods on federal land follow those prescribed by the federal land-managing agency's protocols (primarily BLM and USFS). Individuals conducting archaeological field investigations meet professional qualifications as defined in ORS 390.235(6)(b) as well as *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*, "Professional Qualifications Standards" (48 [190] Federal Register 44738-44739 [9-29-83, Part IV]). These qualifications are required by the Oregon SHPO under ORS 390.235(6)(b) for individuals or groups conducting research as a result of federal or state permits and licenses in the State of Oregon. Prior to any future subsurface inventory or evaluation efforts that require Archaeological Resources Protection Act permits or State of Oregon permit, BLM and SHPO are required to consult with participating tribes.

Per Oregon SHPO guidelines, the direct analysis area was examined with intensive surface inventory methods using pedestrian transect intervals of 65 feet (20 meters [m]) or less. The survey area for the Proposed Route and alternatives covers 250 feet (75 m) on either side of the centerline. The survey corridor for new access roads or unsurfaced roads requiring reconstruction or widening is 100 feet (30 m) on either side of the centerline. The survey convention for ancillary features, such as laydown areas and the communication facilities, includes a buffer of 150 feet (45 m) around the footprint of the proposed activity. Survey is not required for existing roads that occur outside of the Project Site Boundary. This survey area is outlined in the ASP (Attachment S-1) and required by the PA (Attachment S-5). In some instances, the survey area along roads is larger than the direct analysis area.⁶ As a result, some resources presented in the survey report (Attachment S-6) are not included in the direct

⁶ For some roads, the survey area is larger than the Site Boundary. This occurs along existing roads requiring moderate improvements (Site Boundary = 50-foot buffer; Survey Area = 100-foot buffer), and existing roads requiring extensive improvements (Site Boundary = 50-foot buffer; Survey Area = 100-foot buffer).

analysis area and are not presented in this exhibit. These resources are noted in the survey report (Attachment S-6).

Survey standards include identification of areas of archaeological sensitivity; identification of visible cultural resources or other indicators of the presence or absence of cultural resources; identification and documentation of the extent of prior significant ground disturbance; identification of potential archaeological issues requiring consideration during Project planning; and the determination, when possible, of cultural resources that meet established criteria of eligibility for the NRHP. Project components, including the Proposed Route, access roads requiring improvement or new construction, laydown areas, communication facilities, and other related transmission infrastructure, are subject to inventory. Exceptions are areas that have been subjected to extensive disturbance (e.g., paved roads and highways, parking lots, and lawns), areas deemed hazardous (e.g., loose talus slopes, slippery bedrock exposures, deep streams), or excessively steep (35°+) slopes.

A Cultural Resources Technical Report documenting the pedestrian survey has been prepared and is included as confidential Attachment S-6, filed with ODOE as a separate, confidential document, in accordance with ORS 192.501(11). This report summarizes the results of the literature review (within 2 miles of Proposed Route and alternative routes centerline), provides an environmental and cultural context of the Project, documents the results of the pedestrian survey, provides NRHP eligibility recommendations for identified cultural resources when possible, identifies areas of archaeological sensitivity or increased potential for buried archaeological resources, and provides management recommendations for identified cultural resources and necessary future work to avoid significant impacts on cultural resources.

3.2.2.2 *Visual Assessment of Aboveground Resources*

As noted in the VAHP, the visual assessment of aboveground resources is focused on historic properties and is conducted in phases. These phases include both the RLS (Phase 1) and ILS (Phase 2). The studies focus on delineating the Visual Assessment analysis area (referred to as the indirect Area of Potential Effect in confidential attachments S-7 and S-10), existing historic resource data, survey objectives, field investigation methods, RLS and ILS results (as appropriate), recommendations, and references.

The RLS was designed to provide an inventory of buildings, structures, districts, objects, and trails within the Visual Assessment analysis area by systematically documenting intact resources by location, theme, and chronological period. The survey focused on properties over 45 years old, including houses, barns and farms, churches, public buildings, schools, commercial structures, industrial structures, cemeteries, landscapes, historic linear features such as trails, rail lines and roads, as well as archaeological sites with aboveground features such as stone cairns. Background research was conducted before, during, and after fieldwork and included examination of individual properties and the Visual Assessment analysis area. Examples of sources used in the survey work include the Oregon SHPO Historic Sites Database, historic USGS quadrangle maps and aerial photographs, Sanborn maps, Metsker maps, plat maps, tax records, county histories, historical societies, preservation groups, local government agencies, local citizens, local libraries, and museums. An RLS interim report was completed in December 2012 and was revised in coordination with the Cultural Resources Working Group in August 2013, October 2014, and then finalized in September 2015. It should be noted that the 2015 report includes incomplete information about resources on CTUIR tribal lands. Additional RLS information pertaining to CTUIR tribal lands will be provided once the field study is completed for those areas. The RLS report (Attachment S-7) focuses on information collected during fieldwork, such as architectural characteristics, a resource's approximate construction date, and any applicable NRHP criteria. The report makes recommendations on

historic properties that should be eliminated from further study because they are not eligible for the NRHP, fail to meet NRHP criteria, lack integrity, and/or the Project has no potential to affect. The RLS also provides a catalog of properties used to identify individual or concentrations of aboveground cultural resources that are worthy of further study.

The ILS analyzes those properties from the RLS that have sufficient integrity, for which an NRHP criterion might apply, and that have the potential to be affected by the Project. The history of each property was documented and then comparatively analyzed against the historic context of the Visual Assessment analysis area. This provides a framework for determining whether the resource meets any of the NRHP Criteria of Evaluation. Fieldwork for the ILS was conducted between October 2014 and October 2016 for those areas for which access had been approved. Right of access had not been obtained to some CTUIR tribal lands at that time, and those parcels will be examined at a later date. The ILS report (Attachment S-10) includes the background information compiled for the inventory plan, a revised historic context, recommendations concerning resource eligibility for the NRHP, as well as recommendations for avoidance, effect minimization, and mitigation measures to reduce impacts to below significant adverse levels consistent with the EFSC Standard for Historic, Cultural and Archaeological Resources (OAR 345-022-0900). The ILS also addresses aboveground resources in Project areas that have been re-routed since completion of the RLS in 2015. The ILS has incomplete information pertaining to resources on CTUIR tribal lands. Additional ILS information pertaining to CTUIR tribal lands will be provided once the field study is completed for those areas.

3.2.2.3 Traditional Cultural Properties and Historic Properties of Religious and Cultural Significance to Indian Tribes

Identification of TCPs and HPRCSITs have relied primarily on the BLM's government-to-government consultations under Section 106 and ethnographic studies completed by tribes, including CTUIR's traditional use study (Engum 2014a, 2014b), as described above. The results of these consultation efforts are summarized in Section 3.3.3. Additional information regarding these resources and other areas of concern has been provided to IPC by CTUIR for use in the VAHP studies. Other information was retained from public sources such as the B2H EIS (BLM 2017). This information is presented in Section 3.3.3.

3.2.2.4 Enhanced Archaeological Survey

Since certain environmental conditions and modern disturbances may obscure surface evidence of past human activities, enhanced survey measures, including subsurface shovel probes, will be included where necessary in the second phase of the cultural resources pedestrian survey effort. Prior to excavation of any shovel probes, a probing plan detailing the approach to subsurface survey will be submitted to state and federal agencies for consultation and approval, and all appropriate federal and state permits will be obtained. Excavation or removal (collection) of archaeological resources from any federally managed land (e.g., BLM, USFS, or other federal agencies) necessitates an Archaeological Resource Protection Act permit from the federal land manager. Subsurface probing on non-federal public lands, inclusive of any state, county, or municipal lands, will be conducted under a State of Oregon Archaeological Excavation Permit per ORS 390.235(1)(a) and OAR 736-051-0080 to -0090. Subsurface probing is planned to occur prior to ground-disturbing construction activity and within the selected route only.

Oregon State guidelines allow for shovel probing to assist in: (1) the identification of cultural resources during surface survey (site discovery probes); and (2) as a method of subsurface reconnaissance to test for the presence/absence of cultural remains and cultural site boundary definition (site boundary probes). Identifying cultural site boundaries during survey is important because a site's location relative to the Project is critical to assessing Project effects and developing

appropriate mitigation measures. When cultural site boundaries cannot be defined based on surface evidence alone, subsurface probing has the potential to provide crucial data to guide Project design and resource management decisions. Both site discovery probes and cultural site boundary probes may be employed as necessary to assist with resource identification and assessment.

Much of the surveyed direct analysis area was found to have acceptable ground surface visibility (30 percent or greater) to confidently identify surface expressions of archaeological resources. In areas of poor ground surface visibility (less than 30 percent) or areas with increased potential for subsurface archaeological deposits due to sedimentation, shovel probing will be conducted. Twenty-seven of these “high probability areas” where site discovery probes will be conducted have been identified along the Proposed Route, two have been identified along the Double Mountain Alternative, and four have been identified along the Morgan Lake Alternative (see confidential Attachment S-4). These areas were identified regardless of land ownership, and include BLM, USFS, and private lands. No such areas were identified along the West of Bombing Range Road Alternative 1 or Alternative 2. The high probability areas are subject to change based on CTUIR and SHPO input received during review.

To avoid unnecessary disturbance of archaeological resources, archaeological site boundary probing and NRHP-eligibility testing will be conducted at archaeological resources within the selected route only and prior to ground-disturbing construction activity.

3.3 Cultural Resources Inventory Results

131 OAR 345-021-0010(1)(s)(D)(ii): The results of the discovery measures described in subparagraph (i), together with an explanation by the applicant of any variations from the survey, inventory, or testing recommended.

This section addresses the results of the studies described above and completed for the Project. Work completed to date includes (1) the compilation of the background research data, as outlined in Section 3.2.1; (2) the preparation of an ASP and VAHP, as discussed in Section 3.2.2; (3) progress on the Phase 1 pedestrian cultural resources survey, discussed in Section 3.2.2.1; and (4) completion of the Phase 1 RLS and Phase 2 ILS for aboveground resources, discussed in Section 3.2.2.2. The results of the cultural resources pedestrian survey and the ILS are described below, followed by specific analyses of historic properties and archaeological sites and objects required by OAR 345-021-0010(1)(s), OAR 345-021-0010(1)(s)(B), and OAR 345-021-0010(1)(s)(C). Table S-2 lists resources in the analysis area known at the time Exhibit S was prepared, including their resource type, NRHP eligibility recommendations, whether the resource is in the direct analysis area (including the construction footprint) or the Visual Assessment analysis area, and which Project component is associated with the resource. Additional information regarding resources that CTUIR recently shared with IPC has been included in Attachment S-12; however, additional HPRCSITs may be identified through IPC’s continued consultations with tribes. Four linear resources with multiple segments were identified in the analysis area by the surveys conducted for the Project: South Canal (2 segments), Vale Oregon Main Canal (4 segments), Oregon Trail/Oregon NHT (36 segments or otherwise associated sites), and UPRR (4 segments). Only segments within the analysis area of this Exhibit are listed below. As agreed upon by SHPO in a May 2, 2018, email, resources listed under the category of Oregon Trail/Oregon NHT are based on the Oregon Trail National Historic Trail Multiple Property District NRHP nomination. One segment of the South Canal, 2 segments of the Vale Oregon Main Canal, 11 segments of the Oregon Trail/Oregon NHT, and 4 segments of the UPRR are crossed by the direct analysis area. Any additional segments that are outside of the analysis area (identified through surveys for Project routes no longer under consideration) are described in Attachments S-6 and S-10. It should be noted that the impact analyses below consider these linear resources as singular resources, rather than as individual segments.

**ATTACHMENT S-9
HISTORIC PROPERTIES MANAGEMENT PLAN (WITH INADVERTENT
DISCOVERY PLAN)**

**BOARDMAN TO HEMINGWAY
TRANSMISSION LINE PROJECT
HISTORIC PROPERTIES MANAGEMENT
PLAN FOR OREGON DEPARTMENT OF
ENERGY COMPLIANCE**

SHPO Case #: 08-2232

Prepared by:



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September 2018

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ABBREVIATIONS AND ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	area of potential effect
ASC	Application for Site Certificate
BLM	Bureau of Land Management
CCEM	Construction Contractor's Environmental Manager
CIC	Compliance Inspection Contractor
CRM	Cultural Resources Monitor
CRS	Cultural Resources Specialist
CRT	Cultural Resource Team
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
EFSC	Energy Facility Siting Council
HPMP	Historic Properties Management Plan
HPRCSIT	Historic Properties of Religious and Cultural Significance to Indian Tribes
IDP	Inadvertent Discovery Plan
ILS	Intensive Level Survey
IPC	Idaho Power Company
kV	kilovolt
LCIS	Legislative Commission on Indian Services
MP	Monitoring Plan
MPDF	Multiple Property Documentation Form
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NHT	National Historic Trail
NPS	National Park Service
NRHP	National Register of Historic Places
O&M	operation and maintenance
OAR	Oregon Administrative Rules
ODOE	Oregon Department of Energy
ORS	Oregon Revised Statute
PA	Programmatic Agreement
Project	Boardman to Hemingway Transmission Line Project
pASC	Preliminary Application for Site Certificate
RLS	Reconnaissance Level Survey
ROW	right-of-way
SHPO	State Historic Preservation Office
THPO	Tribal Historic Preservation Office
U.S.C.	United States Code
USFS	U.S. Department of Agriculture Forest Service
VAHP	Visual Assessment of Historic Properties

DEFINITIONS

Aboveground resource: A type of cultural resource or feature with aboveground elements that has the potential to be directly or indirectly affected by the Project which includes cairns, rock alignments, shelters, and other buildings, structures, districts, objects, and sites potentially eligible for listing on the NRHP under Criterion A, B, C, or D. Also referred to in Oregon as a historic site.

Analysis area: The overall area examined for impacts by the Project in Exhibit S. Includes subset analysis areas of the direct analysis area and the Visual Assessment analysis area.

Archaeological site: A type of cultural resource consisting of a concentration of a minimum of 10 artifacts within the ground or in ruins or a feature (Oregon State Historic Preservation Office [SHPO] 2013a). A geographic locality in Oregon, including but not limited to submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects and the contextual associations of the archaeological objects with each other or biotic or geological remains or deposits (ORS 358.905(1)(c)).

Archaeological object: A type of cultural resource consisting of fewer than 10 artifacts. Also referred to as an isolated find (Oregon SHPO 2013a). It is part of the physical record of an indigenous or other culture found in the state or waters of the state and consists of material remains of past human life or activity that are of archaeological significance (ORS 358.905(1)(a)).

Burial: Any natural or prepared physical location whether originally below, on, or above the surface of the earth, into which, as a part of a death rite or death ceremony of a culture, human remains were deposited (ORS 358.905(1)(e)).

Construction footprint: The area within the Project Site Boundary that will be directly impacted by the Project through ground disturbance during construction.

Cultural resource: Any place where material evidence exists about the human past. Generally, 50 years or older. Physical features, both natural and human made, associated with human activity. These would include sites, structures, and objects representing events in history, architecture, or human development. Cultural resources are unique and non-renewable resources (Thomas 1998).

Cultural site boundary: The extent of a cultural resource as identified by field surveys. Typically defined as the extent of cultural materials (surface and subsurface).

Direct analysis area: The portion of the analysis area examined for direct impacts by the Project. Equivalent to the Project Site Boundary.

Funerary objects: Any artifacts or objects that, as part of a death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later (ORS 358.905(1)(f)).

Historic Properties of Religious and Cultural Significance to Indian Tribes (HPRCSIT): A type of cultural resource whose significance is derived from the role it plays in an Indian Tribe's historically rooted beliefs, customs, and practices and that may be located on ancestral, aboriginal, or ceded lands of the Tribe. Also referred to as a sacred site. See also Section 101(d)(6)(A) of the NHPA and Advisory Council on Historic Preservation (ACHP) (2008).

Historic property: A type of cultural resource consisting of any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the NRHP, including artifacts, records, and remains related to and located within such a property or resource.

Historic site: A type of cultural resource inclusive of historic buildings, structures, sites, districts, and objects that would be included in the SHPO's online Historic Sites Database.

Human remains: The physical remains of a human body, including, but not limited to, bones, teeth, hair, ashes or mummified or otherwise preserved soft tissues of an individual (ORS 358.905(1)(g)).

Indian tribe: Any tribe of Indians recognized by the Secretary of the Interior or listed in the Klamath Termination Act, 25 United States Code [U.S.C.] 3564 et seq., or listed in the Western Oregon Indian Termination Act, 25 U.S.C. 3691 et seq., if the traditional cultural area of the tribe includes Oregon lands (ORS 97.740(4) [incorporated by reference in ORS 358.905(1)(d)]).

Object of cultural patrimony: An object having ongoing historical, traditional or cultural importance central to the native Indian group or culture itself, rather than property owned by an individual native Indian, and which, therefore, cannot be alienated, appropriated, or conveyed by an individual regardless of whether or not the individual is a member of the Indian tribe. The object shall have been considered inalienable by the native Indian group at the time the object was separated from such group. The term does not include unassociated arrowheads, baskets, or stone tools or portions of arrowheads, baskets, or stone tools (ORS 358.905(1)(h)(A); ORS 358.905(1)(h)(B)).

Operation footprint: The area within the Project Site Boundary that will be directly impacted by the Project during its lifetime of operation.

Professional Archaeologist: A person who has extensive formal training and experience in systematic, scientific archaeology (ORS 97.740(6)).

Project Site Boundary: The perimeter of the site of the proposed energy facility and encompassing all of its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micrositing corridors proposed by the applicant (OAR 345-001-0010(55)).

Sacred object: An archaeological object or other object that: (A) is demonstrably revered by any ethnic group, religious group or Indian tribe as holy; (B) is used in connection with the religious or spiritual service or worship of a deity or spirit power; or (C) was or is needed by traditional native Indian religious leaders for the practice of traditional native Indian religion (ORS 358.905(1)(k)).

Study Area (2-mile, 5-mile): The area examined during pre-survey cultural resource-related research efforts, including the records search and literature review. A 2-mile buffer and a 5-mile buffer on the Proposed Route and alternative routes established two subsets of the Study Area for the pedestrian cultural resources survey and the Visual Assessment of Historic Properties Study Plan (VAHP), respectively.

Traditional Cultural Property (TCP): A type of historic property that is eligible for inclusion on the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community (Parker and King 1998).

Visual Assessment analysis area: The portion of the analysis area examined for indirect impacts by the Project. The area assessed for indirect effects that extends 5 miles or to the visual horizon, whichever is closer, on either side of the centerline of the Proposed Route and alternative routes.

1.0 INTRODUCTION

This Historic Properties Management Plan (HPMP) provides a general overview of the measures that will be implemented to address the avoidance, minimization of impacts, and mitigation of impacts to cultural resources as a result of Idaho Power Company's (IPC) Boardman to Hemingway Transmission Line Project (Project). It provides a general approach to treat impact resources. When a final route is chosen, resource-specific treatment plans incorporating these general measures will be developed and implemented prior to construction activities. Implementation of the HPMP is anticipated to occur in first and second quarters of 2022. The HPMP addresses cultural resources for the purposes of meeting the Oregon Energy Facility Siting Council's (EFSC or Council) siting standards. These resources include historic properties listed on or likely to be listed on the National Register of Historic Places (NRHP) (NRHP-eligible and including sites determined significant in writing by a Native American tribe), archaeological sites on public or private land, and archaeological objects on private land within the Project Site Boundary described in Exhibit S of the Project's Application for Site Certification (ASC) submitted to the Oregon Department of Energy (ODOE). Such resources could be significantly impacted during construction, reclamation of temporary disturbance areas, or operation and maintenance (O&M). The HPMP demonstrates that the Project will comply with EFSC's Historic, Cultural, and Archaeological Resources Standard (Oregon Administrative Rules [OAR] 345-022-0090) by showing that the construction and operation of the Project, taking into account mitigation, are not likely to result in significant impacts to the cultural resources described above and considered in the EFSC standard.

It is noted that the Bureau of Land Management (BLM) is the lead agency overseeing the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) processes for the Project. As part of compliance with those regulations, a Programmatic Agreement (PA) (Attachment S-7 of the ASC) has been prepared for this Project. A separate HPMP will be prepared by the BLM in consultation with the Idaho and Oregon State Historic Preservation Offices (SHPO), Advisory Council on Historic Preservation (ACHP) and the parties to the PA, including ODOE (PA Sections IV, B and VII, A-H). A framework for the BLM's HPMP has been drafted by that agency, but a complete HPMP has not yet been completed. The framework is included as Appendix A of this document. Although the PA can support the EFSC process, the PA does not supersede the EFSC site certificate process and cannot be fully relied upon to determine compliance with EFSC's standards. Therefore, this HPMP was prepared specifically for ODOE and to comply with the EFSC certification process. It may be modified as necessary following completion of the BLM's HPMP or incorporated as appropriate into the BLM's HPMP through BLM's consultation with ODOE as a party to the PA.

1.1 Purposes of HPMP

The purposes of this HPMP are to:

- Provide a summary and overview of the Project and the Site Certificate Project Site Boundary, including a discussion of proposed facilities, location of facilities, and project location maps;
- Provide a summary of state laws and regulations that define the research, evaluation, and reporting procedures to be followed for the Project under the EFSC certification process;
- Provide a brief summary of cultural resources studies conducted for the Project and a review of the findings of those studies;

- Summarize methods for determination and documentation of effects that have been used for the Project and will be used in the event of inadvertent discoveries;
- Document the measures that IPC has already taken or will take to avoid and minimize impacts to cultural resources considered by EFSC's standards
- Document IPC's goals for managing and protecting resources subject to EFSC standards within the analysis area;
- Provide management guidelines for categories of significant impacts to cultural resources considered by EFSC's standards;
- Present a Monitoring Plan (Section 7) which includes guidelines for how avoidance and minimization measures will be implemented during construction, reclamation, and O&M; how the effectiveness of these methods will be documented; procedures for halting construction, including agency notification in the event of unanticipated discoveries during construction; and under what circumstances cultural resources monitors will be present;
- Present an Inadvertent Discovery Plan (IDP) (Section 8), which specifies the procedures to follow in the event that cultural resources are found during construction, reclamation, and O&M, which were not detected during surveys conducted prior to ground-disturbing activities; and
- Be implemented and adhered to during construction, reclamation, and O&M, per OAR 345-021-0010(1)(s)(iii)(E) and OAR 345-022-0090(1).¹

The intent of this HPMP is to specify the general terms of avoidance and monitoring, and to present a framework for mitigation planning.

1.2 Regulatory Context

The following section briefly discusses the federal and state laws and regulations applicable to the Project in regard to cultural resources.

1.2.1 EFSC Administrative Rules

1.2.1.1 Site Certificate Application Requirements

OAR 345-021-0010(1)(s) provides that IPC must include information in Exhibit S or confidential submissions of the following information regarding historic, cultural, and archeological resources:

(A) Historic and cultural resources within the analysis area that have been listed, or would likely be eligible for listing, on the National Register of Historic Places.

(B) For private lands, archaeological objects, as defined in ORS 358.905(1)(a), and archaeological sites, as defined in ORS 358.905(1)(c), within the analysis area.

(C) For public lands, archaeological sites, as defined in ORS 358.905(1)(c), within the analysis area.

(D) The significant potential impacts, if any, of the construction, operation and retirement of the proposed facility on the resources described in paragraphs (A), (B) and (C) and a plan for protection of those resources that includes at least the following:

¹ Subsections (2) and (3) of the Historic, Cultural, and Archaeological Resources Standard apply to power generation facilities and special criteria facilities, respectively. Because the Project does not include a power generation or special criteria facility, subsections (2) and (3) of OAR 345-022-0090 do not apply to the Project.

(i) A description of any discovery measures, such as surveys, inventories, and limited subsurface testing work, recommended by the State Historic Preservation Officer or the National Park Service of the U.S. Department of Interior for the purpose of locating, identifying and assessing the significance of resources listed in paragraphs (A), (B) and (C).

(ii) The results of the discovery measures described in subparagraph (i), together with an explanation by the applicant of any variations from the survey, inventory, or testing recommended.

(iii) A list of measures to prevent destruction of the resources identified during surveys, inventories and subsurface testing referred to in subparagraph (i) or discovered during construction.

(E) The applicant's proposed monitoring program, if any, for impacts to historic, cultural and archaeological resources during construction and operation of the proposed facility.

1.2.1.2 General Standards for Siting Facilities

Subsection (1) of the Historic, Cultural, and Archaeological Resources Standard at OAR 345-022-0090(1)² provides that IPC must demonstrate that the construction and operation of the Project, taking into account mitigation, are not likely to result in significant adverse impacts to:

(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;

(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and

(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).

1.2.2 Applicable Oregon Revised Statutes

The following Oregon Revised Statutes are applicable to the Project, with respect to cultural resources.

1.2.2.1 Indian Graves and Protected Objects

Oregon Revised Statutes (ORS) 97.745 provides for protection of Indian graves and protected objects, including cairns, burials, human remains, funerary objects, sacred objects, and objects of cultural patrimony of any native Indian. It describes acts prohibited in relation to the above resources, the applicability of the statute, and the notification procedures for when suspected Indian human remains are discovered. The statute states:

(1) Except as provided in ORS 97.750, no person shall willfully remove, mutilate, deface, injure or destroy any cairn, burial, human remains, funerary object, sacred object or object of cultural patrimony of any native Indian. Persons disturbing native Indian cairns or burials through inadvertence, including by construction, mining, logging or agricultural activity, shall at their own expense reinter the human remains or funerary object under the supervision of the appropriate Indian tribe.

(2) Except as authorized by the appropriate Indian tribe, no person shall:

² Subsections (2) and (3) of the Historic, Cultural, and Archaeological Resources Standard apply to power generation facilities and special criteria facilities, respectively. Because the Project does not include a power generation or special criteria facility, subsections (2) and (3) of OAR 345-022-0090 do not apply to the Project.

(a) Possess any native Indian artifacts, human remains or funerary object having been taken from a native Indian cairn or burial in a manner other than that authorized under ORS 97.750.

(b) Publicly display or exhibit any native Indian human remains, funerary object, sacred object or object of cultural patrimony.

(c) Sell any native Indian artifacts, human remains or funerary object having been taken from a native Indian cairn or burial or sell any sacred object or object of cultural patrimony.

(3) This section does not apply to:

(a) The possession or sale of native Indian artifacts discovered in or taken from locations other than native Indian cairns or burials; or

(b) Actions taken in the performance of official law enforcement duties.

(4) Any discovered human remains suspected to be native Indian shall be reported to the state police, the State Historic Preservation Officer, the appropriate Indian tribe and the Commission on Indian Services.

1.2.2.2 Archaeological Objects and Sites

ORS 358.920 identifies prohibited acts on public and private lands in Oregon, relative to archaeological resources. It states that disturbances to archaeological sites or objects on public or private lands must be completed under a permit issued under ORS 390.235 and provides direction for disposition of those archaeological materials and any human remains and associated funerary objects. The section is not applicable to the disturbance of Native American cairns, which is covered by the provisions of ORS 97.740 to 97.760. The statute states:

(1)(a) A person may not excavate, injure, destroy or alter an archaeological site or object or remove an archaeological object located on public or private lands in Oregon unless that activity is authorized by a permit issued under ORS 390.235.

(b) Collection of an arrowhead from the surface of public or private land is permitted if collection can be accomplished without the use of any tool.

(c) It is prima facie evidence of a violation of this section if:

(A) A person possesses the objects described in paragraph (a) of this subsection;

(B) A person possesses any tool that could be used to remove such objects from the ground; and

(C) A person does not possess a permit required under ORS 390.235.

(2) A person may not sell, purchase, trade, barter or exchange or offer to sell, purchase, trade, barter or exchange any archaeological object that has been removed from an archaeological site on public land or obtained from private land within the State of Oregon without the written permission of the landowner.

(3)(a) A person may not sell, trade, barter or exchange or offer to sell, trade, barter or exchange any archaeological object unless the person furnishes the purchaser a certificate of origin to accompany the object that is being sold or offered. The certificate shall include:

(A) For objects obtained from public land:

(i) A statement that the object was originally acquired before October 15, 1983.

(ii) The location from which the object was obtained and a brief cumulative description of how the object had come into the possession of the current owner in accordance with the provisions of ORS 358.905 to 358.961 and 390.235.

(iii) A statement that the object is not human remains, a funerary object, sacred object or object of cultural patrimony.

(B) For objects obtained from private land:

(i) A statement that the object is not human remains, a funerary object, sacred object or object of cultural patrimony.

(ii) A copy of the written permission of the landowner to acquire the object.

(b) As used in this subsection, "certificate of origin" means a signed and notarized statement that meets the requirements of paragraph (a) of this subsection.

(4)(a) If the archaeological object was acquired after October 15, 1983, from public lands, any object not described in paragraph (b) of this subsection is under the stewardship of the state and shall be delivered to the Oregon State Museum of Anthropology. The museum shall work with the appropriate Indian tribe and other interested parties to develop appropriate curatorial facilities for artifacts and other material records, photographs and documents relating to the cultural or historic properties in this state. Generally, artifacts shall be curated as close to the community of their origin as their proper care allows. If it is not feasible to curate artifacts within this state, the museum may after consultation with the appropriate Indian tribe or tribes enter into agreements with organizations outside this state to provide curatorial services; and

(b) If the object is human remains, a funerary object, a sacred object or an object of cultural patrimony, it shall be dealt with according to ORS 97.740, 97.745 and 97.750.

(5) A person may not excavate an archaeological site on privately owned property unless that person has the property owner's written permission.

(6) If human remains are encountered during excavations of an archaeological site on privately owned property, the person shall stop all excavations and report the find to the landowner, the state police, the State Historic Preservation Officer and the Commission on Indian Services. All funerary objects relating to the burial shall be delivered as required by ORS 358.940.

(7) This section does not apply to a person who disturbs an Indian cairn or burial. Any person who disturbs an Indian cairn or burial for any reason shall comply with the provisions of ORS 97.740 to 97.760.

(8) Violation of the provisions of this section is a Class B misdemeanor.

1.2.2.3 Archaeological Sites and Historical Material

ORS 390.235 sets forth the permit requirements and rules for excavation or removal of archaeological or historical materials as follows:

(1)(a) A person may not excavate or alter an archaeological site on public lands, make an exploratory excavation on public lands to determine the presence of an archaeological site or remove from public lands any material of an archaeological, historical, prehistorical or anthropological nature without first obtaining a permit issued by the State Parks and Recreation Department.

(b) If a person who obtains a permit under this section intends to curate or arrange for alternate curation of an archaeological object that is uncovered during an archaeological investigation, the person must submit evidence to the State Historic Preservation Officer that the Oregon State Museum of Anthropology and the appropriate Indian tribe have approved the applicant's curatorial facilities.

(c) No permit shall be effective without the approval of the state agency or local governing body charged with management of the public land on which the excavation is to be made, and without the approval of the appropriate Indian tribe.

(d) The State Parks and Recreation Director, with the advice of the Oregon Indian tribes and Executive Officer of the Commission on Indian Services, shall adopt rules governing the issuance of permits.

(e) Disputes under paragraphs (b) and (c) of this subsection shall be resolved in accordance with ORS 390.240.

(f) Before issuing a permit, the State Parks and Recreation Director shall consult with:

(A) The landowning or land managing agency; and

(B) If the archaeological site in question is associated with a prehistoric or historic native Indian culture:

(i) The Commission on Indian Services; and

(ii) The most appropriate Indian tribe.

(2) The State Parks and Recreation Department may issue a permit under subsection (1) of this section under the following circumstances:

(a) To a person conducting an excavation, examination or gathering of such material for the benefit of a recognized scientific or educational institution with a view to promoting the knowledge of archaeology or anthropology;

(b) To a qualified archaeologist to salvage such material from unavoidable destruction; or

(c) To a qualified archaeologist sponsored by a recognized institution of higher learning, private firm or an Indian tribe as defined in ORS 97.740.

(3) Any archaeological materials, with the exception of Indian human remains, funerary objects, sacred objects and objects of cultural patrimony, recovered by a person granted

a permit under subsection (2) of this section shall be under the stewardship of the State of Oregon to be curated by the Oregon State Museum of Anthropology unless:

(a) The Oregon State Museum of Anthropology with the approval from the appropriate Indian tribe approves the alternate curatorial facilities selected by the permittee;

(b) The materials are made available for nondestructive research by scholars;
and

(c)(A) The material is retained by a recognized scientific, educational or Indian tribal institution for whose benefit a permit was issued under subsection (2)(a) of this section;

(B) The governing board of a public university listed in ORS 352.002, with the concurrence of the appropriate Indian tribe, grants approval for material to be curated by an educational facility other than the institution that collected the material pursuant to a permit issued under subsection (2)(a) of this section; or

(C) The sponsoring institution or firm under subsection (2)(c) of this section furnishes the Oregon State Museum of Anthropology with a complete catalog of the material within six months after the material is collected.

(4) The Oregon State Museum of Anthropology shall have the authority to transfer permanent possessory rights in subject material to an appropriate Indian tribe.

(5) Except for sites containing human remains, funerary objects and objects of cultural patrimony as defined in ORS 358.905, or objects associated with a prehistoric Indian tribal culture, the permit required by subsection (1) of this section or by ORS 358.920 shall not be required for forestry operations on private lands for which notice has been filed with the State Forester under ORS 527.670.

(6) As used in this section:

(a) "Private firm" means any legal entity that:

(A) Has as a member of its staff a qualified archaeologist; or

(B) Contracts with a qualified archaeologist who acts as a consultant to the entity and provides the entity with archaeological expertise.

(b) "Qualified archaeologist" means a person who has the following qualifications:

(A) A post-graduate degree in archaeology, anthropology, history, classics or other germane discipline with a specialization in archaeology, or a documented equivalency of such a degree;

(B) Twelve weeks of supervised experience in basic archaeological field research, including both survey and excavation and four weeks of laboratory analysis or curating; and

(C) Has designed and executed an archaeological study, as evidenced by a Master of Arts or Master of Science thesis, or report equivalent in scope and quality, dealing with archaeological field research.

(7) Violation of the provisions of subsection (1)(a) of this section is a Class B misdemeanor.

Any subsurface archaeological excavation (as applicable) on non-federal public lands, inclusive of any state, county, or municipal lands, will be conducted under a State of Oregon Archaeological Excavation Permit per ORS 390.235(1)(a) and OAR 736-051-0080 to -0090.

1.2.3 Additional Regulatory Context

A substantial portion of the Project is located on private lands (69 percent or 186 miles) with little State lands involved (0.4 percent or 1.1 miles). However, the Project also crosses significant stretches of federally-managed land (24 percent or 65.4 miles across BLM-managed land; 0.2 percent or 0.5-mile across Bureau of Reclamation-managed lands; 4 percent or 10.5 miles across Department of Defense/U.S. Army Corps of Engineers-managed lands; and 3 percent or 7.1 miles on National Forest System lands). BLM is the lead federal agency responsible for completing the NEPA environmental analysis and for compliance with Section 106 of the NHPA.

1.2.3.1 Section 106 Cultural Resources Working Group and Consulting Parties

ODOE is a participant in the BLM's Cultural Resources Working Group for the Project. Consistent with Section 106, the BLM has convened a cultural resources working group, comprising representatives of the Oregon State Office and Vale District Office of the BLM and its contractor; U.S. Department of Agriculture Forest Service (USFS); Bonneville Power Administration; the ACHP; Oregon and Idaho SHPOs; ODOE; Confederated Tribes of the Umatilla Indian Reservation (CTUIR); CTUIR Tribal Historic Preservation Officer (THPO); Shoshone Paiute Tribe; Shoshone Bannock Tribe; Malheur, Baker, Union, Umatilla, and Morrow Counties; Oregon Commission on Historic Trails; Oregon-California Trails Association; Stop Idaho Power; and IPC. In addition to the working group, 32 consulting parties have been identified for the Project, including federal, state, and local agencies; IPC; tribes; historic preservation groups; and, public community groups and individuals with an interest in the Project. These are listed below:

- BLM
- U.S. Army Corps of Engineers
- U.S. Department of the Navy, Naval Weapons Training Facility Boardman
- U.S. Forest Service, Regional Office
- U.S. National Park Service (NPS), Ice Age Floods National Geologic Trail
- NPS, Pacific Northwest Region
- Idaho SHPO
- Washington SHPO
- Burns Paiute Tribe
- Shoshone-Bannock Tribes of Fort Hall
- Baker County
- Union County
- National Trust for Historic Preservation
- Oregon Historic Trails Advisory Council
- Bonneville Power Administration
- Bureau of Reclamation
- U.S. Fish and Wildlife Service, Umatilla National Wildlife Refuge
- USFS, Wallowa-Whitman National Forest
- NPS National Lewis and Clark Trail Offices
- ACHP
- Oregon SHPO
- ODOE³
- CTUIR
- Shoshone-Paiute Tribes of the Duck Valley Indian Reservation
- Morrow County
- Lewis and Clark Trail Heritage Foundation
- Oregon-California Trails Association
- City of Baker City

³ ODOE's involvement in the Section 106 Cultural Resources Working Group was intended to facilitate the use of the federal Section 106 for compliance with ODOE's state regulatory requirements.

- IPC
- Halt Idaho Power
- Private Individual
- Poison Creek Neighborhood Group

To date, the Cultural Resources Working Group has provided an open forum for identifying and resolving issues related to cultural resources. Through in-person meetings and conference calls, the cultural resources working group defined the size and boundaries of the area of potential effect for the Project under Section 106; reviewed, commented upon, and/or approved cultural resources and viewshed assessment study plans; and prepared a PA.

1.2.3.2 Programmatic Agreement

A PA for managing historic properties that may be affected by the Project was prepared by BLM, acting as the designated lead federal agency and in consultation with the Section 106 Cultural Resources Working Group. The intent and applicability of the PA is for compliance with the NHPA and Section 106; however, studies and consultations completed under the direction of the PA may support the EFSC permitting process.

The PA allows for identification of cultural resources as well as NRHP eligibility evaluation and effect determinations on the Proposed Route and all alternative routes considered during the permitting process. The PA allows for the final determinations of Project effects to historic properties (including NRHP-listed, -eligible, and unevaluated resources) and the resolution of adverse effects under Section 106 to be outlined in a HPMP. Although the HPMP required by the PA will be submitted by BLM for review by all PA parties, including ODOE, it is anticipated to be specific to compliance with Section 106 of the NHPA. In order to comply with the EFSC permitting process, this ODOE-specific HPMP has been drafted. Although the HPMP dictated by the PA has not been completed as of the drafting of this document, approaches to identification and effect determinations are expected to be similar between the two HPMPs; however, this ODOE-specific HPMP also addresses archaeological resources and objects on private lands, regardless of NRHP-eligibility status. A framework of the BLM's anticipated Section 106 HPMP is included in Appendix A.

1.3 Organization of the HPMP

Section 1 of this HPMP provides an introduction to the document, describes its purpose, and provides a state regulatory context for the Project. Section 2 describes the Project and the Project's Site Boundary included in the Site Certificate. Section 3 outlines the sequence of Project-related tasks that will occur in order to avoid, minimize, or mitigate significant impacts on cultural resources considered under EFSC's siting standards for cultural resources. Section 4 summarizes the cultural resource studies completed for the Project and their results. Section 5 discusses the methods for determination of NRHP eligibility and other cultural resources considered under EFSC's siting standards and assessment of effects. Section 6 outlines IPC's proposed avoidance and mitigation plan for the Project, as pertains to cultural resources considered under EFSC's siting standards. Sections 7 and 8 provide a general Monitoring Plan and an IDP, respectively. Section 9 is a list of references cited in this HPMP.

2.0 PROJECT DESCRIPTION

This section provides a brief Project description and defines the Project's Site Boundary included in the site certificate. The Project Site Boundary guides what resources are considered in this HPMP.

2.1 Project Description

The Project consists of an approximately 296.6-mile-long single-circuit 500-kilovolt (kV) transmission line between Boardman, Oregon and the Hemingway Substation located near Melba, Idaho (Project). In the state of Oregon, the Project includes 270.8 miles of single-circuit 500-kV transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line along a new right-of-way (ROW). The proposed transmission line will be constructed on federal, state, and private land in portions of two states and six counties: Morrow, Umatilla, Union, Baker, and Malheur Counties, Oregon, and Owyhee County, Idaho. This HPMP is applicable to the 284 miles of transmission line and associated Project components within the state of Oregon.

The Project requires a site certificate from the EFSC, as well as approval from federal land management agencies (for portions of the project on federal land). IPC submitted a Notice of Intent to the ODOE on July 15, 2010, to file an ASC for the Project. On February 27, 2013, IPC submitted a preliminary ASC (pASC) to ODOE, and amended the application in May of 2013 to include BLM alternatives not previously included in the pASC. An amended Project Order was provided by the Council on December 22, 2014. If issued, the Site Certificate would authorize the construction of the transmission lines, a switching station near the Port of Morrow, Oregon, communication stations, related and supporting facilities, and temporary features.

2.2 Project Site Boundary

The Project Site Boundary includes the construction footprint and is the area within which the Project may be built. Although alternative transmission line routes and attendant roads and facilities are included in the Project Site Boundary, this HPMP will only be implemented at the Project components selected for construction. The Project Site Boundary includes the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kV electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuild of 0.9 mile of a 230-kV transmission line, and rebuild of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than 0.25-acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 of existing roads requiring substantial modification and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

2.3 Visual Assessment Area

In addition to the Project Site Boundary, this HPMP considers historic properties and other cultural resources within 5 miles of the Proposed Route centerline and with a view of the Project. "Other" cultural resources include non-historic properties with aboveground components (such as standing buildings, cairns, hunting blinds, etc.) or other qualities wherein the viewshed is a significant quality of the resource. The Visual Assessment area was determined through a Geographic Information System viewshed analysis of the Project features in the Project Site Boundary described above. Areas within 5 miles of the Proposed Route centerline and with a view of Project features were included in the Visual Assessment area as well as the Project Site Boundary.

3.0 SEQUENCE OF PROJECT-RELATED TASKS

There are a series of tasks that will be completed to ensure that cultural resources considered by EFSC site certificate standards are avoided or Project impacts to them minimized or mitigated to less than significant. These tasks are identified as those that must take place before construction, during construction, and after construction/during reclamation and O&M, as applicable.

3.1 Pre-Construction Tasks

Pre-construction tasks include the following:

- This HPMP will be completed by IPC and submitted to ODOE, SHPO, involved Native American tribes, and historic societies (such as Oregon-California Trails Association), as determined by ODOE, for review;
- IPC's Cultural Resource Team (CRT) will be selected (see Section 7.1);
- IPC will provide the CRT and ODOE with maps and/or drawings of the Project final construction footprint and Visual Assessment area;
- The CRT will ensure avoidance measures (e.g., sensitive resource flagging, complete avoidance) are in place where needed (see Section 7.3); and
- Required mitigation measures will be completed (as applicable).

In addition to the above tasks, IPC will develop and implement a cultural resource training program as part of the overall environmental training program for all Project staff (construction workers, supervisors, etc.) and those who will access the Project area. As part of the cultural resource training program, a local tribal representative(s) will be invited to participate in the environmental training to discuss or provide context from a tribal cultural perspective regarding the cultural resources within the Project Site Boundary and/or the Visual Assessment area, and how these resources have traditional religious and cultural importance to Native American tribes (as appropriate). The presentation will have the goal of ensuring the appropriate and respectful treatment of such resources within or near the Project or upon their inadvertent discovery. The training program will be prepared and presented at the pre-construction meeting by the CRT and the Native American Representative (as appropriate) and will include a discussion of the following:

- All applicable laws and penalties pertaining to cultural resources;
- A brief discussion of the prehistoric and historic regional context of the area, including local Native American beliefs, how those beliefs are related to cultural resources that

may be found in the area, and appropriate and respectful behavior regarding such resources;

- Types of prehistoric and historic deposits/artifacts found in the area and what they look like on the ground surface, partially buried, buried, and/or freshly exposed as a result of construction activities;
- Explanation of the responsibilities of workers during construction of the Project and during O&M regarding cultural resources;
- Instruction that Project workers will avoid identified sensitive areas within the Project footprint and halt construction or an O&M activity if a cultural resource is inadvertently discovered; and
- Review of this HPMP and the protocols and procedures that will be implemented during construction and O&M activities, such as applicable cultural resource laws, Project/construction personnel, CRT staff and Native American monitor roles and responsibilities, monitoring activities and signage, inadvertent and human remain discovery procedures, stop work procedures, etc.

Presentation of the cultural resource training to Project workers will be a one-time in-person presentation by the CRT lead in coordination with the Native American Tribal Representative(s). Thereafter, the Project's construction contractor's environmental compliance manager can provide the training to additional new staff/personnel in the form of a training video. The training video will include visual examples of environmentally sensitive areas (examples of exclusion zone signage or flagging) and images/footage of prehistoric and historic artifacts and/or deposits that are demonstrative of cultural resource finds in the area and evocative of the sensitive nature of these resources. Staff receiving the training will be required to acknowledge the training by signing a training log which will be maintained by the on-site Project compliance manager, and each worker will receive a training sticker that must be displayed and easily visible on their hard hat.

3.2 Construction Phase Tasks

Construction phase tasks to be completed by the CRT include, but are not limited to, the following:

- Provide ongoing environmental training for newly hired construction staff. The training may be a previously recorded video and may not require additional CRT support, unless requested. The CRT will ensure on-site construction personnel are in compliance and have the appropriate required training sticker displayed on their hard hats;
- Construction monitoring as described in Section 7 of this plan; and
- Conduct testing or data recovery or other types of mitigation for any inadvertent discoveries as described in Section 7 of this plan, as necessary.

Additional construction phase tasks may also include site certificate amendments, if any. The CRT will consult and provide support, as needed, for any Project amendment. During construction, the need may arise for changes to Project construction procedures, approved mitigation measures or other stipulations, and/or the Project Site Boundary or construction footprint. Under these or similar circumstances, an amendment to the Site Certificate will need to be filed and approved by EFSC, to stay in compliance with all conditions of Site Certification. The ODOE will consult with the SHPO, as appropriate, and the CRT will conduct any additional studies deemed necessary.

3.3 Post-Construction Phase Tasks

Post-construction phase tasks to be completed by the CRT include completing test investigations or data recovery analysis (as necessary), preparing artifacts for curation (as applicable), transferring these materials to the approved curation facility or appropriate land owner (if requested), and preparing final reports. The CRT will also prepare and finalize the mitigation and monitoring report.

3.3.1 Operation and Maintenance Phase

O&M activities include transmission line patrols, climbing inspections, structure and wire maintenance, insulator washing (as needed), inspection and maintenance of stations and communication facilities, access road repairs, vegetation management activities to maintain conductor to vegetation clearances, and keeping structures clear of vegetation. Most normal O&M of the Project would not involve any new ground disturbance outside of the construction footprint, and therefore no impacts to previously known cultural resources subject to the EFSC standard would be expected. However, some O&M activities, specifically vegetation management, ground disturbing repairs, etc., within or near cultural resources subject to the EFSC standard may result in significant impacts. The IDP in Section 8 of this HPMP will be followed during O&M activities to ensure the continued protection of such resources. The IDP contains procedures that reference construction personnel specific to the construction phase of the Project; however, the general practices contained within the IDP will be followed by IPC's O&M personnel or contractor(s). IPC's O&M staff and contractor(s) will notify the applicable land-managing agency personnel of any discovery and afford said discovery with the applicable protections.

O&M phase tasks to be completed by IPC's O&M staff and contractor(s) include, but are not limited to, the following:

- On-going employee environmental training annually and for newly hired staff, including provision of post-training informational materials;
- Follow procedures contained in this HPMP and the IDP provided in Section 8, as applicable;
- Coordinate activities with the applicable land-managing agency and, as appropriate, tribe(s) regarding how best to avoid, minimize, or mitigate impacts to cultural resources subject to the EFSC standard and in accordance with the applicable procedures outlined in this HPMP. ODOE and SHPO will be consulted regarding all measures to be conducted;
- Coordinate with tribe(s) regarding the scheduling of O&M activities to be conducted within 5 miles of Historic Properties of Religious and Cultural Significance to Indian Tribes (HPRCSIT) (e.g. sacred sites, traditional use areas, etc.). Regular O&M activities will be scheduled so as to not coincide with or impact use of these sites. Further, vegetation management activities, such as the application of herbicides, will avoid impacting species of concern to tribe(s); and
- Monitoring requirements as described in Section 3.3.3.

IPC's O&M staff will continue to coordinate and consult with ODOE, SHPO, and tribes, as necessary.

3.3.2 Reclamation Phase

Once construction is completed, various reclamation treatments will be applied to reclaim Project areas to a condition agreed upon by the landowner, tenant, or land-managing agency. Reclamation activities may require 4x4 trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, and water trucks. Reclamation treatments that involve ground-disturbing activities within previously undisturbed soils may have the potential to significantly impact cultural resources subject to the EFSC standards.

Table 3-1, below, shows typical reclamation activities and general monitoring requirements, but is not a comprehensive list of mitigation measures that may be required. Resource-specific measures will be provided in future resource-specific mitigations and treatment plans. Measures to be applied to resources of concern to tribes will be determined through consultation with those tribes. Such measures may include avoidance of reclamation activities during tribal use of cultural resources subject to the EFSC standards. Reclamation activities may require monitoring and avoidance measures by the CRT. The HPMP will be adhered to during the Reclamation Phase.

Table 3-1. Examples of Reclamation Activities

Reclamation Activity	Description of Activity	Possible Equipment	Monitoring Requirements
Management of Waste Materials	Cleanup of debris from construction area, such as scrap metals, oil, wood, etc.	4x4 trucks, dump trucks, front-end loaders	None.
Earthworks	Re-establishment of slope and surface stability and recontouring.	4x4 trucks, dump trucks, front-end loaders, motor graders, bulldozers	Monitoring of new ground disturbance is anticipated and/or if work takes place near the boundary of a known cultural resource subject to EFSC standards.
Topsoil Replacement	Reclamation of construction disturbance to pre-construction landscape conditions: replacement of soils, re-contouring, etc.	4x4 trucks, front loader, motor grader	Monitoring of new ground disturbance is anticipated and/or if the work takes place near the boundary of a known cultural resource subject to the EFSC standards.
Seeding	Planting new seeds of indigenous native species.	4x4 trucks	None. No ground disturbance within undisturbed soils.
Alternative Seeding	Seeding of annual grasses or forbs.	4x4 trucks	None. No ground disturbance within undisturbed soils.
Vertical Mulch Replacement	Vegetation previously cleared will be replaced back onto site.	4x4 trucks, front loader, motor grader	None. No ground disturbance within undisturbed soils.

Reclamation Activity	Description of Activity	Possible Equipment	Monitoring Requirements
Visual Composition	Enhancement restoration to mitigate visual impacts. Plan to be developed.	4x4 trucks, front loader, motor grader	May require monitoring if activity is near a known cultural resource subject to EFSC standards.

NOTE: Resource-specific measures, including monitoring where needed, will be developed in coordination with the ODOE, SHPO, and tribe(s), as applicable, for cultural resources subject to the EFSC standards. The measures will be provided in the final Reclamation Plan included in the ASC.

3.3.3 Operation and Maintenance Activities

Routine O&M activities will be conducted within the Project Site Boundary as defined in the Project Order. They will range from routine equipment inspections (no new ground disturbance outside of the Project's permitted area as defined by site certification) performed by relatively small crews to ground-disturbing activities such as pole replacement or access road maintenance performed by larger crews with heavy equipment. Activities that result in new ground disturbance have the potential to cultural resources subject to the EFSC standards. Table 3-2 below lists some of the typical routine O&M activities and generalized monitoring requirements, but is not a comprehensive list of mitigation measures that may be required for O&M activities. Resource-specific measures will be provided in future resource-specific mitigations and treatment plans. Measures to be applied to resources of concern to tribes will be determined through consultation with those tribes. Such measures may include avoidance of reclamation activities during tribal use of cultural resources subject to the EFSC standards. Additional detail of routine O&M activities is contained in Exhibit B of the ASC.

Table 3-2. Operation and Maintenance Activities

Operation and Maintenance Activity	Description of Activity	Schedule, Crew, Equipment	Monitoring Requirements
Transmission Line Maintenance	Ground and aerial inspections of transmission line and nearby vegetation to determine if repairs are necessary.	Semi-annually/Crew of 3 to 4, aerial inspection uses helicopter, ground crew uses 4x4 trucks or all-terrain vehicles.	None.
Hardware Maintenance Repairs	Repair or replacement of individual components (no new ground disturbance outside of right-of-way [ROW]).	Schedule depends on inspection results; crew may use 4x4 trucks, material truck (flatbed), bucket trucks (low reach), boom trucks (high reach), or personal lift.	None.

Operation and Maintenance Activity	Description of Activity	Schedule, Crew, Equipment	Monitoring Requirements
Access Road and Work Repair	Grading or repair of existing maintenance access roads and work areas, spot repair of sites subject to flooding or scouring.	Schedule depends on inspections or response to emergency; crews may use a grader, backhoe, four-wheel-drive pickup truck, and a tracked-loader, or bulldozer.	Monitoring of new ground disturbance is anticipated and/or if the work takes place near the boundary of a known cultural resource subject to EFSC standards.
Vegetation Management	Within the ROW under the wires and to 10 feet outside outermost conductor, vegetation maintained under 5 feet tall. From this zone to the edge of the ROW, vegetation maintained up to 25 feet in height or as needed to ensure safe operations.	Schedule depends on inspections; crew size varies, and vegetation will be removed using chain saws, weed trimmers, rakes, shovels, mowers, and brush hooks. Clearing efforts in heavy growth areas will use a Hydro-Ax or similar equipment.	Monitoring of new ground disturbance is anticipated and/or if the work takes place near the boundary of a known cultural resource subject to EFSC standards.
Station and Communication Station Maintenance	Equipment testing, monitoring and repair, emergency and routine procedures for service continuity and preventive maintenance of remote surveillance system.	Scheduled once monthly or as needed; crew of 2-4 persons, use light utility truck.	None.
Emergency Response	Activities necessary to repair natural hazard, fire, or human-caused damages to line.	Equipment is similar to conducting routine maintenance, with use of similar equipment to complete repairs (e.g., helicopters for quick response)	Monitoring of new ground disturbance is anticipated and/or if the work takes place near the boundary of a known cultural resource subject to EFSC standards.

Operation and Maintenance Activity	Description of Activity	Schedule, Crew, Equipment	Monitoring Requirements
Fire Protection	All federal, state, and county laws, ordinances, rules, and regulations pertaining to fire prevention and suppression will be strictly adhered to.	Typical practices include brush clearing prior to work, stationing a water truck at the job site to keep the ground and vegetation moist in extreme fire conditions, enforcing red flag warnings, providing "fire behavior" training to all pertinent personnel, and keeping vehicles on or within designated roads or work areas.	Monitoring of new ground disturbance is anticipated and/or if the work takes place near the boundary of a known cultural resource subject to EFSC standards.

Note: Resource-specific measures, including monitoring where needed, will be developed in coordination with the ODOE, SHPO, and tribe(s), as applicable, for cultural resources subject to EFSC standards. The measures will be amended to the HPMP.

4.0 PREVIOUS RESEARCH AND CULTURAL RESOURCE TYPES IDENTIFIED WITHIN THE PROJECT AREA

This section discusses the identification of cultural resources during the Project’s planning and permitting phase. It also summarizes the cultural resource types identified within the Project area. Studies completed include a literature and records review, cultural resources pedestrian survey of the Project Site Boundary, a Visual Assessment of Historic Properties (VAHP), and ethnographic studies completed by the CTUIR and Shoshone-Paiute tribes. (At the time of this publication, the ethnographic studies are considered confidential and are unavailable to IPC.) The cultural resources pedestrian survey (Anderson et al. 2018) and the VAHP study (AECOM 2018) both include extensive cultural and historic contexts for the Project. Both studies are included as confidential attachments to Exhibit S of the ASC. An Enhanced Archaeological Survey, consisting of survey of inaccessible parcels, shovel probing, and testing, will occur after publication of this HPMP and receipt of the Site Certificate, but prior to construction activities.

4.1 Literature Review and Cultural Resources Pedestrian Survey

Prior to the initiation of cultural resource pedestrian surveys, a literature and records review was conducted of the analysis area. Available existing records of previously conducted surveys and recorded sites were retrieved from the Oregon SHPO’s inventory and site database, the CTUIR, THPO, the USFS, and applicable BLM field offices. The literature review presented in the technical report (confidential Attachment S-6) for the Project provides an in-depth discussion of the environmental and cultural contexts of the analysis area, including an overview of prehistory, ethnography, and history.

A series of cultural resource pedestrian surveys were conducted in an effort to field check and examine previously recorded resources and identify any unrecorded cultural resources within the Site Boundary. The entire Project Site Boundary has been inventoried except for areas to

which access has been denied, or with development precluding ground surface visibility (e.g., paved roads and highways, parking lots, and lawns), areas deemed hazardous (e.g., loose talus slopes, slippery bedrock exposures, deep streams, and electrical substations), or excessively steep (35 degree and greater) slopes. The latter areas (hazardous and steep areas) were examined visually from a safe distance, however, particularly for resources such as rock art, rock shelters, cairns, and any other apparent cultural resource or feature. Six pedestrian survey sessions of accessible private and public lands were conducted between the spring of 2011 and the summer of 2016. Areas of denied access will be subject to complete pedestrian survey during the Enhanced Archaeological Survey to be conducted after receipt of the site certificate, prior to facility construction.

4.2 Ethnographic Studies

To identify and protect contemporary and ongoing tribal use of culturally significant areas and/or sites, general information about sacred sites and other places of traditional cultural or religious importance to Native Americans or other cultural groups has been researched as part of the completion of the cultural context for the Project as well as the VAHP. The BLM has completed separate ethnographic studies of the direct analysis area in coordination with the CTUIR and Shoshone-Paiute Tribes of the Duck Valley Indian Reservation. The Burns Paiute Tribe is in the process of conducting a third ethnographic study. The confidential traditional use study completed by CTUIR in 2014 through the Section 106 process was provided to IPC on May 3, 2018 during an in-person meeting between ODOE, SHPO, CTUIR, and IPC regarding the EFSC site certificate process. The study (Engum 2014a, 2014b) has been incorporated, as appropriate, into the assessment of Project impacts. Additional formal and informal phone conversations have occurred between CTUIR and IPC since the May 3, 2018 meeting to further IPC's coordination efforts.

Many HPRCSITs and other cultural resources that could potentially be HPRCSITs were identified by Project studies as being crossed by the direct analysis area. Two formally evaluated HPRCSITs crossed by the direct analysis area are Sand Hollow Battleground and Sisupa (Engum 2014a, 2014b). Sand Hollow Battleground is the site of the largest battle of the Cayuse War, involving the First Oregon Rifle Regiment and the Umatilla, Cayuse, Palouse, and Walla Walla tribes and holds other aspects of significant to the CTUIR that are unrelated to the battle that occurred there (Engum 2014a, 2014b; Minthorn 2006; Mitchell 2003). Sisupa is the site of a campsite between the Columbia River and lone (Engum 2014a, 2014b; Hunn et al. 2015). These two resources were determined eligible for the NRHP by the U.S. Department of Defense (DOD 2015) and are historic properties subject to the EFSC standards.

Nisxt is a third formally evaluated HPRCSIT located on the Columbia River east of the Port of Morrow. This site was identified in a Traditional Use Study completed by the Yakama Nation under contract to the U.S. Army Corps of Engineers (Meninick, et al. 2014). The site is identified as a permanent winter village named for the greasewood found there. The U.S. Army Corps of Engineers determined that one component of the site is NRHP eligible. The site is located within the indirect analysis area.

IPC will continue to coordinate with interested tribes to determine any necessity to address conflicts with HPRCSITs or other traditional use sites that are subject to EFSC standards.

4.3 Visual Assessment of Historic Properties

A VAHP study was completed in a phased approach, including a reconnaissance level survey (RLS), completed in September 2015, and an intensive level survey (ILS), completed in

February 2018. The RLS and ILS are primarily designed to identify potential effects to built environment or aboveground resources. Fieldwork for the ILS was conducted between October 2014 and October 2016. Additional RLS and ILS work remains on CTUIR lands. The entire Project Site Boundary and viewshed have been inventoried except for areas to which access has been denied and CTUIR lands. Areas of denied access and the CTUIR lands will be subject to complete survey after receipt of the site certificate, but prior to facility construction and only if access is granted from the applicable property owners. The ILS analyzes those properties from the RLS that have sufficient integrity, for which an NRHP criterion might apply, and that have the potential to be affected by the Project (i.e. the Project would be visible from the resource). The history of each property in the ILS was documented and then comparatively analyzed against the historic context of the Project. This provides a framework for determining whether the resource meets any of the NRHP Criteria for Evaluation.

The RLS fieldwork identified 764 built environment resources in Oregon, including multiple crossings of historic trails and pre-contact resources, such as quarries and cairns. The ILS study addressed 229 of these resources. These resources included NRHP-listed resources as well as resources that were recommended for additional study or NRHP evaluation, or were unevaluated resources, archaeological sites with aboveground features, or were newly identified following an updated literature search and data gap analysis to cover portions of the Project that were not previously identified in the RLS. Of the 229 resources, potential adverse effects are anticipated for 39 resources. Fourteen of the 39 resources require further consultation and research before making a recommendation on Project effect avoidance, minimization, and/or mitigation strategies. The Project will cross three historic properties with the potential for direct adverse effects. A list of sites with potential adverse effects is provided in Table 4-1. The majority of potential adverse effects could occur to stacked rock features/cairns. Due to the difficulty in dating and attributing cultural origin, additional consultation with ODOE, SHPO, and tribes will be conducted as an interim step towards determining if mitigation would be appropriate. Resource-specific management and/or treatment plans will be developed as needed as a result of consultations.

Table 4-1. Project Effects to Aboveground Resources

ID Number	Resource Name	Effect
CFR 1064	Vey Ranch	Potential Adverse Effect
35MW1	Midden	Further research and consultation necessary with Tribes and/or Federal Agency
35MW2	Camp, shell midden, lithic scatter	Further research and consultation necessary with Tribes and/or Federal Agency
35MW11	Midden	Further research and consultation necessary with Tribes and/or Federal Agency
SL-MO-001, SL-MO-005	Sand Hollow Battle Ground - (Associated Report #26196)	Further research and consultation with CTUIR; off-site mitigation
35MW248	Rock Cairns	Potential Adverse Effect

ID Number	Resource Name	Effect
SL-MO-003	Map A2: Nisxt (Associated Report #26592)	Further research and consultation with Confederated Tribes of Yakam Nation necessary
SL-MO-004	Map B2, C2, C3: Sisupa (Associated Report #26196)	Further research and consultation with CTUIR necessary
UP-102	Two Log Cabins	Further research and consultation with CTUIR necessary
UP-103	Buckhorn Cabin	Further research and consultation with CTUIR necessary
UP-106	Historic Cabin	Further research and consultation with CTUIR necessary
SL-UM-010	Historic Lookout Tower	Further research and consultation with CTUIR necessary
Range Unit 12 Site 1	Rock Cairn	Further research and consultation with CTUIR necessary
Range Unit 12 Site 2	Rock Cairn	Further research and consultation with CTUIR necessary
B2H-UM-006	Daly Wagon Road	Potential Adverse Effect
35UN459	Rock Cairn	Potential Adverse Effect
35UN493	Rock Cairn	Potential Adverse Effect
B2H-BA-282	Oregon Trail ACEC - Virtue Flat segment and Flagstaff Hill	Potential Adverse Effect
B2H-BA-285 (3B2H-CH-05)	Oregon Trail ACEC - Straw Ranch 1 and 2	Potential Adverse Effect
3B2H-CH-05	Oregon Trail Segment	Potential Adverse Effect
B2H-BA-327	Goodale's/Sparta Trail	Potential Adverse Effect
0503050334SI	Rock cairn, rock alignment	Potential Adverse Effect
14S44E14-2	Rock cairns, rock alignment, lithic scatter; Three Stone Rock Stacks	Potential Adverse Effect
35BA372	Rock Cairn	Potential Adverse Effect
35BA388	Rock Alignment	Potential Adverse Effect
35BA1423	Hunting blind rock stacks. Identified by CTUIR informant near ODOT borrow pit	Potential Adverse Effect
B2H-MA-041	Oregon Trail ACEC - Alkali Springs Segment	Potential Adverse Effect
B2H-MA-042	Oregon Trail ACEC-Birch Creek segment	Potential Adverse Effect
4B2H-EK-31	Benson Reservoir	Potential Adverse Effect
4B2H-EK-41	Oregon Trail Segment	Potential Adverse Effect
6B2H-RP-09	Oregon Trail Segment	Potential Adverse Effect
35ML550	Ali-Alk Rock shelter	Potential Adverse Effect
35ML1549	SM Site-2 (Stacked Rock Feature)	Potential Adverse Effect

ID Number	Resource Name	Effect
35ML1550	SM Site-3 (Stacked Rock Feature)	Potential Adverse Effect
35ML1552	SM Site-5 (Stacked Rock Feature)	Potential Adverse Effect
35ML1553	SM Site-6 (Stacked Rock Feature)	Potential Adverse Effect
35ML552	Ali-Alk Stacked Stone Rings	Potential Adverse Effect
35ML1959	Rock Cairn	Potential Adverse Effect
35ML1960	Rock Cairn	Potential Adverse Effect

4.3.1.1 Oregon Trail

This section provides an overview of resources identified by the ILS as associated with the Oregon Trail. Some of the resources discussed in this section are also mentioned in the VAHP section above, but are presented in summary form here to provide a unified discussion of this significant resource.

The evaluation of segments, sites, and side trails associated with the Oregon Trail was performed consistent with the currently proposed Multiple Property Documentation Form (MPDF) for the Oregon Trail, Oregon 1840-1880 as well as *Guidance for Recording and Evaluating Linear Cultural Resources* (Oregon SHPO 2013). The MPDF has been approved by the Oregon State Advisory Commission on Historic Preservation, but has yet to be approved by the Keeper of the National Register. The draft MPDF provides a framework for evaluating the various property types associated with the Oregon Trail in the State of Oregon that could be buildings, structures, objects, or sites, as well as districts. The MPDF also considers the Oregon Trail a linear historic district (in its totality) that contains contributing and non-contributing resources located within its historic boundaries. The Oregon Trail is also considered to be significant at the national level and has been designated as a National Historic Trail (NHT).

The MPDF discusses several Property Types associated with the Oregon Trail and specifically discusses the associated resources that fall under this typology. The following is a list of MPDF Property Types and associated resources located within the Visual Assessment analysis area: river crossings, fords, and ferries; intersecting routes; Indian agencies/reservations; Euro-American towns; springs; mountain ascents and descents; valleys; landmarks; battle sites; and important camping sites.

A total of 37 resources associated with the Oregon Trail were assessed during the VAHP studies. Of the 37 Oregon Trail resources, eleven were identified as being within the Project Site Boundary (3B2H-CH-05, 4B2H-EK-02, 4B2H-EK-41, 6B2H-RP-09, 5B2H-SA-01, B2H-UN-005, B2H-BA-282, 35MW227, 35UN74, B2H-MA-003, B2H-MA-007). Twenty-eight NRHP-eligible Oregon Trail-related resources were recommended for the visual impacts assessment and following that analysis eight had the potential to be adversely affected by the Project. Table 4-2 summarizes the adversely impacted resources. Resource-specific mitigation and/or treatment plans will be determined, as necessary, in consultation with ODOE and SHPO.

Table 4-2. Project Impacts to Oregon Trail Resources

Temporary Resource Number	Resource Name	Effect
SL-MO-001, SL-MO-005	Sand Hollow Battle Ground (Associated SHPO Report #26196) (for its associations with Oregon Trail)	Potential Adverse Effect

Temporary Resource Number	Resource Name	Effect
B2H-BA-282	Oregon Trail ACEC - Virtue Flat segment and Flagstaff Hill (Flagstaff Hill component affected)	Potential Adverse Effect
3B2H-CH-05	Oregon Trail ACEC - Straw Ranch 1 and 2	Potential Adverse Effect
B2H-BA-285	Oregon Trail Segment (near Straw Ranch)	Potential Adverse Effect (Project Site Boundary)
B2H-BA-327	Goodale's/Sparta Trail	Potential Adverse Effect
B2H-MA-041	Oregon Trail ACEC - Alkali Springs Segment	Potential Adverse Effect
6B2H-RP-09	Oregon Trail Segment	Potential Adverse Effect (Project Site Boundary)
B2H-MA-042	Oregon Trail ACEC - Birch Creek segment	Potential Adverse Effect
4B2H-EK-41	Oregon Trail Segment	Potential Adverse Effect (Project Site Boundary)

In addition to considering the potential for resourced-specific impacts, an analysis that considers the potential cumulative impacts to Oregon Trail resources was prepared.

As an overview of the cumulative impacts analysis, of the 177.97 miles of the Congressionally Designated Route of the Oregon NHT, 43.89 miles would have a potential view that is within 0.5 mile of the Project Site Boundary. For "Contributing Trail Segments" or segments of the Oregon Trail that have been previously identified by surveys or listed on the NRHP, approximately 89.35 miles of these segments lies within the 5 miles of the Project centerline and about 27.43 miles would have a potential view that is within 0.5 mile of the Project Site Boundary.

While the cumulative effect data provide a general indication of the magnitude for indirect impacts, the resource-specific analysis performed during the ILS is more precise in its assessment of impacts to contributing resources associated with the Oregon Trail and informs Project planning in an effort to avoid, reduce, or mitigate impacts.

4.4 Cultural Resources Types Identified by Surveys

Table 4-3 provides a summary of the different cultural resources found by the Project's surveys in Oregon. These definitions have been developed in coordination with the BLM as part of the Project's Section 106 process and conform to the agency's GIS requirements. Studies conducted under the Project's Section 106 compliance efforts have been used to support analyses for the EFSC process.

Table 4-3. Cultural Resources Identified within the Direct Analysis Area

Resource Type	#	Resource Type	#
Pre-Contact Archaeological Sites		Historic/Aboveground Sites	
Cairn(s)	16	Railroad – UPRR (3 segments) ²	1
Cairn(s) & Hunting Blind	3	Ranching	1
Cairn(s) & Lithic Scatter	1	Road	1
Cairn(s) & Lithic/Tool Scatter	1	Survey Marker	3
Hunting Blind	1	Utility Line	1
Lithic Scatter	9	Utility Line & Water Conveyance	1
Lithic/Tool Scatter	23	Water Conveyance	7
Quarry	7	Water Conveyance – South Canal (1 segment) ³	1
Temporary Camp	1	Water Conveyance – Vale Oregon Main Canal (2 segments) ³	1
Multicomponent Archaeological Sites		Undetermined Archaeological Sites	
Cairn(s), Quarry, & Homestead	1	Cairn(s)	1
Lithic Scatter & Refuse Scatter	2	Rock Alignment	1
Lithic/Tool Scatter & Refuse Scatter	1	Pre-Contact Archaeological Objects	
Lithic/Tool Scatter, Homestead, & Refuse Scatter	1	Biface(s)	4
Lithic/Tool Scatter, Ranching, Water Conveyance	1	Biface(s) & Debitage	3
Quarry & Refuse Scatter	1	Core(s)	6
Quarry, Refuse Scatter, & Water Conveyance	1	Core(s) & Debitage	2
Temporary Camp & Ranching	1	Core(s), Debitage, & Tested Cobble(s)	1
Historic Archaeological Sites		Core(s), Debitage, & Utilized Flake(s)	2
Agriculture	6	Debitage	40
Agriculture & Other	1	Debitage & Tested Cobble(s)	1
Agriculture, Ranching	1	Debitage & Tool(s)	2
Cairn(s)	1	Debitage & Utilized Flake(s)	2
Cairn(s) & Trail	1	Other	1
Farmstead (in Ruin)	1	Projectile Point(s)	7
Homestead (in Ruin)	4	Utilized Flake(s)	6
Logging/Railroad (Abandoned)	1	Multicomponent Archaeological Objects	
Mining	9	Debitage & Refuse	2
Railroad – UPRR (2 segments) (in Ruin) ²	1	Debitage, Preform(s), & Refuse	1
Ranching	5	Debitage, Tested Cobble(s), & Refuse	1
Refuse Scatter	14	Historic Archaeological Objects	
Refuse Scatter & Structure (in Ruin)	1	Agriculture	5
Road (Abandoned)	6	Other	1
Structure (in Ruin)	1	Refuse	22
Trail – Oregon Trail (5 segments) ³	1		
Utility Line	3		
Water Conveyance (Abandoned)	5		

5.0 METHODS FOR DETERMINATION OF NRHP ELIGIBILITY AND EFFECTS

This section discusses the methods to be used to determine NRHP-eligibility and Project effects to resources. Per EFSC standards, significant effects may occur as a result of impacts on historic properties (NRHP-listed or -eligible resources), archaeological sites on private or state lands, or archaeological objects (also referred to here as isolated finds) on private lands. These same methods will be used if any previously unidentified cultural resources are discovered within the Project Site Boundary.

5.1 Determination of NRHP Eligibility

The cultural resources studies completed to date by IPC contain recommendations for NRHP eligibility for resources in the Project Site Boundary and Visual Assessment analysis area. These recommendations will be reviewed and accepted or modified by SHPO. For each resource that is within the Project Site Boundary and Visual Assessment analysis area, the SHPO will determine NRHP eligibility based on the recommendations. It should be noted that for sites that may be significant to tribes, IPC will coordinate with the affiliated tribe to make an appropriate NRHP eligibility recommendation. IPC will treat all unevaluated cultural resources as though they are NRHP-eligible and will try to avoid all unevaluated sites. If avoidance is not feasible, resource eligibility will be evaluated, which may require subsurface testing, additional research, and/or consultation with tribes or historic preservation groups to determine the significance of the site.

The CRT will make NRHP-eligibility recommendations for cultural resources identified during the construction or post-construction phases using the same criteria outlined in the Project's studies (Anderson et al. 2018; AECOM 2018).

5.2 Determination of Effects

Each historic property, archaeological site, and archaeological object subject to the EFSC standards has been or will be evaluated to determine if the Project will have a significant impact on the resource. Direct impacts may occur as a result of direct disturbance of NRHP-listed or -eligible cultural resources or archaeological sites within the direct analysis area or archaeological objects on private lands within the direct analysis area. Given the non-renewable nature of cultural resources, these impacts that occur through ground disturbance would be permanent. Indirect impacts may occur as a result of new construction within the viewshed of NRHP-listed or -eligible cultural resources with aboveground component or cultural resources where the surrounding viewshed plays an integral role in the expressing the resource's significance or in its use. This includes resources such as trails, buildings, and cairns, as well as TCPs. Impacts will only occur for those resources where the viewshed, setting, and landscape contributes to the significance or quality of use of the resource.

While IPC may make recommendations of NRHP eligibility and impact significance, the SHPO will make such determinations. For resources that may have significance to tribes, the CRT and IPC will coordinate with the appropriate tribe(s) to make eligibility and impact significance recommendations. IPC will provide consulted parties with the results of the finding. In addition, the ODOE will utilize the impact methodologies discussed in Attachments S-2, S-7, and S-10 to Exhibit S to determine the indirect visual effects of the proposed Project on cultural resources meeting the EFSC standards and with aboveground features or are of traditional significance to tribes. In addition, IPC in coordination with appropriate tribes will broadly assess cumulative effects in order to identify reasonably foreseeable, potentially adverse effects as a result of the proposed Project.

The determinations of effects to cultural resources subject to the EFSC standards will serve as the basis for IPC's development of resource-specific avoidance, minimization, or mitigation measures presented for review and approval in future resource-specific treatment and/or mitigation plans.

6.0 AVOIDANCE AND PROPOSED MITIGATION PLAN

Cultural resources meeting the EFSC standards (historic properties, archaeological sites on state or private lands, and archaeological objects on private lands) will be avoided, protected, and/or mitigated if avoidance is not possible. Justification for not avoiding any such resources will be provided to ODOE. If impacts are unavoidable, efforts will be aimed at reducing or compensating for those impacts. Impacted resources will require mitigation to reduce impacts to less than significant. The appropriate mitigation measure(s) depends on a number of factors, including the applicable criteria for NRHP eligibility and significance to a tribe(s). Following the identification of impacts and the development of appropriate mitigation measures, resource-specific mitigation plans will be prepared and included as Appendix B to this HPMP.

This section provides a generalized framework and approach IPC will assume for minimizing and mitigating significant impacts to cultural resources subject to the EFSC standards.

6.1 Avoidance

IPC has designed the Project to avoid significant cultural resources to the extent feasible. Cultural resources were identified within or near the Project area early in Project planning through literature reviews and Project-specific surveys. The Project design has been altered where feasible to avoid effects to significant cultural resources identified by the studies completed for the Project, and IPC is committed to a similar process for unanticipated or inadvertent discoveries during construction. Resource-specific treatment and mitigation plans will be developed in consultation with the ODOE and SHPO, and in coordination with appropriate tribe(s), so as to reduce the impacts to less than significant (see Appendix B).

In many cases, direct effects to significant cultural resources identified during the Project planning phase were avoided by relocating a Project facility, but the proposed facility may be installed near the resource. In order to avoid physical damage to the resource during construction, it and a buffer will be marked for avoidance by flagging, fencing, or staking. The buffer will be established on a resource-specific and basis determined through consultation with ODOE and SHPO, and when necessary, the appropriate tribes. In some cases, with large sites, complexes of sites, or districts/landscapes, only that part of the site near the construction activities will need to be marked for avoidance.

Construction monitoring to ensure successful site avoidance as planned and to watch for subsurface discoveries during grading, blading, excavation, and other initial mechanical ground-disturbing activities, will be conducted as detailed in the Monitoring Plan (see Section 7).

During Project construction, reclamation, and O&M activities, it is possible that surface and/or subsurface resources, not identified during pedestrian surveys, could be discovered. Section 8, the IDP, details the required response to such a discovery.

6.2 General Recommended Mitigation Measures for Cultural Resources Subject to the EFSC Standards

Based on the results of the archaeological and above ground resource surveys and avoidance efforts, it is unlikely that significant impacts to NRHP-eligible and listed historic properties can be entirely avoided by this Project. Even if the Project could be redesigned to avoid all direct effects

through ground disturbance, the substantial change in the setting of some important resources where setting is an aspect of integrity, including NHTs, cannot be entirely avoided and has already been identified in the survey reports. In addition, there may be resources that due to their critical location or size cannot be entirely avoided. The mitigation measures discussed in this section offer general guidance but do not hinder alternative approaches, site-specific mitigation for historic properties will be developed in coordination with the ODOE, SHPO, the tribe(s), and/or historic preservation societies (as applicable).

6.2.1 General Recommended Mitigation for Direct Significant Impacts

The Project has been designed to avoid direct effects to resources recommended eligible for or listed on the NRHP, including significant archaeological sites, historic buildings, and trails. Resource-specific mitigation measures for significant impacts will be addressed through resource-specific treatment and/or mitigation plans (Appendix B). However, this section provides a generalized approach to mitigate for direct significant impacts. These mitigation measures may or may not be appropriate for all directly impacted resources. Appropriate resource-specific mitigation will be determined through consultation with ODOE and SHPO, as well as tribes and historic preservation societies as appropriate.

The most common anticipated direct impact on cultural resources subject to the EFSC standards consists of direct disturbance of archaeological resources within the construction footprint. After all reasonable avoidance and minimization measures have been implemented and a significant impact is still considered probable, mitigation would likely include data recovery. This may include excavation, research, and analysis, as summarized in Table 6-1. Appropriate alternative methods may be developed in coordination with ODOE, SHPO, tribe(s), and/or historic preservation societies.

Table 6-1. Example Data Recovery Methods for Unavoidable Direct Impacts*

Time Period of Resource	Example Resource Types	Potential Data Recovery for Resources without a Subsurface Component	Potential Data Recovery for Resources with Subsurface Component(s)
Pre-contact	Lithic scatters, campsites, hearths, and quarries	<ul style="list-style-type: none"> • Surface collection or in-field artifact analysis and recording • Detailed surface mapping • Geomorphological studies • Photo documentation • Curation 	<ul style="list-style-type: none"> • Surface collection or in-field artifact analysis and recording • Detailed surface mapping • Geomorphological studies • Controlled excavation • Laboratory analysis • Photo documentation • Curation
Historic Era	Refuse scatters, mining sites, homesteads	<ul style="list-style-type: none"> • Archival research • Surface collection or in-field artifact analysis • Detailed surface mapping • Photo documentation 	<ul style="list-style-type: none"> • Archival research • Surface collection or in-field artifact analysis • Detailed surface mapping • Controlled scientific excavation • Laboratory analysis • Photo documentation

* Table intended as starting point for consultations to determine appropriate mitigation measures to reduce impacts. Resource types listed are not exhaustive.

When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering scientific information from and about the resource, will be prepared. Such plans will be drafted in coordination with ODOE, SHPO, and appropriate tribe(s). Planning for data recovery excavation to mitigate the loss of substantial and significant archaeological resources will be guided by data gathered during the test investigations and by the research design. Data recovery activities as management for

unavoidable direct impacts on cultural resources subject to the EFSC standards would be confined to the construction footprint. The appropriate state permits will be acquired to conduct all field work.

The data recovery plan will also include excavation, analysis, collection, and cataloging methods. Once data recovery and analysis are completed, the results will be provided in a report prepared by the Cultural Resources Specialist (CRS; see Section 7.1.1 for reporting and review).

In addition to data recovery, off-site mitigation may also be proposed and approved. Typical off-site mitigation measures can include methods described below for indirect effects (see Section 6.2.2).

6.2.1.1 General Recommended Mitigation Measures for Direct Impacts to Specific Resource Types

Based on the cultural resource pedestrian survey conducted for the Project (Anderson et al. 2018), the following site types (Table 6-2) have been identified within the construction footprint or Project Site Boundary. If avoidance is not feasible, minimization and/or mitigation measures will be implemented. This section presents a general framework for such strategies by cultural resource site type. Resource-specific mitigation or treatment plans will be guided by the Oregon SHPO's *Guidelines for Conducting Field Archaeology in Oregon* (2013) and developed in coordination with ODOE, SHPO, tribe(s), and/or historic preservation societies, as applicable. Table 6-2 lists potential minimization and mitigation measures for direct effects to the specific resource site types identified by Anderson et al. (2018). This list is not all-inclusive and other resource-specific mitigation measures may be appropriate. The example mitigation measures noted in this table would be deployed for direct significant impacts to cultural resources subject to the EFSC standard.

Table 6-2. Framework for Potential Minimization and Mitigation of Direct Impacts to Specific Cultural Resource Site Types Identified within the Direct Analysis Area

Site Type	Potential Minimization/Mitigation Measure
Pre-Contact Sites	
Lithic Scatter	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Lithic/Tool Scatter	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Quarry	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Temporary Camp	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Multicomponent Sites	
Lithic Scatter & Refuse Scatter	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Lithic/Tool Scatter & Refuse Scatter	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).

Site Type	Potential Minimization/Mitigation Measure
Lithic/Tool Scatter, Ranching Complex, Water Conveyance	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Possible Rock Art, Utility Line, and Water Conveyance	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Quarry & Refuse Scatter	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Quarry, Water Conveyance, & Refuse Scatter	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Temporary Camp & Water Conveyance	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Temporary Camp, Lithic/Tool Scatter, Refuse Scatter, and Ranching	Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Historic-Era Sites	
Agriculture	Update recordation (if necessary), data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Bridge	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Homestead	Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Homestead/Ranching	Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Logging/Railroad	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Mining	Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Railroad	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Railroad & Utility Line	Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Ranching	Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Refuse Scatter	Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).

Site Type	Potential Minimization/Mitigation Measure
Road	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Structure	Update recordation (if necessary, HABS/HAER/HALS documentation, repair, rehabilitation, or restoration (if applicable)). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Survey Marker	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Survey Marker & Refuse	Update recordation (if necessary, data recovery (if applicable)). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Trail Segment	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment.
Trail Segment & Utility Line	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment.
Utility Line	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Utility Line & Water Conveyance	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Water Conveyance	Update recordation (if necessary). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Water Conveyance & Bridge	Update recordation (if necessary, HABS/HAER/HALS documentation, repair, rehabilitation, or restoration (if applicable)). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).
Undetermined Sites	
Rock Circle	Update recordation (if necessary, data recovery (if applicable)). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).

6.2.2 General Recommended Mitigation for Indirect Significant Impacts

Mitigation of cultural resources subject to the EFSC standards that are significantly indirectly impacted by the construction, reclamation, or O&M of the Project may include historic documentation, photographic documentation (modern and historic), collection of oral histories, or architectural, landscape, or engineering documentation. As with significant direct impacts, resource-specific mitigation measures for significant indirect impacts will be addressed through resource-specific treatment and/or mitigation plans (Appendix B). However, this section provides a generalized approach to mitigate for significant indirect impacts. These mitigations may or may not be appropriate to all indirectly impacted resources. Appropriate resource-specific mitigation will be determined through consultation with ODOE and SHPO, as well as tribes and historic preservation societies as appropriate.

The most common anticipated indirect impact on cultural resources subject to the EFSC standards consists of visual intrusion in a resource's landscape (where that landscape or view contributes to resource's significance). Table 6-3 lists potential management methods for

unavoidable indirect effects to cultural resources subject to the EFSC standards. Table 6-4 lists potential minimization and mitigation measures for indirect effects to the specific aboveground resource site types identified by AECOM (2017). Actual management will be determined through coordination with ODOE, SHPO, appropriate tribe(s), and/or historic preservation societies.

Table 6-3. Example Management Methods for Significant Indirect Impacts

Resource Category*	Example Resource Types*	Potential Management Methods for Significant Indirect Impacts
Trails (NHT, stage trails, freight roads, etc.)	<ul style="list-style-type: none"> Trail remnants/ segments Associated trail sites or features (stations, burials, inscriptions) 	<ul style="list-style-type: none"> Recording—including HABS/HAER/HALS Additional literature or archival review (e.g. historic maps, local papers) Remote sensing Purchase of conservation easement or other land protection where trail traces exist Historic trails restoration within and outside Project area Public signage, publication/print/media, and/or interpretive plans Design Modification
Historic Buildings and Structures	<ul style="list-style-type: none"> Farm and ranch sites/homesteads Historic districts Utility lines Water conveyance systems Mining sites Bridges, etc. 	<ul style="list-style-type: none"> Photo documentation and scale drawings National Register Nomination (if owner consents) HABS/HAER/HALS documentation Additional archival and literature review Restoration of historic building or structure Relocation of historic building or structure Public interpretation (with owner permission)
Historic Property of Religious or Cultural Significance to Indian Tribes (TCPs; limited to those subject to EFSC standards)	<ul style="list-style-type: none"> Ceremonial areas Vision quest sites Hunting and gathering areas 	<ul style="list-style-type: none"> Additional literature/archival review Ethnographic documentation Oral histories Public archaeology funding As recommended by impacted tribes

* Resource categories and types listed is not an exhaustive list.

HABS – Historic American Building Survey; HAER – Historic American Engineering Record; HALS – Historic American Landscape Survey

Table 6-4. Framework for Potential Minimization and Mitigation for Indirect and Direct Impacts to Specific Aboveground Site Types Identified within the Analysis Area

Built Environment Resource Type	Potential Minimization/ Mitigation (indirect and direct impacts)
Trails (Oregon NHT, Lewis and Clark NHT, stage trails, freight roads, etc.)	Recordation in HABS/HAER/HALS; metal detector surveys, additional historical research, information pamphlets, trail segment management plans; conservation easements; land acquisition; National Register nomination
Historic Buildings (Store, bank, Cabins, Homestead, etc.)	Recordation in HABS/HAER/HALS; restoration of historic building; relocation of historic building; oral histories; public interpretation; print publication; video media publication; National Register nomination

Built Environment Resource Type	Potential Minimization/ Mitigation (indirect and direct impacts)
Historic Structures (Railroad, mining, resources, bridge, utility lines, water conveyance, etc.)	Recordation in HABS/HAER/HALS; restoration of historic structure; relocation of historic structure; oral histories; public interpretation; print/media publication; National Register nomination
Historic Districts (residential, commercial, industrial, agricultural)	Historic district design guidelines for utilities, repair and maintenance guidelines, print publication, video media publication (website/podcast/video); National Register nomination
Archaeological resources with above ground features (Cemeteries, cairns, rock alignments, house pits, hunting blinds, middens, camp, quarry, rock art, rock shelter	Ethnographic documentation; resource management plan; recordation in HABS/HAER/HALS (if appropriate); partnership and funding for public archaeology projects; print publication, video media publication (website/podcast/video)
Traditional Cultural Properties (Ceremonial areas, vision quest, or gathering areas, etc.)	Ethnographic documentation; resource management plan; recordation; oral histories, etc.

Note: Resource-specific mitigation will be developed as appropriate in coordination with tribe(s), ODOE, and SHPO to resolve adverse impacts to sites that may not fall under the categories above.
HABS – Historic American Building Survey; HAER – Historic American Engineering Record; HALS – Historic American Landscape Survey

7.0 MONITORING PLAN

This Monitoring Plan (MP) specifically addresses monitoring of cultural resources subject to the EFSC standards and provides details regarding roles and responsibilities of various personnel in the field. OAR 345-021-0010(1)(s)(E) requires the development of this MP as part of the HPMP for implementation during the Project phases. This section presents the roles and responsibilities of the CRT and specifies the monitoring procedures to be followed during construction activities.

The purpose of this MP is to specify:

- How avoidance of known resources will be ensured and documented;
- How monitors will interact with other environmental compliance staff and construction personnel; and
- How monitors will employ the IDP.

This MP, as part of the Project-wide HPMP, will be supplemented with a set of confidential Project maps of the selected route and design (Appendix C – Confidential Project Maps) that will illustrate resource-specific avoidance details, including monitoring of areas determined to have a high probability for buried cultural deposits.

7.1 Cultural Resources Team

The CRT is a part of IPC’s environmental inspection team and will report to and coordinate with the Construction Contractor’s Environmental Manager (CCEM).

The CRT will conduct cultural resource field monitoring, ensure compliance with requirements within the HPMP, and implement treatments, as applicable. Such activities will be inspected and coordinated by IPC and reported to ODOE, SHPO, and, as necessary, appropriate tribe(s) and/or historical societies.

The following sections describe the qualifications, roles, and responsibilities of each member of the CRT.

7.1.1 Cultural Resources Specialist (Principal Investigator)

Qualifications—The Cultural Resources Specialist (CRS) must have a graduate degree in anthropology/archaeology or a closely related field, and meet the Secretary of the Interior's Professional Qualifications Standards for archaeology, history, or architectural history as published in Title 36 Code of Federal Regulations 61. In addition, the CRS must have:

- At least 5 years of archaeological resource mitigation and field experience; and
- At least 3 years of experience in a decision-making capacity regarding cultural resources on construction projects, and the appropriate training and experience to knowledgeably make recommendations regarding the significance of cultural resources.

IPC will provide written documentation, such as a resume, on the qualifications of the CRS to the SHPO, ODOE, Compliance Inspection Contractor (CIC), and IPC's Environmental Manager(s) no less than 75 days prior to the start of ground disturbance. At least 15 days prior to ground disturbance, the CRS will provide a letter to the CIC naming Cultural Resource Monitors (CRMs), including sufficient alternates to account for absences, for the Project demonstrating that the identified CRMs meet the minimum qualifications for cultural resource monitoring.

Responsibilities—The CRS will be the primary point of contact for the CRT. The CRS will coordinate directly with the ODOE and CCEM and with the CIC. The CIC will act as the conduit to the ODOE. The CRS will be responsible for cultural resource-related notifications to the ODOE and CCEM, who will be responsible for notifying IPC. IPC will coordinate with the appropriate tribe(s) regarding applicable finds (i.e., pre-contact resources, Native American burials). The CRS will be responsible for the analysis and the overall quality of the monitoring reports and discovery reports, if any. The CRS is responsible for the planning, execution, completion, and quality of the cultural resources monitoring tasks undertaken prior to and during the Project construction.

The CRS will be responsible for obtaining construction plans and schedules from the Construction Contractor, for tasking field personnel to monitor construction, and for evaluation or conduct of data recovery (e.g., excavations) for any unanticipated or inadvertent discoveries during construction.

The CRS will direct the preparations for and execution of day-to-day construction monitoring activities, which will include the following actions:

- Present the cultural resources section of the environmental training program (an employee training program for all construction personnel prior to ground-disturbing activities). Cultural resource training, developed in consultation with the ODOE and in coordination with the tribe(s), will include the proper procedures to follow if cultural resources are encountered during Project ground disturbance. The environmental training program may include an approved video, training pamphlets, and/or other media resources.
- Direct the CRM(s) regarding where and when to monitor Project construction activities.
- Review the CRM's daily monitoring log(s).
- Prepare a monthly summary report during active construction on the progress or status of cultural resources-related activities and submit to the CIC, who will submit the report to the ODOE and, if requested, affiliated tribes. The summary will include any new

cultural resource forms for any finds identified under the monitoring program (see Appendix D).

- Notify the CCEM, the CIC, ODOE, and, as requested, affiliated tribes by telephone or email of unanticipated or inadvertent discoveries of cultural resources within 24 hours of becoming aware of the situation.
- Notify the CCEM, the CIC, ODOE, and, as requested, affiliated tribes by telephone or email of any incidents of noncompliance related to cultural resources within 24 hours of becoming aware of the situation, and recommend corrective action to resolve the problem or achieve compliance.
- Obtain additional technical specialists or additional monitors, if warranted or required.
- Oversee the implementation and/or implement the IDP (Section 8).
- Oversee the completion of resource forms and other appropriate documentation of discoveries by members of the CRT.
- If a discovered cultural resource is determined eligible for the NRHP, the CRS will consult with the ODOE and the CCEM. The CCEM will be responsible for coordinating with IPC's Environmental Manager(s). The CRS will develop a treatment plan for the historic property if it is not covered by the HPMP. The ODOE will be responsible for coordinating with SHPO. IPC will be responsible for coordinating with the appropriate tribe if the resource is determined to be associated with Native Americans (pre-contact or historic).
- Determine the scope, methods, and techniques to be used for test investigations or data recovery and analysis of artifacts and other materials, as applicable.
- Oversee the completion of any required test excavations or data recovery excavations, and any curation.
- Oversee the completion of field analysis, curation, and reports of tests excavations, data recovery excavations, and ensure that the reports meet state requirements and the appropriate SHPO standards for completeness and quality.
- Oversee the completion of the final mitigation and monitoring report, post-construction.

7.1.2 Cultural Resource Monitors

A Lead CRM will be assigned by the CRS to direct daily monitoring activities of other CRMs. CRMs will conduct the daily cultural resource construction monitoring as specified in the HPMP. Preference will be given to monitors who are familiar with the types of historic and pre-contact resources in the area. The qualifications and responsibilities of the CRM are as follows.

Qualifications—The Lead CRM will have a graduate degree in anthropology/archaeology or a closely related field; at least 2 years of experience conducting archaeological fieldwork under direction of a Professional Archaeologist with at least 3 months of archaeological construction field and monitoring experience in the region. Other CRMs will have an undergraduate degree, be under the direct supervision of the Lead CRM and CRS, and have at least 2 years of experience conducting archaeological fieldwork under direction of a Professional Archaeologist with at least 3 months of archaeological construction field and monitoring experience in the region.

Responsibilities—The Lead CRM will be present full time at the Project construction site, as directed by the CRS, to oversee and direct the daily monitoring task of the CRMs. The CRMs will watch ground-disturbing construction activities and inspect cleared ground and excavation areas for signs of previously undiscovered cultural resources during construction as indicated in the HPMP or until monitoring reduction has been approved by the ODOE.

Prior to the start of construction or beginning of monitoring duties, all CRM staff will be trained in the consistent and accurate identification and recording of historic trails (e.g., Oregon NHT) and other local resource types within the Project region.

The CRM will provide daily documentation of construction activities and any findings. The monitor will prepare a daily monitoring log (see Appendix E) briefly describing the field conditions, construction progress and activities, non-compliance activities, and record of any finds of archaeological material.

The CRM will be responsible for implementing the requirements outlined in the environmental training program, HPMP, and IDP. If the CRM or other construction personnel discover cultural resource finds during construction, the CRM will have authority to halt construction in the vicinity of the find and will notify the CRS.

7.2 Potential Additional Cultural Support Staff

If the CRS and/or CRM(s) are needed in other areas where construction is continuing and ongoing, and/or in an effort to complete the work within a scheduled amount of time, it may be necessary for IPC to acquire additional field staff in the event of an unexpected data recovery effort or resource-specific treatment. The following additional staff may be acquired, so as to avoid removing CRMs from their monitoring duties. All field crews will work under the supervision of the CRS.

7.2.1 Field Director

Qualifications—The Field Director will have a graduate degree in Anthropology/Archaeology, or a closely related field, and meet the requirements of the appropriate Oregon state permit for Qualified Archaeologists. Additionally, the Field Director should have at least 1 year of experience directing field work with at least 3 months of experience in the region and 4 months of experience with comparable cultural resource types and in similar cultural contexts and environmental settings.

Responsibilities—The Field Director, under the supervision of the CRS, will be responsible for the day-to-day activities of the testing and data recovery investigations, including management of field personnel and coordination of crews. The Field Director will also be responsible for compiling and ensuring the quality of the field data on a daily basis. Additionally, the Field Director will coordinate the work of any sub-consultants or other contractors participating in the cultural resources field investigations, and will be responsible for implementing the requirements of the environmental training for the crew, including daily safety briefings.

7.2.2 Crew Chiefs

Qualifications—The Crew Chief(s) will have an undergraduate degree in anthropology/archaeology, or a related field, and at least 1 year of experience as an archaeological crew chief with at least 3 months of experience in the region and 4 months of experience with comparable cultural resources in similar cultural contexts and environmental settings.

Responsibilities—The Crew Chief(s), in consultation with the Field Director, will be responsible for implementing the field strategies at individual resources. The Crew Chief will direct the field crew, lay out excavations, and compile collections and field documentation on a daily basis. Additionally, the Crew Chief will be responsible for implementing on-site safety procedures and/or environmental training.

7.2.3 Field Crew

Qualifications—Field crew members for any field recording or excavation activities will have an undergraduate degree in anthropology/archaeology, or a related field, and/or have attended a field school.

Responsibilities—Field crew members will conduct surface examinations and hand excavations, and monitor mechanical test investigation excavations. Each crew member will operate under the direct supervision of the Crew Chief and will conduct basic documentation of field operations, including the completion of excavation-level records, bag labeling, and trench monitoring forms.

7.2.4 Laboratory Director

Qualifications—The Laboratory Director will have an undergraduate degree in anthropology/archaeology, or a closely related field, and field school experience.

Responsibilities—The Laboratory Director will be responsible for directing all phases of laboratory processing of the data recovery and/or monitoring collections, including check-in, cleaning, sorting, cataloguing, analyzing, distributing special samples, and preparing for curation. The Laboratory Director will coordinate closely with the CRS to ensure that the appropriate data are documented and compiled.

7.3 Monitoring and Avoidance Procedures

This section describes the monitoring procedures that will apply Project-wide. Resource-specific monitoring and avoidance procedures will be included in resource-specific mitigation and/or treatment plans. The objectives of monitoring are to ensure and document avoidance of cultural resources subject to EFSC standards, to identify at the time of discovery any cultural resources exposed during ground disturbance, and to protect such resources from damage while recommendations of likely NRHP-eligibility are reviewed and approved by the SHPO (in consultation with ODOE and other appropriate parties, including appropriate tribes).

7.3.1 Cultural Resource Construction Monitoring

Cultural resource monitoring for the Project will be conducted Project-wide, unless otherwise specified by the ODOE or SHPO. For the purposes of this HPMP, cultural resource construction monitoring is defined as on-the-ground, close-up observation by a CRS or CRM meeting the qualifications prescribed in Section 7.1.

The CRS and/or CRM will be present during mechanical scraping, grading, excavating, and other ground disturbing activities (as applicable). Cultural resource monitoring will not be required once all surface and subsurface ground disturbance in a construction area is completed or if equipment or vehicles are traveling over previously disturbed surfaces. Routine travel on existing or disturbed roads or across disturbed transmission structure pads will not be monitored for cultural resources. However, additional blading or excavating at a depth beyond the previously disturbed area will be monitored for cultural resources, even within previously graded or bladed areas. A CRM will be required when sensitive resource barriers are installed to protect cultural resources subject to EFSC standards. The CRM will ensure that the barrier is erected in the proper place. The barriers or sensitive resource signage will be removed once construction is completed in that area.

The CRM will maintain daily monitoring logs (Appendix E – Monitoring Log) of Project-related construction monitoring activities. Logs will reflect the daily monitoring activities and will include:

- Date, time of work, and amount of time spent at a construction monitoring location;
- Area of work (defined by segment, tower structure number, and or milepost);

- Type of work, equipment present, and name of construction crew being monitored
- Construction activities being performed (e.g., grading, excavation, etc.);
- Documentation of successful resource avoidance;
- Activities for which there are cultural resource problems, non-compliances, or other concerns;
- Identification of an unanticipated discovery, steps taken to protect the discovery, and documentation of notifications (name, agency, time, and notes); and/or
- Color digital photographs (as appropriate) to document construction and monitoring activities and submitted as attachments to the daily log.

CRMs will prepare and provide their monitoring logs daily to the CRS via e-mail (original hard copies for Project records will be provided to the CRS in bulk at intervals determined by the CRS). The CRS will prepare and provide IPC monthly summary reports on the progress or status of cultural resources-related activities during active construction. The monthly reports will summarize construction progress, monitoring (monitor name, dates worked, finds, issues, etc.), and status of cultural resource-related issues. These reports will also include the appropriate state cultural resource forms for finds identified under the monitoring program (see Section 8). IPC will submit the reports to the ODOE to ensure compliance with the Site Certificate.

The CRS will direct the preparation and distribution of a Cultural Resources Monitoring Results report, or any other outstanding report actions (e.g., mitigation) under the HPMP, no later than 3 years after the completion of the relevant Project work element. All reports will be submitted to the ODOE, SHPO, and tribes. For additional survey reporting and review times during construction, see Section 7.4.1 below.

7.3.2 Change in Full-Time Monitoring Status

If the CRS determines that full-time monitoring is not necessary in certain construction locations or that monitoring will be conducted on an “as needed” intermittent schedule, the CRS will provide in writing (via email) to the ODOE, SHPO, and, if requested, tribes, explaining the decision to reduce the level of monitoring. Notification must be provided at least 14 days prior to implementing any change. The ODOE will provide written approval to the CRS and CIC via email within 10 days of receiving notice to reduce monitoring.

7.3.3 Inadvertent Discoveries

If a discovery is made in Oregon, the notification procedures found in the IDP (see Section 8) shall be followed.

The CRS will send the requesting tribes a notification (via letter or email) following the discovery of Native American cultural materials other than those considered isolated finds or archaeological objects (unless otherwise specified).

The CRS and the CRM(s) will have the authority to temporarily halt construction operations within a 200-foot radius of a find or exposed resource to determine if cultural resources subject to EFSC standards are present and if they will be significantly impacted by continuing construction operations. The CRS or CRM will be responsible for delineating the area within which construction will halt using flagging tape, rope, or some other means as necessary.

7.3.4 Flagging, Fencing, and Signage Measures

For Project construction activities, the CRM will flag, fence, or provide signage for previously recorded and newly identified culturally sensitive areas (i.e., significant cultural resources) that are within 200 feet of Project construction, to ensure such resources are avoided and that ground-disturbing construction activities do not impact flagged resource boundaries or

inadvertent discoveries. “Environmentally Sensitive Area” signage will be used for such areas during construction. The signage will be posted, with a buffer, around the cultural resource by the CRM one day prior (as practical) to construction in the area, to avoid drawing attention to the area prior to construction.

The CRS and/or a CRM will field check and maintain signage and ensure that it remains in place while construction activities in the vicinity are active. The CRS or CRM will remove the flagging and/or signs following the completion of Project-related construction activities in the vicinity.

7.3.5 Monitoring Locations and Schedule

The CRS and/or Lead CRM and CRM(s) will observe ground disturbance as specified in Section 7.3.1. The CRS will obtain a construction schedule from the Construction Contractor at least 2 weeks prior to the start of ground-disturbing activities to ensure proper CRM staffing and confirm monitoring locations. The CRS and/or Lead CRM will then establish a schedule for the CRM(s) to follow and a protocol for communication with the CIC and the CCEM, who will confer with the CRS on any changes to construction dates. Daily updates or changes to the construction schedule will be provided by the Construction Contractor to the CRS and the CIC, as appropriate.

7.4 Construction Compliance

The CRS and Lead CRM will coordinate with the CIC to monitor and report problem areas and any non-compliance issues to the ODOE. The CRS will then notify the CCEM, who will notify IPC’s Environmental Manager(s).

Non-compliance procedures will be specified in the Conditions of Site Certification and will be followed. If the non-compliance includes unauthorized or unmonitored ground disturbance, cultural resource surveys to determine presence of or damage to cultural resources will be required. An effects determination and mitigation may also be required. A written notice from the SHPO and ODOE will be required before construction will be allowed to continue in the non-compliance area. It should be noted that non-compliance regarding cultural resources can result in criminal and civil penalties. Disturbance of human remains or associated objects is considered a Class C Felony with fines (ORS 91.740-9760), and disturbance to archaeological sites can result in a Class B misdemeanor and fines (ORS 358.905-358.961).

7.4.1 Construction Change Management-Site Certificate Amendment

During the construction and O&M phases of the Project, unforeseen or unavoidable site conditions can result in the need for changes from approved mitigation measures and construction and O&M procedures. Additionally, the need for route realignments, extra workspaces, or access roads outside of the previously approved and certified Project Site Boundary may arise (e.g., to avoid an inadvertent discovery), resulting in the need to prepare an amendment to the Site Certificate (see Section 3.2). The CIC will consult with the CRS for any amendment(s) requested by IPC to ensure cultural resource compliance. All applicable procedures as specified in this HPMP and Conditions of Site Certification will be followed.

If a new area outside the previously surveyed Project Site Boundary is proposed for ground disturbance, a survey for cultural resources must be conducted and a report documenting presence or lack of surface resources submitted as part of the amendment approval process. If cultural resources are found, NRHP eligibility, effects determinations, and any applicable mitigation must be completed before ground disturbance can be permitted. Mitigation is only necessary for resources subject to EFSC standards.

IPC will submit copies of the draft inventory report to ODOE, SHPO, and requesting tribes for a review and comment period to be determined between IPC and ODOE. If the SHPO accepts the findings of the report, the ODOE can assume concurrence and issue the amendment or other applicable authorization to proceed with construction. If not, the report will be revised by the CRS and resubmitted to the same parties.

8.0 INADVERTENT DISCOVERY PLAN

This section provides guidance on the process that will be followed if previously undocumented cultural material or human remains are discovered during the construction and O&M phases of the Project. Inadvertent discovery procedures as presented below are designed to ensure compliance with the following:

- ORS 358.905-955, archaeological sites and objects;
- ORS 390.235, Permits and Conditions for Excavation and Removal of Archaeological or Historical Material; Rules; Criminal Penalty and its associated OAR 736-051-0080 to 0090; and
- ORS Chapter 91.740 to 97.760, Indian Graves and Protected Objects; Treatment of Native American Human Remains Discovered Inadvertently or Through Criminal Investigations on Private and Public and State-Owned Lands In Oregon created by the Government to Government Cultural Resources Cluster Group formed under Executive Order 96-30.

8.1 Inadvertent Discovery Procedures

This section provides detailed guidance for Project personnel to follow if cultural resource materials are inadvertently discovered. The procedures differ depending on whether unanticipated cultural materials (Section 8.1.1) or human remains (Section 8.1.2) are encountered. Key contacts are provided in Section 8.2.

8.1.1 Inadvertent Discovery of Cultural Materials

In the case of an inadvertent discovery of general cultural materials (i.e., archaeological sites), the following procedures will be followed and all notification will occur within 24 hours:

- The CRS or CRM(s) will have the authority to halt construction operations within a 200-foot radius of a find or exposed resource to access the find and determine whether the find is likely significant and would be affected by continuing construction operations, or if the find is non-cultural. Construction activities can continue outside the established 200-foot radius exclusion zone/no-work zone once the CRS or CRM(s) have determined the full horizontal extent of the resource either through surface observations or subsurface probes (as determined by the CRS).
- The CRM will inspect the area for additional resources. The CRM will use flagging tape, rope, or some other means necessary to delineate the area of the find within which construction will halt. This may also include off-site dirt or rock spoil from that area.
- The CRM will immediately notify the CRS (if not present) of the discovery, and provide the CRS with the Global Positioning System coordinates, photographs, and description of the observed cultural material.
- If an inadvertent discovery is identified by construction personnel, and a CRS or CRM is not present, the individual that identified the find must halt construction in the area of the find and contact the CRS immediately.

- The CRS will notify the ODOE, Oregon SHPO State Archaeologist or Assistant State Archaeologist, CCEM, IPC, the CIC, and any tribes that have requested notification, as appropriate, of the discovery. IPC will contact the appropriate landowner.
- ODOE will coordinate and consult with the SHPO State Archaeologist or Assistant State Archaeologist, landowner, and the appropriate tribe(s).
- The CRS will be responsible to notify and coordinate with the IPC's Environmental Manager(s) of the find and of the stop work activity, as applicable.
- The CRS will prepare a preliminary summary report containing detailed information regarding the observed cultural material, type (e.g., isolated find/archaeological object or site), period, Universal Transverse Mercator coordinates, legal description and location map, photographs, and recommendations regarding likely NRHP eligibility.
- The SHPO, in consultation with the ODOE and tribe(s), as appropriate, will determine the likely NRHP eligibility, the Project effects on the discovery, and the treatment of the discovery, based on the recommendations contained in the summary report provided by the CRS. Landowner approval will be required for any determined treatment.
 - If the discovery cannot be avoided, and more data are required to make a determination of NRHP-eligibility, IPC will direct the CRS to prepare and submit a testing plan to the SHPO, ODOE, landowner, and tribe(s), as appropriate, for review. Upon SHPO and landowner approval (and as applicable, the appropriate tribe(s)), IPC's CRS will execute the testing plan. Any excavation will be conducted under a state archaeological permit granted under ORS 390.235.
 - If the discovery is determined to be subject to the EFSC standards and the Project will have a significant impact on the resource, IPC will direct the CRS to prepare a treatment plan for review and approval by the SHPO (in consultation with ODOE and in coordination with the parties noted above), in an effort to reduce impacts to less than significant. The treatment plan will include (but not be limited to) a resource-specific research design, methods, analysis, disposition of any collected artifacts and curation (as applicable), and a schedule for completing work and report submittals.
 - Once the treatment plan is approved by the SHPO in writing (via email), IPC can direct the CRS to execute the treatment plan. Any excavation (testing/data recovery) on state lands will be conducted under a state archaeological permit granted by the State Parks and Recreation Department under ORS 390.235 (includes approval by state agency and the appropriate Native American tribe(s)) and OAR 736-051-0080, and on private land under OAR 736-051-0090 (includes ORS 390.235, and landowner's written permission).
 - Within one week of completion of mitigation, IPC will submit a preliminary report containing the results of the mitigation. A final mitigation report will be prepared and submitted to SHPO, ODOE, landowner, and tribe(s), as appropriate, within the timeframe as specified in the treatment plan.
- If the SHPO, in consultation with the ODOE and tribe(s), as applicable, determines the discovery will not be significantly impacted, the SHPO will contact IPC by telephone and in writing (via email) indicating that construction may resume. No further consultation will be necessary.
- No archaeological testing/excavation will occur and no artifacts will be collected without approval from ODOE, SHPO, landowner, and tribe(s), as applicable, and acquisition of appropriate state permit(s).

8.1.2 Inadvertent Discovery of Human Remains

In Oregon, the treatment of human remains will follow the protocol developed by the State of Oregon's Tribal/State Agency Government to Government Cultural Resource Cluster Group in 2006 (updated August 2014): *Treatment of Native American Human Remains Discovered Inadvertently or Through Criminal Investigations on Private and Public, State-Owned Lands In Oregon* (see Appendix F). Native American ancestral remains, funerary objects, sacred objects and objects of cultural patrimony associated with Oregon Tribes are protected under Oregon state law, including criminal penalties (ORS 97.740-.994 and 358.905-.961)

If human remains (including physical remains-bones, teeth, hair, ashes, or mummified or otherwise preserved soft issues of a human), burial, funerary objects, sacred objects, or objects of cultural patrimony are inadvertently discovered during Project construction, **ALL** human remains and associated burial associated material will be treated with dignity and respect, and the following procedures will apply:

PROTOCOL FOR THE IDENTIFICATION OF HUMAN REMAINS:

- **STOP CONSTRUCTION ACTIVITIES**
 - Immediately halt construction within 200 feet radius of the remains.
 - Ensure the area is protected from additional disturbance with flagging, fencing, or by posting a CRM or other project personnel.
 - Ensure that the remains will be treated respectfully, and are not touched, moved, photographed, discussed on social media sources (e.g., Instagram, Facebook, Twitter, etc.), or further disturbed.
 - Stop Construction will remain in effect and construction will not proceed within a 200-foot radius around the discovery until the appropriate approvals are obtained.
- **NOTIFICATION:** Immediately notify the Oregon State Police and the CRS (if not on site). The CRS will immediately notify the SHPO, Legislative Commission on Indian Services (LCIS), ODOE, landowner, and IPC via telephone and in writing. The LCIS will determine the appropriate Native American tribe(s) to notify. Once identified by the LCIS, the appropriate Native American tribe(s) will be notified immediately by the CRS. See Section 8.2 below for contact information.
- For any human remains discovered on state or private lands in Oregon, ORS Section 97.740 through 97.760 will apply. Oregon laws (ORS 146.090 and .095) outline the types of deaths that require investigation and the accompanying responsibilities for that investigation. The law enforcement official, district medical examiner, and the district attorney for the county where the death occurs are responsible for deaths requiring investigation. Deaths that require investigation include those occurring under suspicious or unknown circumstances.
- If the human remains **are not clearly modern**, then there is a high potential that the remains are Native American and therefore ORS 97.745(4) applies, which requires immediate notification of State Police, SHPO, LCIS, and appropriate Native American Tribe(s) (as noted above).
- As noted above, human remains will be treated with respect, protected, and secured from further disturbance. The human remains and any associated artifacts should not be disturbed, manipulated, or transported from the original location until a plan is developed in consultation with the above named parties. These actions will help ensure compliance with Oregon state law that prohibits any person willfully removing human remains and/or objects of cultural significance from its original location, as defined in ORS 97.745.

- If the human remains are found to be Native American, the State Police, SHPO, ODOE, landowner, LCIS, CRS, and appropriate Native American Tribe(s) will consult and implement a culturally sensitive plan for reburial (if the remains cannot be avoided by the Project and/or if desired by the tribe(s)).
- If the human remains are found not to be of Native American descent, historic in nature, and are not part of a crime investigation, IPC will consult with the SHPO, ODOE, CRS, and landowner to develop and implement a plan for removal and reburial (if the remains cannot be avoided by the Project and/or if desired by the landowner).
- For all human remains, reburial plans (and any type of excavation) will follow Oregon state laws and will be developed and approved by the appropriate parties. Reburial plan(s) will be specific to each inadvertent discovery of human remains.
 - Per ORS 97.750, excavation by a Professional Archaeologist of a Native American cairn or burial [human remains] and associated material shall be initiated only after prior written notification to the SHPO and State Police, as defined in ORS 358.905, and with the prior written consent of the appropriate Indian (Native American) tribe(s) in the vicinity of the intended action. Failure of a tribe(s) to respond to a request for permission [to excavate] within 30 days of its mailing shall be deemed consent.
 - Per ORS 97.750 and 97.745, and as noted above, the LCIS will designate the appropriate tribe(s).

8.2 Key Contacts

Contact information for key state agency, tribal, IPC, and CRT members in the event of an unanticipated or inadvertent discovery is provided in Table 8-1.

Table 8-1. Key Project Contacts

Organization	Name	Role	Phone Numbers	Email
Oregon State Police	Chris Allori	Sergeant: identification of human remains	503-731-4717 (o) 503-708-6461 (c) 503-731-3030 (d)	TBD
ODOE	Kellen Tardaewether	Senior Siting Analyst; Lead state agency	503-373-0214 (o) 503-586-6551 (c)	Kellen.Tardaewether@oregon.gov
Oregon SHPO	Dennis Griffin	State Archaeologist	503-986-0674 (o) 503-881-5038 (c)	Dennis.griffin@state.or.us
Oregon SHPO	John Pouley	Assistant Archaeologist	503-986-0675 (o) 503-480-9164 (c)	John.pouley@state.or.us
Oregon SHPO	Jessica Gabriel	Historian	503.986.0677	Jessica.Gabriel@oregon.gov
LCIS	Karen Quigley	Executive Director; Identifies appropriate Native American Tribe(s) for Project.	503-986-1067 (o)	karen.m.quigley@state.or.us
IPC	Shane Baker	Senior Archaeologist	208-388-2925 (o)	sbaker@idahopower.com
IPC	Dave Valentine	Project Archaeologist	208-388-2855 (o)	dvalentine@idahopower.com
Project CRS	TBD	TBD	TBD	TBD
Project CCEM	TBD	TBD	TBD	TBD
CTUIR	Carey Miller	THPO	541-429-7234 (o)	careymiller@CTUIR.org
Burns Paiute Tribal Council	TBD			
Confederated Tribes of the Colville Reservation	TBD			
Confederated Tribes of the Warm Springs Reservation	TBD			
Fort McDermitt Shoshone-Paiute Tribes	TBD			
Klamath Tribes	TBD			
Nez Perce Tribe	TBD			
Shoshone-Bannock Tribes of the Fort Hall Indian Reservation	TBD			

c=cell, o=office, d=dispatch; TBD=to be determined.

9.0 REFERENCES CITED

Anderson, Stephen, Erin King, and Jenna Farrell

- 2018 *Boardman to Hemingway Transmission Line Project, Cultural Resource Technical Report, Morrow, Umatilla, Union, Baker, and Malheur Counties, Oregon*. Prepared by Tetra Tech, Inc. Golden, CO. Submitted to Idaho Power Company, Boise, ID and Oregon Energy Facility Siting Commission. Contract No. CM-3901.

AECOM (AECOM, Inc.)

- 2018 Intensive Level Survey – Visual Assessment of Historic Properties Report, Boardman to Hemingway Transmission Line Project. Prepared by AECOM, Inc., Portland, OR. Submitted to Idaho Power Company, Boise, ID,

1 **Appendix A.1: Resource Inventory Tables with Management Recommendations**
2 **for Resources Potentially Protected under OAR 345-022-0090**

3
4 **I. Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-**
5 **022-0090(1)(a)**

6
7 The resources discussed in the below section apply to protections under OAR 345-022-
8 0090(1)(a). The Department points to the language of the EFSC standard, specifically,
9 “...resources that have been listed on, or would likely be listed on...” the common term used by
10 SHPO and throughout the profession, is eligible or likely eligible for listing on the NRHP.
11 Therefore, the terms eligible or likely eligible meet the meaning of *likely to be listed on the*
12 NRHP in the EFSC standard. Resources inventoried in the analysis area that would not
13 experience a direct or indirect impact, are not evaluated. The applicant included
14 recommendations of eligibility and supporting documentation in ASC Exhibit S, Errata, and
15 materials submitted to SHPO and the Department for all identified resources. Applicant
16 recommendations, in general, include recommendations of eligible for listing on the NRHP, and
17 not eligible for listing, and unevaluated (presumed or treated as likely eligible for listing). The
18 Department, in consultation with SHPO and the applicant, determined that recommendations
19 of “not eligible” will be treated as “unevaluated” for purposes of the Council’s review. A
20 resource designation of “unevaluated” means that it is treated as likely eligible for listing on the
21 NRHP and the impact analysis and mitigation (if any) is evaluated based on that designation.
22 Updated resource eligibility determinations will be submitted to the Department pending the
23 Section 106 review.

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25 **II. Oregon Trail and National Historic Trails**

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27 Historic trails within the analysis area, as listed in ORS 358.057, include the Oregon National
28 Historic Trail (NHT), Lewis and Clark NHT, Meek Cutoff, Nathaniel Wyeth Route, and Upper
29 Columbia Route. Congress declared the 2,170-mile-long Oregon Trail a National Historic Trail in
30 1978. The applicant states that the proposed facility analysis area would cross the Oregon NHT
31 17 times along the route.¹ Separate from the NHT, the site boundary crosses 12 segments of
32 the Oregon Trail. Of these total Oregon Trail resources, 9 NRHP-eligible segments would be
33 crossed by the proposed facility and, for some segments, would be impacted by other views of
34 the proposed facility within the geographic area visible from the resource (viewshed) (see Table
35 HCA-3 below)

36
37 Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts, includes
38 information from Exhibit S; Table S-2, SHPO comment letters, and ASC Errata information. Table
39 HCA-2 identifies 29 trail resources within the analysis area (includes site boundary/direct and

¹ B2HAPPDoc3-36 ASC 19 Exhibit S Cultural ASC Public 2018-09-28. Section 3.4.1.1.

1 visual impact areas). Table HCA-2 specifies the trail segment, general resource description,
2 existing and proposed NRHP recommendations, and descriptions of the closest project
3 component that was evaluated for impacts. The far-right column in Table HCA-2 provides
4 additional descriptions and specifics about how the applicant would avoid direct and indirect
5 impacts to each segment. Resources identified in Table HCA-2 are assumed to be likely eligible
6 therefore are protected under the EFSC standard OAR 345-022-0090(1)(a)), however impacts to
7 these resources are not expected or are avoided entirely, consequently there are not any
8 impacts to protected resources for Council to evaluate for avoidance, minimization or
9 mitigation.

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11 The final resource eligibility determinations will be verified or established in the Section 106
12 compliance review and this information will be provided in the final HPMP and will be
13 submitted to the Department prior to construction.

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Table HCA-2: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>35MW00224 (Well Spring, Oregon Trail Site)</u>	<u>N/A</u>	<u>Morrow</u>	<u>Archaeological Site - Homestead & Trail</u>	<u>Listed (Criterion A - Draft MPDF)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>DOD</u>	<u>Yes</u>	<u>No further management</u>
<u>35MW00227</u>	<u>N/A</u>	<u>Morrow</u>	<u>Archaeological Site - Road</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u> <u>Proposed Route: Structure work area; Pulling & tension site; Existing road needing 21-70% modification West of Bombing Range Road Alternatives 1 & 2: No impacts</u>	<u>DOD</u>	<u>Yes</u>	<u>Avoid. Subsurface probing needed. If the Section 106 determination is eligible, applicant will avoid Site # 35MW227 as follows: Proposed Route: For the structure work area and pulling & tension site, applicant will relocate or reduce the size of those areas to avoid Site # 35MW227; for the existing road, all improvements will be made within the existing road prism thereby avoiding any new impacts; applicant will flag any portion of the boundary of Site # 35MW227 that occurs within 100 feet of construction activity. West of Bombing Range Road Alternatives 1 & 2: No avoidance measures are necessary as there are no direct impacts proposed for these alternatives.</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>35MW00230 (Emigrant Cemetery)</u>	<u>B2H-MO-004</u>	<u>Morrow</u>	<u>Archaeological Site - Cemetery</u>	<u>Listed (Criterion A - nomination and Draft MPDF)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>DOD</u>	<u>Yes</u>	<u>No further management</u>
<u>Oregon Trail - Unnamed Segment (Lindsey Feedlot Lane)</u>	<u>B2H-MO-008</u>	<u>Morrow</u>	<u>Historic Site/ Aboveground - Trail</u>	<u>Not Eligible</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management</u>
<u>TBD</u>	<u>Segment 3B2H-SA-03</u>	<u>Morrow</u>	<u>Archaeological Site - Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>Avoid. Archival research and documentation; Testing needed.</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>TBD</u>	<u>Segment 3B2H-SA-04</u>	<u>Morrow</u>	<u>Archaeological Site - Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>Avoid. Archival research and documentation; Testing needed.</u>
<u>Oregon Trail - Unnamed Segment (Sand Hollow)</u>	<u>Segment 3B2H-SA-05</u>	<u>Morrow</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management</u>
<u>Oregon Trail - Well Spring Segment</u>	<u>B2H-MO-007 (4B2H-VIZ EK-01)</u>	<u>Morrow</u>	<u>Archaeological Site - Trail</u>	<u>Listed (Criterion A) (Boundary Increase - Draft MPDF)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>DOD</u>	<u>Yes</u>	<u>No further management</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>Oregon Trail – Well Spring Segment</u>	<u>3B2H-CH-01</u>	<u>Morrow</u>	<u>Archaeological Site - Trail</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Visual Assessment analysis area</u>	<u>DOD</u>	<u>Yes</u>	<u>No further management</u>
<u>TBD</u>	<u>Segment 4B2H-EK-02</u>	<u>Morrow</u>	<u>Archaeological Site - Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area; Visual Assessment analysis area</u> <u>Proposed Route: Within 250 feet of structure work area West of Bombing Range Road Alternatives 1 & 2: No impacts</u>	<u>DOD</u>	<u>Yes</u>	<u>Avoid. Archival research and documentation; Testing needed. IPC will avoid Site # 4B2H-EK-02 as follows: Proposed Route: IPC will locate the structure work area to avoid Site # 4B2H-EK-02; IPC will flag any portion of the boundary of Site # 4B2H-EK-02 that occurs within 100 feet of construction activity. West of Bombing Range Road Alternatives 1 & 2: No avoidance measures are necessary as there are no direct impacts proposed for these alternatives</u>
<u>TBD</u>	<u>Segment 4B2H-EK-03</u>	<u>Morrow</u>	<u>Archaeological Site - Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>Avoid. Archival research and documentation; Testing needed.</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>TBD</u>	<u>Segment 5B2H-SA-01</u>	<u>Morrow</u>	<u>Archaeological Site - Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area; Visual Assessment analysis area</u> <u>Proposed Route: Structure work area West of Bombing Range Road Alternatives 1 & 2: No impacts</u>	<u>DOD</u>	<u>Yes</u>	<u>Avoid. Archival research and documentation; Testing needed. IPC will avoid Site # 5B2H-SA-01 as follows: Proposed Route: IPC will relocate or reduce the size of the structure work area to avoid Site # 5B2H-SA-01; IPC will flag any portion of the boundary of Site # 5B2H-SA-01 that occurs within 100 feet of construction activity. West of Bombing Range Road Alternatives 1 & 2: No avoidance measures are necessary as there are no direct impacts proposed for these alternatives</u>
<u>35UM00365 (Meacham Pioneer Memorial Cemetery Site)</u>	<u>N/A</u>	<u>Umatilla</u>	<u>Archaeological Site - Cemetery</u>	<u>Not Eligible</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>ODOT</u>	<u>Yes</u>	<u>No further management</u>
<u>35UM00472</u>	<u>N/A</u>	<u>Umatilla</u>	<u>Archaeological Site - Burial</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management</u>
<u>35UN00435 (Oregon Trail/Ladd Canyon)</u>	<u>N/A</u>	<u>Union</u>	<u>Archaeological Site - Trail</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management (not in viewshed)</u>
<u>35UN00517 (Oregon Trail)</u>	<u>N/A</u>	<u>Union</u>	<u>Archaeological Site - Trail</u>	<u>Eligible, Contributing</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV, USFS</u>	<u>Yes</u>	<u>No further management</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>35UN0074</u>	<u>N/A</u>	<u>Union</u>	<u>Archaeological Site - Lithic Scatter, Homestead, Grave, Campground, & Trail</u>	<u>Not in accessible survey area. Previous recommendation: Eligible.</u>	<u>Proposed Route, Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area Multi Use Area UN- 02 Existing road needing 21-70% modification</u>	<u>PV, ODOT</u>	<u>Yes</u>	<u>Avoid. Survey location when access granted. IPC will either: Relocate MUA UN-02 out of Site # 35UN74 entirely; Or Survey the relevant portions of Site # 35UN74 to verify the boundaries of the trail, campground, lithic scatter, homestead, and grave features; relocate or reduce the size of MUA UN-02 to avoid the verified boundaries of those features; and, if avoidance is not possible, provide compensatory mitigation as described in the HPMP; graves will be treated as specified in the HPMP; IPC will flag any portion of the boundary of Site # 35UN74 that occurs within 100 feet of construction activity.</u>
<u>Oregon Trail - Whiskey Creek Segment (O-BK-UN-1)</u>	<u>B2H-UN-005</u>	<u>Union</u>	<u>Archaeological Site - Trail</u>	<u>Eligible</u>	<u>Proposed Route, Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area Proposed Route: Existing road needing 21-70% modification; New road, bladed Morgan Lake Alternative: No impact</u>	<u>BLM, PV</u>	<u>Yes</u>	<u>No further management. If the Section 106 determination is eligible, applicant will avoid Site # B2H-UN-005 as follows: Proposed Route: For the new road, applicant will relocate or reduce the size of the new road to avoid Site # B2HUN-005; for the existing road, all improvements will be made within the existing road prism thereby avoiding any new impacts; applicant will flag any portion of the boundary of Site # B2H-UN-005 that occurs within 100 feet of construction activity. Morgan Lake Alternative: No avoidance measures are necessary as there are no direct impacts proposed for this alternative.</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>TBD (Oregon Trail, California Gulch/Blue Mountain Segment)</u>	<u>B2H-UN-001</u>	<u>Union</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV, USFS</u>	<u>Yes</u>	<u>No further management</u>
<u>35BA01366 (Oregon Trail)</u>	<u>Segment 3B2H-CH-06</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management</u>
<u>Oregon Trail ACEC - Swayze Creek Segment</u>	<u>B2H-BA-291</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV</u>	<u>Yes</u>	<u>No further management</u>
<u>Signature Rock</u>	<u>B2H-BA-286</u>	<u>Baker</u>	<u>Historic Site/ Aboveground - Historic Rock Markings</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>Yes</u>	<u>No further management.</u>
<u>TBD (Oregon Trail, Powell Creek Segment)</u>	<u>B2H-BA-337</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV</u>	<u>Yes</u>	<u>No further management</u>
<u>TBD (Oregon Trail, White Swan)</u>	<u>B2H-BA-281</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV</u>	<u>Yes</u>	<u>No further management (not in viewshed)</u>
<u>35ML00747 (Oregon Trail, Tub Mountain Segment)</u>	<u>B2H-MA-010</u>	<u>Malheur</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV, STL</u>	<u>Yes</u>	<u>No further management (not in viewshed)</u>

Table HCA-1: Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>0503040048SI</u>	<u>Segment 0503040048SI</u>	<u>Malheur</u>	<u>Archaeological Site - Trail Segment</u>	<u>Not Eligible / Not contributing</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>Yes</u>	<u>No further management</u>
<u>Meek Cutoff / Meek Study Route Hambleton Line</u>	<u>B2H-MA-003</u>	<u>Malheur</u>	<u>Archaeological Site - Trail</u>	<u>Likely Eligible/ Unevaluated (segment)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area; Visual Assessment analysis area</u>	<u>BLM, BR, FWS, PV, STL, STL, STP, USDA, USFS</u>	<u>Yes</u>	<u>No further management</u>
<u>The Dalles Military Road</u>	<u>B2H-MA-007</u>	<u>Malheur</u>	<u>Archaeological Site - Road</u>	<u>Unevaluated No historic or archaeological evidence identified during survey. Identified through historic map review.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management</u>
<u>The Dalles Military Road</u>	<u>B2H-MA-007</u>	<u>Malheur</u>	<u>Archaeological Site - Road</u>	<u>Unevaluated No historic or archaeological evidence identified during survey. Identified through historic map review.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>PV</u>	<u>Yes</u>	<u>No further management</u>

1 Oregon Trail Resources: Potential Indirect Impacts

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3 Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts, below
4 lists the inventoried NRHP or or likely-NRHP eligible trails resources that, based on the
5 applicants' VAHP ILS, that could experience adverse indirect impacts from proposed facility
6 visibility for Oregon Trail/NHT trail segments that are NRHP-listed or eligible. Table HCA-3 also
7 includes applicant representations to avoid direct impacts to Oregon Trail resources. These
8 measures include reducing or relocating facility components and/or activities, avoiding
9 construction activities within 100 feet of the identified resource characteristics, flagging
10 resource boundaries, and staying within existing areas of disturbance. Table HCA-3, Oregon
11 Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts, also represents the Oregon
12 Trail as one linear resource and also provides a discussion of the individual trail segments.

13
14 Table HCA-3 includes resource identification numbers, general resource description, facility
15 location and components associated with the impact, and the expected visual impact from the
16 proposed facility. The far-right column includes a compilation of mitigation information. The
17 mitigation proposals are discussed further in the below section detailing the recommended site
18 certificate condition for the submission, review and approval of the final Historic Properties
19 Management Plan (HPMP).

20
21 The final resource eligibility determinations and appropriate mitigation measures for the
22 Oregon Trail as a linear resource will be verified or established in the Section 106 compliance
23 review and this information will be provided in the final HPMP. Also submitted to the
24 Department for its review and approval, in consultation with SHPO. via the HPMP will be
25 mitigation measures for eligible segments of the Oregon Trail, if not already addressed in
26 Section 106, as discussed further below.

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43 Table HCA-3: Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect
44 Impacts

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<i>Linear Resource</i>									
<u>Oregon Trail/Oregon NHT</u>	N/A	<u>Morrow, Umatilla, Union, Baker, Malheur</u>	<u>Archaeological Site - Trail</u>	<u>Listed (Criterion A)</u>	<u>Proposed Route, Morgan Lake Alternative, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2</u>	<u>Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>BLM, BOR, DOD, FWS, ODOT, PV, STL, STL, STP, USDA, USFS</u>	<u>No - Potential visual impact. Avoidance measures to prevent direct impacts.</u>	<u>Note - Oregon Trail presented in this row as one linear resource, see other rows in table for evaluation of individual segments.</u> <u>Avoid Direct Impacts. Archival research and documentation; Testing needed.-Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---</u> <ul style="list-style-type: none"> <u>Recording—including HABS/HAER/HALS</u> <u>Additional literature or archival review (e.g. historic maps, local papers)</u> <u>Remote sensing</u> <u>Purchase of conservation easement or other land protection where trail traces exist</u> <u>Historic trails restoration within and outside Project area</u> <u>Public signage, publication/print/media, and/or interpretive plans</u> <u>Design Modification</u>
<i>By Segment</i>									
<u>Sand Hollow Battleground</u>	<u>SL-MO-001, SL-MO-005</u>	<u>Morrow</u>	<u>HPRCISIT/TCP/Trail</u>	<u>Eligible (Criteria A and B)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2,</u>	<u>Avoidance measures for Direct Analysis Area (Construction Footprint); Visual</u>	<u>BLM, DOD, PV</u>	<u>No - Potential visual impact</u>	<u>Note-Sand Hollow Battleground is considered both a TCP/HPRCISIT and an Oregon Trail-related resource. See also discussion in Tribal Resources Section.</u> <u>Public Archaeology Funding, Public Interpretation Funding, Consultation.-- Update recordation (if necessary. Off-Site: publish research focus article or</u>

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
					<u>Proposed Route</u>	<u>Assessment analysis area</u>			<p><u>professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---</u></p> <ul style="list-style-type: none"> • <u>Recording—including HABS/HAER/HALS</u> • <u>Additional literature or archival review (e.g. historic maps, local papers)</u> • <u>Remote sensing</u> • <u>Purchase of conservation easement or other land protection where trail traces exist</u> • <u>Historic trails restoration within and outside Project area</u> • <u>Public signage, publication/print/media, and/or interpretive plans</u> • <u>Design Modification</u>
<u>TBD</u>	<u>Segment 6B2H-RP-09</u>	<u>Union</u>	<u>Archaeological Site - Cairn(s) & Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<p><u>Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u></p> <p><u>Proposed Route: Structure work area; Within 250 feet of existing road</u></p>	<u>PV</u>	<u>No - Potential visual impact</u>	<p><u>Avoid Direct Impacts.</u></p> <p><u>Proposed Route: For the structure work area and pulling & tension site, IPC will relocate or reduce the size of those areas to avoid Site # 6B2H-RP-09; for the existing road, IPC will flag any portion of the boundary of Site # 6B2H-RP-09 that occurs within 100 feet of construction activity.</u></p> <p><u>Morgan Lake Alternative: No avoidance measures are necessary as there are no direct impacts proposed for this alternative.</u></p> <p><u>Archival research and documentation; Testing needed.---Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g.,</u></p>

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
						needing 21-70% improvement Morgan Lake Alternative: No impact			website, kiosk, etc.), rehabilitation of off-site trail segment---• Recording—including HABS/HAER/HALS • Additional literature or archival review (e.g. historic maps, local papers) • Remote sensing • Purchase of conservation easement or other land protection where trail traces exist • Historic trails restoration within and outside Project area • Public signage, publication/print/media, and/or interpretive plans • Design Modification

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>Goodale's/ Sparta Trail</u>	<u>B2H-BA-327</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV</u>	<u>No - Potential visual impact</u>	<u>Design Modification, Public Interpretation Funding, and/or Print/Media Publication---</u> <u>Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---</u> <ul style="list-style-type: none"> • <u>Recording—including HABS/HAER/HALS</u> • <u>Additional literature or archival review (e.g. historic maps, local papers)</u> • <u>Remote sensing</u> • <u>Purchase of conservation easement or other land protection where trail traces exist</u> • <u>Historic trails restoration within and outside Project area</u> • <u>Public signage, publication/print/media, and/or interpretive plans</u> • <u>Design Modification</u>
<u>TBD</u>	<u>Segment 3B2H-CH-05</u>	<u>Baker</u>	<u>Archaeological Site - Trail Segment & Utility Line</u>	<u>Trail Segment: Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C); Utility Line: Not Eligible</u>	<u>Proposed Route</u>	<u>Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>PV</u>	<u>No- Potential visual impact</u>	<u>S-6: Trail Segment: Avoid Direct Impacts. IPC will either:</u> <u>Relocate the road out of Site # 3B2H-CH-05 entirely; Or,</u> <u>Relocate the new road to avoid Site # 3B2H-CH-05 where possible; and, if avoidance is not possible, provide compensatory mitigation as described in the HPMP; IPC will flag any portion of the boundary of Site # 3B2H-CH-05 that occurs within 100 feet of construction activity.</u>

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
									<p>Archival research, documentation, and testing needed; Utility Poles: No Further Management; S- 10: Design Modification, Public Interpretation Funding, and/or Print/Media Publication---Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---</p> <ul style="list-style-type: none"> • Recording—including HABS/HAER/HALS • Additional literature or archival review (e.g. historic maps, local papers) • Remote sensing • Purchase of conservation easement or other land protection where trail traces exist • Historic trails restoration within and outside Project area • Public signage, publication/print/media, and/or interpretive plans • Design Modification

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>TBD (Oregon Trail, Straw Ranch 1 & 2 Segments)</u>	<u>B2H-BA-285</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u> <u>BLM Straw Ranch ACEC within 125 feet of New Road, Primitive</u>	<u>BLM, PV</u>	<u>No - Potential visual impact</u>	<u>Design Modification, Public Interpretation Funding, and/or Print/Media Publication. IPC will locate the new road to avoid the ACEC boundaries; IPC will flag any portion of the boundary of Site # B2H-BA-285 that occurs within 100 feet of construction activity.---</u> <ul style="list-style-type: none"> • <u>Recording—including HABS/HAER/HALS</u> • <u>Additional literature or archival review (e.g. historic maps, local papers)</u> • <u>Remote sensing</u> • <u>Purchase of conservation easement or other land protection where trail traces exist</u> • <u>Historic trails restoration within and outside Project area</u> • <u>Public signage, publication/print/media, and/or interpretive plans</u> • <u>Design Modification</u>

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>TBD (Oregon Trail, Virtue Flat, Flat Segment and Flagstaff Hill))</u>	<u>B2H-BA-282</u>	<u>Baker</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Avoidance measures for Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u> <u>Structure work area; Existing road needing 71-100% modification</u>	<u>BLM, PV</u>	<u>No - Potential visual impact</u>	<u>Design Modification, Public Interpretation Funding, and/or Print/Media Publication. For the structure work area and pulling & tension site, IPC will relocate or reduce the size of those areas to avoid Site # B2H-BA-282; for the existing road, all improvements will be made within the existing road prism thereby avoiding any new impacts; IPC will flag any portion of the boundary of Site # B2H-BA-282 that occurs within 100 feet of construction activity---Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---• Recording—including HABS/HAER/HALS</u> <u>• Additional literature or archival review (e.g. historic maps, local papers)</u> <u>• Remote sensing</u> <u>• Purchase of conservation easement or other land protection where trail traces exist</u> <u>• Historic trails restoration within and outside Project area</u> <u>• Public signage, publication/print/media, and/or interpretive plans</u> <u>• Design Modification</u>
<u>Oregon Trail ACEC - Alkali Springs Segment</u>	<u>B2H-MA-041</u>	<u>Malheur</u>	<u>Historic Site/ Aboveground - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>No - Potential visual impact</u>	<u>Design Modification, Public Interpretation Funding, and/or Print/Media Publication</u> <u>The commemorative sign at the site has</u>

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
									<u>provided sufficient interpretation of the area and the trail within it. Therefore, the recorded segment is recommended as a non-contributing element of the Oregon NHT and is not eligible under NRHP Criteria A, B, C, or D, and no further management consideration of the resource is recommended.</u>
<u>TBD</u>	<u>Segment 4B2H-EK-41</u>	<u>Malheur</u>	<u>Archaeological Site - Trail Segment</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<u>Avoidance measures for Direct Analysis Area; Visual Assessment analysis area</u> <u>BLM Within 125 feet of New Road, Primitive and structure work area</u>	<u>PV</u>	<u>No - Potential visual impact</u>	<u>Avoid Direct Impacts. IPC will locate the new road and structure work area to avoid Site # 4B2H-EK-41; IPC will flag any portion of the boundary of Site # 4B2H-EK-41 that occurs within 100 feet of construction activity.</u> <u>Archival research and documentation; Testing needed.---Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---</u> <ul style="list-style-type: none"> • <u>Recording—including HABS/HAER/HALS</u> • <u>Additional literature or archival review (e.g. historic maps, local papers)</u> • <u>Remote sensing</u> • <u>Purchase of conservation easement or other land protection where trail traces exist</u> • <u>Historic trails restoration within and outside Project area</u> • <u>Public signage, publication/print/media, and/or interpretive plans</u> • <u>Design Modification</u>

Table HCA-2: NRHP-Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts

<u>Assigned Trinomial or Other ID</u>	<u>Pedestrian Survey or Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Resource Type and Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land Ownership</u>	<u>Avoided Impact</u>	<u>Attachment S-9 Avoidance Measure or/and Management Recommendations (HPMP)</u>
<u>TBD (Oregon Trail, Birch Creek Segment)</u>	<u>B2H-MA-042</u>	<u>Malheur</u>	<u>Archaeological Site - Trail</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM, PV</u>	<u>No - Potential visual impact</u>	<u>Design Modification, Public Interpretation Funding, and/or Print/Media Publication---</u> <u>Update recordation (if necessary. Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.), rehabilitation of off-site trail segment---</u> <ul style="list-style-type: none"> • <u>Recording—including HABS/HAER/HALS</u> • <u>Additional literature or archival review (e.g. historic maps, local papers)</u> • <u>Remote sensing</u> • <u>Purchase of conservation easement or other land protection where trail traces exist</u> • <u>Historic trails restoration within and outside Project area</u> • <u>Public signage, publication/print/media, and/or interpretive plans</u> • <u>Design Modification</u>

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Evaluation of Mitigation for Indirect Impacts per NRHP-Eligible Oregon Trail/NHT Segment

As presented in Table HCA-3: NRHP Eligible Oregon Trail/NHT Inventory in Analysis Area with Potential Indirect Impacts, Oregon Trail/NHT segment locations were the proposed facility would cross, or be substantially visible from, would result in adverse visual impacts to the resource and rely on the definition of mitigation (OAR 345-010-0010(33)).

Based on the extent of potential adverse visual impacts to the NRHP-eligible Oregon Trail/NHT resources and within the 5-mile resource viewshed of the resource identified in Table HCA-3, at least one minimization measure (design modification) and one measure resulting in restoration; preservation and maintenance; or compensation (OAR 345-001-0010(33)(b) and; (c), (d) or (e)) directly benefiting the affected area – which the Department recommends be defined as the county within which the impacted resource is located. To impose this requirement, the Department recommends Council require that Attachement S-9 the HPMP include Table HCA-4b as presented below.

Table HCA-4b: Department Recommended Mitigation for NRHP-Eligible Oregon Trail/NHT Segments

Table HCA-3b: Department Recommended Mitigation for NRHP-Eligible Oregon Trail/NHT Segments

<u>Mitigation</u>
<u>The HPMP shall establish the following mitigation for each impacted NHRP-Eligible Oregon Trail/NHT Segment:</u>
<u>At least one of the following (OAR 345-001-0010(33)(b)):</u>
<u>Design modification</u>
<u>And, at least one of the following (OAR 345-001-0010(33)(c)-(e)), with a demonstrated direct benefit to affected area (county of resource site), in order of priority:</u>
<u>Purchase of conservation easement or other land protection where trail traces exist</u>
<u>Historic trails restoration within and outside the facility area</u>
<u>Land acquisition</u>
<u>Public signage, publication/print/media, and/or interpretive plans</u>
<u>Trail segment management plans</u>
<u>Additional literature or archival review (e.g. historic maps, local papers);</u>
<u>Remote sensing</u>
<u>National Register nomination</u>
<u>Recording—including HABS/HAER/HALS</u>
<u>Funding for public interpretation, archeological resource, or other program benefiting Oregon Trail resources</u>
<u>Acronyms: HABS – Historic American Building Survey; HAER – Historic American Engineering Record; HALS –Historic American Landscape Survey</u>
<u>Notes:</u>

**Table HCA-3b: Department Recommended Mitigation
for NRHP-Eligible Oregon Trail/NHT Segments**

<u>Mitigation</u>
<u>^{1.} Required mitigation established through the federal Section 106 compliance review may be used to satisfy the EFSC mitigation requirement for listed or likely NRHP-eligible Oregon Trail/NHT trail segments if applicant can demonstrate that it addresses both the design modifications and the restoration, preservation and maintenance; or compensation mitigation within affected area (county), as included in this table [Table HCA-4b of the HPMP]. If not duplicated through the federal Section 106 process, the applicant shall establish the scope and scale of Table HCA-4b mitigation, prior to construction, subject to Department review and approval, as part of the EFSC-specific HPMP, as outlined in recommended Historic, Cultural and Archeological Resources Condition 2.</u>

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Applicability of Visual Impact Mitigation for Protected Resources with Shared Viewsheds

Many NRHP-eligible Oregon Trail/NHT segments identified in Table HCA-3 are also protected under, or located within resources protected under, the Council’s Protected Areas, Recreation, Scenic and Land Use standards. To minimize unnecessary duplication in mitigation and appropriately apply mitigation for the same or similar visual impact, mitigation proposed by the applicant, if not already represented by the applicant, be further modified (Table HCA-4b), would also reduce proposed facility visual impacts to protected resources within the 5-mile viewshed of NRHP-Eligible Oregon Trail/NHT segments listed in Table HCA-3.

The certificate holder is also required to employ design modifications– and, within the same affected area, restore; preserve or maintain; or compensate for the visual impact using an entity or project that would directly benefit the same county, based on the mitigation presented in Table HCA-4b above, which is the same mitigation items discussed in HPMP Section VII. The Department notes that if the mitigation resulting from the Section 106 compliance review meets the requirements included in Table HCA 4b, in each affected county, then that would satisfy this requirement and may be updated in the HPMP.

Evaluation of Mitigation for Indirect Impacts per NRHP-Eligible Oregon Trail/NHT as a Linear Resource (Cumulative Impacts)

Final resource eligibility determinations will be verified or established in the Section 106 compliance review and this information would be provided in the final HPMP, submitted to the Department for its review and approval, in consultation with SHPO. The Department notes that its review and approval would include resources evaluated under OAR 345-022-0090(1)(a) and (b), discussed later in this section; appropriate mitigation measures for those resources. The information contained in Table HCA-3, includes how the sensitive Oregon Trail resources would be avoided, reduced, and/or mitigated consistent with the requirements of Section 6.2.2 of the HPMP and includes the site-specific measures contained in Table 6-3 from the HPMP and the framework outlined in Table 6-4 of the HPMP. This compiled information has been included in the HPMP.

1 III. Tribal Resources

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3 Under OAR 345-001-0010(52) any tribe identified by the Legislative Commission on Indian
4 Services (LCIS) that may be affected by the proposed facility is identified as a reviewing agency
5 in the EFSC review process. The following Tribes were identified by LCIS as being potentially
6 affected by the proposed facility:

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8 • Confederated Tribes of the Umatilla Indian Reservation
9 • Confederated Tribes of the Warm Springs Indian Reservation of Oregon
10 • Burns Paiute Tribe

11 Table HCA-5 below provides information that the applicant provided on three historic
12 properties of religious and cultural significance to Indian tribes (HPRCSITs). Table HCA-5 only
13 represents the HPRCSITs described by the applicant in Exhibit S and that are available for public
14 disclosure in this order and associated application materials.

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34 Table HCA-5: Exhibit S Historic Properties of Religious and Cultural Significance to Indian
35 Tribes

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Table HCA-5: Exhibit S Historic Properties of Religious and Cultural Significance to Indian Tribes

<u>Assigned Trinomial or Other ID</u>	<u>Visual Assessment Temporary Resource #</u>	<u>County</u>	<u>Generalized Resource Description</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Impact Avoided?/ Project Effect</u>	<u>Management Recommendation</u>
<u>Nisxt</u>	<u>SL-MO-003</u>	<u>Morrow</u>	<u>TCP/ HPRCSIT</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>No - Potential visual impact</u>	<u>Consultation with Confederated Tribes of the Yakama Nation</u>
<u>Sisupa</u>	<u>SL-MO-004</u>	<u>Morrow</u>	<u>TCP/ HPRCSIT</u>	<u>Eligible (Criteria A and D)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2, Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>DOD, PV</u>	<u>No - Potential visual impact</u>	<u>Public Archaeology Funding, Consultation.</u>
<u>Sand Hollow Battle-ground</u>	<u>SL-MO-001, SL-MO-005</u>	<u>Morrow</u>	<u>TCP/ HPRCSIT</u>	<u>Eligible (Criteria A and B)</u>	<u>Proposed Route, West of Bombing Range Road Alternative 1, West of Bombing Range Road Alternative 2, Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>BLM, DOD, PV</u>	<u>No - Potential visual impact</u>	<u>Public Archaeology Funding, Public Interpretation Funding, Consultation.</u>

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IV. Other Resources Potentially Impacted under OAR 345-022-0090(1)(a)

Table HCA-6, Potentially Impacted Resources under OAR 345-022-0090(1)(a), below represents all the resources inventoried in the site boundary/direct analysis area, and within the visual impact area/Area of Potential Effect (APE) that may experience a direct or indirect impact. Table HCA-5 is generated from the information provided in ASC Exhibit S; Table S-2, and the Exhibit S and HPMP Errata. Table HCA-6 includes resources that may potentially be protected under OAR 345-022-0090(1)(a) and OAR 345-022-0090(1)(b) of the ESFC standard. If a resource is not eligible for listing on the NRHP, it may qualify as an archaeological object or archaeological site as defined in statute and covered under OAR 345-022-0090(1)(b). Table HCA-6 does not include resources that the applicant proposes would only be potentially protected under sub (b) of the standard. Table HCA-6 also excludes Oregon Trail/NHT and historic properties of religious and cultural significance to Indian tribes (HPRCSITs). The table provides the resource identification, generalized description, the project component that may create the impact, whether there is a potential direct or indirect impact, and some management notes represented for additional activities and avoidance measures. To align the EFSC process with the federal Section 106 compliance review, many resources that the applicant recommended as “not eligible” have been changed and evaluated in this order as “unevaluated/likely eligible”, therefore protected under OAR 345-022-0090(1)(a). The final resource designations, avoidance, and mitigation measures resulting from the Section 106 compliance review identified in Table HCA-6 shall be provided to the Department in the final HPMP.

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>Segment 4B2H-EK-26/ OWR&N Roundhouse and OWR&N/OSL Joint Railyard</u>	<u>Baker</u>	<u>Railroad Segment & Structure/ Historic Archaeological Site</u>	<u>Unevaluated (Criterion D); Not Eligible (Criteria A, B, and C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-SA-12</u>	<u>Baker</u>	<u>Homestead / Historic Archaeological Site</u>	<u>Unevaluated (Criteria A, B, and D); Not Eligible (Criterion C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-SA-16</u>	<u>Baker</u>	<u>Ranching / Historic Archaeological Site</u>	<u>Unevaluated (Criteria A, B, and D); Not Eligible (Criterion C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>0503050334SI</u>	<u>Baker</u>	<u>Cairn(s)/ Undetermined Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>14S44E14-2</u>	<u>Baker</u>	<u>Cairn(s), Lithic Scatter, & Rock Alignment(s)/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>35BA00372</u>	<u>Baker</u>	<u>Rock Alignment(s)/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>35BA00388</u>	<u>Baker</u>	<u>Rock Alignment(s)/ Undetermined Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>35BA01423</u>	<u>Baker</u>	<u>Cairn(s) & Hunting Blind/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential cumulative visual impact</u>
<u>4B2H-EK-08</u>	<u>Baker</u>	<u>Mining / Historic Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM, PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/ indirect impact. Avoid direct impact until eligibility determined. Research Needed.</u>
<u>4B2H-EK-10</u>	<u>Baker</u>	<u>Lithic/Tool Scatter/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/ indirect impact. Avoid direct impact until eligibility determined. Research Needed.</u>
<u>4B2H-EK-32</u>	<u>Baker</u>	<u>Lithic/Tool Scatter, Ranching, Water Conveyance/Multicomponent Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-MC-02</u>	<u>Baker</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>
<u>6B2H-MC-05</u>	<u>Baker</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>
<u>6B2H-SA-14</u>	<u>Baker</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed</u>
<u>N/A</u>	<u>Baker</u>	<u>Lithic/Tool Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological site not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>4B2H-EK-30</u>	<u>Baker</u>	<u>Water Conveyance / Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological site not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>6B2H-RP-02</u>	<u>Baker</u>	<u>Mining / Historic Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological site not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-SA-07</u>	<u>Baker</u>	<u>Homestead / Historic Archaeological Site</u>	<u>Eligible (Criterion C); Unevaluated (Criteria A, B, and D)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>B2H-DM-07</u>	<u>Baker</u>	<u>Homestead / Historic Archaeological Site</u>	<u>Eligible (Criterion A), Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>Benson Reservoir</u>	<u>Baker</u>	<u>Water Conveyance / Historic Site Aboveground</u>	<u>Eligible (Criteria A and B); Not Eligible (Criteria C and D)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area; Visual Assessment analysis area</u>	<u>BLM, PV</u>	<u>a) Historic Property</u>	<u>Potential visual impact. Avoid Direct Impacts</u>
<u>N/A</u>	<u>Malheur</u>	<u>Rockshelter / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential visual impact</u>
<u>35ML01549</u>	<u>Malheur</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>35ML01550</u>	<u>Malheur</u>	<u>Rock Alignment(s)/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>35ML01552</u>	<u>Malheur</u>	<u>Rock Alignment(s)/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>35ML01553</u>	<u>Malheur</u>	<u>Cairn(s)/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>35ML01959</u>	<u>Malheur</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>35ML01960</u>	<u>Malheur</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential cumulative visual impact</u>
<u>B2H-EE-37</u>	<u>Malheur</u>	<u>Lithic/Tool Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>B2H-EE-38</u>	<u>Malheur</u>	<u>Lithic/Tool Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>B2H-SA-29</u>	<u>Malheur</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>B2H-SA-42</u>	<u>Malheur</u>	<u>Quarry / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential direct/indirect</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
					(Construction Footprint)			impact. Avoid direct impact until eligibility determined. Testing Needed.
<u>B2H-SA-44</u>	<u>Malheur</u>	<u>Lithic/Tool Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Potential Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>N/A</u>	<u>Malheur</u>	<u>Quarry, Refuse Scatter, & Water Conveyance /Multicomponent Archaeological Site</u>	<u>Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>3B2H-SA-27</u>	<u>Malheur</u>	<u>Lithic Scatter & Refuse Scatter /Multicomponent Archaeological Site</u>	<u>Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>4B2H-EK-48</u>	<u>Malheur</u>	<u>Quarry & Refuse Scatter / Multicomponent Archaeologic al Site</u>	<u>Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>4B2H-EK-50</u>	<u>Malheur</u>	<u>Lithic Scatter & Refuse Scatter /Multicomponent Archaeological Site</u>	<u>Pre-Contact Component: Eligible (Criterion D), Not Eligible (Criteria A – C); Historic Component: Not Eligible</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>35ML1522</u>	<u>Malheur</u>	<u>Open Camp / Pre-Contact Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2: Not in accessible survey area.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>VM-11-01</u>	<u>Malheur</u>	<u>Groundstone / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not identified.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>2B2H-SA ISO-14</u>	<u>Malheur</u>	<u>Refuse / Historic IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Double Mountain Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>
<u>3B2H-SA ISO-35</u>	<u>Malheur</u>	<u>Debitage / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-SA ISO-01</u>	<u>Malheur</u>	<u>Debitage / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>
<u>B2H-EE-ISO-23</u>	<u>Malheur</u>	<u>Debitage / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>
<u>B2H-SA-ISO-39</u>	<u>Malheur</u>	<u>Debitage / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>
<u>B2H-SA-ISO-52</u>	<u>Malheur</u>	<u>Debitage / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>
<u>B2H-SA-ISO-54</u>	<u>Malheur</u>	<u>Debitage / Pre-Contact IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological object not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed (IF).</u>
<u>6B2H-SA-01</u>	<u>Malheur</u>	<u>Mining / Historic Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological site not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-SA-02</u>	<u>Malheur</u>	<u>Refuse Scatter / Historic Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological site not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>B2H-SA-31</u>	<u>Malheur</u>	<u>Refuse Scatter / Historic Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>None - Archaeological site not eligible for NRHP. Federal land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>Kingman Lateral</u>	<u>Malheur</u>	<u>Water Conveyance /Historic Site/Aboveground</u>	<u>No historic or archaeological evidence identified during survey. Identified through historic map review.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM, BLM, BLM, BR, BR, BR, BR, PV</u>	<u>None - Identified through historic map review. No physical evidence.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>Ontario to Burns Freight Road</u>	<u>Malheur</u>	<u>Road / Historic Archaeological Site</u>	<u>No historic or archaeological evidence identified during survey. Identified through historic map review.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM, PV</u>	<u>None - Identified through historic map review. No physical evidence.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>3B2H-SA-26</u>	<u>Malheur</u>	<u>Lithic/Tool Scatter / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>3B2H-SA-28</u>	<u>Malheur</u>	<u>Quarry / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>3B2H-SA-30</u>	<u>Malheur</u>	<u>Quarry / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>3B2H-SA-31</u>	<u>Malheur</u>	<u>Quarry / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>4B2H-EK-42</u>	<u>Malheur</u>	<u>Lithic/Tool Scatter / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Data Recovery. Potential direct/indirect impact. Avoid direct impact until eligibility determined.</u>
<u>4B2H-EK-49</u>	<u>Malheur</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>4B2H-EK-51</u>	<u>Malheur</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>4B2H-EK-52</u>	<u>Malheur</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>4B2H-EK-53</u>	<u>Malheur</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>6B2H-SA-04</u>	<u>Malheur</u>	<u>Quarry / Pre-Contact Archaeological Site</u>	<u>Eligible (Criterion D); Not Eligible (Criteria A – C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM</u>	<u>a) Historic Property</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>
<u>35ML00552 (Ali-Alk Stacked Stone Rings)</u>	<u>Malheur</u>	<u>Stone rings / Pre-Contact Archaeological Site</u>	<u>Eligible</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>Potential visual impact</u>
<u>N/A</u>	<u>Malheur/ Owyhee</u>	<u>Quarry / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM, PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>N/A</u>	<u>Morrow</u>	<u>Midden / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>FWS</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact</u>
<u>N/A</u>	<u>Morrow</u>	<u>Shell Midden & Temporary Camp/Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>FWS</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact</u>
<u>35MW00011</u>	<u>Morrow</u>	<u>Midden /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>FWS</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>35MW00248</u>	<u>Morrow</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential visual impact</u>
<u>126CSF-Resource 11</u>	<u>Morrow</u>	<u>Survey Marker / Historic Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not identified.)</u>	<u>West of Bombing Range Road Alternative 1</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property and/or b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>126CSF-Resource 4</u>	<u>Morrow</u>	<u>Road / Historic Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not identified.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>DOD</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>4-2-IF</u>	<u>Morrow</u>	<u>Refuse / Historic IF/Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not identified.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property and/or b) Archaeological object on private land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>CFR 1064 (Vey Ranch)</u>	<u>Morrow</u>	<u>Ranch / Historic Site/ Aboveground</u>	<u>Eligible (Criterion A)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Historic Property</u>	<u>Potential visual impact. NRHP nomination and/or public interpretation/funding</u>
<u>UPRR</u>	<u>Morrow, Umatilla, Union, Baker, Malheur</u>	<u>Railroad / Archaeological Site & Historic Site/ Aboveground</u>	<u>Multiple Segments, varying eligibility recommendations)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>SL-UM-010 (Lookout T2S, R34E, S 18)/ Historic Lookout Tower</u>	<u>Umatilla</u>	<u>Forestry / Historic Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BIA</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact</u>
<u>6B2H-MC-13</u>	<u>Umatilla</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-MC-14</u>	<u>Umatilla</u>	<u>Refuse Scatter & Structure/ Historic Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-MC-15</u>	<u>Umatilla</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>
<u>6B2H-MC-18</u>	<u>Umatilla</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-MC-19</u>	<u>Umatilla</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-MC-23</u>	<u>Umatilla</u>	<u>Hunting Blind / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-MC-30</u>	<u>Umatilla</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-MC-31</u>	<u>Umatilla</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-TH-01</u>	<u>Umatilla</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-TH-04</u>	<u>Umatilla</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>N/A</u>	<u>Umatilla</u>	<u>Cabin / Multicomponent Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>CTUIR</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact</u>
<u>UP-106</u>	<u>Umatilla</u>	<u>Cabin /Historic Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>CTUIR</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact</u>
<u>N/A</u>	<u>Umatilla</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Eligible (Criteria TBD)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BIA</u>	<u>a) Historic Property</u>	<u>Potential visual impact</u>
<u>Range Unit 12 Site 2</u>	<u>Umatilla</u>	<u>Cairn(s) / Pre-Contact Archaeological Site</u>	<u>Eligible (Criteria TBD)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BIA</u>	<u>a) Historic Property</u>	<u>Potential visual impact</u>
<u>UP-102</u>	<u>Umatilla</u>	<u>Structure(s) Historic Site/ Aboveground</u>	<u>Eligible (Criteria TBD)</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>BIA</u>	<u>a) Historic Property</u>	<u>Potential visual impact</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>B2H-UM-006 /Daly Wagon Road</u>	<u>Umatilla</u>	<u>Wagon Road / Historic Site/ Aboveground</u>	<u>Eligible (Criteria A and C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>BIA, BLM, BLM, BLM, BLM, PV</u>	<u>a) Historic Property</u>	<u>Potential visual impact. Public Interpretation, Funding, Print/Media Publication</u>
<u>35UN00459</u>	<u>Union</u>	<u>Rock Cairn / Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential cumulative visual impact</u>
<u>35UN00493</u>	<u>Union</u>	<u>Rock Alignment Undetermined Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential cumulative visual impact</u>
<u>6B2H-MC-07/6B2H-MC-07 / Clover Creek Valley Homestead</u>	<u>Union</u>	<u>Homestead /Historic/Aboveground</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Potential Historic Property</u>	<u>Potential visual impact. Additional Research; Design Modification; Public Interpretation Funding, and/or Print/Media Publication</u>
<u>N/A</u>	<u>Union</u>	<u>Lithic/Tool Scatter, Homestead, & Refuse Scatter/ Multicomponent Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>6B2H-MC-06</u>	<u>Union</u>	<u>Cairn(s) & Lithic/Tool Scatter/ Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-RP-08</u>	<u>Union</u>	<u>Cairn(s) /Pre-Contact Archaeological Site</u>	<u>Unevaluated</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>
<u>6B2H-RP-10</u>	<u>Union</u>	<u>Cairn(s) / Historic Archaeological Site</u>	<u>Unevaluated</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>
<u>B2H-SA-24</u>	<u>Union</u>	<u>Rock Alignment /Undetermined Archaeological Site</u>	<u>Unevaluated</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Potential Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Consultation Needed.</u>
<u>35UN0097</u>	<u>Union</u>	<u>Temporary Camp & Ranching / Multicomponent Archaeological Site</u>	<u>Pre-Contact Component: Eligible (Criterion D). Historic Component: Not Eligible</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Data Recovery.</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
<u>N/A</u>	<u>Union</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2: Not in accessible survey area.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property and/or b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>ISO-001</u>	<u>Union</u>	<u>Logging / Historic IF/ Archaeological Object</u>	<u>Unevaluated/Likely Eligible (from Table S-2: Not in accessible survey area.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>PV</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property and/or b) Archaeological object on private land.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>35UN0280</u>	<u>Union</u>	<u>Lithic Scatter / Pre-Contact Archaeological Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not identified.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>USFS</u>	<u>Unknown - Not identified during pedestrian survey. Requires additional survey to determine if subject to a) Historic Property.</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>B2H-BS-102</u>	<u>Union</u>	<u>Utility Line / Historic Site</u>	<u>Unevaluated/Likely Eligible (from Table S-2:Not Eligible.)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area</u>	<u>USFS</u>	<u>None - Archaeological site not eligible</u>	<u>Potential direct/indirect impact. Avoid direct</u>

Table HCA-6: Potentially Impacted Resources under OAR 345-022-0090(1)(a)

<u>Temporary Resource #: Ped. Survey/Visual Assessment OR Assigned Trinomial</u>	<u>County</u>	<u>Generalized Resource Description/ Resource Type</u>	<u>NRHP Recommendation</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Land ownership</u>	<u>Applicable EFSC Standard</u>	<u>Project Impacts and Management Comments</u>
					(Construction Footprint)		for NRHP. Federal land.	impact until eligibility determined.
<u>Segment 6B2H-RP-09</u>	<u>Union</u>	<u>Cairn(s) & Trail Segment / Historic Archaeological Site</u>	<u>Eligible, Contributing (Criterion A); Unevaluated (Criterion D); Not Eligible (Criteria B and C)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint); Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>35UN0052 (Stockhoff Basalt Quarry Site)</u>	<u>Union</u>	<u>Cairn(s), Quarry, & Homestead /Multicomponent Archaeological Site</u>	<u>Eligible (Criterion D)</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>BLM, PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>Potential direct/indirect impact. Avoid direct impact until eligibility determined. Testing Needed.</u>
<u>6B2H-MC-10</u>	<u>Union</u>	<u>Hunting Blind</u>	<u>Unevaluated</u>	<u>Morgan Lake alternative</u>	<u>Visual Assessment analysis area</u>	<u>PV</u>	<u>a) Historic Property; b) Archaeological site on private land</u>	<u>6B2H-MC-10 is 5.14 meters south of the direct analysis southern boundary. Additional Research; Design Modification; Public Interpretation Funding, and/or Print/Media Publication</u>

1

1
2 V. Potential Impacts to Historic, Cultural, and Archaeological Resources Under OAR 345-
3 022-0090(1)(b)

4
5 Under OAR 345-022-0090(1)(b), for a proposed facility located on private land, the Council must
6 find that the construction and operation of the facility, taking into account mitigation, are not
7 likely to result in significant adverse impacts to archaeological objects, as defined in ORS
8 358.905(1)(a)², or archaeological sites, as defined in 358.905(1)(c).³ The applicant explains that
9 to maintain consistency with studies completed for the ASC Exhibit S for Council’s evaluation
10 and for the federal regulatory compliance, it assumed historic archaeological objects and sites
11 must have been constructed or created 50 years ago or more, compared to 75 years as
12 identified in 358.905(1)(a).⁴

13
14 If the lead federal agency disagrees with the not eligible determination, the resource would be
15 considered eligible for listing on the NRHP and therefore protected under OAR 345-022-
16 0090(1)(a). Table HCA-7, *Inventoried Resources under OAR 345-022-0090(1)(b)*, includes
17 resources that the applicant recommends as not eligible for listing on the NRHP, but that may
18 be evaluated and protected under OAR 345-022-0090(1)(b). The measures for impact
19 avoidance, minimization and mitigation for these resources would extend to any resources not
20 covered under OAR 345-022-0090(1)(a) but protected under OAR 345-022-0090(1)(b). These
21 resources located on private land were evaluated against the criteria identified in ORS
22 358.905(1)(a) and ORS 358.905(1)(c).

23
24 The applicant proposed archaeological sites 6B2H-MC-03 and 6B2H-SA-06 may qualify as an
25 “archaeological site” under ORS 358.905(1)(c) because they may contain archaeological objects
26 and the contextual associations of the archaeological objects with each other. The Department
27 notes that these sites may be evaluated in the federal Section 106 review and determined
28 eligible for listing on the NRHP, and therefore also protected under OAR 345-022-0090(1)(a). If
29 the lead federal agency concurs with the applicant’s recommendation that these sites are not
30 eligible, they may otherwise be protected under OAR 345-022-0090(1)(b). The sites shall be
31 avoided pending SHPO concurrence with this designation based on final design and any other
32 necessary measures to determine the sites significance. This information shall be provided to
33 the Department in the final HPMP.

² ORS 358.905(1)(a) states ““Archaeological object” means an object that: (A) Is at least 75 years old; (B) Is part of the physical record of an indigenous or other culture found in the state or waters of the state; and (C) Is material remains of past human life or activity that are of archaeological significance including, but not limited to, monuments, symbols, tools, facilities, technological by-products and dietary by-products.”

³ ORS 358.905(1)(c) states “(A) “Archaeological site” means a geographic locality in Oregon, including but not limited to submerged and submersible lands and the bed of the sea within the state’s jurisdiction, that contains archaeological objects and the contextual associations of the archaeological objects with: (i) Each other; or (ii) Biotic or geological remains or deposits. (B) Examples of archaeological sites described in subparagraph (A) of this paragraph include but are not limited to shipwrecks, lithic quarries, house pit villages, camps, burials, lithic scatters, homesteads and townsites.

⁴ B2HAPPDoc3-36 ASC 19 Exhibit S_Cultural_ASC_Public 2018-09-28. Section 3.4.2.

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Table HCA-7: Inventoried Resources under OAR 345-022-0090(1)(b)

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Table HCA-7: Inventoried Resources under OAR 345-022-0090(1)(b)

<u>Cultural Resources Pedestrian Survey Temporary Resource #</u>	<u>County</u>	<u>Resource Type</u>	<u>Generalized Resource Description (Attachment S-6)</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Protected Under OAR 345-022- 0090(1)(b)</u>	<u>Potential Impact</u>	<u>Management Recommendation</u>
<u>35BA1351 / B2H-JF-13</u>	<u>Baker</u>	<u>Archaeological Site</u>	<u>Historic /Ranching: Vegetated wooden corral -concentration of manufactured metal and wood parts, metal truck/ tractor cab - manual pump to well head replaced with electric pump- appears to still be in use for cattle.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-RP ISO-01</u>	<u>Baker</u>	<u>IF/ Archaeological Object</u>	<u>Pre-Contact /Utilized Flake(s): Isolated Find consists of single piece of pre-contact debitage, a secondary obsidian flak</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>6B2H-RP ISO-02</u>	<u>Baker</u>	<u>IF/ Archaeological Object</u>	<u>Pre-Contact /Debitage: Isolated Find consists of three pieces of pre- contact debitage, all tertiary chert flakes</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>Will be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>6B2H-RP ISO-03</u>	<u>Baker</u>	<u>IF/ Archaeological Object</u>	<u>Pre-Contact /Debitage: Isolated Find consists of a pre-contact obsidian bifacial thinning flake. The flake appears medially fractured.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>6B2H-SA ISO-05</u>	<u>Baker</u>	<u>IF/ Archaeological Object</u>	<u>Historic/ Refuse: Isolated Find includes aqua glass insulator fragment, sanitary can (meat type), and</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>

Table HCA-7: Inventoried Resources under OAR 345-022-0090(1)(b)

<u>Cultural Resources Pedestrian Survey Temporary Resource #</u>	<u>County</u>	<u>Resource Type</u>	<u>Generalized Resource Description (Attachment S-6)</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Protected Under OAR 345-022- 0090(1)(b)</u>	<u>Potential Impact</u>	<u>Management Recommendation</u>
			<u>several brown, glazed ceramic sherds.</u>					
<u>6B2H-SA ISO-06</u>	<u>Baker</u>	<u>IF/ Archaeological Object</u>	<u>Pre-Contact /Debitage: Isolated Find consists of a single piece of pre- contact debitage, an obsidian tertiary flake</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>3B2H-CH-03</u>	<u>Baker</u>	<u>Archaeological Site</u>	<u>Historic/Mining: historic mining area with three prospect pits and one tailings pile.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-MC-03</u>	<u>Baker</u>	<u>Archaeological Site</u>	<u>Historic/Mining: mine shaft (10 feet deep, oil cans and lumber present), two prospecting pits (metal/glass present), small concrete pad, wagon remnants, and concentration of rocks</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>Potentially</u>	<u>Avoid. May be directly impacted pending determinati on and mitigation</u>	<u>Avoid, SHPO determination, See HPMP.</u>
<u>6B2H-RP-05</u>	<u>Baker</u>	<u>Archaeological Site</u>	<u>Historic/Ranching: corral (appears to be in use), windmill (collapsed), and refuse scatter of concrete blocks</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-SA-06</u>	<u>Baker</u>	<u>Archaeological Site</u>	<u>Historic/Farmstead: standing and collapsed buildings, two refuse concentrations, a hay storage/feed structure, two caches of farming equipment, and an auto body.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>Potentially</u>	<u>Avoid. May be directly impacted pending determinati on and mitigation</u>	<u>Avoid, SHPO determination, See HPMP.</u>

Table HCA-7: Inventoried Resources under OAR 345-022-0090(1)(b)

<u>Cultural Resources Pedestrian Survey Temporary Resource #</u>	<u>County</u>	<u>Resource Type</u>	<u>Generalized Resource Description (Attachment S-6)</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Protected Under OAR 345-022-0090(1)(b)</u>	<u>Potential Impact</u>	<u>Management Recommendation</u>
<u>B2H-SA-30</u>	<u>Malheur</u>	<u>Archaeological Site</u>	<u>Historic/Refuse Scatter: varied historic refuse scatter of cans, glass bottles and shards, crockery, miscellaneous items, and farm machinery.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-RP ISO-10</u>	<u>Umatilla</u>	<u>IF/ Archaeological Object</u>	<u>Historic/Refuse: Isolated Find consists of single piece of historic refuse: an aqua glass insulator fragment.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>6B2H-RP ISO-11</u>	<u>Umatilla</u>	<u>IF/ Archaeological Object</u>	<u>Historic/Refuse: Isolated Find consists of several clear glass bottle fragments.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>B2H-BS-ISO-25</u>	<u>Umatilla</u>	<u>IF/ Archaeological Object</u>	<u>Pre-Contact /Utilized Flake(s): Isolated Find consists of utilized basalt secondary flake with 10 percent cortex on the dorsal surface.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>6B2H-MC-16</u>	<u>Umatilla</u>	<u>Archaeological Site</u>	<u>Historic/Utility Line: Consists of five single utility poles (telephone), some with rock jacks</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-MC-26</u>	<u>Umatilla</u>	<u>Archaeological Site</u>	<u>Historic/Agriculture: Consists of 20 historic agricultural field clearing rock piles and a potential basalt quarry. Former agricultural field. Sanitary cans and lumber scatter.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>

Table HCA-7: Inventoried Resources under OAR 345-022-0090(1)(b)

<u>Cultural Resources Pedestrian Survey Temporary Resource #</u>	<u>County</u>	<u>Resource Type</u>	<u>Generalized Resource Description (Attachment S-6)</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Protected Under OAR 345-022-0090(1)(b)</u>	<u>Potential Impact</u>	<u>Management Recommendation</u>
<u>6B2H-RP ISO-08</u>	<u>Umatilla</u>	<u>IF/ Archaeological Object</u>	<u>Historic/Agriculture: Isolated Find consists of a small agricultural cache of farming equipment. The cache includes three nearly identical metal discers with grain drills.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>Shovel probe to confirm isolated nature.</u>
<u>6B2H-TH-05</u>	<u>Umatilla</u>	<u>Archaeological Site</u>	<u>Historic/Agriculture: consists of eight rock piles from historic agricultural field-clearing</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-TH-08</u>	<u>Umatilla</u>	<u>Archaeological Site</u>	<u>Historic/Agriculture: consists of dilapidated shed, a wooden cart, a harrower, and remnants of a wagon/cart. Misc metal scraps and few pieces of milled lumber scattered across the site.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-TH-09</u>	<u>Umatilla</u>	<u>Archaeological Site</u>	<u>Historic/Agriculture & Other: agricultural locus and a stone concentration of indeterminate age. Agricultural equipment includes hitch with drawbar and wooden tractor trailer. Refuse is also present, including barbed wire and ammo.</u>	<u>Proposed Route</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>

Table HCA-7: Inventoried Resources under OAR 345-022-0090(1)(b)

<u>Cultural Resources Pedestrian Survey Temporary Resource #</u>	<u>County</u>	<u>Resource Type</u>	<u>Generalized Resource Description (Attachment S-6)</u>	<u>Project Route(s)</u>	<u>Project Component</u>	<u>Protected Under OAR 345-022- 0090(1)(b)</u>	<u>Potential Impact</u>	<u>Management Recommendation</u>
<u>6B2H-MC-09</u>	<u>Union</u>	<u>Archaeological Site</u>	<u>Historic/Road: consists of two abandoned road segments and associated refuse. The roads are separated by tributary. Refuse includes porcelain with blue print, whiteware, miscellaneous glass and metal, and agricultural machinery parts.</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>6B2H-MC-11</u>	<u>Union</u>	<u>Archaeological Site</u>	<u>Historic/Mining: Consists of a historic prospecting pit, with small tailing pile nearby.</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>
<u>B2H-BS-49</u>	<u>Union</u>	<u>Archaeological Site</u>	<u>Historic/Ranching: Consists of a historic wooden corral. The corral is rectangular in shape and constructed of natural timbers and milled lumber.</u>	<u>Morgan Lake Alternative</u>	<u>Direct Analysis Area (Construction Footprint)</u>	<u>No</u>	<u>May be directly impacted</u>	<u>No further management.</u>

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VI. Potential Impacts to and Mitigation for Historic, Cultural, and Archaeological Resources Under OAR 345-022-0090(1)(c)

OAR 345-022-0090(1)(c), the Council’s Historic, Cultural and Archaeological Resources standard addresses and protects archaeological sites on public lands under OAR 345-022-0090(1)(c) as defined in ORS 358.905(1)(c).⁵ ASC Exhibit S, Table S-2 identifies only one archaeological site located on public (state) lands. This is resource 35UM00365 the Meacham Pioneer Memorial Cemetery Site, managed by the Oregon Department of Transportation (ODOT). This resource is also identified in Table HCA-2, Oregon Trail/NHT Inventory in Analysis Area with Avoided/No Impacts. There would not be direct or indirect impacts to this resource, therefore, OAR 345-022-0090(1)(c) does not apply.

VII. Mitigation for Historic, Cultural, and Archaeological Resources: Historic Properties Management Plan (HPMP)

Table HCA-8 through Table HCA-10 outline avoidance measures to avoid direct impacts to Oregon Trail/NHT resources, resource evaluation, impact minimization, and mitigation measures.

Table HCA-8: Potential Minimization and Mitigation of Direct Impacts to Resource Site Types Identified within the Direct Analysis Area

Table HCA-8: Potential Minimization and Mitigation of Direct Impacts to Resource Site Types Identified within the Direct Analysis Area*

<u>Site Type</u>	<u>Potential Minimization/Mitigation Measure</u>
<u>Pre-Contact Sites</u>	
<u>Lithic Scatter, Lithic/Tool Scatter, Quarry, Temporary Camp</u>	<u>Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill).</u> <u>Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website,</u>
<u>Multicomponent Sites</u>	

⁵ ORS 358.905(1)(c) states, “(A) “Archaeological site” means a geographic locality in Oregon, including but not limited to submerged and submersible lands and the bed of the sea within the state’s jurisdiction, that contains archaeological objects and the contextual associations of the archaeological objects with: (i) Each other; or (ii) Biotic or geological remains or deposits. (B) Examples of archaeological sites described in subparagraph (A) of this paragraph include but are not limited to shipwrecks, lithic quarries, house pit villages, camps, burials, lithic scatters, homesteads and townsites.

B2HAPPDoc3-36 ASC 19 Exhibit S Cultural ASC Public 2018-09-28. Section 3.4.2.

Table HCA-8: Potential Minimization and Mitigation of Direct Impacts to Resource Site Types Identified within the Direct Analysis Area*

<u>Lithic Scatter/Tool & Refuse Scatter, Ranching Complex, Water Conveyance, Possible Rock Art, Utility Line, Quarry & Refuse Scatter, Temporary Camp</u>	<u>Data recovery (controlled excavation), or in-place preservation/protection (capping with clean fill). Off-Site: publish research-focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).</u>
<u>Historic-Era Sites</u>	
<u>Agriculture, Bridge, Homestead, Ranching, Logging Railroad, Mining, Railroad and Utility Line, Refuse Scatter, Road, Structure, Survey Marker, Trail Segment, Water Conveyance</u>	<u>Update recordation (if necessary), data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).</u>
<u>Undetermined Sites</u>	
<u>Rock Circle</u>	<u>Update recordation (if necessary, data recovery (if applicable). Off-Site: publish research focus article or professional society presentation, or public education and outreach (e.g., website, kiosk, etc.).</u>
* Applies to OAR 345-022-0090(1) (a) through (c) Source: B2HAPPDoc3-36 ASC 19 Exhibit S_Cultural_ASC_Public 2018-09-28. Attachment S-9. Table 6-2.	

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Table HCA-9 Potential Minimization and Mitigation Methods for Indirect Impacts

Table HCA-9 Potential Minimization and Mitigation Methods for Indirect Impacts*

<u>Resource Category</u>	<u>Example Resource Types</u>	<u>Potential Management Methods for Indirect Impacts</u>
<u>Trails (NHT, stage trails, freight roads, etc.)</u>	<ul style="list-style-type: none"> • <u>Trail remnants/ segments</u> • <u>Associated trail sites or features (stations, burials, inscriptions)</u> 	<ul style="list-style-type: none"> • <u>Recording—including HABS/HAER/HALS**</u> • <u>Additional literature or archival review (e.g. historic maps, local papers)</u> • <u>Remote sensing</u> • <u>Purchase of conservation easement or other land protection where trail traces exist</u> • <u>Historic trails restoration within and outside Project area</u> • <u>Public signage, publication/print/media, and/or interpretive plans</u>

Table HCA-9 Potential Minimization and Mitigation Methods for Indirect Impacts*

<u>Resource Category</u>	<u>Example Resource Types</u>	<u>Potential Management Methods for Indirect Impacts</u>
<u>Historic Buildings and Structures</u>	<ul style="list-style-type: none"> • <u>Farm and ranch sites/homesteads</u> • <u>Historic districts</u> • <u>Utility lines</u> • <u>Water conveyance systems</u> • <u>Mining sites</u> • <u>Bridges, etc.</u> 	<ul style="list-style-type: none"> • <u>Photo documentation and scale drawings</u> • <u>National Register Nomination (if owner consents)</u> • <u>HABS/HAER/HALS documentation</u> • <u>Additional archival and literature review</u> • <u>Restoration of historic building or structure</u> • <u>Relocation of historic building or structure</u> • <u>Public interpretation (with owner permission)</u>
<u>Historic Property of Religious or Cultural Significance to Indian Tribes (TCPs; limited to those subject to EFSC standards)</u>	<ul style="list-style-type: none"> • <u>Ceremonial areas</u> • <u>Vision quest sites</u> • <u>Hunting and gathering areas</u> 	<ul style="list-style-type: none"> • <u>Additional literature/archival review</u> • <u>Ethnographic documentation</u> • <u>Oral histories</u> • <u>Public archaeology funding</u> • <u>As recommended by impacted tribes</u>

* Applies to OAR 345-022-0090(1) (a)

** HABS – Historic American Building Survey; HAER – Historic American Engineering Record; HALS – Historic American Landscape Survey

Source: B2HAPPDoc3-36 ASC 19 Exhibit S Cultural ASC Public 2018-09-28. Attachment S-9. Table 6-3.

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Table HCA-10 Potential Minimization and Mitigation Methods for Indirect and Direct Impacts to Aboveground Resources

Table HCA-10 Potential Minimization and Mitigation Methods for Indirect and Direct Impacts to Aboveground Resources*

<u>Built Environment Resource Type</u>	<u>Potential Minimization/ Mitigation (Indirect and Direct impacts)</u>
<u>Trails (Oregon NHT, Lewis and Clark NHT, stage trails, freight roads, etc.)</u>	<u>Recordation in HABS/HAER/HALS**; metal detector surveys, additional historical research, information pamphlets, trail segment management plans; conservation easements; land acquisition; National Register nomination</u>
<u>Historic Buildings (Store, bank, Cabins, Homestead, etc.)</u>	<u>Recordation in HABS/HAER/HALS; restoration of historic building; relocation of historic building; oral histories; public interpretation; print publication; video media publication; National Register nomination</u>

Table HCA-10 Potential Minimization and Mitigation Methods for Indirect and Direct Impacts to Aboveground Resources*

<u>Built Environment Resource Type</u>	<u>Potential Minimization/ Mitigation (Indirect and Direct impacts)</u>
<u>Historic Structures (Railroad, mining, resources, bridge, utility lines, water conveyance, etc.)</u>	<u>Recordation in HABS/HAER/HALS; restoration of historic structure; relocation of historic structure; oral histories; public interpretation; print/media publication; National Register nomination</u>
<u>Historic Districts (residential, commercial, industrial, agricultural)</u>	<u>Historic district design guidelines for utilities, repair and maintenance guidelines, print publication, video media publication (website/podcast/video); National Register nomination</u>
<u>Archaeological resources with above ground features (Cemeteries, cairns, rock alignments, house pits, hunting blinds, middens, camp, quarry, rock art, rock shelter</u>	<u>Ethnographic documentation; resource management plan; recordation in HABS/HAER/HALS (if appropriate); partnership and funding for public archaeology projects; print publication, video media publication (website/podcast/video)</u>
<u>Traditional Cultural Properties (Ceremonial areas, vision quest, or gathering areas, etc.)</u>	<u>Ethnographic documentation; resource management plan; recordation; oral histories, etc.</u>
<p>* Applies to OAR 345-022-0090(1) (a) through (c) ** HABS – Historic American Building Survey; HAER – Historic American Engineering Record; HALS – Historic American Landscape Survey Source: B2HAPPDoc3-36 ASC 19 Exhibit S Cultural ASC Public 2018-09-28. Attachment S-9. Table 6-4.</p>	

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APPENDIX A
BLM HPMP FRAMEWORK

Appendix B5
Historic Properties Management Plan Framework

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Acronyms and Abbreviations

APE	Areas of Potential Effect
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
HPMP	Historic Properties Management Plan
NAGPRA	Native American Graves Protection and Repatriation Act
NRHP	National Register of Historic Places
Project	Boardman to Hemingway Transmission Line Project
PSMP	Property-specific Mitigation Plans
SHPO	State Historic Preservation Officers
THPO	Tribal Historic Preservation Officers

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APPENDIX B5 – HISTORIC PROPERTIES MANAGEMENT PLAN FRAMEWORK

HISTORIC PROPERTIES MANAGEMENT PLAN DRAFT ANNOTATED OUTLINE

1.0 INTRODUCTION

- 1.1 Purpose of the Historic Properties Management Plan (HPMP)
This section addresses the purpose of the HPMP, which is to provide a project-wide set of plans and procedures to avoid, minimize, or mitigate adverse effects on historic properties.
- 1.2 Property-specific Mitigation Plans (PSMPs)
This section addresses the intent and purpose of the PSMPs, which is to specify the general terms of avoidance, monitoring, and a framework for mitigating adverse effects. The purpose of each PSMP is to supplement this HPMP with property-specific information, including treatment and mitigation for unavoidable direct and indirect effects.
- 1.3 Laws and Regulations
This section briefly addresses the federal and state laws and regulations applicable to the project with regard to cultural resources.
 - 1.3.1 Federal
 - 1.3.2 State
 - 1.3.3 Tribal
- 1.4 Organization
This section briefly outlines the organization and structure of the HPMP by section.

2.0 PROJECT AND AREA OF POTENTIAL EFFECTS DESCRIPTION

This section provides a project description and defines the areas of potential effect (APE) as established in the Programmatic Agreement for the project.

- 2.1 Project Description
This section provides a brief project description.
- 2.2 Area of Potential Effect
This section provides a definition of the APE as a baseline for survey and inventory.
 - 2.2.1 Direct Effects
This section discusses the direct-effects APE
 - 2.2.2 Indirect Effects
This section discusses the indirect-effects APE

3.0 SEQUENCE OF PROJECT-RELATED TASKS

This section addresses the various tasks that will be completed to ensure that historic properties eligible for or listed on the National Register of Historic Places (NRHP) are avoided or project impacts are minimized or mitigated and the sequence in which these tasks will occur during each phase of the project as listed below.

- 3.1 Pre-construction
Tasks include completion, submittal, and approval of the HPMP and resource specific monitoring plans.

- 3.2 Construction
Tasks include ongoing environmental training of construction staff, construction monitoring, mitigation of inadvertent discoveries, completion of work associated with PSMPs required during construction.
- 3.3 Post-construction
Tasks include completion of test investigation or data recovery analysis, preparation of artifacts for curation, transfer of materials to curation facility or appropriate land owner, and preparation of final reports
- 3.4 Reclamation
Tasks include monitoring of various reclamation treatments applied to reclaim temporary use areas.
- 3.5 Operation and Maintenance
Tasks include transmission line patrols, climbing inspections, structure and wire maintenance, insulator washing, inspection and maintenance of stations and communication facilities, access road repairs, and vegetation management activities.

4.0 PREVIOUS RESEARCH AND CULTURAL RESOURCE TYPES IDENTIFIED WITHIN THE PROJECT AREA

This section addresses the identification of resources and previous literature review, pedestrian field surveys, and research conducted for the project and identifies known cultural resource types within the project area.

- 4.1 Identification and Evaluation of Historic Properties
This section addresses the identification and evaluation of historic properties for the project. The HPMP is based on the results of cultural resource inventories consisting of background records and literature research, and pedestrian surveys. The Programmatic Agreement outlines the requirements for cultural resources inventory and identification of historic properties for the project
 - 4.1.1 Archival Research and Results
This section addresses the parameters and results of the archival research conducted for the project.
 - 4.1.2 Field Survey Methods and Results
This section addresses the parameters and results of the field surveys conducted for the project.
- 4.2 Ethnographic Studies
This section addresses the ethnographic studies prepared for the project.
- 4.3 Definition of Cultural Resources Site Types
This section provides a summary of the different cultural resource site types found in Oregon and Idaho in table format.
 - 4.3.1 Pre-contact Resources
 - 4.3.2 Historic Resources
 - 4.3.3 Multicomponent Resources

5.0 METHODS FOR DETERMINATION OF ELIGIBILITY AND EFFECTS

This section addresses the methods to be used to determine eligibility and project effects on sites within the project APEs.

- 5.1 Determination of Eligibility
This section addresses how determination of eligibility will be established by BLM, in consultation with tribes, Tribal Historic Preservation Officers (THPOs), State Historic Preservation Officers (SHPOs), and appropriate Concurring Parties to the

Programmatic Agreement, for sites within the project APEs based upon criteria contained in 36 CFR 60.4.

5.2 Determinations of Effects

This section addresses how historic properties will be evaluated to determine if the project has an adverse effect.

6.0 AVOIDANCE AND PROPOSED MITIGATION PLAN

This section presents a general framework for resolution of adverse effects from the project on historic properties.

6.1 Avoidance

6.2 General Mitigation Measures

Due to the scale of the project, it is unlikely that adverse effects to historic properties can be avoided entirely. This section provides mitigation options for unavoidable impacts.

6.2.1 Mitigation for Direct Adverse Effects

6.2.2 Mitigation for Indirect Effects

7.0 MONITORING PLAN

This section addresses monitoring for cultural resources during construction of the project. This plan provides details regarding roles and responsibilities of various personnel in the field in coordination with the project-wide Environmental Compliance Monitoring Plan that will be prepared as a part of the project Plan of Development.

7.1 Cultural Resources Team

This section addresses the role and responsibilities of the Cultural Resources Team as part of the Construction Contractors environmental inspection team.

7.2 Construction Compliance

7.2.1 Monitoring and Avoidance Procedures

This section addresses the monitoring procedures that will be applied project-wide including cultural resource construction monitoring, intermittent monitoring, inadvertent discoveries, and flagging, fencing, and signage measures.

7.2.2 Variances and Amendments

This section addresses the procedure to be followed when a variance or amendment is required due to changes in the project footprint.

8.0 REFERENCES CITED

APPENDICES

- A Inadvertent Discovery Plan
- B NAGPRA Plan of Action
- C Subsurface Investigation Strategy

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APPENDIX B
RESOURCE-SPECIFIC MITIGATION PLANS
(TO BE DETERMINED)

APPENDIX B – RESOURCE-SPECIFIC MITIGATION PLANS

To be completed following selection of final route and implemented Spring 2021.

**APPENDIX C
CONFIDENTIAL PROJECT MAPS
(TO BE DETERMINED)**

APPENDIX C – CONFIDENTIAL PROJECT MAPS

To be completed following selection of final route.

APPENDIX D
OREGON CULTURAL RESOURCE FORMS

Oregon Archaeological Site Form

Site Identification

Enter New Site Identifying information

* = Required Field
Smithsonian Trinomial To be assigned
Agency/Field ID *
Site Name
Recording Date *

Administrative Information

* = Required Field			
Managing Office			
Owners			
Owner		Former Owner?	
Site Ownership/Management Notes			
National Register Status Statements <i>Each Reviewing organization - including the field organization - can enter a status statement</i>			
Status	Role	Date	Statement Author

Oregon Archaeological Site Form

Site Type

* = Required Field		
Dimensions		
Length *	Width *	Units
Calculated Area		
Depth of cultural deposit *		
Site Type *		
Features		
Cultural Periods *		
General Age *		

Oregon Archaeological Site Form

Location

<p>* = Required Field <i>For sites in urban setting, give appropriate address in access description</i></p>	
<p>County *</p>	
<p>Cadastral Locations</p>	
<p>Township *</p>	<p>Range * Sec * 1/4 1/4 1/4 DLC# Meridian</p>
<p>Map References</p>	
<p>Map Name *</p>	<p>Revision Year *</p>
<p>UTM Coordinates *</p>	
<p>Type *</p>	<p>East * North * Method * Zone * Datum *</p>
<p>Describe access to site from permanent feature and how to find primary datum:</p>	

Oregon Archaeological Site Form

Environmental Information

<p>* = Required Field</p> <p>Depositional Environment</p>					
Soil Description:					
Culturally Significant Vegetation:					
Culturally Significant Vegetation Description:					
Water Sources					
Name of Water Body	Type	Stream Type	Stream Class	Distance	Direction
<p>Site Setting</p> <p><i>Discuss environmental setting of site relevant to site location, including on-site vegetation, topography, dated landforms and formation processes):</i></p>					
Province/Basin					
Province		Elev From (ft) *	Elev to (ft) *	Aspect	
Basin		Subbasin			
Drainage Name					

Oregon Archaeological Site Form

Site Description

<p>* = Required Field</p> <p>Site Description and Site Function * <i>Include discussion of site condition, found artifacts and other relevant information</i></p>	
<p>Date(s) of use <i>(Be as specific as possible. 0 if unknown, may not leave blank.)</i></p> <p>From * To * BC/AD/BP * Dating Method *</p>	
<p>Site Observations <i>The following were observed:</i></p> <p>Artifacts Present * Quantity *</p>	
<p>Estimated Counts</p> <p>Historic Prehistoric</p>	
<p>Rock Art</p> <p>Rock Art Present</p>	

Oregon Archaeological Site Form

Rock Art

* = Required Field	
Number of Loci: *	Number of Panels: *
Panels are Situated on:	Panel Description
Panel Aspects	
Type of Rock:	Formation name if known and additional information
Degree of Patination	
Category and Techniques Petroglyphs	Pictographs
Colors	Color Description
Rock Art Superimposed?	Superimposed art description
Natural Destructive Agents	Natural Destructive Agents Description
Other Destructive Agents	Other Destructive Agents Description
Detailed Description	

Oregon Archaeological Site Form

Site Condition

<p>* = Required Field</p> <p>Visit Date *</p>
<p>Site Condition *</p>
<p>Recorder <i>(Name and Organization)</i></p>
<p>Artifacts or Samples Collected?</p>
<p>Activities/Work Performed *</p>
<p>Impacts and Impact Agents</p>
<p>Protective Measures Recommended/Present Use & Expected</p>

Bibliographic References

Bibliographic References				
Author	Publication Year	Title	Agency	Primary Reference?

OREGON STATE CULTURAL RESOURCE ISOLATE FORM

ADMINISTRATIVE DATA

CR ISOLATE NUMBER:
OWNER:

COUNTY:

LOCATIONAL DATA

LEGAL DESCRIPTION: ___ 1/4 ___ 1/4 ___ 1/4 of SECTION ___ TOWNSHIP ___ RANGE ___
DLC ___ UTM ZONE: EASTING: NORTHING: GPS (Y/N):
USGS QUAD(S) NAME: SERIES: DATE:

ENVIRONMENTAL DATA

ELEVATION: SLOPE: ASPECT:
ITEM DESCRIPTION (Narrative, drawings, sketch map, photo):

Collected? Yes ___ No ___
Recorder:

Date:

ATTACH USGS TOPOGRAPHIC MAP:

APPENDIX E
MONITORING LOG

Boardman to Hemingway Transmission Line Project
Cultural Resource Monitoring

Page of

Report # _____	Boardman to Hemingway Transmission Line Cultural Resource Monitor Daily Report	Date ____ / ____ / ____
-----------------------	---	-------------------------

Cultural Resource Monitor: _____ Project Segment: _____ Location (GPS): _____ Construction Company: _____ Equipment Used/Operator Name: _____ Current Weather : _____ Ground Conditions: _____	Check all that apply: No Culture Resource findings: <input type="checkbox"/> Inadvertent Discovery: <input type="checkbox"/> Non-Compliance Issue: <input type="checkbox"/> Incident Reports: <input type="checkbox"/> (attached form as appropriate) Variances: <input type="checkbox"/> (attach to variance form)
--	--

Areas Inspected

Location: _____	Time : _____	Activity : _____
Location: _____	Time : _____	Activity : _____
Location: _____	Time : _____	Activity : _____
Location: _____	Time : _____	Activity : _____
Location: _____	Time : _____	Activity : _____
Location: _____	Time : _____	Activity : _____

Item	Yes	No	N/A	Comments (if no then location)
------	-----	----	-----	--------------------------------

Monitors and Sensitive Resources

Monitoring near existing Archaeological site (exclusion area)? If yes, list site number and approximate distance from construction activity in comment section.				
All exclusion areas marked and avoided?				
Inadvertent discoveries of cultural resources? If yes, explain and document identified cultural material type and steps taken on continuation sheet.				
Impacts to existing cultural resource sensitive area(s)? If yes, Non-compliance, explain and document steps taken on continuation sheet.				
Native American Monitor present, as applicable?				

Photographs

Filename: _____	Filename: _____
Direction: _____	Direction: _____
Description: _____	Description: _____
Filename: _____	Filename: _____
Direction: _____	Direction: _____
Description: _____	Description: _____

APPENDIX F
TREATMENT OF NATIVE AMERICAN HUMAN REMAINS DISCOVERED
INADVERTENTLY OR THROUGH CRIMINAL INVESTIGATIONS ON
PRIVATE AND PUBLIC, STATE-OWNED LANDS IN OREGON

Treatment of Native American Human Remains Discovered Inadvertently or Through Criminal Investigations on Private and Public, State-Owned Lands in Oregon

Native American burial sites are not simply artifacts of the tribe's cultural past, but are considered sacred and represent a continuing connection with their ancestors. Native American ancestral remains, funerary objects, sacred objects and objects of cultural patrimony associated with Oregon Tribes are protected under state law, including criminal penalties (ORS 97.740-.994 and 358.905-.961). The laws recognize and codify the Tribes' rights in the decision-making process regarding ancestral remains and associated objects. Therefore both the discovered ancestral remains and their associated objects should be treated in a sensitive and respectful manner by all parties involved.

Identification of Human Remains

- Oregon laws (ORS 146.090 & .095) outline the types of deaths that require investigation and the accompanying responsibilities for that investigation. The law enforcement official, district medical examiner, and the district attorney for the county where the death occurs are responsible for deaths requiring investigation. Deaths that require investigation include those *occurring under suspicious or unknown circumstances*.
- If human remains that are inadvertently discovered or discovered through criminal investigations **are not clearly modern**, then there is high probability that the remains are Native American and therefore ORS 97.745(4) applies, which requires immediate notification with State Police, State Historic Preservation Office, Commission on Indian Services, and all appropriate Native American Tribes. To determine who the "appropriate Native American Tribe" is, the responsible parties should contact the Legislative Commission on Indian Services (CIS). To determine whether the human remains are Native American, the responsible parties should contact the appropriate Native American Tribes at the initial discovery. It should be noted that there may be more than one appropriate Native American Tribe to be contacted.
- If the human remains are possibly Native American then the area should be secured from further disturbance. The human remains and associated objects **should not be disturbed, manipulated, or transported from the original location until a plan is developed in consultation with the above named parties**. These actions will help ensure compliance with Oregon state law that prohibits any person willfully removing human remains and/or objects of cultural significance from its original location (ORS 97.745).
- All parties involved and the appropriate Native American Tribes shall implement a culturally sensitive plan for reburial.

Notification

- State law [ORS 97.745 (4)] requires that any discovered human remains suspected to be Native American shall be reported to -
 1. State Police
 - Sgt. Chris Allori, Office (503) 731-4717, Cell (503) 708-6461, Dispatch (503) 731-3030

2. State Historic Preservation Office (SHPO)
 - Primary contact = Dennis Griffin, State Archaeologist, office phone (503) 986-0674, cell phone (503) 881-5038
3. Legislative Commission on Indian Services (LCIS)
 - Contact = Karen Quigley, Director, office phone (503) 986-1067. Karen will provide the list of appropriate Native American Tribes
4. All appropriate Native American Tribes provided by LCIS
 - Burns Paiute Tribe - Agnes Castronuevo (541) 573-8089
 - Confederated Tribes of Coos, Lower Umpqua and Siuslaw - Stacy Scott, M.A. (541) 888-7513, Cell (541) 297-5543
 - Confederated Tribes of Grand Ronde - David Harrelson (503) 879-1630
 - Confederated Tribes of Siletz - Robert Kentta (541) 444-8244
 - Confederated Tribes of the Umatilla Indian Reservation - Teara Farrow Ferman (541) 276-3447; secondary contact Catherine Dickson (541) 966-2338 or (541) 429-7231
 - Confederated Tribes of Warm Springs - Sally Bird (541) 553-3555
 - Coquille Indian Tribe – Bridgett Wheeler (541) 756-0904
 - Cow Creek Band of Umpqua Indians - Jessie Plueard (541) 677-5575 ext. 5577
 - Klamath Tribes - Perry Chocktoot, Culture & Heritage Director (541) 783-2219

Exhibit P1 Fish and Wildlife Habitat and Species

Boardman to Hemingway Transmission Line Project



*1221 West Idaho Street
Boise, Idaho 83702*

Mark Stokes, Project Leader
(208) 388-2483
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(208) 388-5375
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Application for Site Certificate

September 2018

3.2.4.8 Proposed Conditions to Address Future Surveys

IPC proposes the following site certificate conditions, providing schedules for the forthcoming biological surveys. Whether one or more surveys is applicable in a particular area will depend on the relevant protocol (see Exhibit P1, Table P1-1).

Fish and Wildlife Condition 1: *Prior to construction, the certificate holder shall conduct, as applicable, the following biological surveys on those portions of the site boundary that have not been surveyed at the time of issuance of the site certificate:*

- a. Northern Goshawk;
- b. American Three-Toed Woodpecker;
- c. Great Gray Owl;
- d. Flammulated Owl;
- e. Terrestrial Visual Encounter Surveys;
- f. Wetlands; and
- g. Fish Presence and Crossing Assessment Surveys.

Fish and Wildlife Condition 2: *Prior to construction, the certificate holder shall conduct, as applicable, the following biological surveys on all portions of the site boundary, regardless of whether those portions have been surveyed at the time of issuance of the site certificate:*

- a. Washington ground squirrels; and
- b. Raptor Nests.

Fish and Wildlife Condition 13: *During construction, if the certificate holder will be conducting ground-disturbing activities during the migratory bird nesting season between April 1 and July 15, the certificate holder shall conduct, as applicable, biological surveys for native, non-raptor bird species nests on all portions of the site boundary a maximum of 7 days prior to ground-disturbing activities, regardless of whether those portions have been previously surveyed. If the certificate holder identifies a native, non-raptor bird species nest, the certificate holder shall submit to the department for its approval a notification addressing the following:*

- a. Identification of the native, non-raptor species observed;
- b. Location of the nest; and
- c. Any actions the certificate holder will take to avoid, minimize, or mitigate impacts to the nest.

3.3 Identification 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 a description of the characteristics and condition of that habitat in the analysis area.

3.3.1 Fish and Wildlife Habitat Types

The analysis area encompasses multiple general vegetation types that serve as fish and wildlife habitats. The seven general vegetation types present are (1) agriculture/developed, (2) bare ground, (3) open water/unvegetated wetland, (4) riparian vegetation, (5) forest/woodland, (6) shrub/grass, and (7) wetland.

Agricultural/developed lands are common in Morrow and Umatilla counties, and are less common in the other three Oregon counties crossed by the Project (i.e., Union, Baker, and Malheur counties). Bare ground, cliffs, and talus cover only small areas of land at each occurrence, and are rare in the analysis area. Open water/unvegetated wetland, including streams and ponds, is also limited in the analysis area, which encompasses mostly arid and semiarid lands with low precipitation. Most streams in the analysis area are intermittent, and are fed by stormwater. Riparian vegetation is associated with open water/unvegetated wetlands and wetlands. Riparian vegetation occurs between upland habitat and the edge of delineated wetlands or delineated non-wetland waters.

The vast majority of the analysis area consists of shrub/grass. Shrublands and grasslands in the analysis area differ in structure and species composition depending on the ecoregion, elevation, soil conditions, moisture regimes, and fire history present in the area. However, these communities typically occur on dry flats and plains, rolling hills, saddles, and ridges where precipitation is low. They are dominated by forbs, grasses, and shrub species. Fire has historically played an important role in maintaining grassland and shrubland communities, and served as a cyclical disturbance regime (ODFW 2006).

Forests are rare within the analysis area and occur primarily in the Blue Mountains region. Wetlands are areas where water saturation is the dominant factor that determines the soil type/development, as well as the types of plants and animals that can inhabit these areas (Cowardin et al. 1979). Wetlands are sparsely distributed in the analysis area, but are found in all counties crossed by the Project in Oregon (see Exhibit J).

Each of the general vegetation types, discussed above, are further defined into habitat types based on the dominant plant species found within a vegetation community, or the hydraulic regime that controls the waterbody. Refining these general vegetation types into habitat types is important when discussing fish and wildlife use because species composition can differ according to the specific conditions found within each habitat type. For example, the wildlife species composition found in a forested wetland would likely be different from what would be found in an emergent wetland. Table P1-2 describes the general vegetation types as well as the habitat types found within the analysis area based on field survey data and Gap Analysis Project (GAP) data (USGS 2011).

Table P1-2. Description and Definition of General Vegetation Types and Habitat Types within the Analysis Area

General Vegetation Type	Habitat Type	Description
Agriculture / Developed	Agriculture	Agricultural areas vary in composition on an annual basis. Cultivated croplands and modified grasslands are plowed and harvested seasonally, while pastures are mowed, hayed, or grazed one or more times a year. Conservation Reserve Program (CRP) land is included in the Agriculture habitat type. CRP lands were identified by vegetation composition and do not represent lands actually enrolled in the program.
	Developed	Developed areas typically contain non-native vegetation, in the form of landscaping around buildings and homes, as well as invasive-plants that have become established in disturbed landscapes. Much of the developed habitat type crossed by the Project includes dirt, gravel, and paved roads.
Bare Ground	Bare Ground, Cliffs, Talus	Bare ground or areas with limited vegetation consist of lands where the endemic site conditions are unsuitable for consistent vegetative communities to develop, and where the predominant habitat features are related to geological structures as opposed to vegetative components. These areas include cliffs, rock, and talus habitats, as well as areas where soil conditions prohibit the growth of most plant species.
Open Water / Unvegetated Wetland	Ponds and Lakes	Ponds and lakes are permanently flooded, intermittently exposed, or semi-permanently flooded areas which do not fall into the river and stream classifications.
	Perennial Streams	Perennial streams consist of flowing waterbodies that have a year-round flow of water, except for infrequent periods of severe drought.
	Intermittent Streams	Intermittent streams contain water for only part of the year, but more than just in response to precipitation. Canals and ditches are included in this habitat type.
	Ephemeral Streams	Ephemeral streams contain water only in direct response to precipitation. They receive little or no water from springs and no long-continued supply from melting snow or other sources. The stream channel is at all times above the water table.
Riparian	Herbaceous Riparian	Grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding located in the transitional zone between upland and aquatic habitats. Located outside delineated wetlands and delineated non-wetland waters.
	Introduced Riparian	Areas where non-native vegetation dominates lands immediately adjacent to streams and wetlands. Within the analysis area, typically includes Russian olive (<i>Elaeagnus angustifolia</i>). Located outside delineated wetlands and delineated non-wetland waters.
	Riparian Woodland and Shrubland	Typically found within the flood zone of rivers and immediate streambanks. This habitat type is associated with perennial, intermittent, and ephemeral streams with woody vegetation. Located outside delineated wetlands and delineated non-wetland waters.

General Vegetation Type	Habitat Type	Description
Forest / Woodland	Douglas Fir / Mixed Grand Fir	The Douglas-fir / mixed grand fir habitat type is the most common forest community found within the analysis area. Douglas-fir (<i>Pseudotsuga menziesii</i>) is typically more dominant than grand fir (<i>Abies grandis</i>), but begins to decrease in abundance as elevations increase; ultimately being replaced by <i>Abies</i> and <i>Pinus</i> species at higher elevations (Franklin and Dyrness 1988).
	Ponderosa Pine	The ponderosa pine (<i>Pinus ponderosa</i>) community is typically an open woodland, and contains a variety of common tree species that vary based on elevation and moisture regime. This community is common in much of the Blue Mountains, and is the second most common forest type crossed by the Project. Ponderosa pine forests are found in the arid transition zone between shrub steppe and higher elevation forests. The ponderosa pine zone in the analysis area is typically dominated by ponderosa pine, Douglas-fir, grand fir, lodgepole pine (<i>Pinus contorta</i>), western larch (<i>Larix occidentalis</i>), western juniper (<i>Juniperus occidentalis</i>), and quaking aspen (<i>Populus tremuloides</i>) (Franklin and Dyrness 1988).
	Western Juniper / Mountain Mahogany Woodland	This community could be described as a transition zone between shrubland and woodland/forest communities, as it is often found within the ecotone between the lower edge of the ponderosa pine forest community and the shrub-steppe community, often in very dry areas. The structure of this woodland type is widely spaced trees, a discontinuous shrub layer, and an herbaceous layer dominated by grasses. The overstory is dominated by western juniper and mahogany species (<i>Cercocarpus</i> spp.) with scattered ponderosa pine as well (Franklin and Dyrness 1988). Dominant shrubs may include big sage (<i>Artemisia tridentata</i>), antelope bitterbrush (<i>Purshia tridentata</i>), rabbitbrush (<i>Chrysothamnus nauseosus</i>), and wax currant (<i>Ribes cereum</i>). The herbaceous layer is dominated by wheatgrass (<i>Agropyron spicatum</i>) and Idaho fescue (<i>Festuca idahoensis</i>) (Franklin and Dyrness 1988).
	Forested-Other	This broadly defined vegetation type includes a variety of plant communities present in the analysis area that either represents a small percentage of the total geographic area studied, or have been disturbed and do not fit into other vegetation classifications. It includes recently burned forests (stand replacing burns), as well as recently harvested areas.
Shrub / Grass	Native Grasslands	Grassland communities (or steppe communities lacking a major shrub component) within the analysis area are dominated by various species of <i>Poa</i> , <i>Festuca</i> , and <i>Agropyron</i> . Poor soil conditions, as well as a short fire return interval, often prevent these grassland communities from transitioning into a shrub dominated community (Franklin and Dyrness 1988).

General Vegetation Type	Habitat Type	Description
	Desert Shrub	Desert shrub communities contain saline and very alkaline soils that support various saltbrush species (<i>Atriplex</i> spp.), as well as grasses such as Sandberg bluegrass (<i>Poa secunda</i>) and basin wildrye (<i>Elymus cinereus</i> ; Franklin and Dyrness 1988).
Shrub / Grass (continued)	Shrub-Steppe with Big Sage	Shrub-steppe communities are widespread in the analysis area. These communities are dominated by bunchgrasses such as wheatgrass, Idaho fescue, and Sandberg bluegrass, as well as shrub species. Within this particular shrub-steppe community, the dominant shrub species is big sage (Franklin and Dyrness 1988).
	Shrub-Steppe without Big Sage	This shrub-steppe community is similar to the community described previously, except that it is typically dominated by shrub species such as curl-leaf mountain-mahogany (<i>Cercocarpus ledifolius</i>) or antelope bitterbrush instead of big sage (Franklin and Dyrness 1988).
	Introduced Upland Vegetation	This broadly defined shrubland type includes a variety of plant communities present in the analysis area that either represents a small percentage of the total geographic area studied, or have been disturbed and do not fit into other vegetation classifications.
Wetland	Emergent Wetland	Emergent wetlands are defined by a lack of significant shrub or tree cover (Cowardin et al. 1979). This wetland type is variable and can occur over a variety of locales, including arid-climate ephemeral depressions, wet alpine meadows, and bogs. Vegetation is also variable based on the locale, but includes species adapted to prolonged inundation or soil saturation. Vegetation found in emergent wetlands may include grasses, sedges, rushes, and other forbs adapted to wet conditions.
	Scrub-Shrub Wetland	Scrub-shrub wetlands are identified by the dominance of woody vegetation less than 20 feet in height, which may include both shrubs and sapling trees (Cowardin et al. 1979). This wetland type can also occur over a wide range of elevations. Willows (<i>Salix</i> spp.) often dominate scrub-shrub wetlands.
	Forested Wetland	Forested wetlands are identified by the dominance of woody vegetation more than 20 feet in height (Cowardin et al. 1979). Common species found in forested wetlands include black cottonwood (<i>Populus trichocarpa</i>), quaking aspen, and hawthorn (<i>Crataegus douglasii</i>).
	Aquatic Bed Wetland	Includes wetlands with plants that grow on or below the surface of the water.

3.3.2 ODFW Habitat Categorization

The ODFW Fish and Wildlife Habitat Mitigation Policy provides a framework for assigning one of six category types to habitats based on the relative importance of these habitats to fish and wildlife species. The definition of each category type, as well as the mitigation goals for these category types, is listed in Table P1-3. Habitats located within the analysis area were classified into these six category types in accordance with OAR 635-415-0025 and following the methods in Attachment P1-1. IPC used data from the TVES surveys that identified the ecological systems and assigned an initial habitat category based on vegetation characteristics. Following this categorization, IPC overlaid WAGS, raptor nest, and fish presence data collected during surveys, as well as existing mapped big game ranges, onto the initial habitat categorization using ArcGIS. The wildlife habitat overlays modify the habitat category “up” to a Category 1, Category 2, or Category 3 as follows³:

Category 1 habitat:

- Trees or structures that contain a special status raptor nest;⁴
- Occupied WAGS colonies, defined as a single or cluster of holes as well as the required habitat for squirrel survival (the required habitat for squirrel survival is a 785-foot buffer around the holes in suitable habitat; and
- Caves that provide roosts and hibernacula for bats.

Category 2 habitat:

- ODFW elk (*Cervus canadensis nelsoni*) winter range (ODFW 2013a);⁵
- ODFW mule deer (*Odocoileus hemionus*) winter range (ODFW 2013a);
- Bighorn sheep (*Ovis canadensis*) herd ranges (ODFW 2013b);
- Areas of potential ground squirrel use, defined as areas adjacent to and within 4,921 feet (1.5 kilometers [km]) of WAGS Category 1 habitat, but not occupied by any squirrels either for burrowing or foraging, which is of similar habitat type and quality to the adjacent WAGS Category 1 habitat;
- Fish-bearing streams; and
- Bat roosts and hibernacula other than caves.

Category 3 habitat:

- Elk summer range as defined by the M.A.P. (Measure and Prioritize) Elk Habitat Project (RMEF 1999);
- Mule deer summer range as defined in the Mule Deer Habitat of the Western United States (WAFWA 2002); and
- Non-fish-bearing streams.

³ For instance, if TVES identified an area as a Category 5 habitat based on vegetation characteristics and it is within mule deer winter range, then the category is modified “up” to a Category 2 habitat. If TVES identified an area as a Category 2 habitat based on vegetation characteristics and it is within mule deer summer range, the habitat category is not modified “down” to a Category 3. There are not any wildlife habitat overlays identified as Category 4, 5, or 6.

⁴ Although trees or structures with raptor nests are managed as Category 1 habitat, they are not included in the habitat categorization calculations due to their relatively small size on the landscape.

⁵ See Exhibit P3 for a complete discussion of elk habitat categorization.

Detailed descriptions of the methods used to categorize habitats within the analysis area are included in Attachment P1-1 (Habitat Categorization Matrix) and Appendix A to Attachment P1-1 (Methods and Models Used for Habitat Categorization).

Fish presence also played a role in the categorization of stream habitats (see Attachment P1-1). Fish were assumed present in all perennial streams and in intermittent streams if the OSDAM data indicated that the stream contained macro-invertebrates, or if ODFW biologists indicated that an intermittent stream contained fish when water is present. Following this initial incorporation of fish presence into the habitat categorization data, IPC refined their fish presence analysis through additional coordination with ODFW and field surveys (see the Fish Habitat Report in Attachment P1-7B). This refined fish presence information has been incorporated into the habitat categorization process.

Table P1-3. Habitat Categorization Types

Category Type	Definition ¹	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.	The mitigation goal for Category 1 habitat is 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.	The mitigation goal 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.	The mitigation goal is no net loss of either habitat quantity or quality.
4	Important habitat for fish and wildlife species.	The mitigation goal is no net loss of either habitat quantity or quality.
5	Habitat for fish and wildlife having high potential to become either essential or important habitat.	The mitigation goal, 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.	The mitigation goal is to minimize impacts.

¹ Source: OAR 635-415-0025.

Attachment P1-1 contains the metrics and habitat components used to classify habitats into these six category types, based on the presence of habitat characteristics and species observations. These metrics and habitat components were first reviewed by land managers and biologists from ODFW, USFS, FWS, NOAA Fisheries, and BLM during the interagency meetings. Additional meetings to discuss these methods as well as the preliminary habitat categorization maps were held with the ODFW in September 2011 and with BLM, ODFW,

USFS, FWS, and ODOE in November 2011 and September 2012. IPC has since revised Attachment P1-1 to reflect only those habitat types within the analysis area and to incorporate wetland delineation data and fish presence information. Major roads within the analysis area were identified as developed habitat types during survey efforts. In addition, Project access roads that are identified as existing roads have been included as a developed habitat type and given a width of 8 feet.

Because surveys have not been completed to date within the entire analysis area, there are areas where survey information is not currently available. In these areas, aerial photo interpretation was used in conjunction with GAP data and adjacent survey data to approximate the appropriate habitat type and category. For example, to estimate the current land conditions found in the areas that were not surveyed, aerial photo interpretation was used to compare unsurveyed areas to surveyed areas located directly adjacent to the unsurveyed area (e.g., if a survey conducted in a sagebrush habitat determines that it is of high quality with few invasive species, and an unsurveyed area directly adjacent is similar in appearance to the surveyed area based on aerial images, then the unsurveyed area would be classified in accordance with the conditions found in the surveyed area). The habitat categorization, as well as the associated impact values and mitigation requirements, will be recalculated once complete survey information is obtained.

Table P1-4 lists the acres of each habitat type, by ODFW habitat category, located within the analysis area; however, these numbers do not directly relate to impacts because portions of the analysis area will not be impacted (the acres of direct impact that will occur within the analysis area are quantified in Section 3.5.3).

Table P1-4. Acres of Habitat Types by ODFW Habitat Category within the Analysis Area¹

General Vegetation Type	Habitat Type	ODFW Habitat Category (acres)						Total ⁴
		1	2	3	4	5	6	
Agriculture/ Developed	Agriculture ³	–	412.6	38.9	3.5	–	1,370.7	1,825.6
	Developed / Disturbed	–	–	–	–	–	458.9	458.9
Bare Ground	Bare Ground, Cliffs, Talus	–	40.7	17.8	–	–	–	58.5
Open Water/ Unvegetated Wetland ²	Ponds and Lakes	–	1.6	0.6	–	–	–	2.2
	Perennial Streams	–	19.5	0.6	–	–	–	20.1
	Intermittent Streams	–	24.4	7.4	0.9	–	–	32.7
	Ephemeral Streams	–	3.5	1.5	–	–	–	5.1
Riparian Vegetation	Herbaceous Riparian	–	8.4	13.2	–	–	–	21.6
	Introduced Riparian	–	4.9	0.7	–	–	–	5.5
	Riparian Woodland and Shrubland	–	59.0	1.4	–	–	–	60.4
Forest/ Woodland	Douglas Fir / Mixed Grand Fir	–	481.5	922.4	–	–	–	1,403.9
	Ponderosa Pine	–	890.2	216.9	–	–	–	1,107.1
	Western Juniper / Mountain Mahogany Woodland	–	359.8	–	–	–	–	359.8
	Forested-Other	–	–	108.5	–	–	–	108.5

General Vegetation Type	Habitat Type	ODFW Habitat Category (acres)						Total ³
		1	2	3	4	5	6	
Shrub/ Grass	Native Grasslands	–	3,827.2	223.3	37.7	–	–	4,088.2
	Desert Shrub	–	139.2	135.3	27.0	–	–	301.6
	Shrub-Steppe with Big Sage	–	4,958.0	1,217.4	885.0	89.0	–	7,149.5
	Shrub-Steppe without Big Sage	–	868.0	34.9	114.7	–	–	1,017.5
	Introduced Upland Vegetation	–	2,976.4	90.5	–	1,661.4	–	4,728.3
Wetland ²	Emergent Wetland	–	35.2	–	–	–	–	35.2
	Scrub-Shrub Wetland	–	28.5	–	–	–	–	28.5
	Forested Wetland	–	6.4	–	–	–	–	6.4
	Aquatic Bed Wetland	–	0.2	–	–	–	–	0.2

¹ The analysis area is defined in Section 3.1 and consists of the Project's Site Boundary. Note the analysis area is greater than the total area disturbed by the Project.

² The acres of wetlands and waters within the analysis area listed here reflect the occurrence of wetlands and waters presented in Exhibit J. The acres of stream habitats (ephemeral, intermittent, and perennial) presented in this table was quantified using the stream data from Exhibit J; habitat categorization of streams is based on the fish presence determination as detailed in Attachment P1-7B. Please refer to the discussion on impacts to fish species in Exhibit P1 and Exhibit Q for more detail.

³ Category 2 agriculture habitat type includes areas that appear to be in the Conservation Reserve Program within elk or mule deer winter range.

⁴ Numbers may not sum exactly due to rounding.

3.3.3 Habitat Category Maps

OCAR 345-021-0010(1)(p)(C): A map showing the locations of the habitat identified in (B).

Attachment P1-8 contains a mapbook that shows the habitat types by ODFW habitat category within the analysis area. The underlying vegetation/waterbody type determined during field surveys, the habitat categorization based on the vegetation/waterbody type alone, as well as the final categorization (once wildlife habitat data were considered; see Section 3.3.2) are shown in these maps for the analysis area.

3.4 Identification of State Sensitive Species

OCAR 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.

OCAR 345-021-0010(1)(p)(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.

This section addresses species that have been designated by Oregon as State Sensitive Species. State Sensitive Species are defined by ODFW as “naturally-reproducing fish and wildlife species, subspecies, or populations which are facing one or more threats to their populations and/or habitats” (OCAR 635-100-0040). ODFW further defines State Sensitive Species as either Sensitive or Sensitive Critical. Sensitive species are defined as having small or declining populations, are at-risk, and/or are of management concern. Sensitive Critical means the species have current or legacy threats that are significantly impacting their abundance, distribution, diversity, and/or habitat; Sensitive Critical species may decline to the point of qualifying for threatened or endangered status if conservation actions are not taken (ODFW 2016).

IPC developed the list of State Sensitive Species that could potentially occur within the analysis area through a review of pertinent literature and databases (including 2016 ORBIC data), consultation with applicable land-management agencies, and the results of Project-specific field surveys. Baseline surveys were conducted to better determine habitats that could support State Sensitive Species within the analysis area (as discussed in Section 3.2; also see the Revised Final Biological Survey Work Plan in Attachment P1-2). Table P1-5 lists the State Sensitive Species that could occur within the analysis area, their designation as Sensitive or Sensitive Critical, as well as whether or not the species has been documented within the analysis area. This includes 11 mammals (2 of which have been documented in the analysis area), 23 birds (20 of which have been documented or potentially documented in the analysis area), 5 reptiles/amphibians (2 of which have been documented in the analysis area), and 6 fish (1 of which has been documented in the analysis area). Further details regarding the locations of State Sensitive Species detected during surveys can be found in the biological survey summary report (see Attachment P1-7A).

an adverse effect on fish and other aquatic organisms from elevation of pH levels (e.g., stress, injury). Herbicides used near waterbodies (used to control invasive-plant species) can leach into waterbodies, or run off into waterbodies during rain events. These herbicides can have adverse effects on fish species, resulting in reduced fitness or mortality. To reduce the risk of oils, wet concrete, or wash water entering streams, IPC will follow the avoidance and minimization measures outlined in the Spill Prevention, Containment, and Countermeasures (SPCC) Plan (see Exhibit G, Attachment G-4, as well as Exhibit J, which contains some of the preliminary measures that will be followed), which will be fully developed during final design of the Project and submitted to ODOE prior to construction of the Project. Both Exhibit G, Attachment G-4, and Exhibit J contain measures that will prevent hazardous substances from entering fish-bearing streams. Use of herbicides will follow agency-approved types and application methods on federal lands and manufacturer's recommendations on private lands (see Attachment P1-5, Noxious Weed Plan, and Attachment P1-4, Vegetation Management Plan), which will include restrictions on where herbicides could be used (e.g., restriction on use near waterbodies).

Fish salvage (i.e., removal or exclusion of fish from an area) is often necessary during installation of culverts or other crossing structures on perennial streams. Potential adverse effects of fish salvage include fish injury, stress, and direct mortality. Injury and stress could result in the individual fish becoming more susceptible to infection or predation, thereby resulting in mortality. All structure installations at the identified crossings will be temporary and require ODFW approval, however, and none of the crossings will require work within the bankfull channel. Therefore, the Project will not likely require any work area isolation and fish salvage. Although no fish salvage is currently proposed for the Project, any site related to the Project that requires work area isolation and fish salvage will adhere to the ODFW-approved methods and therefore limit potential adverse effects to fish species.

3.5.6 Measures to Avoid, Reduce, or Mitigate Adverse Effects

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 ODFW mitigation goals described in OAR 635-415-0025 and a discussion of how the proposed measures would achieve those goals.

This section describes the avoidance, minimization, and mitigation measures that have been and will be implemented to avoid, reduce, or mitigate potential adverse impacts to fish and wildlife habitat and State Sensitive species, and discusses how the proposed measures achieve ODFW habitat mitigation goals. Mitigation is further discussed in the Fish and Wildlife HMP (Attachment P1-6).

3.5.6.1 Avoidance and Minimization Measures

Project Design

During initial routing of the Project, avoidance of sensitive resources related to fish and wildlife habitat and State Sensitive species was taken into consideration by IPC. Applicable sensitive resource areas that were avoided to the extent practical during the initial siting process included, but were not limited to:

- BLM-designated areas of critical environmental concern;
- BLM-designated wilderness study areas;
- Waterbodies and wetlands, including wild and scenic rivers and streams with special status species;

- FWS and NOAA Fisheries critical habitats for federal Endangered Species Act-listed species;
- Areas with sensitive wildlife resources, such as WAGS colonies, elk and mule deer winter range, sage-grouse habitat, and raptor nests;
- USFS-designated inventoried roadless areas; and
- Category 1 WAGS and State Sensitive wildlife habitat on the NWSTF Boardman.

To minimize impacts, the Project was designed to follow existing developments and utility corridors, such as existing roads and power lines, to the extent practical in order to consolidate impacts of the proposed line in areas that have already been disturbed, as opposed to impacting undisturbed areas.

IPC also conducted extensive public outreach, as well as consultations with land-managing agencies regarding possible route locations for the Project. A route that completely avoided impacts to all sensitive resources was not possible due to the distribution of sensitive resources across the landscape. As avoidance of one sensitive resource can often result in the route being located within range of another sensitive resource (e.g., avoiding forested habitats can cause the route to pass through more shrubland habitats), input from the public and land-managing agencies led to alternative routes that weighed avoidance of one resource against another. Documentation of the siting process is available in Exhibit B. Details regarding the siting process and the constraints considered during the development of the proposed and alternative routes are presented in the Project Siting Studies (Attachments B-1, B-2, and B-4 in Exhibit B).

Efforts to avoid and minimize impacts to fish species and habitat have been and will continue to be coordinated with ODFW as reflected in the fish passage plans and designs provided in Exhibit BB, Attachment BB-3.

Construction and Operation Plans

IPC has prepared a Reclamation and Revegetation Plan (Attachment P1-3), a Vegetation Management Plan (Attachment P1-4), a Noxious Weed Plan (Attachment P1-5), an SPCC Plan (Exhibit G, Attachment G-4), and an Erosion and Sediment Control Plan (ESCP) as part of the National Pollution Discharge Elimination System General Permit #1200-C (Exhibit I, Attachment I-3).

The Reclamation and Revegetation Plan describes and recommends actions that will minimize the effects associated with ROW preparation and the construction of Project facilities and will immediately stabilize disturbed areas to facilitate native plant revegetation. The Vegetation Management Plan describes the methods by which vegetation along the transmission line will be managed during operation of the Project, including the use of herbicides. The Noxious Weed Plan describes the measures that IPC will undertake to control noxious weed species and prevent the introduction of these species during construction and operation activities. The SPCC Plan outlines preventative measures and practices to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release. The ESCP shows a representative 1-mile section of the Project and presents typical erosion and sediment control measures, BMPs, and notes for proper implementation of the plans. These plans will work to avoid and minimize the potential adverse impacts to fish and wildlife habitat presented in this Exhibit.

The Vegetation Management Plan, Reclamation and Revegetation Plan, and Noxious Weed Plan are addressed in Fish and Wildlife Conditions 4, 5, 6, 16, 17, 18, 27, and 28. IPC is proposing a site certificate condition in Exhibit G regarding an ODEQ-approved SPCC Plan and a site certificate condition in Exhibit I regarding an ODEQ-approved ESCP.

Environmental Training

Construction personnel will attend mandatory training on protection of sensitive resources, as well as the need to adhere to all applicable restrictions and permit requirements. The training will ensure that all Project personnel understand and are aware of the environmental requirements, protection measures, and compliance. To ensure compliance with the environmental training program, IPC proposes that the Council include the following condition in the site certificate providing that IPC will ensure all Project personnel are trained on environmental matters:

Fish and Wildlife Condition 9: *Prior to construction, the certificate holder shall train all construction personnel on the protection of cultural, paleontological, ecological, and other natural resources such as (a) federal and state laws regarding antiquities, paleontological resources, and plants and wildlife, including collection and removal; (b) the importance of these resources; (c) the purpose and necessity of protecting them; and (d) reporting and procedures for stop work.*

Seasonal Restrictions

During construction and operation, IPC will implement seasonal restrictions for big game habitat (Fish and Wildlife Condition 10), sage-grouse habitat (Fish and Wildlife Condition 11, Exhibit P2), raptor nests (Fish and Wildlife Condition 12), non-raptor breeding birds (Fish and Wildlife Condition 13), and fish-bearing streams. IPC will observe the seasonal fisheries restrictions listed in Table P1-19 below. In addition to the seasonal fisheries restrictions associated with in-water work actions, per the fish passage plans and designs (see Exhibit BB, Attachment BB-3) additional seasonal restrictions may apply to IPC operational use of each of the seven crossings following ODFW review and final approval of the plans and designs. These restrictions are described in detail in Exhibit BB, Attachment BB-3 (see Other Information Conditions 1 and 4).

Table P1-19. Seasonal Fisheries Restrictions for In-water Work Actions Recommended by the ODFW¹ Applicable to Proposed Road Stream Crossing Locations

Subbasin	Waterbody Crossed	Tributary to:	Date Range¹	Location of Sensitive Fish Relative to Crossing
Rock Creek	Little Rock Creek	Rock Creek	July 1–October 31	At Crossing
Rock Creek	Rock Creek	Grande Ronde River	July 1–October 31	At Crossing
Rock Creek	Rock Creek	Grande Ronde River	July 1–October 31	At Crossing
Rock Creek	Rock Creek	Grande Ronde River	July 1–October 31	At Crossing
Jett Creek-Burnt River	Goodman Creek	Burnt River	July 1–October 31	At Crossing
Durbin Creek-Burnt River	Cavanaugh Creek	Burnt River	July 1–October 31	At Crossing
Benson Creek	Jordan Creek	Snake River	July 1–October 31	At Crossing

¹ Source: ODFW 2008

² In addition to seasonal restrictions associated with in-water work actions, additional seasonal restrictions may apply to use of each of the seven crossings following ODFW review and final approval of the plans and designs (see Exhibit BB, Attachment BB-3).

Avian Protection

In addition to applicable avian seasonal restrictions discussed above, IPC designed the Project in accordance with the APLIC suggested practices to minimize the potential impact of the Project on avian species, including State Sensitive avian species likely to use the analysis area. IPC will also adhere to its Avian Protection Plan (Attachment P1-9), which provides protocols for minimizing electrocution and collision events and managing nests during operations, including the protection of nests during vegetation management activities (see Fish and Wildlife Condition 22).

Mapping and Flagging of Sensitive Resources

IPC will develop a set of maps that depict the extent of spatial and/or temporal restriction areas within the analysis area. These maps will be maintained at the Project site. Sensitive wildlife resources that occur within or adjacent to the ROW and work areas will be flagged on the ground, where practical, to ensure they are avoided. IPC requests that the Council include the following condition in the site certificate regarding flagging of sensitive resources:

Fish and Wildlife Condition 15: During construction, the certificate holder shall flag the following environmentally sensitive areas as restricted work zones:

- a. State protected plant species;*
- b. Wetlands and waterways that are not authorized for construction impacts;*
- c. Areas with active spatial and seasonal restrictions; and*
- d. Category 1 habitat.*

The certificate holder shall submit a mapset showing the location of environmentally sensitive areas and restricted work zones to the department for its approval. The certificate holder shall make the mapset available to all construction personnel.

Wildlife Injury

IPC will implement traffic control measures to minimize the risk to wildlife of direct loss due to vehicle collision. This includes adhering to speed limits (see Fish and Wildlife Conditions 16 and 26) on Project roads and limiting access on Project roads (see Fish and Wildlife Condition 10 and Fish and Wildlife Condition 11 [Exhibit P2]).

3.5.6.2 Compliance with ODFW Fish Passage Rules

All historic and current fish-bearing streams associated with the Proposed Route and alternatives were surveyed where access was granted to IPC. Based on these surveys, fish distributions for the Project were developed by IPC and approved by ODFW. Utilizing the ODFW-approved fish distributions, Project roads that intersected fish streams were surveyed and evaluated to determine if a given crossing required a new or improvement to existing road crossing. This approach was intended to help meet ODFW Fish Passage Rules by surveying and evaluating each road crossing. As presented in Table P1-16, seven Project roads will cross fish-bearing streams that will require temporary structures over the road crossings. None of these 7 crossings will require work to be done inside the channel bankfull margins; no other instream work will occur for the other 11 crossings on fish-bearing streams.

The fish passage plans and designs for the seven road crossings that will require temporary structures are provided in Exhibit BB, Attachment BB-3. The development and future review and approval from the ODFW for these Project-related fish passage plans and designs demonstrates IPC's compliance with ODFW Fish Passage Rules. If any future route modification requires road crossing improvement or modifications beyond those identified, IPC

will install all culverts or other stream crossing structures in accordance with ODFW fish passage rules and approvals. Currently, no fish-bearing stream crossings occur on federally managed lands (BLM and USFS). If any future route modification requires road crossing improvement or modifications on federally managed lands, the crossing will be installed in accordance with BLM and USFS requirements on federally managed lands. IPC has developed the Fish Passage Plan to ensure compliance with the Fish Passage Rules, and IPC will conduct all work according to that plan (see Fish and Wildlife Conditions 15 and 16).

3.5.7 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 Reclamation and Revegetation Plan and the Noxious Weed Plan both include monitoring components. IPC also will monitor mitigation actions to determine if mitigation performance measures have been met at habitat mitigation sites. The Fish and Wildlife HMP (Attachment P1-6) discusses habitat mitigation actions and will identify monitoring of those actions. In addition, as described in Exhibit BB, Attachment BB-3, any stream crossing structure put in place for the Project will be inspected for status within a week of any high-flow event during Project construction.

If an exception to Fish and Wildlife Condition 10 or Fish and Wildlife Condition 12 is approved by the Department, the justification may include a wildlife monitoring component. Each exception will be addressed on a case by case basis, and wildlife monitoring may not be needed to justify approval of the exception.

4.0 IDAHO POWER'S PROPOSED SITE CERTIFICATE CONDITIONS

IPC proposes the following site certificate conditions to ensure compliance with the relevant EFSC standards which are relevant to the analysis of fish and wildlife.

Prior to Construction

Fish and Wildlife Condition 1: *Prior to construction, the certificate holder shall conduct, as applicable, the following biological surveys on those portions of the site boundary that have not been surveyed at the time of issuance of the site certificate:*

- a. Northern Goshawk;*
- b. American Three-Toed Woodpecker;*
- c. Great Gray Owl;*
- d. Flammulated Owl;*
- e. Terrestrial Visual Encounter Surveys;*
- f. Wetlands; and*
- g. Fish Presence and Crossing Assessment Surveys.*

Fish and Wildlife Condition 2: *Prior to construction, the certificate holder shall conduct, as applicable, the following biological surveys on all portions of the site boundary, regardless of whether those portions have been surveyed at the time of issuance of the site certificate:*

- a. Washington ground squirrels; and*
- b. Raptor Nests.*

Fish and Wildlife Condition 3: *Prior to construction, the certificate holder shall conduct a one-year traffic study in elk habitat (i.e., elk summer range and elk*

ATTACHMENT P1-3
DRAFT RECLAMATION AND REVEGETATION PLAN

Draft Reclamation and Revegetation Plan

**Boardman to Hemingway Transmission
Line Project**



1221 West Idaho Street
Boise, Idaho 83702

*September 2018; July 2020 (Modified by Oregon Department of Energy
during ASC – PO Phase)*

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LIST OF APPENDICES

Appendix A. Preliminary Agency-Approved Seed Mixes

ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
FWS	U.S. Fish and Wildlife Service
GPS	global positioning system
IPC	Idaho Power Company
kV	kilovolt
OAR	Oregon Administrative Rule
ODA	Oregon Department of Agriculture
ODOE	Oregon Department of Energy
OHV	off-highway vehicle
Project	Boardman to Hemingway Transmission Line Project
RL	reclamation level
ROW	right-of-way
RZ	reclamation zone
T&E	threatened and endangered
TVES	Terrestrial Visual Encounter Surveys
USFS	United States Forest Service

Agency Review Process

The agency review process outlined in this section aligns with the OAR 345-025-0016 agency consultation process applicable to monitoring and mitigation plans.

To afford an adequate opportunity for applicable local, state and federal agencies to review the draft plan prior to finalization and implementation, and any future plan amendments, the certificate holder shall implement the following agency review process.

Step 1: Certificate Holder's Update of Draft Plan or Future Plan Amendment: The certificate holder may develop one Reclamation and Revegetation Plan to cover all construction and operational activities for the entire facility; or, may develop individual plans per county, segment or phase, construction or operation, as best suited for the facility. Based on the draft Reclamation and Revegetation Plan included as Attachment P1-3 of the Final Order on the ASC, the certificate holder shall update the draft plan(s) based on facility design. If the plan(s) are amended following finalization, the certificate holder shall clearly identify and provide basis for any proposed changes.

Step 2: Certificate Holder and Department Coordination on Appropriate Review Agencies and Agency Review Conference Call(s): Prior to submission of the updated draft plan, or any future amended plans, the certificate holder shall coordinate with the Department's Compliance Officer to identify the appropriate federal, state and local agencies to be involved in the plan review process. In this instance, "appropriate" federal agencies are based on landownership where facility construction and operation would result in temporary or permanent disturbance. "Appropriate" state agencies would include Oregon Department of Agriculture and Oregon Department of Fish and Wildlife; "appropriate" local agencies refers to the County Planning Department, Public Works Department and Weed Department, or other county departments with expertise in revegetation. Once appropriate federal, state and local agency contacts are identified by the Department and certificate holder, the Department's Compliance Officer will initiate coordination between agencies to schedule review/planning conference call(s). The Department and certificate holder may agree to schedule separate conference calls per county.

The intent of the conference call(s) are to provide the certificate holder, or its contractor, an opportunity to describe details of the updated draft or amended plan; and, agency plan review schedule. Agencies may provide initial feedback on requirements to be included in the plan during the call, or may provide written comments during the 14-day comment period. The Department will request that any comments provided be supported by an analysis and local, state or federal regulatory requirement (citation).

The certificate holder may coordinate with appropriate review agencies, in advance of or outside of the established agency review process; however, this established agency review process is necessary under OAR 345-025-0016 and may result in more efficient plan finalization and amendment if managed in a consolidated process, utilizing the Department's Compliance Officer as the lead Point of Contact.

Step 3: Agency Review Process: Either with, or prior to, the agency conference call(s), the certificate holder shall distribute electronic copies of the draft, or future amended, plan(s) requesting that the Department coordinate agency review comments within 14-days of receipt, or as otherwise determined feasible. See Section 5.0 of the plan for an example of details to be finalized during the agency review process. Following the 14-day agency review period, the Department will consolidate comments and recommendations into the draft, or amended, plan(s), using a Microsoft Word version of the plan provided by certificate holder. Within 14-days of receipt of the agency review comments, the certificate holder shall provide an updated final version of the plan, incorporating any applicable regulatory requirements, as identified during agency review or must provide reasons supporting exclusion of recommended requirements.

Final plans will be distributed to applicable review agencies by the Department, including the certificate holder's assessment of any exclusions of agency recommendations, and a description of their opportunity for dispute resolution.

Step 4: Dispute Resolution: If any review agency considers the final, or amended, plan(s) not to adhere to applicable state, federal or local laws, Council rules, Council order, or site certificate condition or warranty, the review agency may submit a written request of the potential violation to the Department's Compliance Officer or Council Secretary, requesting Council review during a regularly scheduled Council meeting. The Council would, as the governing body, review the violation claim and determine, through Council vote, whether the claim of violation is warranted and identify any necessary corrective actions.

1.0 INTRODUCTION

This Attachment to Exhibit P1 of Idaho Power Company's (IPC's) application for site certificate contains information describing the framework for application of reclamation and revegetation actions on lands disturbed by the Boardman to Hemingway Transmission Line Project (Project).

Specifically, this Reclamation and Revegetation Plan (hereafter referred to as the Reclamation Plan) describes existing habitat types within the Site Boundary; reclamation zones (RZ); reclamation levels (RL) based on the type, duration, and level of disturbance; and finally, preferred reclamation and monitoring methods. The Final Reclamation and Revegetation Plan will include site-specific treatments, identify seed mixes for use in specific habitat types, address atypical situations, and be subject to agency approval on public lands. The Final Reclamation Plan will be a framework for the subsequent development of site-specific treatment plans.

The Project area, or Site Boundary, as defined in Oregon Administrative Rule (OAR) 345-001-0010(55) includes "the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micro-siting corridors proposed by the applicant." The Site Boundary for this Project includes the following related and supporting facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kilovolt (kV) electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B and the Site Boundary for each Project feature is described in Exhibit C, Table C-24. The location of the Project features and the Site Boundary is outlined in Exhibit C.

1.1 Purpose

The purpose of this Reclamation Plan is to provide a framework for reclamation treatments to be applied to areas impacted by Project construction, operation, and maintenance activities. This Reclamation Plan will describe and recommend construction and reclamation treatment actions that will meet the goals and objectives for land health standards under the applicable authorities, described below in Section 2.0 – Applicable Rules and Statutes; it will also provide requirements for implementing and monitoring reclamation, and will meet the reclamation success standards described in Section 6.4.

Important actions in mitigating the effects associated with the Project include (1) minimizing to the greatest degree practicable the effects associated with right-of-way (ROW) preparation and the construction of facilities, and (2) stabilizing disturbed areas to facilitate eventual desirable plant revegetation for the purpose of maintaining a safe and stable landscape that meets the desired outcomes of land management plans. The procedures outlined in this Plan will assist in:

- Restoring plant communities and associated wildlife habitat and range;
- Preventing substantial increases in noxious weeds in the Project area;
- Minimizing Project-related soil erosion; and
- Reducing visual impacts on sensitive areas caused by construction activities.

1.2 Responsible Parties

IPC will have the overall responsibility of ensuring implementation and monitoring of reclamation efforts for the Project.

The Construction Contractor(s) will be responsible for development of the Final Reclamation Plan. This Reclamation Plan will provide the Construction Contractor(s) the baseline and framework for developing the Final Reclamation Plan that addresses site-specific conditions for reclamation areas identified based on the final design layout of the Project. The Construction Contractor(s) will also be responsible for field-verifying habitat types within the Project disturbance area, identifying and mapping reclamation treatment and control monitoring sites, and collecting preconstruction qualitative and quantitative data at monitoring sites. Once postconstruction reclamation procedures are complete, the Construction Contractor(s) will be responsible for reclamation monitoring, reporting, and installing signage at each reclamation area to indicate that reclamation is in process.

On federal lands, the appropriate land management agency, including either the Bureau of Land Management (BLM) or the United States Forest Service (USFS), will be responsible for the review of the Final Reclamation Plan, on-the-ground reclamation activities, reclamation monitoring reports, and sign-off that reclamation has been completed to the conditions included in the Record of Decision and the ROW Grant.

The Oregon Department of Energy (ODOE) will review all reclamation activities on private, state, and federal lands under the agency's compliance monitoring program. The ODOE Compliance Officer will be responsible for the review of the Final Reclamation Plan, on-the-ground reclamation activities, reclamation monitoring reports, and sign-off that reclamation has been completed ~~to the conditions of the Project Order~~based on the success criteria of the Reclamation Plan.

Reclamation on agricultural lands will be coordinated with local landowners to best meet landowners' needs and management goals. An agricultural mitigation plan is included in ASC Attachment K-1 of Exhibit K.

Sensitive biological resources will be mapped in accordance with a Biological Monitoring Plan.

2.0 APPLICABLE RULES AND STATUTES

This Reclamation Plan is intended to fulfill OARs requiring disclosure of methods used to mitigate for impacts to wildlife habitat, to monitor mitigation efforts, and to protect soil resources.

Specifically, OAR 345-021-0010(1)(p) requires Exhibit P1 to include:

(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 ODFW mitigation goals described in OAR 635-415-0025 and a discussion of how the proposed measures would achieve those goals. (H) A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G). Additionally, OAR 345-022-0022, requires that Exhibit I demonstrates that construction and operation of the Project, taking into account mitigation, will not result in significant adverse impact to soils.

Authority for the reclamation practices defined in this Plan is provided under the following.

2.1 Endangered Species Act of 1973, as amended

Take of federally listed species is prohibited without specific exceptions or permits issued under Sections 7 or 10 of the Endangered Species Act (ESA). Under the ESA, the definition of “take” includes to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. The U.S. Fish and Wildlife Service (FWS) has further defined harm to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Federal agencies must consult with the FWS under Section 7 of the ESA on actions they authorize, fund, or carry out to ensure these actions are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

2.2 Federal Land Policy and Management Act, Section 101(a)(8)

The Federal Land Policy and Management Act requires “public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition.”

2.3 BLM National Sage-Grouse Habitat Conservation Strategy, Section 1.4.1

BLM's goal is to “Sustain or reestablish the integrity of the sagebrush biome to provide the amount, continuity, and quality of habitat that is necessary to maintain sustainable populations of sage-grouse and other sagebrush-dependent wildlife species” (BLM 2004).

2.4 BLM Oregon Standards for Rangeland Health and Guidelines for Livestock Grazing

The Standards for Rangeland Health, as applied in the State of Oregon, are: “to promote healthy sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions; and to provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands” (BLM 1997).

2.5 BLM Oregon, Vale Field Office, Southeastern Oregon Resource Management Plan

“Restore, protect, and enhance the diversity and distribution of desirable vegetation communities including perennial native and desirable introduced plant species. Provide for their continued existence and normal function in nutrient, water, and energy cycles” (BLM 2002).

2.6 BLM Oregon, Vale Field Office, Baker Resource Area Resource Management Plan

“Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences” (BLM 1989).

2.7 USFS, Wallowa-Whitman Land and Resource Management Plan

The Wallow-Whitman Land and Resource Management Plan establishes the following management goals: “To maintain native and desirable introduced or historic plant and animal species and communities. Maintain or enhance ecosystem function to provide for long-term integrity and productivity of biological communities. To provide habitat for viable populations of all existing native and desired nonnative vertebrate wildlife species and to maintain or enhance the overall quality of wildlife habitat across the Forest” (USFS 1990).

2.8 The Oregon Sage-Grouse Action Plan 2015, Section iii

“The overarching habitat goal is to maintain or enhance the distribution of sagebrush habitats in Oregon with the objective to retain greater than 70% of sage-grouse range as sagebrush habitat in advanced structural stages and to manage the remaining 30% (areas of juniper encroachment, non-sagebrush shrubland, and grassland) to increase available habitat within the range of the sage-grouse” (Sage-Grouse Conservation Partnership 2015).

3.0 OVERVIEW OF EXISTING ENVIRONMENTS

Reclamation actions will be specific to the setting and habitat types impacted by the Project.

3.1 Description of Vegetation

The Proposed Route crosses four ecoregions (Thorson et al. 2003). Starting in Morrow County, at the Longhorn Station, the route crosses approximately 34.8 miles of the Columbia Plateau ecoregion. Vegetation in this ecoregion is characterized by grasslands of bluebunch wheatgrass (*Pseudoroegneria spicata*), Sandberg bluegrass (*Poa secunda*), and Idaho fescue (*Festuca idahoensis*), and associated sagebrush species (*Artemisia* sp.) (Thorson et al. 2003). Cheatgrass (*Bromus tectorum*) is common understory component. Major irrigation projects in the area have converted much of land along the route to poplar tree plantations and irrigated agriculture.

In Umatilla County, the route generally runs from west to east, crossing the Columbia Plateau, and rising into the Blue Mountains ecoregion. Vegetation in this portion of the Columbia Plateau ecoregion is similar to that found in Morrow County, supporting bunchgrass communities without the associated sagebrush species (Thorson et al. 2003). Dryland farming is common in this area. Generally, vegetation in the Blue Mountain ecoregion consists of a diverse shrub layer beneath an open canopy of ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*). Areas of mesic spruce-fir forest exist as the route crosses the Blue Mountains, in Union County (Thorson et al. 2003). In Baker County, the route descends as it runs to the southeast, passing through bunchgrass, sagebrush, bitterbrush (*Purshia tridentata*), and some

juniper (*Juniperus*) communities (Thorson et al. 2003). Again, irrigated agriculture is a major land use in the valleys of Baker County.

As the route leaves Baker County, it also leaves the Blue Mountains ecoregion, entering Malheur County and the Snake River Plain ecoregion (Thorson et al. 2003). Aside from irrigated agriculture, Wyoming big sagebrush (*Artemisia tridentata* subsp. *wyomingensis*), basin big sagebrush (*A. tridentata* subsp. *tridentata*), bluebunch wheatgrass, and cheatgrass are common (Thorson et al. 2003). In saline areas, shadscale (*Atriplex confertifolia*), greasewood (*Sarcobatus vermiculatus*), and saltgrass (*Distichlis spicata*) occur.

Before leaving Malheur County and entering Owyhee County, Idaho, to eventually terminate at the Hemingway Substation, the route crosses a small portion of the Northern Basin and Range ecoregion, before returning to the Snake River Plain, in Idaho. Northern Basin and Range ecoregion along this portion of the route is characterized by sagebrush steppe containing deep river canyons, barren lava fields, badlands, and tuffaceous outcrops (Thorson et al. 2003).

3.2 Grouping of Vegetation

IPC used data from the Terrestrial Visual Encounter Surveys (TVES) to identify the ecological systems and assign a habitat type and category based on vegetation characteristics. However, due to limitations on access to private lands, surveys have not been completed within the entire Site Boundary. Approximately 67 percent of the Site Boundary was surveyed for TVES (see Exhibit P1). In areas where survey information was not available due to unsigned right-of-entry agreements or changes in route alignment, biologists used desktop analysis methods to assign habitat type and category. Gap Analysis Project (or GAP) and aerial imagery interpretation were used to delineate habitat type and agency designated habitats (e.g., Oregon Department of Fish and Wildlife designated big game habitats), known occurrences of special status species, and conditions in adjacent surveyed areas were used to approximate the appropriate category type. Detailed descriptions of the modeling and criteria used to identify and categorize habitats within the Site Boundary are included in Attachment P1-1, Habitat Categorization Matrix, and Attachment P1-6, Habitat Mitigation Plan.

TVES and subsequent desktop analysis for the habitat categorization process identified various habitat types present within the Site Boundary. These habitat types were then assembled into RZs for purposes of this Reclamation Plan. Habitat types grouped into RZs are useful in presenting and describing reclamation methods used for specific habitat types. The extent of each habitat type within the Site Boundary is presented in Table 1. RZs are discussed in greater detail in Section 4.1 below.

Table 1. Habitat Types within the Site Boundary and Corresponding Reclamation Zone

Reclamation Zone	Percent of Site Boundary	Habitat Types Included in each Reclamation Zone
Shrubland	37	Desert Shrub Shrub-Steppe with Big Sage Shrub-Steppe without Big Sage
Grassland	18	Native Grasslands
Agriculture	8	Agriculture
Forest and Woodland	13	Douglas Fir / Mixed Grand Fir Ponderosa Pine Western Juniper / Mountain Mahogany Woodland Forested - Other

Reclamation Zone	Percent of Site Boundary	Habitat Types Included in each Reclamation Zone
Wetland / Riparian	1	Aquatic Bed Wetland Emergent Wetland Scrub-Shrub Wetland Forested Wetland Ponds and Lakes Ephemeral, Intermittent, and Perennial Stream Herbaceous Riparian Introduced Riparian Riparian Woodland and Shrubland
Other	23	Introduced Upland Vegetation and Burned Areas Developed / Disturbed Bare Ground, Cliffs, Talus

4.0 RECLAMATION PLAN METHODOLOGY

This section of the Reclamation Plan describes the process used to identify reclamation actions that will be required within areas subject to ground disturbance as a result of Project construction, operation, and maintenance. Reclamation will occur across all areas impacted by the Project unless occupied by a permanent structure, regardless of land ownership. The following discussion focuses on two key components: (1) identification of RZs, and (2) identification of RLs that have been used to designate or prescribe the required actions for each RZ. The implementation of the reclamation actions described in Section 5.0 – Reclamation Plan varies based on these two components, as well as the habitat types potentially affected.

4.1 Identification of Reclamation Zones

This Reclamation Plan identifies six RZs (RZ1 to RZ6), which are an aggregation of the habitat types listed in Table 1. Additionally, this Reclamation Plan describes the applicable reclamation actions for each RZ. While species composition will vary within the RZ, similar habitat types will likely be found within the designated zone that will support similar reclamation actions.

The following subsection describe each RZ applicable within the Site Boundary.

4.1.1 Reclamation Zone 1 – Shrublands (RZ1)

Reclamation Zone 1 (RZ1) includes shrubland habitat types, which is an aggregation of desert shrub, shrub-steppe with big sage, and shrub-steppe without big sage habitat types. Shrublands are the most common zone found within the Site Boundary, accounting for nearly 37 percent of the total cover. Over 84 percent of the Shrublands RZ is dominated by big sagebrush (*Artemisia*) species. Shrub-steppe without big sage and desert shrub habitat types account for 4 percent and 1 percent of the Site Boundary, respectively.

This zone is typically composed of a variety of low, shrubby, and woody vegetation, with a limited to moderate grass understory (NatureServe 2006). This zone is found throughout the Project, from 375 to 4,700 feet in elevation, and receives approximately 8 to 21 inches of rainfall annually (PRISM 2010). All reclamation actions described in Section 5.0 – Reclamation Plan with the exception of selective clearing are potentially applicable to this zone, dependent on site conditions.

4.1.2 Reclamation Zone 2 – Grasslands (RZ2)

Reclamation Zone 2 (RZ2) includes an aggregation of native grassland habitat types. Grasslands are the third most common RZ identified, occupying roughly 18 percent of the Site Boundary. The two most common grassland ecological systems found are the Columbia Basin foothill and canyon dry grassland (9 percent of the Site Boundary) and lower montane foothill and valley grassland (7 percent of the Site Boundary). These once-extensive grasslands have been largely converted to farmland and are now found in small fragments in isolated areas throughout the Site Boundary. Additionally, cheatgrass has invaded and converted many of these grasslands into invasive annual grasslands, which are included in the “Other” habitat type described below.

Within the Site Boundary, grasslands are typically found in both valley and montane environments ranging from 550 to 5,000 feet in elevation and receives approximately 10 to 32 inches of rainfall annually (PRISM 2010). All reclamation actions described in Section 5.0 – Reclamation Plan with the exception of selective clearing and vertical mulch are potentially applicable to this zone, dependent on site conditions.

4.1.3 Reclamation Zone 3 – Agriculture (RZ3)

Reclamation Zone 3 (RZ3) includes both irrigated and dry-land farming, which are important land uses within the Site Boundary. Agriculture, accounting for nearly 8 percent of the Site Boundary, is typically found from approximately 300 to 3,900 feet in elevation, and receives approximately 8 to 15 inches of rainfall annually (PRISM 2010). All reclamation actions described in Section 5.0 – Reclamation Plan with the exception of selective clearing and vertical mulch are potentially applicable to this zone, dependent on site conditions.

4.1.4 Reclamation Zone 4 – Forest and Woodland (RZ4)

Reclamation Zone 4 (RZ4) includes an aggregation of all forested habitats crossed by the Project and accounts for 13 percent of the Site Boundary. Forest and woodlands are mostly made up of mixed grand fir and Douglas-fir forest (47 percent of the Forest and Woodland RZ) with lesser amounts of ponderosa pine forest and juniper woodlands. These mixed grand fir/Douglas-fir forest are common in the Blue Mountains and are found on drier sites, lacking the characteristic mesic understory of wetter grand fir forest types. Ponderosa pine is a common component on warmer sites in this RZ. Other seral species found in this type are lodgepole pine, western larch, and western white pine (NatureServe 2006).

Forested habitats in the Site Boundary are found in the Blue Mountains in Umatilla and Union counties, from just south of La Grande to south and east of Pendleton. Logging and other disturbance such as grazing are common in these habitat types. Juniper woodlands are mostly found in Baker County west of the town of Durkee. Forest and woodland habitats typically range from 1,900 to 8,800 feet in elevation, and receive approximately 22 to 36 inches of rainfall annually (PRISM 2010). All reclamation actions described in Section 5.0 – Reclamation Plan are potentially applicable to this zone, dependent on site conditions.

4.1.5 Reclamation Zone 5 – Wetland and Riparian (RZ5)

Reclamation Zone 5 (RZ5) is composed of wetland and riparian habitat types. These types account for 1 percent of the Site Boundary. This is a minor RZ limited in extent by available moisture that is found mostly along stream banks and adjacent to springs and seeps. While not commonly found, these types provide highly important fish and wildlife and livestock habitat. Forested, scrub-shrub, and herbaceous wetland and riparian habitats are all present in the Site Boundary.

In wetland and riparian areas, reclamation actions associated with the other RZs may not be applicable due to site-specific conditions requiring modification from standard actions or as a

result of agency coordination. In these more sensitive areas, the appropriate land management agency and ODOE or the Construction Contractor(s) must coordinate on reclamation actions to be applied and in some cases the land management agency may require additional, detailed planting plans to accommodate riparian habitats and land management agency objectives.

Permanent impacts to wetland habitats are regulated by the U.S. Army Corps of Engineers and are discussed in detail in Exhibit J.

4.1.6 Reclamation Zone 6 – Other (RZ6)

Reclamation Zone 6 (RZ6) includes an aggregation of disturbed and developed areas and areas dominated by invasive annual and perennial plant species, and is the second most prominent RZ, accounting for 23 percent of the Site Boundary. This zone is typically dominated by invasive plant species or seeded nonnative plants capable of existing in disturbed environments. Introduced forbland and introduced annual and perennial grasslands are the main habitat types of this zone, and together account for 90 percent of the total cover within RZ6. Restoration of these communities to a native plant dominated community is generally not possible as changes in soils and chronic disturbance have altered site potential. This zone is found across a wide range of sites with elevations ranging from approximately 300 to 4,100 feet, receiving from approximately 9 to 31 inches of rainfall annually (PRISM 2010). All reclamation actions described in Section 5.0 – Reclamation Plan with the exception of selective clearing and vertical mulch are potentially applicable to this zone, dependent on site conditions.

Several substrate-dominated natural communities are included under “Other” in Table 1, including cliffs, canyons, and ash and tuff badlands. These sparsely vegetated types are generally found in Malheur County in small, isolated pockets scattered among the sagebrush steppe and shrubland and may require site-specific reclamation plans due to the unique nature of these sites.

4.2 Identification of Reclamation Levels

Determination of RLs that prescribe the types of required actions were based on (1) the type(s) of construction activity, facility features, and the area of associated disturbance; (2) the duration of disturbance (temporary or permanent) associated with these features; and (3) the type of disturbance associated with each activity as described below.

4.2.1 Types of Construction Activities and Facility Features

As presented in Exhibit B, Project Description, major activities associated with the construction of the Project will include, but are not limited to, the following tasks:

- Surveying the transmission centerline, other project features, and work areas;
- Upgrading or constructing temporary and permanent access roads;
- Clearing and grading activities for the ROW, tower sites, multi-use areas, substations, and regeneration sites;
- Developing the Longhorn Station;
- Excavating foundations;
- Installing foundations;
- Assembling and erecting towers with temporary and permanent pad sites;
- Stringing conductors and ground wires;
- Installing communication stations and distribution lines;

- Installing counterpoise (tower grounds) where needed; and
- Conducting cleanup and reclamation of affected areas.

The area disturbed by construction, operation, and maintenance of major facility features will vary as presented in Exhibit B, Project Description. For example, the extent of disturbance associated with bladed access roads will likely be much greater than the disturbance associated with primitive access roads. Likewise, construction disturbance at a tower location will typically be greater than operational and maintenance disturbance for the same tower site.

4.2.2 Disturbance Duration

This Reclamation Plan identifies two broad types of disturbance duration, as defined below.

4.2.2.1 Permanent

Permanent impacts are defined as those impacts that will exist for the entire life of the Project. Permanent impacts would occur along access roads, communication stations, Longhorn Station, and tower sites, as well as within the permanent ROW and vegetative maintenance zones along portions of the Project that cross forested/woodland habitats.

4.2.2.2 Temporary

Temporary impacts are those impacts that will last for a time less than the life of the Project; these include temporary impacts associated with permanent access roads, multi-use areas, pulling and tensioning sites, light-duty fly yards, areas around tower pads, and around the Longhorn Station. Temporary impacts during operation would result from the periodic disturbance associated with inspection and maintenance of the line; temporary impacts associated with retirement of the Project would be similar to those described for construction.

4.2.3 Disturbance Level

This Reclamation Plan defines four broad disturbance levels based on activities associated with construction, operation, and maintenance of Project facilities. Disturbance levels will be considered in the identification of RLs and implementation of specific reclamation practices. In general, the amount of ground disturbance increases with each disturbance level.

4.2.3.1 Disturbance Level 1 (D1) – No New Disturbance

D1 areas include existing access roads and previously disturbed locations that do not require further improvement (vegetation removal or grading) that will remain permanent (in place) after Project construction is complete.

4.2.3.2 Disturbance Level 2 (D2) – Primitive

In D2 areas, disturbance is caused by access to the Project site or construction activities in a work area that requires the clearing of large woody vegetation and other obstructions to improve or provide suitable access for equipment and vehicles. Most woody shrub vegetation is removed and soils are compacted, but no surface soil is removed (i.e., no blading of topsoil), preserving vegetation roots wherever practical to facilitate plant reestablishment. These roads are commonly called “two track” or “overland travel” roads. Examples include new access roads where overland access may be used in the construction of facilities, or in some areas where roads may be improved for access (selective tree and brush clearing). These roads are not intended for use as all-weather roads.

4.2.3.3 Disturbance Level 3 (D3) – Substantial Modification

In D3 areas, disturbance is caused by access to the Project site or construction activities within a work area that requires improving access for equipment and vehicles. Activities resulting in this type of disturbance may include: (1) increasing the width of the existing road prism; (2) changing

the existing road alignment; (3) using materials inconsistent with the existing road surface; and/or (4) changing the existing road profile in a way that would alter vehicle use patterns.

Repairs using existing road surface materials within the existing road prism that would not change the road profile or alter the vehicle use patterns are considered substantial modifications if they comprise greater than 20 percent of the road surface area defined by road prism width and longitudinal distance over a defined road segment.

4.2.3.4 Disturbance Level 4 (D4) – Bladed

Disturbance in D4 areas is caused by removing vegetation and displacement of soils. The soils are compacted and the surface soil is displaced (i.e., blading of topsoil). Some examples include construction of a new road prism across a steep side slope or over rough and uneven terrain, tower sites that require clearing and grading, multi-use areas requiring grading, some light-duty fly yards, and existing access roads that require improvements. These roads are designed to support heavy equipment and vehicular traffic.

4.2.4 Reclamation Levels

Four levels of reclamation (RL1 to RL4) have been identified for the Project based on the potential disturbance level (D1 through D4), and duration of disturbance (temporary or permanent). These RLs are described in the following subsections and summarized in Table 2.

Table 2. Disturbance Level, Disturbance Duration, and Associated Reclamation Level

Disturbance Level	Disturbance Duration	
	Temporary	Permanent
D1 – No New Disturbance	<i>Does Not Apply</i>	RL1 – Minimal Level of Permanent Disturbance
D2 – Primitive	RL2 – Low Level of Temporary Disturbance	RL1 – Minimal Level of Permanent Disturbance
D3 – Substantial Modification	RL3 – Moderate Level of Temporary Disturbance	RL4 – Moderate / High Level of Permanent Disturbance
D4 – Bladed	<i>Does Not Apply</i>	RL4 – Moderate / High Level of Permanent Disturbance

4.2.4.1 Reclamation Level 1 (RL1) – Minimal Level of Permanent Disturbance

Project activities in RL1 areas do not result in new disturbance, require minimal preconstruction treatment, and will normally require no postconstruction reclamation actions (outside of routine maintenance). Routine maintenance will include removal of woody vegetation within the transmission line ROW, which is described in Exhibit P1, Attachment P1-4, Vegetation Management Plan. RL1 can include an existing disturbance, such as an existing road.

4.2.4.2 Reclamation Level 2 (RL2) – Low Level of Temporary Disturbance

Project activities in RL2 areas are low level and temporary that will result in disturbance confined to overland construction, including vegetation crushing, and will require limited reclamation actions. RL2 can include temporary facilities such as pulling and tensioning sites and the temporary portions of structure work areas. Low-level temporary disturbance associated with permanent access roads not needing substantial modification or blading may also occur.

4.2.4.3 Reclamation Level 3 (RL3) – Moderate Level of Temporary Disturbance

Project activities in RL3 areas will result in moderate temporary disturbance, limited to clearing and cutting of vegetation. RL3 can include temporary facilities such as pulling and tensioning sites and the temporary portions of structure work areas. Moderate-level temporary disturbance

associated with permanent access roads may also occur. RL3 is distinguished from RL2 by a higher level of construction disturbance.

4.2.4.4 Reclamation Level 4 (RL4) – Moderate / High Level of Permanent Disturbance

Project activities in RL4 areas will result in a moderate to high level of permanent disturbance (e.g., blading). Reclamation actions will be minimal because RL4 areas will be permanently occupied by Project components and facilities. RL4 applies to rebuilt existing roads, new access roads that will serve for maintenance and operation of the transmission line, regeneration stations, and the permanent portions of the structure pads. In RL4 locations, seeding and alternative seeding will be applied where appropriate and replacement of soils and vertical mulch will be limited.

For RL2 through RL4, pretreatment of existing noxious weed occurrences may be required before construction to prevent infestation and spread.

Table 3 identifies the various RLs to be applied for each of the related and supporting facilities and associated disturbance levels and durations. In general, the order of disturbance levels from least to greatest is overland drive-and-crush, overland clear-and-cut, and blade-and-shape. RL does not imply level of effort to meet reclamation success criteria. For instance, a RL2 in native shrub-steppe habitat may require more time and effort to meet success criteria than a RL3 in an introduced upland vegetation habitat.

Table 3. Construction Component and Reclamation Level

Construction Component	Disturbance Level	Disturbance Duration		Reclamation Level
		Temporary	Permanent	
Structure work areas	D2 – Primitive	●		RL2 – Low Level of Temporary Disturbance
	D3 – Substantial Modification	●		RL3 – Moderate Level of Temporary Disturbance
	D4 – Bladed		●	RL4 – Moderate / High Level of Permanent Disturbance
Pulling and tensioning sites, multi-use areas, and other ancillary facilities that result in temporary disturbance	D2 – Primitive	●		RL2 – Low Level of Temporary Disturbance
	D3 – Substantial Modification	●		RL3 – Moderate Level of Temporary Disturbance
Longhorn Station, communication sites, and other ancillary facilities that result in permanent (long-term) disturbance	D2 – Primitive		●	RL1 – Minimal Level of Permanent Disturbance
	D3 – Substantial Modification		●	RL4 – Moderate / High Level of Permanent Disturbance
	D4 – Bladed		●	RL4 – Moderate / High Level of Permanent Disturbance

Construction Component	Disturbance Level	Disturbance Duration		Reclamation Level
		Temporary	Permanent	
Existing paved roads, access roads (no improvement)	D1 – No New Disturbance		●	RL1 – Minimal Level of Permanent Disturbance
Existing access road (with improvements)	D2 – Primitive		●	RL1 – Minimal Level of Permanent Disturbance
	D2 – Primitive	●		RL2 – Low Level of Temporary Disturbance
	D3 – Substantial Modification		●	RL4 – Moderate / High Level of Permanent Disturbance
	D3 – Substantial Modification	●		RL3 – Moderate Level of Temporary Disturbance
	D4 – Bladed		●	RL4 – Moderate / High Level of Permanent Disturbance
New access road	D2 – Primitive		●	RL1 – Minimal Level of Permanent Disturbance
	D2 – Primitive	●		RL2 – Low Level of Temporary Disturbance
	D3 – Substantial Modification		●	RL4 – Moderate / High Level of Permanent Disturbance
	D3 – Substantial Modification	●		RL3 – Moderate Level of Temporary Disturbance
	D4 – Bladed		●	RL4 – Moderate / High Level of Permanent Disturbance

5.0 RECLAMATION PLAN

This section presents reclamation actions specifically required for each level of reclamation (RL1 to RL4 as described in Section 4.2.4 – Reclamation Levels) within the reclamation zones previously discussed (RZ1 to RZ6 as described in Section 4.1 – Identification of Reclamation Zones).

Reclamation actions are physical treatments and activities that will occur throughout each phase of the Project and are specific to RL, as identified in Table 4. Table 4 presents pre- and post-construction reclamation actions for each RZ and RL. Table 3, which identifies the RLs for various construction components, is to be used in conjunction with Table 4 to determine appropriate site-specific reclamation actions.

Table 4. Reclamation Action Identification

Reclamation Activity	RZ 1 (Shrublands)				RZ 2 (Grasslands)				RZ 3 (Agriculture)				RZ 4 (Forest and Woodland)				RZ 5 (Wetlands and Riparian)				RZ 6 (Other)			
	RL 1	RL 2	RL 3	RL 4	RL 1	RL 2	RL 3	RL 4	RL 1	RL 2	RL 3	RL 4	RL 1	RL 2	RL 3	RL 4	RL 1	RL 2	RL 3	RL 4	RL 1	RL 2	RL 3	RL 4
PRECONSTRUCTION ACTIONS																								
Noxious weed plan implementation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Selective clearing			•	•											•	•			•	•				
Topsoil segregation			•				•				•				•				•				•	
Reclamation monitoring site selection			•				•				•				•				•				•	
POSTCONSTRUCTION ACTIONS																								
Noxious weed plan implementation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Management of waste materials	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Earthworks			•	•			•	•			•	•			•	•			•	•			•	•
Topsoil replacement			•				•				•				•				•				•	
Seeding		•	•	•		•	•	•		•	•	•		•	•	•		•	•	•		•	•	•
Alternative seeding		•	•	•		•	•	•		•	•	•		•	•	•		•	•	•		•	•	•
Vertical mulch replacement			•				•				•				•				•				•	
Signage		•	•			•	•			•	•			•	•			•	•			•	•	
Reclamation monitoring (general and site-specific)		•	•	•		•	•	•		•	•	•		•	•	•		•	•	•		•	•	•

Notes:

RL – Reclamation level

RZ – Reclamation zone

If a variance to the expected disturbance level for a particular construction component is required due to unforeseen environmental or engineering constraints, Table 3 provides direction for determining the revised RL, which can then be used to identify the appropriate reclamation actions per Table 4.

These reclamation actions will facilitate resource protection during construction, enhance recovery for areas temporarily disturbed by Project construction, and promote the re-establishment of vegetation in disturbed areas.

Pre-Construction Agency Consultation

The Construction Contractor(s) will coordinate with the appropriate land management agency and ODOE or landowner(s) during the development of the Final Reclamation Plan. This coordination will include the following:

- Development of site-specific reclamation treatments where disturbance occurs,
- Determining desirable species for each reclamation zone to be included in Table 6 of this plan,
- Determining appropriate seed mixes for each reclamation zone, and
- Delineation of the geographic extent in which each seed mix will be distributed within the areas disturbed by construction.

The Construction Contractor(s) and appropriate land management agency and ODOE, or landowner(s) coordination will occur during the preconstruction phase of the Project to ensure the proper amount of each seed mix can be purchased and is available when needed. The goal of identifying site-specific reclamation treatments will be achieved through analysis of existing data and ground verification of habitat types documented during TVES surveys in areas subject to Project-related ground disturbance. In particular, habitat types important to threatened and endangered (T&E) species may require additional reclamation actions to mitigate disturbance impacts associated with the Project and maximize the probability of reclamation success.

The Construction Contractor(s) will also coordinate with the appropriate land management agency and ODOE on the methods to be used for: field-verification of habitat types within the Project disturbance area, identifying and mapping reclamation treatment and control monitoring sites, and collecting preconstruction qualitative and quantitative data at monitoring sites.

5.1 ROW Preparation and Preconstruction Actions

Preconstruction actions are those that occur before construction of the Project is initiated, and includes activities associated with ROW preparation. ROW preparation includes general site preparation involving flagging of the ROW boundaries, construction areas and sensitive resources (wetlands, T&E plants, cultural) to avoid accidental entry into these areas. It also includes identification and pre-treatment of noxious weed infestations located within proposed Project disturbance footprint (see Exhibit P1, Attachment P1-5, Noxious Weed Plan) and storage areas for windrowed plant and soil materials. Monitoring sites will be established, as described in Section 6.2.2 – Site-Specific Reclamation Monitoring.

Preconstruction actions will focus on protection of environmentally sensitive areas and resources identified for preservation, monitoring site selection and baseline data collection, and identification and pretreatment of noxious weed infestations located within proposed Project disturbance. Preconstruction actions and ROW preparation are the responsibility of the Construction Contractor(s).

Disturbance related to Project construction may begin only after all ROW preparation and

preconstruction actions have been completed.

5.1.1 Noxious Weed Plan Implementation

Noxious weeds and invasive plant species will be managed in conformance with the Noxious Weed Plan (Exhibit P1, Attachment P1-5). Specific measures and agency directives will be detailed in the Noxious Weed Plan once finalized, as well as information regarding noxious weed control measures and monitoring requirements. Noxious weed treatment and monitoring will continue following Project construction.

5.1.2 Monitoring Site Selection

As discussed below in Section 6.2.2 – Site-Specific Reclamation Monitoring, preliminary monitoring site locations will be established along the ROW. A single monitoring site includes

both a treatment site and a control site. The treatment site is an area expected to be disturbed during construction and that will be revegetated. The control site will be paired with the treatment site, meaning the control site will be in the vicinity of the treatment site and will have the same general slope, aspect, and habitat type as the treatment site (prior to disturbance).

Monitoring sites will be selected for each of the habitat types expected to be subject to Project-related surface disturbance as described below in Section 6.1 – Monitoring Requirements.

5.1.3 Selective Clearing

Selective clearing is the normal practice for mitigating impacts in areas where trees or brush of high densities have been cleared due to Project activities. Selective clearing is to be considered in shrubland (RZ1) or forest and woodland RZ (RZ4) areas of the Project. See the Vegetation Management Plan (Exhibit P1, Attachment P1-4) for further discussion of vegetation management.

5.1.4 Topsoil Segregation

Ground disturbance will be avoided and minimized where practical; however, even with avoidance and minimization of disturbance, there will still be extensive areas of temporary soil disturbance resulting from construction of the Project. The Final Reclamation Plan will identify locations where the management of topsoil is warranted (e.g., stripping off the topsoil layer and storing it separately from subsoils), such as areas where topsoil currently supports native plant species or in areas that are important to private landowners (e.g., agricultural soils). Generally, the topsoil layer is considered the upper 6 to 12 inches of soil, but this can vary by soil type, and soils deeper than 12 inches may need to be considered as “topsoil” in certain agricultural areas. Furthermore, top soils in dry shrubland and desert-like environments may be much thinner than 6 inches in many instances.

Topsoil segregation includes the separation of topsoil from subsoil. Topsoil contains organic material, including the seeds of plants growing on the site. Topsoil segregation will be performed where earthworks cause disturbance to vegetation and soil. Topsoil will be set aside for postconstruction replacement. The goal of this activity is to maintain the biological, chemical, and physical integrity of the topsoil and subsoil (where appropriate).

If topsoil is removed, care will be taken to ensure it is not mixed with the underlying subsoil. Topsoil will be stored in a separate stockpile. It will be returned to the area from which it was taken and will not be spread in adjacent areas. If topsoil is not suitable for backfill, it will be spread in other previously disturbed areas or transported to a predetermined off-site disposal area.

Additionally, subsurface soils and waste rock will be spread where practicable and in proximity to the disturbance (within the ROW). This material will be spread uniformly to match existing contours and covered with topsoil, when available, and re-seeded. Large rocks excavated during foundation work will be kept separate from topsoil during construction and during surface preparation as part of restoration. These rocks will be moved to designated on-site locations.

5.2 Postconstruction Reclamation Actions

Postconstruction reclamation actions occur after Project construction has terminated, and primarily focus on stabilizing permanent use areas and restoring temporary areas to allow revegetation. Postconstruction reclamation actions that may be used are defined below and are organized by their sequence of implementation. The Construction Contractor(s) will incorporate the reclamation actions identified in the Final Reclamation Plan that will be reviewed and

approved by the appropriate land management agency and ODOE, or landowner, before postconstruction actions commence.

If reclamation actions identified below cannot be implemented following construction, appropriate interim erosion control measures as proposed by the Construction Contractor(s) and approved by the appropriate land management agency, ODOE, landowner, and/or discussed in the Erosion and Sediment Control Plan (ESCP [discussed in Exhibit I, Soil Protection]), will be installed until revegetation can occur.

5.2.1 Management of Waste Materials

Management of waste materials will be performed in conformance with the Spill Prevention, Containment, and Countermeasures Plan (see Exhibit I, Soil Protection). Final cleanup will ensure all construction areas are free of construction debris including, but not limited to, assembly scrap metals, oil or other petroleum-based liquids, construction wood debris, and worker-generated litter. Permanent erosion control devices will be left in place.

5.2.2 Earthworks

Earthwork activities will include the re-establishment of slope stability, surface stability, desired topographic diversity, and drainage features. Subsurface soils and waste rock will be spread where practicable and in proximity to the disturbance (within the ROW). This material will be spread uniformly to match existing contours and covered with topsoil, when available, and re-seeded. Earthwork activities will include re-contouring, to the extent feasible, of areas that are not needed for operation and maintenance of the Project. Temporarily disturbed lands within the ROW will be re-contoured to match surrounding landscapes. Re-contouring will emphasize restoration of the existing drainage patterns and landform to preconstruction conditions, to the extent practicable. Structure pads and permanent access roads may be reseeded to reduce pad and road erosion, but these permanent features will not be re-contoured. Earthwork activities will also include application of appropriate hydrologic stabilization methods and soil erosion measures in conformance with the ESCP (see Exhibit I, Soil Protection).

Detrimental soil disturbance such as compaction, erosion, puddling, and displacement will be minimized through implementing measures identified in the ESCP. Measures may include road ripping, frequent water bars, cross-ditching (e.g., rolling dips), or other methods to reduce compaction while preventing gully formation. Ripping pattern will be altered to a crossing, diagonal, or undulating pattern of tine paths to avoid concentrated runoff patterns that can lead to gullies.

5.2.3 Topsoil Replacement

Areas within the ROW, laydown or staging yards, and other areas of extensive vehicle travel and material storage may contain compacted soils. These soils will be de-compacted on a case-by-case basis. In areas of droughty soils, the soil surfaces will be mulched and stabilized to minimize wind erosion and to conserve soil moisture in accordance with the ESCP. Topsoil and subsurface soils will be replaced in the proper order during reclamation.

5.2.4 Seeding

Seeding involves planting new seed of native or desirable introduced plant species to establish desired self-perpetuating plant communities within Project-affected areas. It is important to establish a species composition, diversity, structure, and total ground cover appropriate for the desired habitat type to meet the objectives of the BLM and USFS Resource Management Plans on public lands. As stated above, the BLM (2002) plan states that action on BLM lands should "Restore, protect, and enhance the diversity and distribution of desirable vegetation communities including perennial native and desirable introduced plant species." While native

plant communities are generally preferred, in some cases, as determined by the appropriate land management agency, ODOE, or landowner, desirable introduced species may be recommended in seed mixes as a treatment to improve chances of reclamation success where the RZ(s) contain large quantities of invasive species such as cheatgrass or medusahead (*Taeniatherum caput-medusae*), or where there are other limiting factors such as precipitation variability or limited ecological site potential. Under these circumstances, a desirable introduced species seed mix may provide optimal ground cover and long-term protection against annual plant establishment. This treatment is identified as alternative seeding in this Reclamation Plan and is discussed in Section 5.2.5.

In addition to restoring temporarily disturbed areas, IPC will re-seed some permanently disturbed areas. To minimize potential damage from wildland fires, IPC will not reseed areas within a 20-foot radius around structures. Additionally, as stated in the Vegetation Management Plan (Exhibit P1, Attachment P1-4), brush and grass will be cleared around wood poles to help protect structures from range fires.

Appendix A – Preliminary Agency-Approved Seed Mixes includes a list of approved seed mixes provided by the BLM and USFS. These preliminary seed mixes were provided to IPC in a memo from Susan Fritts of the BLM, dated December 16, 2015. The objective of these seed mixes is to provide native or desirable introduced vegetation to compete with invasive and noxious weeds as well as reclaim continuous habitat for wildlife and pollinators species. The seed mixes presented in Appendix A are intended for rehabilitation of sites disturbed during Project construction and are not intended for mitigation of impacts to wetlands or traditional foods. Furthermore, in areas where the preconstruction vegetation is dominated by invasive annual species such as cheatgrass, a desirable introduced species mix has been developed to keep noxious weeds from invading, this mix is not intended to provide habitat for wildlife or pollinators. Soils with exposed or shallow bedrock may require adaptive seed mixtures and implementation of revegetation practices (i.e., fertilization, mulching, monitoring) to enhance revegetation success. Revegetation of areas with extensive rock outcrop may not be possible.

Because the Project crosses four ecoregions, botanists and wildlife biologists from the BLM and USFS designed these seed mixes to be used across each ecoregion and general vegetation community while still tailoring the mixes to be site appropriate. Information from *Natural Vegetation of Oregon and Washington* (Franklin and Dyrness 1973), BFI Native Seed, LLC, Natural Resource Conservation Service, as well as professional experience helped determine the seed mixes. Agency-approved seed mixes will be applied Project-wide, except in agricultural areas, to the appropriate habitat type, unless directed otherwise by the land management agency and/or landowner. The Construction Contractor(s) or weed specialist may recommend modified seeding application rates and timing of implementation to achieve site-specific weed management objectives. Final seed mixes will be determined by soil type and site-specific conditions and will be provided to the Construction Contractor(s) by a BLM or USFS specialist or landowner.

It is important to consider the source of seed used for revegetation. Seed that is genetically adapted to a particular ecoregion will have a much higher success rate in that ecoregion; however, ecoregion-specific seed is not always readily available. Wildland seed collection is a method of increasing seed supply that may be considered if commercially harvested seed is not available.

Before construction begins, the Construction Contractor(s) will produce the Final Reclamation Plan in coordination with the appropriate land management agency, ODOE, or landowner. The Final Reclamation Plan will specifically correlate agency-approved seed mixes to Project-identified RZs and habitat types.

Reclamation seeding methods will include broadcast seeding, drill seeding, or hydroseeding/hydromulching (or a combination of methods). Seeding methods will be chosen based on the type of seed, disturbance level, soil type, terrain, and precipitation levels for the area to be reclaimed. Seeding methods will be reviewed and approved by the land management agency or private landowner.

Broadcast seeding will apply the seed directly on the ground surface. The type of broadcast spreader will depend on the size of the area to be seeded, and the terrain. Seed will be placed in direct contact with the soil, ideally at a depth of approximately 0.5 to 1 inch deep. It will then be covered by raking or dragging a chain or harrow over the seed bed to remove air pockets. Studies have shown that good soil-to-seed contact is required for successful seed germination (Pyke et al. 2015).

Drill seeding will be used on areas of sufficient size with moderate or favorable terrain to accommodate mechanical equipment. Drill seeding provides the advantage of planting the seed at a uniform depth. This is important because seeds buried too deeply either germinate and die before reaching the surface or they may become dormant until they reach enough light to stimulate germination (Pyke et al. 2015).

Hydroseeding, which is the spraying of seeds and water onto the ground surface, or hydroseeding/hydromulching, which is the spraying of seeds, mulch, and water, may be implemented on steeper slopes. Tackifier may be added to facilitate adherence of hydromulch to slopes greater than 25 percent or on sandy or other highly erodible soils.

IPC may use soil amendments (e.g., fertilizer, wood or straw mulches, tackifying agents, or soil stabilizing emulsions) on a case-by-case basis. Straw, hay, mulch, gravel, seed, and other imported materials must be certified weed-free. If certified weed-free materials are not available, then alternative materials will be used with agency approval.

To help limit the spread and establishment of noxious weed species in disturbed areas, desired vegetation must be established promptly after disturbance. IPC will rehabilitate disturbed areas as soon as possible after ground-disturbing construction and operations and maintenance activities and during the optimal period. If areas are not immediately seeded after construction due to weather or scheduling constraints, all noxious weeds will be controlled before seeding. Appropriate herbicides will be used to ensure fall seedings are not affected by residual herbicides.

Additionally, to promote recolonization by T&E plant species and reduce competition between T&E and other plant species, the Construction Contractor(s) will prepare the site-specific revegetation, reseeding, and soil stabilization plans for all areas disturbed by construction or maintenance within 100 feet of mapped T&E plant occurrences. The site-specific plans will be approved by the BLM, USFS, or Oregon Department of Agriculture (ODA) Authorized Officer or his/her designated representative prior to implementation. The plans will be designed to ensure T&E plant species are not disadvantaged. The plans will include proposed seed mixes, seeding application rates, seeding methodologies, seeding timeframes, and any other revegetation or soil stabilization techniques (e.g., natural recolonization, alternative seeding, supplemental planting, supplemental watering, supplemental mulch, surface pocking, the use of soil stabilizers). The seed mixes will be developed in consultation with the BLM, USFS, or ODA botanist, favor the T&E plant species, and be based on site-specific vegetation found on the undisturbed areas adjacent to the areas to be revegetated or reseeded.

5.2.5 Alternative Seeding

Alternative seeding is employed to establish ground cover in disturbed or weed-infested areas by seeding of nonnative grasses and/or forbs. While nonnative species are generally not

desirable, they provide soil cover, stabilization, and a source of organic litter until other vegetation can become established in areas where systems have crossed abiotic and biotic thresholds to an alternative successional state and are unable to recover to their original state (Pyke et al. 2015). Similar to regular seeding, alternative seeding mix compositions and seeding methods will be determined prior to construction through Construction Contractor(s) coordination with the applicable land management agency, ODOE, or landowner.

5.2.6 Vertical Mulch/Slash

Vertical mulch/slash is brush and tree limbs less than 6 inches in diameter removed during woody vegetation removal operations. Vertical mulch/slash is not entirely in contact with the soil surface; rather, parts of the mulch rise above the surface. Removed and stored trees and shrubs are the sources of vertical mulch/slash. For cleared areas, vegetation windrowed to the outside of the disturbance boundary will be replaced back onto the site. Additionally, during topsoil segregation, small rocks will be incorporated and vegetation combined as vertical mulch.

5.2.7 Signage

Reclamation areas will require informational signs to prevent further human disturbance within these recovering areas. Signs stating “Restoration in Progress – No Vehicle Traffic Allowed,” or similar, will be installed as necessary at locations where the ROW intersects permanent access roads to deter vehicular damage to the site. The Construction Contractor(s) will provide reclamation signs and t-posts. Sign locations will be provided by the appropriate land managing agency and ODOE to the Construction Contractor(s) following completion of postconstruction reclamation procedures and prior to the initiation of reclamation monitoring.

5.2.8 Reclamation Monitoring

Monitoring will be initiated prior to construction and will continue through the postconstruction phases of the Project. Monitoring data will be documented and reported to facilitate revised reclamation strategies, if applicable. Revised strategies will be implemented as needed. Evaluation of reclamation success will be based on criteria as described in Section 6.4 – Reclamation Goals and Success Standards.

Reclamation monitoring and reporting will be conducted as described below in Section 6.2 – Monitoring Methods.

5.3 Modifications and Field Changes

The reclamation actions described in this Reclamation Plan will be incorporated into the Final Reclamation Plan, to be developed by the Construction Contractor(s) and subject to the approval of the appropriate land management agency, ODOE, or landowner.

Adjustments to RLs or actions by the Construction Contractor(s) may be necessary if Project conditions change (e.g., disturbance levels change at a specific tower work site, access roads change based on Project needs, etc.).

This Reclamation Plan is intended to provide flexibility with respect to construction and unknown constraints that may be encountered in the field. Changes to the original disturbance level or duration, previously described, will be documented by the Construction Contractor(s) and will be reassessed to ensure appropriate reclamation actions are implemented.

6.0 RECLAMATION SUCCESS STANDARDS, MONITORING, AND MAINTENANCE

Postconstruction reclamation monitoring is required to ensure soil protection is achieved, to evaluate reclamation success of reclaimed areas associated with the construction of Project facilities, to identify the need for adaptive management measures, and to make a final determination regarding reclamation success to release IPC (and the Construction Contractor(s) by contractual obligation) from further monitoring and reclamation actions. Reclamation success standards will be used by the appropriate land management agency and ODOE to determine if the implemented reclamation actions have adequately achieved the goals and objectives provided in the Final Reclamation Plan, with consideration for local site conditions.

The monitoring practices include standard techniques for monitoring sites, data collection, as well as the quantitative (numerical) and qualitative (descriptive) measures to be used in monitoring reclamation success. Specific monitoring requirements, including the site-specific data analysis protocol, will be developed by the Construction Contractor(s), in coordination with the appropriate land management agency and ODOE prior to the start of construction activities. Data will be collected as described below at both the treatment and control sites upon establishment of monitoring sites during preconstruction activities. The data will provide a baseline for comparison to post construction conditions and allow decision makers to make more accurate conclusions pertaining to reclamation success based on site-specific conditions, such as habitat type and climatic conditions.

Reclamation monitoring will be conducted ~~annually every 1 to 2 years until vegetation is established in a similar species composition as the paired control site, and then will extend to a frequency of every 5 to 10 years (depending on habitat vegetation) until the vegetation reaches the same maturity as the paired control site, for up to 5 years following completion of construction (as discussed above).~~ The first annual monitoring event will occur during the first growing season after reclamation actions occur. When it is determined that an area of the Project has been successfully reclaimed at any point during ~~the 5 years of~~ monitoring by satisfying all success criteria (as defined in Section 6.4 – Reclamation Success Standards), IPC will request concurrence from ODOE. If ODOE concurs, IPC will conclude that it has no further obligation to perform reclamation activities in that area of the Project, however, noxious weed monitoring will continue for the life of the Project. ~~Where this is the case, the monitoring effort may require less than 5 years.~~ If, after 5 years of monitoring, some sites (e.g. grasslands) have not attained the success criteria or if at any point during the annual/bi-annual monitoring it is clear that reclamation cannot be successful (including private landowner denial of reclamation activities), IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC may suggest additional reclamation techniques or strategies or monitoring, or IPC may propose mitigation to compensate for any permanent habitat loss.

The Construction Contractor(s) or third-party contractor will prepare and submit a Reclamation Monitoring Report for the entire Project length to IPC, the appropriate land management agency, and ODOE on an annual/bi-annual basis ~~for up to 5 years (as described above, based on habitat vegetation)~~ following completion of each phase of construction. ~~If after 5 years, additional reclamation actions are determined necessary (as described above),~~ Annual/bi-annual reporting will continue until reclamation areas have satisfied all success criteria ~~or IPC has been waived from further reclamation obligations.~~ The purpose of the Reclamation Monitoring Report is to provide a summary and status update on progress toward meeting reclamation goals and success standards as described in the Final Reclamation Plan. Because construction and reclamation activities will occur in phases, the monitoring report will also be organized by construction phase. The Reclamation Monitoring Report will, at a minimum, include:

- A reiteration of reclamation goals and success standards as described in the Final Reclamation Plan;
- A description of the monitoring practices implemented;

- A list and map identifying the location of all reclamation areas including their associated geographic information systems data;
- A presentation of the reclamation monitoring data collected;
- A discussion of the demonstrated or lack of demonstrated progress toward the success standards;
- A discussion of adaptive management;
- A proposed list of sites to be released from further monitoring; and
- Site-specific recommendations for remedial actions, as appropriate.

Adaptive management may be necessary to determine appropriate remedial actions, based on monitoring observations from any year, for sites that have not demonstrated progress toward reclamation success standards. If required, implementation of remedial actions will be determined by the appropriate land management agency and ODOE based on the monitoring data and annual report. The last year's Annual/bi-annual reports will be submitted with a summary of monitoring data, observations, and the overall trend toward reclamation for each habitat type. The appropriate land management agency and ODOE will release IPC from further reclamation and monitoring requirements for specific areas upon acceptance of the annual monitoring report documenting that reclamation success criteria have been met, as discussed above.

Monitoring reclamation activities and remedial measures on disturbed private lands (e.g., agricultural lands) will be determined based on agreements made between the landowner and IPC. Monitoring of agricultural lands is not proposed; restoration of agricultural lands will be considered complete upon replacement of disturbed soils and seeding or planting of crops.

6.1 Monitoring Requirements

Monitoring requirements will vary according to RL as shown in Table 5. RL1 areas (e.g., maintenance of the ROW, existing roads) are permanent disturbance areas that will not require reclamation monitoring. However, all areas disturbed by Project construction will follow measures for noxious weed control as applicable and specified in the Noxious Weed Plan (Exhibit P1, Attachment P1-5).

RL2, RL3, and RL4 are disturbance areas that will require reclamation actions and subsequent reclamation monitoring efforts. Reclamation monitoring includes both general reclamation monitoring and site-specific reclamation monitoring as described in Section 6.2.

The specific location of monitoring sites associated with these different activities will be in key areas and these sites will be reviewed and approved by the appropriate land management agency and ODOE prior to initiation of construction activities. Once monitoring sites have been approved, the Construction Contractor(s) will establish the sites in the field, and baseline data (e.g., photo points, biometrics, and soil conditions) will be collected. The Construction Contractor(s) will conduct annual monitoring following postconstruction activities as described in Section 6.0.

Table 5. Reclamation Monitoring Requirements

Construction Component	Disturbance Level	Disturbance Duration		Reclamation Level	Monitoring
		Temporary	Permanent		
Structure work areas	D2 – Primitive	●		RL2	General
	D3 – Substantial Modification	●		RL3	General, Site-specific
	D4 – Bladed		●	RL4	General

Construction Component	Disturbance Level	Disturbance Duration		Reclamation Level	Monitoring
		Temporary	Permanent		
Pulling and tensioning sites, multi-use areas, and other ancillary facilities that result in temporary disturbance	D2 – Primitive	●		RL2	General
	D3 – Substantial Modification	●		RL3	General, Site-specific
Longhorn Station, communication sites and other ancillary facilities that result in permanent (long-term) disturbance	D2 – Primitive		●	RL1	General
	D3 – Substantial Modification		●	RL4	General
	D4 – Bladed		●	RL4	General
Existing paved roads, access roads (no improvement)	D1 – No New Disturbance		●	RL1	Not Required
Existing access roads (with improvements)	D2 – Primitive		●	RL1	Not Required
	D2 – Primitive	●		RL2	General
	D3 – Substantial Modification		●	RL4	General
	D3 – Substantial Modification	●		RL3	General, Site-specific
	D4 – Bladed		●	RL4	General
New access roads	D2 – Primitive		●	RL1	General
	D2 – Primitive	●		RL2	General
	D3 – Substantial Modification		●	RL4	General
	D3 – Substantial Modification	●		RL3	General, Site-specific
	D4 – Bladed		●	RL4	General

6.2 Monitoring Methods

Identification and establishment of monitoring sites will be accomplished prior to ground-disturbing activities. Identification of monitoring sites (both a treatment site and control site) will include the collection of baseline data for comparison with subsequent postconstruction monitoring. Postconstruction annual monitoring and collection of data will be conducted during the growing season after reclamation actions occur for each phase of construction.

An annual Reclamation Monitoring Report will be prepared by the Construction Contractor(s) and provided to IPC, the appropriate land management agency, and ODOE for review and discussion of reclamation conditions. The annual report will include geographic information systems data as part of the deliverable.

Construction activities will result in varying disturbance levels that will require two types of monitoring:

1. **General reclamation monitoring.** General field reconnaissance (windshield survey) and reporting of conditions in areas disturbed during construction where reclamation actions have been implemented.
2. **Site-specific reclamation monitoring.** Detailed field data collection and reporting at designated reclamation monitoring sites as identified in the Final Reclamation Plan.

A description of the activities associated with these two monitoring methods (practices), and how these practices will be assigned to areas affected by construction of the transmission line and associated facilities, is presented below. The Construction Contractor(s) will consult with the appropriate land management agency and ODOE to adapt these practices, as needed, to meet localized conditions and concerns.

6.2.1 General Reclamation Monitoring

A general field review of the transmission line layout, where accessible by vehicle and right-of-entry is granted, will be conducted in conjunction with annual site-specific reclamation monitoring. The intent of this review is to document overall recovery conditions associated with the Project. Conditions of concern warranting documentation may include establishment of noxious weed populations resulting from Project construction, a lack of desirable vegetation cover, soil compaction, or lack of soil parent material due to erosion. In lieu of establishing monitoring sites, documentation may include establishing single photo points at locations agreed upon with the appropriate land management agency and ODOE and/or recording the apparent cause of unsuccessful reclamation. Site locations may be documented by noting the direction and estimated distance to the nearest transmission line tower (by number) or global positioning system (GPS) coordinates.

Adaptive management actions may be implemented based on findings of general reclamation monitoring as recommended by the appropriate land management agency and ODOE and described in Section 6.5 – Adaptive Management and Site Release. Each annual visit will be used to assess designated general reclamation monitoring locations and document new locations where appropriate.

6.2.2 Site-Specific Reclamation Monitoring

Preliminary site-specific reclamation monitoring locations will be established prior to ground-disturbing activities within areas that will be disturbed by the Project. Site identification will be based on habitat type and habitat category previously identified during the TVES survey, as well as agency recommendation. A single monitoring site includes both a treatment site and a control site. The treatment site is an area expected to be disturbed during construction that will be reclaimed. The control site will be paired with the treatment site, meaning the control site will be in the vicinity of the treatment site and will have the same general slope, aspect, and habitat type as the treatment site (prior to disturbance). A control site may be paired with multiple treatment sites provided there is a high degree of similarity between sites.

Monitoring Site Selection Criteria

Sites will be selected prior to disturbance for each of the reclamation zones and habitat types traversed by the Project, in accordance with the processes identified below.

- Site selection will be prioritized to include T&E plant species occurrences and locations with high visual resource values.
- At least one paired monitoring site will be established for each area of disturbance affecting T&E plants.

- The final number of monitoring sites per habitat will be based on the extent and diversity of vegetation within each habitat type, with an anticipated average of two to five paired monitoring sites per habitat type.
- Selection of monitoring sites will be stratified based on proportions of each habitat type subject to reclamation activities (e.g., if 40 percent of the total area subject to disturbance and subsequent reclamation activities is sagebrush, then 40 percent of the total number of monitoring sites will be located in sagebrush).
- Selection of monitoring sites shall be further stratified based on the presence of noxious weeds, nonnative, or invasive species infestations (e.g., if the total habitat type area is approximately 70 percent cheatgrass, approximately 70 percent of the monitoring sites will be located in cheatgrass-infested areas, and approximately 30 percent of the monitoring sites will be located in noninfested areas).

Final determination of monitoring sites will be approved by the appropriate land management agency and ODOE prior to construction. Cooperation with the Construction Contractor(s) may be necessary prior to construction if changes to construction work area(s) affect the location(s) of the preliminary monitoring site(s).

For each monitoring site, paired transects will be installed and documented as treatment or control for quantitative monitoring. In general, the treatment transect will be placed within an affected area (normally within the immediate ROW), and the control transect will be placed immediately adjacent to the ROW, on undisturbed ground if on public lands. If control plots are on private land, they will be installed within the private land easement. Transect size and quantity will be determined based on the final footprint of disturbed areas, in cooperation with the appropriate land management agency and ODOE. Transect pairs will be sized and oriented in a similar manner, for consistency, unless terrain or construction conditions require deviation. In addition, the location of monitoring sites will avoid areas susceptible to future human disturbance (off-highway vehicles [OHV], transmission line maintenance, planned future utilities), where possible, to preserve the integrity of each monitoring site for the duration of the monitoring period. IPC may consider additional protections (including fencing, signage, or landowner agreements) to maintain effectiveness of monitoring sites.

Once monitoring site locations are finalized, photo points will be established prior to any construction-related disturbance. Photo points will be marked by a metal pin or metal T-post and location recorded with GPS technology to ensure that subsequent photographs are taken from the same location. The cardinal direction of photographs taken will be recorded to allow duplication, to the extent possible, of the same view during annual monitoring events. Photographs will be taken at each photo point (1) when the photo point is established, (2) when initial reclamation efforts have been completed, and (3) during each annual monitoring visit. Photo points will be collected at the same time of year for each year of monitoring, and with the same camera, if possible. Each photo point will include:

- A close-up photograph (0.5-meter by 0.5-meter photo plot) depicting soil surface characteristics and amount of vegetation and litter; and
- A general overview photograph of the site and/or photographs depicting north, south, east, and west views.

Site-specific reclamation monitoring sites will be examined annually, and a variety of vegetation data will be collected including quantitative and descriptive information. Parameters that will be used to measure reclamation success are presented in Section 6.4 – Reclamation Goals and Success Standards. Reclamation monitoring sites will also assess noxious weed, nonnative, and invasive species establishment that may require remedial actions such as removal or

treatment. However, it should be noted that postconstruction monitoring for Project-related impacts to noxious weeds might occur independently of reclamation monitoring, as outlined in Exhibit P1, Attachment P1-5, Noxious Weed Plan.

Reclamation monitoring will also include the consideration of erosion control as a key indicator to measure the trend toward reclamation success (where applicable), and remedial actions may be taken in conjunction with monitoring efforts to control erosion, as needed. These remedial actions will also follow requirements as stipulated in the ESCP discussed in Exhibit I, Soil Protection. In conjunction with, and complementary to, reclamation monitoring, IPC is responsible for monitoring to ensure soil protection is achieved, and providing a monitoring report on reseeding success and/or other methods to stabilize soils to the appropriate land management agency and ODOE annually until it has been determined that an area of the Project has satisfied all success criteria and/or IPC has been released from reclamation obligations (as described above).

6.3 Data Collection

All data collected in support of the Reclamation and Revegetation Plan will be made available to ODOE and its cooperating agencies.

The collection of baseline data during preconstruction establishment of treatment and control monitoring sites and annual postconstruction reclamation monitoring will include both quantitative (numerical) and qualitative (descriptive) data collection. Quantitative monitoring will document the trend and degree of change at each site, and qualitative monitoring will enable investigation of potential reasons for reclamation success or lack thereof and identification of unanticipated issues. Additional baseline data to be collected during preconstruction establishment of treatment and control sites will include the collection of site characteristics that are not expected to change throughout the monitoring period. In addition to the qualitative and quantitative data described below, information to be collected and/or recorded during the initial establishment of monitoring sites may include GPS location, slope, aspect, elevation, soil type, current habitat type, and existing disturbances.

Reclamation monitoring for the Project will use vegetation as the main indicator of recovery, but observations of soil conditions, such as of compaction, rutting, and erosion, will also be documented and considered when assessing progress toward functionality. Measurements and descriptions will be accompanied by photographs that will be used to visually document the status of recovery at all monitoring sites. Sampling points will be mapped and relocated using GPS technology. Photo points and field notes will be the primary methods of qualitative monitoring for the Project. A protocol for taking photographs and a standardized data-recording form (likely electronic form) will be developed by the reclamation subcontractor and approved by the appropriate land management agency and ODOE to ensure consistency of monitoring. Qualitative and quantitative information to be obtained during general reclamation monitoring and site-specific monitoring is described in detail below.

For disturbed areas affecting T&E species, at a minimum, photographs from permanent photo points, percent cover of T&E species within the affected areas, and noxious weed presence and treatment data will be collected and reported. Reclamation monitoring in T&E plant occurrences will be conducted during the blooming period for the species of interest.

6.3.1 Baseline Information

Site characteristics that are not expected to change throughout the monitoring period will be collected during the initial visit. These characteristics should be as similar as possible between

control and treatment (i.e., paired) sites. Data to be collected and recorded during the establishment of control and treatment sites may include the following:

- *Location.* Record the location of control and treatment sites and photo points with a GPS.
- *Slope.* Slope of the control and treatment sites will be recorded. This may include a range if slope is not generally uniform throughout the monitoring site.
- *Aspect.* Record the aspect of the control and treatment sites (cardinal direction the site faces).
- *Elevation.* Record the elevation of the control and treatment sites.
- *Soil type.* Record the soil type(s) based on Natural Resources Conservation Service-mapped soil type.
- *Current habitat type.* Record the current habitat type using a field key such as NatureServe (2006). Ecological site information may also be recorded as it provides insight on site potential, productivity, successional patterns, and management implications.

6.3.2 Qualitative (Descriptive) Information

Qualitative data collection will occur annually for both general and site-specific monitoring. The goal of qualitative monitoring is to describe site conditions and assess the need for remedial actions to ensure sites are progressing toward the success standards ~~to be established in this plan~~ established by the reclamation subcontractor in consultation with the appropriate land management agency and ODOE. The Project area typically has unpredictable weather patterns that may affect reclamation success. Comparing annual qualitative evaluations within similarly disturbed areas in the same habitat type will allow for identification of sites that are demonstrating a comparative lack of reclamation success and may require remedial action. Any non-Project-related disturbances that could affect reclamation will also be documented and described during the collection of qualitative information.

Reclamation success may be assessed by the presence or condition of certain site characteristics that encourage recruitment of native vegetation. If reclamation actions for a given site are implemented successfully, they will contribute to the stabilization of soils, native species seedling or seedbank recruitment, and prevention of noxious weeds establishment. The following items should be considered when creating a qualitative monitoring worksheet for use during monitoring:

- *Waste materials management.* Is the site free of trash and construction material? Is the area free of undesirable materials that may inhibit reclamation success?
- *Evidence of soil stabilization and lack of erosion.* Describe visible signs of soil erosion such as rock pedestals, overland flow patterns, and the formation of rills or gullies. Indicators that soils have not stabilized and erosion is negatively affecting reclamation success include rills greater than 2 inches, sheet flow, head cutting in drainages, eroded slopes occurring on or adjacent to reclaimed areas, and any signs showing accelerated erosion is occurring and soils are not being held by plants on site.
- *Occurrence of noxious weeds.* Noxious weeds compete with native species, and relatively high abundances can have negative effects on site conditions. Are noxious weeds on site both the treatment and control site? Are they inhibiting reclamation success beyond their level of influence at the control site?
- *Evidence of wildlife use.* Wildlife presence can indicate that habitat conditions are improving; however, concentrated or prolonged herbivory can negatively affect

reclamation success if unmanaged. Are wildlife species over-browsing the site? Are wildlife using the site for cover, bedding, or feeding?

- *Livestock use.* Livestock can affect site conditions. Are livestock present on the site? Are livestock trails, prints, and scat present?
- *Recreation and other human-use.* Recreation and other human-use can affect site conditions. Are human trails, trash, or other items that indicate use?
- *Visual appearance.* Does the visual appearance compare similarly to surrounding habitats? Visual comparison with general patterns of established vegetation documented during preconstruction conditions or as observed in the control site will help to determine whether large bare areas are indicative of site conditions or simply a result of the innate patchiness of the habitat type.
- *Plant vigor.* Do mature plants and seedlings appear healthy? Are there signs of decadence, or are plants in poor, fair, good, or excellent condition?
- *Evidence of good reproductive capability and success.* Is seed production evident? Are flowers or seed stalks evident? Are seedlings present? Is vegetative reproduction occurring (e.g., rhizomes and tillers)? How does the number of flowering plants and seedlings compare to the control site or the expectations of the particular seed mix utilized for reclamation?

Each of these site characteristics will help determine trends that relate to reclamation success.

6.3.3 Quantitative (Numerical) Information

Desirable vegetation cover and composition will be quantitatively assessed at site-specific reclamation monitoring sites during annual monitoring to determine if there is progress toward reclamation success standards based on comparison with preconstruction treatment site conditions and the paired control site. Quantitative assessment will enable early identification of potential reclamation issues, and ensure that vegetation establishment of affected areas is occurring as expected based on climatic trends for the area. The following items should be considered when establishing a quantitative monitoring methodology:

- *Plant species list.* Record a complete plant list for each monitoring site. This provides a relative measure of diversity at the site. Each species should be categorized by its growth habitat (e.g., shrub, herbaceous forb, graminoid) and native status (e.g., native, nonnative, or listed as a noxious weed). T&E species will be indicated as such.
- *Total canopy cover.* A line-point intercept method (Herrick et al. 2005) is a rapid and accurate method for quantifying cover, including vegetation, litter, bare soil, rocks, and biotic crusts. This method provides measures for foliar cover, basal cover, and bare ground.
- *Vegetation type structure and composition.* Indicate percent cover of plant species by growth habitat and native status. This will allow for an assessment of whether treatment sites are trending toward achievement of the target habitat type structure and composition.
- *Percent cover of dominant species.* The percent cover for the species with the highest percent cover at each monitoring site will be reported. This information will enable comparison with the control site and provide an indicator of whether the treatment site is developing similar proportional cover of desirable dominant species.
- *Percent cover of T&E species.* The percent cover for T&E species will be recorded, regardless of whether they are most numerous or not, based on the line-point intercept method.

- Percent cover of weed species. The percent foliar cover of weed species will be recorded. This will allow an assessment of whether percent cover of weed species at treatment sites are being maintained at a level equal to or less than control sites.

Diversity, composition, and cover data will be recorded on standard field data sheets (likely electronic forms) to be developed by the Construction Contractor(s) and approved by the appropriate land management agency and ODOE.

6.4 Reclamation Success Standards

Reclamation success, as presented in this Reclamation Plan, is defined by the progression of vegetation and soils toward control site and/or preconstruction conditions. Once reclamation success standards have been met, established vegetation is anticipated to contribute to the maintenance and functionality of the community to ensure continued success after monitoring has concluded.

IPC will be responsible for monitoring reclamation efforts for the Project. Reclamation success will be evaluated by the Construction Contractor(s) and approved by the appropriate land management agency and ODOE by comparing treatment sites to control sites in terms of desirable species cover. The Construction Contractor(s) shall prioritize native perennial bunchgrass as desirable species cover. Reclamation of treatment sites will be considered successful if each site is within a specified percentage of the mean native species cover of the paired control site. Control sites will be representative areas that exhibit the same target habitat type located adjacent to, or near the Project-affected treatment sites. Control sites will be selected with the same slope, aspect, and elevation as treatment sites, to the extent practicable. The establishment of control sites within vegetation undisturbed by the Project will allow comparisons between the reclamation progress of the treatment site and sites undisturbed by the Project. Reclamation success is highly dependent on habitat type, environmental conditions (e.g., annual precipitation), avoidance of future disturbance, and proper implementation of reclamation actions. Recovery from construction disturbance activities such as clearing and grading in semi-arid and arid climactic zones in which the Project is located does not typically occur quickly.

Therefore, reclamation monitoring will assess the progress toward reclamation success standards presented in Table 6. Success standards will be developed based on preconstruction data collected at each monitoring site and/or data collected at each control site.

Table 6 presents preliminary reclamation monitoring success standards for each reclamation zone identified in Section 4.1 of this Plan. These standards will be considered the minimum requirement for each reclamation zone. Every reclamation zone includes a range of habitat types that will need to be considered to determine final reclamation standards for each monitoring site identified.

Table 6. Preliminary Reclamation Monitoring Success Standards

Reclamation Zone	Percent Desirable Vegetation Cover ¹
RZ1 – Shrublands	50
RZ2 – Grasslands	70/30 0
RZ3 – Agriculture	60
RZ4 – Forest and Woodland	50
RZ5 – Wetland and Riparian	70
RZ6 – Other	60

¹ As described in ~~text below~~ Section 6.3.3. above.

During finalization of the plan, the Construction Contractor and review agencies shall establish the desirable vegetation for each reclamation zone. While the success standards identified in Table 6 are preliminary, it is noted that the certificate holder commits to compensatory mitigation in its Habitat Mitigation Plan (Attachment P1-6) for temporary impacts to habitat categories 2 through 4, and that in combination with the above-minimum success standards could fully mitigate the temporary impact. Prior to construction, if Table 6 success criteria is selected, certificate holder shall demonstrate to the Department and ODFW, through letter memo with tables and narrative, that the combination of the above success criteria and compensatory mitigation included in the HMP fully mitigate temporary impacts in accordance with the applicable habitat category mitigation goal. If certificate holder intends to remove acres from its compensatory mitigation sites once revegetation success has been achieved, or cannot demonstrate that combined revegetation and compensatory mitigation for temporary impacts satisfies the applicable habitat category mitigation goal, the agency preferred success criteria, as presented below shall apply to revegetation under this plan and Table 6 shall be removed from the final plan:

Agency Preferred Success Criteria:

- For all Reclamation Zones, % cover of desirable vegetation (native grasses, forbs, shrubs, and trees) is equal or better than percent cover at paired control site
- For RZ1 – Shrublands, in addition to the above criteria, 15% sagebrush cover

Reclamation monitoring success standards will be based on quantitative data collected (discussed in Section 6.3 – Data Collection above) during preconstruction baseline surveys at treatment and control sites. Percent cover for both sites will be compared to ensure that preconstruction baseline conditions are similar to the control site within a particular habitat type. Any major differences will be noted and discussed in the annual monitoring report. Success

standards may be adjusted based on differences between the treatment and control site. Any adjustments to reclamation success standards will require the approval of the appropriate land management agency and ODOE.

After determining that the treatment and control sites are comparable, future reclamation success, based on percent cover measurements, will be compared against cover values collected at the control site. For example, if a treatment site is determined to be within the shrubland reclamation zone, the corresponding control site should also be within the shrubland reclamation zone. If certificate holder maintains acres for temporary habitat impacts in its compensatory mitigation sites (Attachment P1-6 Habitat Mitigation Plan) for the life of the facility, the treatment site will be considered a reclamation success once the percent desirable cover reaches a total of 50 percent of the control site's total vegetation cover [see Table 6]). If the control site has 80 percent total native vegetation cover, with 60 percent cover of woody vegetation and 20 percent cover of herbaceous vegetation, As described above, if certificate holder intends to remove acres from its compensatory mitigation sites (Attachment P1-6 Habitat Mitigation Plan) once revegetation success has been achieved, the above-referenced agency-preferred revegetation success criteria of equal or better conditions for monitoring sites compared to control sites shall apply.

If the annual monitoring report concludes (with agency concurrence) that typical environmental conditions, proper implementation of reclamation actions, and lack of disturbance is evident, reclamation success will be based on vegetation cover for each habitat type within the reclamation zone. If reclamation success is not evident by the last annual monitoring report (with agency concurrence), or if interim monitoring reports indicate that reclamation success is highly unlikely, adaptive management and/or remedial actions (Section 6.5 – Adaptive Management and Site Release) may be required.

6.5 Adaptive Management and Site Release

An adaptive management approach will allow frequent review and feedback on the progress of reclamation as a part of monitoring activities for the Project. Adaptive management greatly increases the potential for reclamation success by providing for early detection of problems and the opportunity to implement remedial actions to address these problems, if necessary. Effective monitoring is an essential element of adaptive management because it provides reliable feedback on the effects of reclamation actions. If adaptive management measures are determined to be necessary, monitoring data (both qualitative and quantitative) will provide information on reclamation components that are deficient, such as desirable vegetation cover, soil compaction, or lack of parent soil material due to erosion. Based on this information, appropriate remedial reclamation actions may include measures such as supplemental seeding, mulching, weed treatment, access control, herbivory prevention, and/or erosion control measures. Recommendations could also include waiting to determine if favorable germination/establishment conditions are expected such as ample seasonal moisture or favorable temperatures.

Progress toward reclamation success standards, as well as remedial/adaptive management actions (if necessary), will be identified in annual Reclamation Monitoring Reports.

Should remedial actions be required after year three, additional qualitative and quantitative monitoring in years four and five (as appropriate) will allow the effects of remedial action or climatic events to be discerned. Adaptive management actions to address unauthorized or excessive access, herbivory, or erosion may be appropriate on a case-by-case basis where feasible as early as year one or two, based on monitoring data analysis described in the annual Reclamation Monitoring Reports. Adaptive management actions such as supplemental planting or seeding may not be appropriate until analysis of year three monitoring data because in some situations it may take three growing seasons for plant establishment to stabilize, allowing for

assessment of reclamation success. Recommendations for adaptive management actions will be included in the annual Reclamation Monitoring Report and implemented by IPC in coordination with the appropriate land management agency and ODOE.

All adaptive management actions will be subject to the review and approval of the appropriate land management agency and ODOE. The Construction Contractor(s) will use all reasonable methods to help IPC ensure reclamation is progressing toward the success standards identified in Section 6.4 – Reclamation Goals and Success Standards. To the extent possible, IPC will tailor ROW easements to reduce potential land use conflicts within reclaimed areas by proposing access control (Exhibit B, Attachment B-5) and other means to regulate potentially disruptive land use activities. It is possible some sites will be incapable of supporting adequate vegetation to progress towards the success standards due to conflicting land management and/or environmental limitations not associated with the Project. For instance, reclamation may fail in areas with non-Project related disturbance such as unmanaged OHV access, grazing of domestic livestock, natural disasters such as fire or flooding, and/or construction of other projects. If reclamation failure is determined to be caused by these non-Project related disturbance, IPC will coordinate with ODOE regarding appropriate steps forward. IPC may suggest additional reclamation techniques or strategies or monitoring, or IPC may propose mitigation to compensate for any permanent habitat loss.

7.0 PLAN UPDATES

Once the preferred route is selected, final engineering is completed, and complete coverage of the Project area is conducted, a Final Reclamation Plan can be prepared. The Final Reclamation Plan will be updated prior to the start of construction. As the construction order and schedule are refined, the Final Reclamation Plan will be updated to include the schedule for baseline vegetation and weed surveys, identification of any areas for preconstruction noxious weed treatment, and provide a more detailed reclamation schedule and plan. Details specific to noxious weeds are presented in the Noxious Weed Plan (see Exhibit P1, Attachment P1-5).

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APPENDIX A
PRELIMINARY AGENCY-APPROVED SEED MIXES

The seeding rates in the table below are only provided for grasses being planted using a standard rangeland drill. If other methods of seeding are to be used, the seeding rate would likely need to be adjusted. Additional time is needed to develop seeding rates for forb and shrub species. In general, these species would compose a small portion of the seed mix and would be seeded at 0.1 pound per acre (lb./acre) or less. IPC may consider planting well established sagebrush plants and other shrubs acquired from reputable nurseries in areas where shrubs have been removed or crushed. Planting of established sagebrush plants and other shrubs will require site-specific consideration and coordination with ODOE.

Owyhee and Malheur Counties/Northern Basin and Range and Snake River Plain

Loamy Soil Mix

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50	7
Bottlebrush squirreltail	<i>Elymus elymoides</i>	20	2
Sandberg's bluegrass	<i>Poa secunda</i>	20	0.25
Basin wildrye	<i>Leymus cinereus</i>	5	1
Western yarrow	<i>Achillea millefolium</i>		
Basalt milkvetch	<i>Astragalus filipes</i>		
Sulfur buckwheat	<i>Eriogonum umbellatum</i>		
Bigseed biscuitroot	<i>Lomatium macrocarpum</i>		
Munro globemallow	<i>Sphaeralcea munroana</i>		
Wyoming sagebrush/ Basin big sagebrush ¹	<i>Artemisia tridentata</i> ssp. <i>tridentata</i> / ssp. <i>wyomingensis</i>		

Sandy Soil Mix

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Indian ricegrass	<i>Oryzopsis hymenoides</i>	50	6
Needle and thread	<i>Hesperostipa comata</i>	30	4
Bottlebrush squirreltail	<i>Elymus elymoides</i>	20	2
Monroe globemallow	<i>Sphaeralcea munroana</i>		
Tufted evening primrose	<i>Oenothera caespitosa</i>		
Smooth desert dandelion	<i>Malaxothrix glabrata</i>		
Fourwing saltbush	<i>Atriplex canescens</i>		
Rubber rabbit brush	<i>Ericameria nauseosa</i>		
Antelope bitterbrush	<i>Purshia tridentata</i>		

Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Baltic rush	<i>Juncus balticus</i>	80	1
Spike rush	<i>Eleocharis palustris</i>	20	3

Southern Baker County/Blue Mountains

Wyoming Sagebrush Mix

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50	7
Idaho fescue ²	<i>Festuca idahoensis</i>		
Bottlebrush squirreltail	<i>Elymus elymoides</i>	20	2
Sandberg's bluegrass	<i>Poa secunda</i>	15	0.25
Small fescue	<i>Vulpia macrostachys</i>	5	0.10
Basin wildrye	<i>Leymus cinereus</i>	5	1
Western yarrow	<i>Achillea millefolium</i>		
Basalt milkvetch	<i>Astragalus filipes</i>		
Parsnipflower buckwheat	<i>Eriogonum heracleoides</i>		
Bigseed biscuitroot	<i>Lomatium macrocarpum</i>		
Monroe globemallow	<i>Sphaeralcea munroana</i>		
Arrowleaf balsamroot	<i>Balsamorhiza sagittata</i>		
Hoary aster	<i>Machaeranthera canescens</i>		
Wyoming sagebrush	<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i>		
Three tip sagebrush ³	<i>Artemisia tripartita</i>		
Curl-leaf mountain mahogany ³	<i>Cercocarpus ledifolius</i>		

Mountain Sagebrush Mix

Same as Wyoming sagebrush mix but replace Wyoming sagebrush with Mountain sagebrush

Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Nevada rush	<i>Juncus nevadensis</i>	60	1
Spike rush	<i>Eleocharis palustris</i>	40	3

Northern Baker, Union, and Morrow Counties/Blue Mountains

Warm/Hot Forests

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	60	9
Sandberg's bluegrass	<i>Poa secunda</i>	20	0.3
Prairie Junegrass	<i>Koeleria macrantha</i>	20	0.15
Penstemon	<i>Penstemon</i> sp.		
Oregon sunshine	<i>Eriophyllum lanatum</i>		
Western yarrow	<i>Achillea millefolium</i>		
Tailcup lupine	<i>Lupinus caudatus</i>		
Heartleaf arnica	<i>Arnica cordifolia</i>		
Larkspur	<i>Delphinium</i> sp.		
Hoary aster	<i>Machaeranthera canescens</i>		
Missouri goldenrod	<i>Solidago missouriensis</i>		

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Mountain monardella	<i>Monardella odoratissima</i>		
Hollyleaved barberry ⁴	<i>Mahonia aquifolium</i>		

Warm/Hot Forests Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Blue wildrye	<i>Elymus glaucus</i>	50	5
Western wheatgrass	<i>Pascopyrum smithii</i>	50	5

Cool Forests

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Blue wildrye	<i>Elymus glaucus</i>	33	4
Mountain brome	<i>Bromus marginatus</i>	33	6
Pinegrass	<i>Calamagrostis rubescens</i>	33	0.25
Heartleaf arnica	<i>Arnica cordifolia</i>		
Thickstem aster	<i>Eurybia integrifolia</i>		
Missouri goldenrod	<i>Solidago missouriensis</i>		
Aster	<i>Aster foliaceus</i>		
Snowberry ⁴	<i>Symphoricarpos albus</i>		
Dwarf rose ⁴	<i>Rosa gymnocarpa</i>		
Prickly currant ⁴	<i>Ribes lacustre</i>		

Cool Forest Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Blue wildrye	<i>Elymus glaucus</i>	50	4
Mountain brome	<i>Bromus marginatus</i>	50	6

Umatilla County/Columbia Basin

Loamy Soils

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50	7
Bottlebrush squirreltail	<i>Festuca idahoensis</i>	15	1.5
Sandberg's bluegrass	<i>Poa secunda</i>	15	0.25
Thickspike wheatgrass	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	20	5
Wooly plantain	<i>Plantago patagonica</i>		
Narrow leaf milkweed	<i>Asclepias fascicularis</i>		
Silky lupine	<i>Lupinus sericeus</i>		
Common sunflower	<i>Helianthus annuus</i>		
Tiny trumpet	<i>Collomia linearis</i>		
Rubber rabbitbrush	<i>Ericameria nauseosa</i>		

Sandy Soils

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	46	7
Indian ricegrass	<i>Oryzopsis hymenoides</i>	12	1
Sandberg's bluegrass	<i>Poa secunda</i>	12	0.25
Needle and thread	<i>Hesperostipa comata</i>	6	1
Bottlebrush squirreltail	<i>Elymus elymoides</i>	8	1
Sand dropseed	<i>Sporobolus cryptandrus</i>	6	0.025
Purple three awn	<i>Aristida purpurea</i>	10	0.5
Wooly plantain	<i>Plantago patagonica</i>		
Narrow leaf milkweed	<i>Asclepias fascicularis</i>		
Silky lupine	<i>Lupinus sericeus</i>		
Common sunflower	<i>Helianthus annuus</i>		
Tiny trumpet	<i>Collomia linearis</i>		
Rubber rabbitbrush	<i>Ericameria nauseosa</i>		

Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Baltic rush	<i>Juncus balticus</i>	80	1
Spike rush	<i>Eleocharis palustris</i>	20	3

Areas Dominated by Invasive Annual Species (throughout Project)

Under 4,000 feet Elevation

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Siberian wheatgrass/Vavilov ⁵	<i>Agropyron fragile</i>	100	10

Over 4,000 feet Elevation

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Crested wheatgrass/Ephraim ⁶	<i>Agropyron cristatum</i>	100	10

Notes:

¹ Use of Wyoming sagebrush or Basin big sagebrush would depend on which species was present preconstruction.

² On moist north slopes, add Idaho fescue at a rate of 1 lb./acre and reduce bluebunch wheatgrass to 4 lb./acre.

³ Species to be added site specifically.

⁴ Species would be planted as one- or two-year seedlings into disturbed areas.

⁵ Siberian wheatgrass will not be used for re-seeding on Forest Service-administered lands, unless otherwise approved by the U.S. Forest Service.

⁶ Crested wheatgrass will not be used for re-seeding on Forest Service-administered lands, unless otherwise approved by the U.S. Forest Service.

APPENDIX A
PRELIMINARY AGENCY-APPROVED SEED MIXES

The seeding rates in the table below are only provided for grasses being planted using a standard rangeland drill. If other methods of seeding are to be used, the seeding rate would likely need to be adjusted. Additional time is needed to develop seeding rates for forb and shrub species. In general, these species would compose a small portion of the seed mix and would be seeded at 0.1 pound per acre (lb./acre) or less. IPC may consider planting well established sagebrush plants and other shrubs acquired from reputable nurseries in areas where shrubs have been removed or crushed. Planting of established sagebrush plants and other shrubs will require site-specific consideration and coordination with ODOE.

Owyhee and Malheur Counties/Northern Basin and Range and Snake River Plain

Loamy Soil Mix

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50	7
Bottlebrush squirreltail	<i>Elymus elymoides</i>	20	2
Sandberg's bluegrass	<i>Poa secunda</i>	20	0.25
Basin wildrye	<i>Leymus cinereus</i>	5	1
Western yarrow	<i>Achillea millefolium</i>		
Basalt milkvetch	<i>Astragalus filipes</i>		
Sulfur buckwheat	<i>Eriogonum umbellatum</i>		
Bigseed biscuitroot	<i>Lomatium macrocarpum</i>		
Munro globemallow	<i>Sphaeralcea munroana</i>		
Wyoming sagebrush/ Basin big sagebrush ¹	<i>Artemisia tridentata</i> ssp. <i>tridentata</i> / ssp. <i>wyomingensis</i>		

Sandy Soil Mix

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Indian ricegrass	<i>Oryzopsis hymenoides</i>	50	6
Needle and thread	<i>Hesperostipa comata</i>	30	4
Bottlebrush squirreltail	<i>Elymus elymoides</i>	20	2
Monroe globemallow	<i>Sphaeralcea munroana</i>		
Tufted evening primrose	<i>Oenothera caespitosa</i>		
Smooth desert dandelion	<i>Malaxothrix glabrata</i>		
Fourwing saltbush	<i>Atriplex canescens</i>		
Rubber rabbit brush	<i>Ericameria nauseosa</i>		
Antelope bitterbrush	<i>Purshia tridentata</i>		

Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Baltic rush	<i>Juncus balticus</i>	80	1
Spike rush	<i>Eleocharis palustris</i>	20	3

Southern Baker County/Blue Mountains

Wyoming Sagebrush Mix

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50	7
Idaho fescue ²	<i>Festuca idahoensis</i>		
Bottlebrush squirreltail	<i>Elymus elymoides</i>	20	2
Sandberg's bluegrass	<i>Poa secunda</i>	15	0.25
Small fescue	<i>Vulpia macrostachys</i>	5	0.10
Basin wildrye	<i>Leymus cinereus</i>	5	1
Western yarrow	<i>Achillea millefolium</i>		
Basalt milkvetch	<i>Astragalus filipes</i>		
Parsnipflower buckwheat	<i>Eriogonum heracleoides</i>		
Bigseed biscuitroot	<i>Lomatium macrocarpum</i>		
Monroe globemallow	<i>Sphaeralcea munroana</i>		
Arrowleaf balsamroot	<i>Balsamorhiza sagittata</i>		
Hoary aster	<i>Machaeranthera canescens</i>		
Wyoming sagebrush	<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i>		
Three tip sagebrush ³	<i>Artemisia tripartita</i>		
Curl-leaf mountain mahogany ³	<i>Cercocarpus ledifolius</i>		

Mountain Sagebrush Mix

Same as Wyoming sagebrush mix but replace Wyoming sagebrush with Mountain sagebrush

Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Nevada rush	<i>Juncus nevadensis</i>	60	1
Spike rush	<i>Eleocharis palustris</i>	40	3

Northern Baker, Union, and Morrow Counties/Blue Mountains

Warm/Hot Forests

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	60	9
Sandberg's bluegrass	<i>Poa secunda</i>	20	0.3
Prairie Junegrass	<i>Koeleria macrantha</i>	20	0.15
Penstemon	<i>Penstemon</i> sp.		
Oregon sunshine	<i>Eriophyllum lanatum</i>		
Western yarrow	<i>Achillea millefolium</i>		
Tailcup lupine	<i>Lupinus caudatus</i>		
Heartleaf arnica	<i>Arnica cordifolia</i>		
Larkspur	<i>Delphinium</i> sp.		
Hoary aster	<i>Machaeranthera canescens</i>		
Missouri goldenrod	<i>Solidago missouriensis</i>		

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Mountain monardella	<i>Monardella odoratissima</i>		
Hollyleaved barberry ⁴	<i>Mahonia aquifolium</i>		

Warm/Hot Forests Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Blue wildrye	<i>Elymus glaucus</i>	50	5
Western wheatgrass	<i>Pascopyrum smithii</i>	50	5

Cool Forests

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Blue wildrye	<i>Elymus glaucus</i>	33	4
Mountain brome	<i>Bromus marginatus</i>	33	6
Pinegrass	<i>Calamagrostis rubescens</i>	33	0.25
Heartleaf arnica	<i>Arnica cordifolia</i>		
Thickstem aster	<i>Eurybia integrifolia</i>		
Missouri goldenrod	<i>Solidago missouriensis</i>		
Aster	<i>Aster foliaceus</i>		
Snowberry ⁴	<i>Symphoricarpos albus</i>		
Dwarf rose ⁴	<i>Rosa gymnocarpa</i>		
Prickly currant ⁴	<i>Ribes lacustre</i>		

Cool Forest Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Blue wildrye	<i>Elymus glaucus</i>	50	4
Mountain brome	<i>Bromus marginatus</i>	50	6

Umatilla County/Columbia Basin

Loamy Soils

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	50	7
Bottlebrush squirreltail	<i>Festuca idahoensis</i>	15	1.5
Sandberg's bluegrass	<i>Poa secunda</i>	15	0.25
Thickspike wheatgrass	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	20	5
Woolly plantain	<i>Plantago patagonica</i>		
Narrow leaf milkweed	<i>Asclepias fascicularis</i>		
Silky lupine	<i>Lupinus sericeus</i>		
Common sunflower	<i>Helianthus annuus</i>		
Tiny trumpet	<i>Collomia linearis</i>		
Rubber rabbitbrush	<i>Ericameria nauseosa</i>		

Sandy Soils

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	46	7
Indian ricegrass	<i>Oryzopsis hymenoides</i>	12	1
Sandberg's bluegrass	<i>Poa secunda</i>	12	0.25
Needle and thread	<i>Hesperostipa comata</i>	6	1
Bottlebrush squirreltail	<i>Elymus elymoides</i>	8	1
Sand dropseed	<i>Sporobolus cryptandrus</i>	6	0.025
Purple three awn	<i>Aristida purpurea</i>	10	0.5
Wooly plantain	<i>Plantago patagonica</i>		
Narrow leaf milkweed	<i>Asclepias fascicularis</i>		
Silky lupine	<i>Lupinus sericeus</i>		
Common sunflower	<i>Helianthus annuus</i>		
Tiny trumpet	<i>Collomia linearis</i>		
Rubber rabbitbrush	<i>Ericameria nauseosa</i>		

Riparian

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Baltic rush	<i>Juncus balticus</i>	80	1
Spike rush	<i>Eleocharis palustris</i>	20	3

Areas Dominated by Invasive Annual Species (throughout Project)

Under 4,000 feet Elevation

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Siberian wheatgrass/Vavilov ⁵	<i>Agropyron fragile</i>	100	10

Over 4,000 feet Elevation

Common Name	Scientific Name	Percent Composition	Seeding Rate (lb./acre)
Crested wheatgrass/Ephraim ⁶	<i>Agropyron cristatum</i>	100	10

Notes:

¹ Use of Wyoming sagebrush or Basin big sagebrush would depend on which species was present preconstruction.

² On moist north slopes, add Idaho fescue at a rate of 1 lb./acre and reduce bluebunch wheatgrass to 4 lb./acre.

³ Species to be added site specifically.

⁴ Species would be planted as one- or two-year seedlings into disturbed areas.

⁵ Siberian wheatgrass will not be used for re-seeding on Forest Service-administered lands, unless otherwise approved by the U.S. Forest Service.

⁶ Crested wheatgrass will not be used for re-seeding on Forest Service-administered lands, unless otherwise approved by the U.S. Forest Service.

**ATTACHMENT P1-4
VEGETATION MANAGEMENT PLAN**

Vegetation Management Plan

Boardman to Hemingway Transmission Line Project



*1221 West Idaho Street
Boise, Idaho 83702*

September 2018

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
BLM	Bureau of Land Management
IPC	Idaho Power Company
kV	kilovolt
NERC	North American Electric Reliability Council
ODOE	Oregon Department of Energy
OSHA	U.S. Department of Labor Occupational Safety and Health Administration
Project	Boardman to Hemingway Transmission Line Project
ROW	right-of-way
TVES	Terrestrial Visual Encounter Surveys
TVMP	Transmission Vegetation Management Program
USFS	United States Forest Service

Agency Review Process

The agency review process outlined in this section aligns with the OAR 345-025-0016 agency consultation process applicable to monitoring and mitigation plans.

To afford an adequate opportunity for applicable local, state and federal agencies to review the draft plan prior to finalization and implementation, and any future plan amendments, the certificate holder shall implement the following agency review process.

Step 1: Certificate Holder's Update of Draft Plan or Future Plan Amendment: The certificate holder may develop one Vegetation Management Plan to cover all construction activities for the entire facility; or, may develop individual plans per county, segment or phase, as best suited for facility construction. Based on the draft Vegetation Management Plan included as Attachment P1-4 of the Final Order on the ASC, the certificate holder shall update the draft plan(s) based on facility design and construction plans. If the plan(s) are amended following finalization, the certificate holder shall clearly identify and provide basis for any proposed changes.

Step 2: Certificate Holder and Department Coordination on Appropriate Review Agencies and Agency Review Conference Call(s): Prior to submission of the updated draft plan, or any future amended plans, the certificate holder shall coordinate with the Department's Compliance Officer to identify the appropriate federal, state and local agencies to be involved in the plan review process. Once appropriate federal, state and local agency contacts are identified by the Department and certificate holder, the Department's Compliance Officer will initiate coordination between agencies to schedule review/planning conference call(s). The Department and certificate holder may agree to schedule separate conference calls per county.

The intent of the conference call(s) are to provide the certificate holder, or its contractor, an opportunity to describe details of the updated draft or amended plan; and, agency plan review schedule. Agencies may provide initial feedback on requirements to be included in the plan during the call, or may provide written comments during the 14-day comment period. The Department will request that any comments provided be supported by an analysis and local, state or federal regulatory requirement (citation).

The certificate holder may coordinate with appropriate review agencies, in advance of or outside of the established agency review process; however, this established agency review process is necessary under OAR 345-025-0016 and may result in more efficient plan finalization and amendment if managed in a consolidated process, utilizing the Department's Compliance Officer as the lead Point of Contact.

Step 3: Agency Review Process: Either with, or prior to, the agency conference call(s), the certificate holder shall distribute electronic copies of the draft, or future amended, plan(s) requesting that the Department coordinate agency review comments within 14-days of receipt, or as otherwise determined feasible. Following the 14-day agency review period, the Department will consolidate comments and recommendations into the draft, or amended, plan(s), using a Microsoft Word version of the plan provided by certificate holder. Within 14-days of receipt of the agency review comments, the certificate holder shall provide an updated final version of the plan, incorporating any applicable regulatory requirements, as identified during agency review or must provide reasons supporting exclusion of recommended requirements. Final plans will be distributed to applicable review agencies by the Department, including the certificate holder's assessment of any exclusions of agency recommendations, and a description of their opportunity for dispute resolution.

Step 4: Dispute Resolution: If any review agency considers the final, or amended, plan(s) not to adhere to applicable state, federal or local laws, Council rules, Council order, or site certificate condition or warranty, the review agency may submit a written request of the potential violation to the Department's Compliance Officer or Council Secretary, requesting Council review during a regularly scheduled Council meeting. The Council would, as the governing body, review the violation claim and determine, through Council vote, whether the claim of violation is warranted and identify any necessary corrective actions.

1.0 INTRODUCTION

This Attachment to Exhibit P1 to Idaho Power Company's (IPC) Application for Site Certificate provides information on the Vegetation Management Plan that IPC will follow for the life of the Boardman to Hemingway Transmission Line Project (Project). The Project area, or Site Boundary, as defined in Oregon Administrative Rule 345-001-0010(55) includes "the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micro-siting corridors proposed by the applicant." The Site Boundary for this Project includes the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kilovolt (kV) electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B, and the Site Boundary for each Project feature is described in Exhibit C, Table C-24. The location of the Project features and the Site Boundary is outlined in Exhibit C. This Vegetation Management Plan includes a discussion of 1) the purpose, goals and objectives, 2) an overview of the vegetation community types within the Site Boundary where vegetation management will occur, and 3) methods of vegetation management.

1.1 Purpose

This Vegetation Management Plan describes the framework for the development of the final Vegetation Management Plan. The focus of this framework and the final Plan is to describe the methods in which vegetation along the transmission line will be managed during operation of the Project. The measures IPC will undertake to control noxious and invasive-plant species and prevent the introduction of these species within the Project Site Boundary are discussed in the Noxious Weed Management Plan (Exhibit P1, Attachment P1-5). The measures that will be taken to reclaim and revegetate areas that have been impacted by construction activities are discussed in the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3).

This Plan is applicable Project-wide, and it is expected that modifications to this Plan will be made once final agreements are reached with the appropriate land management agencies and the Oregon Department of Energy (ODOE), as well as with counties and individual landowners. The final Vegetation Management Plan is intended to meet the applicable guidance contained in the Oregon Forest Practices Act (Oregon Administrative Rule Chapter 629), United States

Forest Service (USFS) Manual 2070 (USFS 2008) and 2900 (USFS 2011), as well as any applicable Bureau of Land Management (BLM) Resource Management Plans and local (i.e., county or city) management plans. Vegetation management specifications will follow those detailed in PacifiCorp's Transmission and Distribution Vegetation Management Program Specification Manual (Appendix A).

1.2 Goals and Objectives

IPC has two goals for conducting vegetation management during operation of the Project:

1. **Access:** IPC's access goal for conducting vegetation management is to maintain work areas adjacent to Project features but within the right-of-way (ROW), that will allow vehicle and equipment access; this access is necessary for operations, maintenance, and repair of the Project.
2. **Safety/reliability:** IPC's safety and reliability goal for vegetation maintenance is to maintain the safety and reliability of the transmission line, by preventing tall vegetation from coming into contact with conductors.

2.0 OVERVIEW OF EXISTING ENVIRONMENTS

Vegetation management activities may occur throughout the Project but will be heavily focused in forest and woodland areas, and forested riparian and forested wetlands where tall shrubs and trees may impact transmission lines and structures. IPC used data from the Terrestrial Visual Encounter Surveys (TVES) to identify the ecological systems and assign a habitat type and category based on vegetation characteristics. However, due to limitations on access to private lands, surveys have not been completed within the entire Site Boundary. Approximately 67 percent of the Site Boundary was surveyed for TVES (see Exhibit P1). In areas where survey information was not available due to unsigned right-of-entry agreements or changes in route alignment, biologists used desktop analysis methods to assign habitat type and category. The U.S Geological Service Gap Analysis Project data (USGS 2011) and aerial imagery interpretation were used to delineate habitat type and agency designated habitats (e.g., Oregon Department of Fish and Wildlife designated big game habitats). Known occurrences of special status species, and conditions in adjacent surveyed areas were used to approximate the appropriate category type. Detailed descriptions of the modeling and criteria used to identify and categorize habitats within the Site Boundary are included in Attachment P1-1, Habitat Categorization Matrix, and Attachment P1-6, Fish and Wildlife Habitat Mitigation Plan.

TVES and subsequent desktop analysis for the habitat categorization process identified various habitat types present within the Site Boundary. These habitat types were then assembled into vegetation cover types for purposes of this Vegetation Management Plan. Grouped cover types are useful in presenting and describing vegetation management methods used for specific habitat types, mainly forest and woodland. These vegetation cover types differ slightly from the "General Vegetation Type" identified as part of the habitat categorization process and are described below in Table 1.

The extent of each vegetation cover type and the habitat types included in each cover type within the Site Boundary are presented in Table 1. Descriptions of each cover type are provided in the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3), but are described as Reclamation Zones in that plan. The vegetation cover types specific to the Vegetation Management Plan are described below.

Table 1. Vegetation Cover Types within the Site Boundary

Vegetation Cover Type	Percent of Site Boundary	Habitat Types Included in Each Vegetation Cover Type
Shrubland	37	Desert Shrub Shrub-Steppe with Big Sage Shrub-Steppe without Big Sage
Grassland	18	Native Grasslands
Agriculture	8	Agriculture
Forest and Woodland	13	Douglas-Fir / Grand Fir Ponderosa Pine Western Juniper / Mountain Mahogany Woodland Forested – Other
Wetland / Riparian	1	Emergent Wetland Scrub-Shrub Wetland Forested Wetland Aquatic Bed Wetland Ponds and Lakes Ephemeral, Intermittent, and Perennial Stream Herbaceous Riparian Introduced Riparian Riparian Woodland and Shrubland
Other	23	Introduced Upland Vegetation Developed / Disturbed Bare Ground, Cliffs, Talus

Forest and Woodland, where most vegetation management will occur, account for 11 percent of the Site Boundary. Forest and Woodland types are made up mostly of Douglas-fir (*Pseudotsuga menziesii*) forest and ponderosa pine (*Pinus ponderosa*) forest with lesser amounts of western juniper (*Juniperus occidentalis*) woodlands. Forested habitats are found predominantly in the Blue Mountains, in Umatilla and Union counties, from just south of La Grande to south and east of Pendleton. Small pockets of Douglas-fir forests are also mapped in the drainages and highest elevations southwest of the town of Durkee. Logging and other disturbance such as grazing is common in these cover types. Juniper woodlands are mostly found in Baker County northwest of Durkee to south of Weatherby.

Wetland and Riparian habitat occurs in 1 percent of the Site Boundary. These areas are found throughout the Site Boundary adjacent to rivers, springs, and seeps. Vegetation management may be required in forested wetland and riparian areas where trees and shrubs may grow sufficiently large to interfere with transmission lines and structures.

3.0 VEGETATION MANAGEMENT

General vegetation management strategies are described below, with specifications and methodologies detailed in the PacifiCorp Transmission and Distribution Vegetation Management Program Specification Manual (Appendix A).

IPC must maintain work areas adjacent to electrical transmission structures and along the ROW to allow access for vehicles and equipment necessary for operations, maintenance, and repair. Furthermore, vegetation management under the transmission line minimizes the potential for fires and power outages that can result when vegetation comes into contact with conductors.

Vegetation management is expected to be minimal for the Project, as the vast majority of the Project crosses through areas that contain low-growing vegetation cover types (e.g., grasslands and shrublands; Table 1). As these vegetation cover types will not grow to heights that could interfere with the transmission line, they will not be maintained or cleared under the line during operation of the Project. Forest and Woodlands make up 13 percent of the area within the Site Boundary and will account for the majority of the vegetation management activities. Some vegetation management may also be required in wetland/riparian areas that are dominated by trees or tall shrubs.

Vegetation management will be conducted in compliance with the American National Standards Institute (ANSI) Pruning Standards Best Management Practices for Utilities, Oregon Forest Products Act, the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), North American Electric Reliability Council's (NERC) Standard FAC-003-3 Transmission Vegetation Management Program (TVMP)¹, and IPC's TVMP (Appendix A). The vegetation management program will accomplish the following tasks:

- Lines that are 138-kV, 161-kV, 230-kV, and above are patrolled, at a minimum cycle of once a year, to identify hazardous vegetation, within or adjacent to the ROW, that could fall in or onto transmission lines or associated facilities. Hazardous trees, snags, or "hot spots" are removed. Any trees that will become a clearance violation prior to the next scheduled maintenance cycle are evaluated, and trimmed or removed.
- Trim trees and tall shrubs to the extent that the clearance lasts for the duration of the cycle.
- Remove vegetation, as necessary, to provide required electrical clearance and improve access to facilities.
- Remove tall-growing vegetation within structures. Clear brush and grass around wood poles to help protect structures from range fires.
- Facilitate a low-growing plant community that stabilizes the site, inhibits the growth of tall-growing shrubs and trees, and provides habitat for wildlife.

Clearing of vegetation near Project components will be accomplished using manual (i.e., hand pulling, lopping by hand crews), and mechanical methods (i.e., chainsaws, weed trimmers, rakes, shovels, mowers, brush hooks, and Slash Buster [a track-driven machine]), or a combination of these methods. The specific methods depend on site-specific conditions, such as slope, access, size/extent of vegetation, previous agreements with landowners, and the presence of sensitive resources. In order to meet vegetation maintenance objectives, herbicides may also be used to control vegetation in selected areas as described in Section 3.3 of this Plan.

Forest and woodland habitats are concentrated in the portion of the Project that crosses the Blue Mountains, but are also found northwest of Durkee to south of Weatherby. Initial ROW clearing activities in forest and woodland habitats are detailed in Exhibit K, Attachment K-2 ROW Clearing Assessment. Unlike the portion of the Project that crosses low-lying vegetation (e.g., grasslands and shrublands), these forest and woodland habitats, as well as some wetland and riparian areas, contain vegetation that will need to be maintained within the ROW in order to maintain access, safety, and reliability of the Project. Maintenance of the ROW will require IPC to file with the Oregon Department of Forestry a Plan for an Alternate Practice under the Oregon

¹ FAC-003-1 requires transmission owners to prepare, and keep current, a formal TVMP. The TVMP shall include the transmission owner's objectives, practices, approved procedures, and work specifications. Available at: <http://www.nerc.com/files/FAC-003-1.pdf>

Forest Practices Act. IPC's Plan for an Alternate Practice is included in Exhibit BB, Attachment BB-1. The vegetation management that will be conducted along these forested and woodland portions of the Project is discussed in the following sub-section.

3.1 Right-of-Way Maintenance

Vegetation management practices along the ROW will be conducted in accordance with the TVMP in Appendix A. As stated above, these practices will comply with the standards set by the ANSI Pruning Standards Best Management Practices for Utilities, the Oregon Forest Products Act, and by OSHA and NERC requirements.

A wire-border zone method will be used during maintenance of the ROW in forested and woodland habitats to control tall vegetation and to ensure adequate ground-to-conductor clearances (Appendix A, Section 6.7.1.5.1). This method results in two zones of clearing and revegetation: the wire zone and the border zone. The wire zone includes the linear area along the ROW located under the wires as well as the area extending 10 feet outside of the outermost phase-conductor. After initial clearing, vegetation in the wire zone will be maintained to consist of native grasses, legumes, herbs, ferns, shrubs, and other low-growing vegetation that remain under approximately 5 feet tall at maturity. The border zone is the linear area along each side of the ROW extending from the edge of the wire zone to the edge of the ROW. Vegetation in the border zone will be maintained to consist of tall shrubs or short trees (up to 25 feet high at maturity), grasses, and forbs. These cover plants along the border zone benefit the ROW by competing with and excluding undesirable plants. No clearing will be conducted in areas where the height of mature trees will not come within 50 feet of the wires (e.g., a canyon or ravine crossing with high ground clearance at mid-span). Minimum clearance values are affected by circuit voltage, terrain, span length, ruling span length, conductor size and tension, anticipated wind conditions, and structure framing parameters. Figures 6.4a, 6.4b, and 6.5 in Appendix A illustrate specifications for the wire-border zones.

Transmission lines are inspected and cleared on long-term cycles; however, shorter clearing cycles may occur if conditions dictate out-of-cycle trimming is needed to maintain the wire-border zone objectives. During operations, vegetation growth will be monitored and managed to maintain the wire-border zone objectives. The methods for maintaining vegetation within the wire and border zones will be similar to those described above, with the exception that mechanical as opposed to manual methods will be employed due to the scope and extent of area to be treated.

In addition to the cyclical inspection cycles described above, Transmission Patrolmen patrol and inspect lines at a minimum once a year to identify any transmission defects and any vegetation hazards that may develop between the long-term clearing cycles. During these inspections, the Patrolman will identify hazardous vegetation, within or adjacent to the ROW, that could fall in or onto the transmission lines or associated facilities and cause an outage. The Patrolman will evaluate the hazardous vegetation as to the level of threat posed by categorizing the vegetation as an "imminent threat," "medium hazard," or "low hazard." Any issues found are reported to the grid operator and to vegetation management, and documented on an Emergency Tree Action Form. If possible, the Patrolman will take photos of the "imminent threat" vegetation for further evaluation by vegetation management staff.

Imminent threats are any vegetation issue that poses an imminent threat of causing a line outage and that has a high risk of failure in the next few days or weeks. These imminent threats are normally tall trees that have one or more drastic defects that could cause the tree to fail and fall in or onto transmission lines and cause an outage. An "imminent threat" could also be vegetation that is in good condition but that has grown so close to the transmission line that it could be brought into contact with the line through a combination of conductor sag and/or wind-

induced movement in the conductor or the vegetation. Hazards are any vegetation issue that poses a threat of causing a line outage, but that has either a low or medium risk of failure in the next month. These hazards are normally trees that have one or lesser defects that could cause the tree to fail and fall in or onto transmission lines and cause an outage.

On federal and state ground, IPC prefers to clear cut all tall-growing trees in the ROW. Clear-cut methods include crews that use chain saws, or track-driven machines such as Slash Buster and the Brontosaurus. On private property, removal is IPC's first choice, but if not approved, IPC will proceed to trim the trees. The typical trimming methods used are a top trim or side trim.

During tree- and shrub-trimming operations, strategies that minimize effects to wildlife will be used. Tree and shrub trimming will be avoided during the primary avian breeding season (April 1–July 15), especially in sensitive habitat (i.e., riparian). Upland habitat suitable to nesting migratory birds will be surveyed prior to ground clearing between April 1 and July 15 for active nests. A 100-foot no-construction-buffer around active nests will be implemented. No seasonal restrictions will be imposed on clearing upland habitat between July 15 and February 15. Ground clearance in riparian habitats will be allowed between August 1 and March 30, with the exception of a seasonal constraint for impacts to fisheries resources.

3.2 Slash and Debris Management

As the vast majority of the Project crosses through areas where little to no vegetation management will be conducted, substantial slash and debris is unlikely to be generated along most portions of the Project during operations. However, maintenance and construction along the portion of the Project that crosses forested and woodland areas could generate timber slash and debris. In general, this slash and debris can be either 1) chipped, with the chips scattered along the ROW or removed; 2) lopped and scattered on site; or 3) piled on site. IPC's preferred method for handling slash is to lop and scatter the slash on site, as long as the scattered material does not block access, represent a safety hazard, or adversely affect management goals for the area. The method for managing slash and debris in these areas will be determined based on the requirements and recommendations by the appropriate land management or regulatory agency and ODOE. Slash management strategies will be developed to minimize fuel loading and wildfire hazard.

3.3 Herbicide Use

On federally controlled lands, a Pesticide Use Proposal will be submitted prior to any application as recommended in the Final Environmental Impact Statement on Vegetation Treatments Using Herbicides on BLM Lands in Oregon (BLM 2010). The Pesticide Use Proposal will include the dates and locations of application, target species, herbicide, adjuvants, application rates and methods (e.g., spot spray vs. boom spray), and anticipated impacts to non-target species and susceptible areas. Private property will be sprayed only if written approval is obtained from the landowner. All herbicide applications will comply with U.S. Environmental Protection Agency label instructions; federal, state, and/or county regulations; permit stipulations; and landowner agreements. Herbicide contractors, certified and approved in the state of Oregon, will have current safety data sheets and will take all reasonable precautions to prevent spills.

Herbicide use near special status species and waterbodies will follow label requirements, state and federal law, and BLM and USFS recommendations. Only herbicides approved by the land-managing agency as safe to use in aquatic environments and reviewed by IPC for effectiveness will be used within 100 feet of aquatic resources, and no herbicides will be applied within 100 feet of known threatened and endangered plants or waterbodies during preconstruction activities. Areas of flowing water, wetlands, or other sensitive resources where herbicide use will be prohibited will be described in the Final Noxious Weed Plan and be identified on construction

maps and flagged. IPC will also comply with the Idaho and Oregon National Pollutant Discharge Elimination System permits related to the use of herbicides in and adjacent to waterbodies.

Care will be taken during transport and storage to minimize the potential for leaks. In the event of an herbicide spill, the spill will be promptly cleaned up by appropriately trained personnel, and contaminated materials will be transported to a disposal site that meets local, state, and federal requirements. If a spill occurs whose cleanup is beyond the capability of on-site equipment and personnel, an Emergency Response Contractor available to further contain and clean up the spill will be identified. Potential contractors will be identified prior to the start of construction activities. Emergency spill response kits will be maintained at all locations where hazardous materials, including herbicides and pesticides, are stored in sufficient quantities based on the amount of materials stored on-site. Spill kits will include materials to address spills both on land and into water. If a spill occurs, the applicator will report it in accordance with applicable laws and will contact Construction Contractor(s) supervisory personnel, the appropriate land management agency, and the ODOE. Spill preventive and containment measures or practices will be incorporated as described in Exhibit G, Materials Analysis, and Attachment G-4, Draft Spill Prevention, Control, and Countermeasures Plan.

Additional information pertaining to herbicide use is listed in the Noxious Weed Plan (Exhibit P1, Attachment P1-5).

4.0 PLAN UPDATES

Once the preferred route is selected and final engineering is completed, an updated Vegetation Management Plan will be prepared. The Vegetation Management Plan will be updated prior to the start of construction.

5.0 LITERATURE CITED

- BLM (Bureau of Land Management). 2010. Final Environmental Impact Statement Vegetation Treatments Using Herbicides on BLM Lands in Oregon. BLM, Oregon State Office. Portland, Oregon. Available online at: <http://www.blm.gov/or/plans/vegreatmentseis/documents.php>.
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**APPENDIX A
PACIFICORP'S TRANSMISSION AND DISTRIBUTION VEGETATION
MANAGEMENT PROGRAM SPECIFICATION MANUAL**



**Transmission & Distribution
Vegetation Management Program**

Standard Operating Procedures



Revision	Status	Date	Author	Change Tracking
00	Issued for implementation	12/15/2008	R. H. Miller	Manual created
01	Reviewed/Updated	06/15/2012	R. H. Miller	<ol style="list-style-type: none"> 1. Clarified language throughout 2. Revised Chapter 4 to reflect a process checklist used for project management. 3. Modified Clearance 2 to strictly reflect table 5 in IEEE 516-2003 Table 5. 4. Section 6.4.1 changed so that if contract utility foresters identify an imminent threat, they contact the appropriate line patrolmen to initiate the imminent threat procedure.
02	Reviewed/Updated	09/06/2013	R.H. Miller	<ol style="list-style-type: none"> 1. Clarified language throughout. 2. Revised distribution action thresholds and clearance standards to accommodate three and four year cycles. 3. Modified transmission clearance requirements to accommodate FAC-003-02
03	Reviewed/Updated	06/24/2015	R.H. Miller	<ol style="list-style-type: none"> 1. Clarified language 2. Brought specification manual into line with FAC-003-03
04	Reviewed/Updated	07/01/2015	R.H. Miller	<ol style="list-style-type: none"> 1. Corrected Table of Contents 2. Updated Figures 2.1 and 6.6 with Rocky Mt. Power 3. Corrected reference to Table 2.2 4. Added substation inspection Section (2.6 and 4.2.4.6) 5. Clarified definition of interim work. 6. Clarified side work.
05	Reviewed/Updated`	06/01/2016	R.H. Miller	<ol style="list-style-type: none"> 1. Changed document to “Standard Operating Procedures” 2. Clarified language 3. Chapter 2. <ol style="list-style-type: none"> a. Added “At Fault” tree crew caused outages language – Section 2.1.6 b. Added language to contact media – Section 2.4.2.1 c. Added language to contact legal – Section 2.4.2.2 d. Added language that mechanical cutting (Jarraff’s and helicopters) to comply with ANSI A300. e. Added language for storm emergency response 2.10. f. Added language assigning responsibility for property damage to contractors 2.12. 4. Chapter 4 <ol style="list-style-type: none"> a. Added language to requiring rules be followed on hydroelectric facilities and communicate with plant manager – Section 4.2.4.7. b. Added language requiring limited visual hazard tree inspections around substations and transition stations – 4.2.4.8.

Revision	Status	Date	Author	Change Tracking
				<ul style="list-style-type: none"> c. Added language on working around schools – Section 4.2.7.1. d. Added language regarding working near mobile home parks and apartment complexes – Section 4.2.7.2. e. Simplified language on accounting for pruning in – Section 4.3.1 5. Chapter 5 <ul style="list-style-type: none"> a. Updated interim maintenance language – Section 5.3 b. Added a section on distribution herbicide maintenance – Section 5.5 c. Updated work thresholds and clearances – Table 5.1 d. Added table on interim work thresholds and clearances – Table 5.2 e. Added section on padmount transformers – Section 5.7. 6. Chapter 7 <ul style="list-style-type: none"> a. Added section on closed chain of custody – Section 7.1 b.

Approval: Steve Anderton, Managing Director, T&D Support Services Date: 06/01/2017



**Transmission & Distribution
Vegetation Management Program
Standard Operating Procedures
June 1, 2017**

PacifiCorp, Director, Vegetation Management
1407 West North Temple, Room 230
Salt Lake City, Utah 84116
801.220.2271



**Transmission & Distribution
Vegetation Management Program**

Standard Operating Procedures

Mission Statement:

Manage trees and vegetation around PacifiCorp's transmission and distribution facilities in a professional, cost effective and environmentally conscientious manner to provide safe, reliable and outstanding service to our customers.

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1. PROGRAM OVERVIEW

Trees growing into or near power lines are a concern for PacifiCorp because they can create safety and service reliability risks. Close growing branches can provide access for children and others to high-voltage lines, exposing them to the potential danger of serious injury or death due to electric contact. Branches touching power lines can spark and start fires and cause interruptions in electric supply. Trees whipped by winds or weighed down by rain or snow can interrupt power, which disrupts businesses, homes, and compromises critical community infrastructure, such as hospitals and emergency services.

Three major electric grid failures, including the catastrophic blackout on August 14, 2003, were initiated by tree-caused outages on transmission lines (U.S.-Canada Power System Outage Task Force 2003).

For these reasons and others, the National Electrical Safety Code (ANSI 2016) Section 218-A-1, states:

Trees which may damage ungrounded supply conductors should be pruned or removed. Note: Normal tree growth, the combined movement of trees and conductors under adverse weather conditions, voltage and sagging of conductors at elevated temperatures are among the factors to be considered in determining the extent of pruning required.

PacifiCorp's distribution system averages scores of trees for every mile of line, any of which could potentially create problems. With that level of exposure, it is impossible to secure the system

completely. Electric utilities, such as PacifiCorp, manage their systems to reduce electric supply and service reliability risks by clearing trees from power lines.

Often, particularly in the case of transmission lines, the best solution is to remove tall-growing trees in favor of low-growing species that will never interfere with the high-voltage lines. However, it is not always possible to remove conflicting trees. Trees that cannot be removed must be pruned to clear the utility space using modern, arboriculturally-sound pruning practices.

PacifiCorp's standard operating procedures cover the vegetation management program for both distribution and transmission facilities. It includes program descriptions, specifications and protocols for customer relations. Its intent is to provide direction for foresters as well as contract GF/supervisors, contract utility foresters and utility tree workers on PacifiCorp's system, and helps inform PacifiCorp employees about vegetation management.

1.1 Applicable References

The following standards and best practices shall be followed:

- *American National Standard for Tree Care Operations: ANSI A300 (Part 1) Pruning*
- *American National Standard for Tree Care Operations: ANSI A300 (Part 7) Integrated Vegetation Management*
- *American National Standard for Tree Care Operations: ANSI A300 (Part 9) Tree Risk Assessment.*

- *American National Standard for Arboricultural Operations ANSI Z133 Safety Requirements*

The following best practice should be followed:

- International Society of Arboriculture: *Best Management Practices, Utility Pruning of Trees*
- International Society of Arboriculture: *Best Management Practices, Integrated Vegetation Management*
- International Society of Arboriculture: *Best Management Practices, Tree Risk Assessment*
- Utility Arborist Association *Best Management Practices: Field Guide to Closed Chain of Custody for Herbicides in the Utility*

1.2 Professionalism

PacifiCorp employs a staff of professional foresters to manage its vegetation program and communicate effectively the community service it provides. Contractor front line managers, supervisors or general foreman (GFs) must be Society of Arboriculture (ISA) Certified Arborists and ISA Certified Utility Specialists. PacifiCorp promotes Board Certified Master Arborist credentials among its staff foresters.

1.2.1 Contract utility forester Qualifications

Contract utility foresters should have the following qualifications:

- Contract utility forester 1: No experience required. ISA certification and a certified applicator card not required. Maximum of 90 days in this position.
- Contract utility forester 2: Minimum of an associate's degree and up to two (2) years' experience. ISA

certification and a certified applicators license required.

- Contract utility forester 3: Minimum of an associates degree and over two (2) years' experience. Certified applicator's license and ISA certification required.
- Contract utility forester 4: Minimum of a bachelor's degree or four (4) years' experience. Certified applicator's license, ISA certification and Utility Specialist certification are required.
- Contract utility forester 5: Minimum of a bachelor's degree and five (5) years' experience. Certified applicator's license, ISA certification and Utility Specialist certification are required. This is the preferred classification.

PacifiCorp vegetation management is founded on the industry's best practices, including systematic maintenance, scientifically-based pruning, tree removal, tree replacement, cover type conversion, herbicide use and tree growth regulator applications; as well as specialized tools and equipment. PacifiCorp is progressive in trying innovative methods, products and equipment in order to improve safety and productivity.

1.3 Tree Line USA

PacifiCorp has been a Tree Line USA recipient utility every year since 2002. Tree Line USA is an award from the National Arbor Day Foundation, which recognizes utilities for utilizing practices that protect America's urban forests. To qualify, utilities must apply scientifically-based tree care, conduct annual worker training, plant trees, and conduct public education, including participating in Arbor Day celebrations. Contract

employees should participate in annual worker training to cooperate with and help PacifiCorp continue to merit this award.

2. GENERAL PROCEDURES

General specifications cover safety, the environment, how to approach archeological sites, communication, tree growth rate definition, tree removal, mechanical and helicopter cutting, slash disposal, emergency disposal, facility inspection, property damage, freelance work and miscellaneous procedures.

2.1 Safety Federal and state OSHA requirements governing vegetation management activities shall be followed at all times. ANSI Z133.1 (ANSI 2012) and OSHA 1910.269, are examples of these requirements. Activities shall be conducted in a manner that minimizes both tree crew and public safety risks. Crews shall have functional radio or telephone communication on the job site at all times.

PacifiCorp's electrical system will continue in normal operations during routine vegetation management work. Contract employees shall be aware of the potential dangers and qualified to work in the vicinity of energized facilities. Contract personnel performing line clearance work shall hold one of the following designations as defined by ANSI Z13:

- Qualified Line Clearance Arborist
- Qualified Line Clearance Arborist Trainee

2.1.2 Holds and Clearances

Minimum approach clearances for qualified line clearance arborists specified in ANSI Z133 or PacifiCorp's *Accident Prevention Manual* (Joint Safety Committee 2003 [Table 2.1]), should not be compromised. If there is a difference in the distances required in the two standards, the greater of the two is

operative. If work requires violating minimum approach distances, or if a crew leader determines conditions to be unsafe, crew leaders should contact their supervisor/GF before proceeding. The GF/supervisor should determine whether or not a clearance or hold is necessary at that work site.

A hold means deactivating automatic line reclosers on a circuit. It is intended to protect PacifiCorp facilities and should not be considered a safety measure. If, in the judgment of the crew leader, an energized line cannot be worked safely, the GF/supervisor should arrange a clearance. A clearance is de-energizing a line.

PacifiCorp does not issue holds or clearances to tree crews. Rather, the Company will issue holds or clearances to a journeyman lineman, who shall be present at the site during work. Holds require at least 48 hours' notice to dispatch, vegetation management and the district operations manager. In some cases, a clearance on transmission lines must be requested weeks or even months in advance. Customers do not need to be notified if a clearance is necessary to safely work trees from lines in an emergency.

Customers who will be affected by planned power outages associated with clearances must also receive 48 hours notice, except during emergency situations such as storm restoration work. De-energized lines; whether due to a planned outage, wind or storm damage, or some other reason; must be worked as if they are energized. If a line cannot be worked safely assuming it is energized, it must be grounded. Linemen must set the grounds and be present during work, and

give approval prior to tree crew members
breaching minimum approach distances to
ensure safety.

Figure 2-1 Emergency procedure for a tree on line incident.

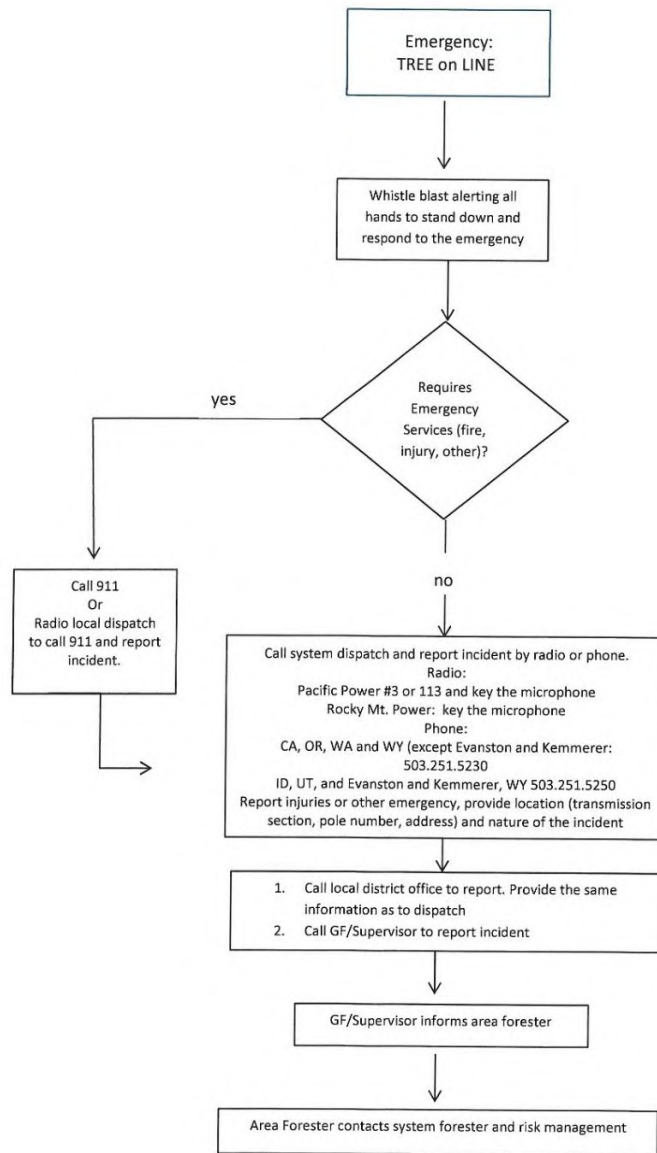


Table 2-1 Minimum approach distances for qualified line-clearance arborists and line-clearance arborist trainees

Voltage Phase-to-Phase	Minimum Approach Dist.	Source
50-300 v	Avoid contact	APM/Z133
301-750 v	1 foot	APM/Z133
301 v-15 kV	2 feet, six inches	APM
15-46 kV	3 feet	APM/Z133
46-72 kV	4 feet, 2 inches	Z133
72-121 kV	4 feet, 6 inches	Z133
138-145 kV	5 feet, 2 inches	Z133
161-169 kV	6 feet	Z133
230-242 kV	7 feet 11 inches	Z133
345-362 kV	13 feet 2 inches	Z133
500-550 kV	19 feet	Z133

Note: APM is PacifiCorp's *Accident Prevention Manual* (Joint Safety Committee 2003). Z133 is the *American National Standard for Tree Care Operations*. Z133 distances are for sea level up to 5,000. Distances increase for elevations above 5,000 feet (ANSI 2012).

2.1.1 Emergencies

An emergency is major storm (as declared by PacifiCorp), or situation where vegetation has either caused or presents a clear, imminent threat of causing an outage, fire or public electric contact.

2.1.1.1 Whistles

Every crew member, supervisor/GF and forester shall carry a whistle at all times while on work sites. A whistle shall be used as an alarm, commanding all crew members to immediately stop work and respond to the emergency. Whistle blasts should also be used to initiate aerial rescue drills. Whistles are not to be used for non-emergency situations, such as getting another crew member's attention.

2.1.1.2 Tree on Line

If a tree or tree part accidentally falls onto an energized line, work shall stop

immediately, and procedures outlined in Figure 2.1 followed.

2.1.2 Readily Climbable

Readily climbable trees have low limbs that are accessible from the ground and sufficiently strong and close together to support a child or average person so that the tree and can be accessed without using a ladder or special equipment. Access into a tree by a vehicle does not render a tree climbable.

Readily climbable trees pose a high risk when a main stem would allow a child or average person to climb either within arm's reach of an uninsulated, energized electric line or within such proximity to the electric line that the climber could be injured by direct or indirect contact. They are located near homes, schools, parks, businesses or other locations where people (particularly children) frequent.

If readily climbable trees are identified, within two weeks, steps shall be taken to reduce the safety risk by removing the tree or pruning it to specification clearances. If possible, branches should be removed to at least 8 feet above the ground or altering facility construction so energized lines can no longer be accessed through the tree.

2.1.3 Tree Houses

Tree houses built in trees growing near high voltage lines present possible electric safety risks. Safety risks in these cases could materialize if a tree house is sufficiently close to the conductors so that children or others may contact the line either directly or indirectly. Indirect contact may occur through any conductive object, including a tree or tree parts that are contacting power lines.

Tree houses built in trees growing in proximity to power lines must meet two criteria in order to remain where they are located. First, no part of the structure may be any closer than twice the minimum approach distances for persons other than qualified line-clearance arborists as specified in Table 2 of ANSI Z133 (Table 2.2). Second, the tree must be pruned so that it grows no closer than ANSI Z133 Table 2 (Table 2.2) distances, at least until the next scheduled work. Maximum line sag and sway should be taken into consideration. Tree houses that do not meet these conditions shall be removed within two weeks of their identification.

Tree house safety risks may be managed by changing facility construction so tree house clearances can be maintained. Facility reconfiguration for this purpose may be done at a property owner's request, provided they cover the expense of the facility modification.

2.1.4 Fire Protection

Federal, state and local fire protection laws and regulations shall be followed, and the contractor performing the work must obtain necessary work permits. Crews shall have all firefighting tools and equipment required by the responsible governmental agency. Contractors shall also adhere to fire restrictions concerning work hours, fire watch following work and other policies of the pertinent jurisdiction. Crews working in fire-prone rural areas should receive fire prevention and suppression training from the competent authorities.

2.1.5 At Fault Tree Crew-Caused Outages

Primary distribution and transmission outages caused by tree crews shall be assessed by a committee made up of the managing director of distribution and transmission support, director of vegetation management, business analyst and two contract representatives. The conduct of the subject crew during the incident will be compared to requirements in ANSI Z133, OSHA 1610.269, contractor safety rules and the PacifiCorp Accident Prevention Manual. Outages determined to be "at fault" by the majority of committee members will result in a credit to PacifiCorp from the contractor in an amount specified contractually.

2.2 Environment

Environmental respect is a MidAmerican Energy Holding Company core value, requiring strict adherence to all environmental rules and regulations.

2.2.1 Species of Concern

Tree work should not disturb or harm any rare, threatened, endangered, or protected plant or animal species. Nesting season work restrictions are examples of

important scheduling considerations necessary to accommodate threatened and endangered species. Prior to beginning projects on federal and state lands, PacifiCorp foresters shall contact the responsible agency to determine whether or not such species are present on the right-of-way. If there are, foresters should contact PacifiCorp environmental services for support.

All tree and brushwork shall conform to guidelines of the responsible governing agency. Field data inventories of threatened or endangered species may be on file in PacifiCorp district offices. PacifiCorp environmental services should be contacted whenever threatened and endangered species are identified.

2.2.2 Wetlands

Wetlands are lands where water saturation is the dominant factor determining the nature of soil development and the types of plant and animal communities present living in and on the soil (EPA 2004). Wetlands shall be worked by hand. Federal, State and local laws and regulations concerning wetlands shall be followed.

2.2.3 Stream Protection

Work shall not pollute water. Trees shall not be felled into streams or drainage ditches in a way that could obstruct or impair the flow of water, unless instructed otherwise by the responsible governing agency. Machine work shall not be performed within fifty feet of a stream. Soil or debris shall not be placed below the high water mark of streams, unless instructed otherwise by a responsible authority. Equipment shall use existing or

designated stream crossings. State forestry or fish and wildlife agencies shall be contacted if tree removal in and around streams could cause erosion or if resulting exposure could increase water temperature. Federal and state laws and regulations shall be followed concerning stream protection.

2.2.4 Bird Protection

Migratory birds are protected by the *Migratory Bird Treaty Act of 1918* (16 USC 703-712). The act was most recently amended in 1998. All but a handful of bird species are protected under the act. Vegetation management's policy is that all bird species should be considered subject to the law's provisions. Foresters should provide annual training on bird protection to every tree crew.

The Migratory Bird Treaty Act prohibits removal of bird nests that have eggs or chicks, and killing protected species. Active nests may be disturbed in rare cases of urgent fire or electrical safety risk (in the judgment of the responsible Company regional forester). If tree crews identify a possible immediate risk, they should contact the regional forester for authorization. Foresters should consult PacifiCorp environmental services regarding whether or not work may be approved. If it may not, work should be postponed until after young have left the nest.

Eagle and colonial water bird nests (such as those of cormorants and herons) may not be disturbed regardless of whether or not they are active. Eagles are subject to additional protection insofar as it is illegal to disturb them near their nests or winter roosting sites.

Figure 2-2 Bird nest procedure

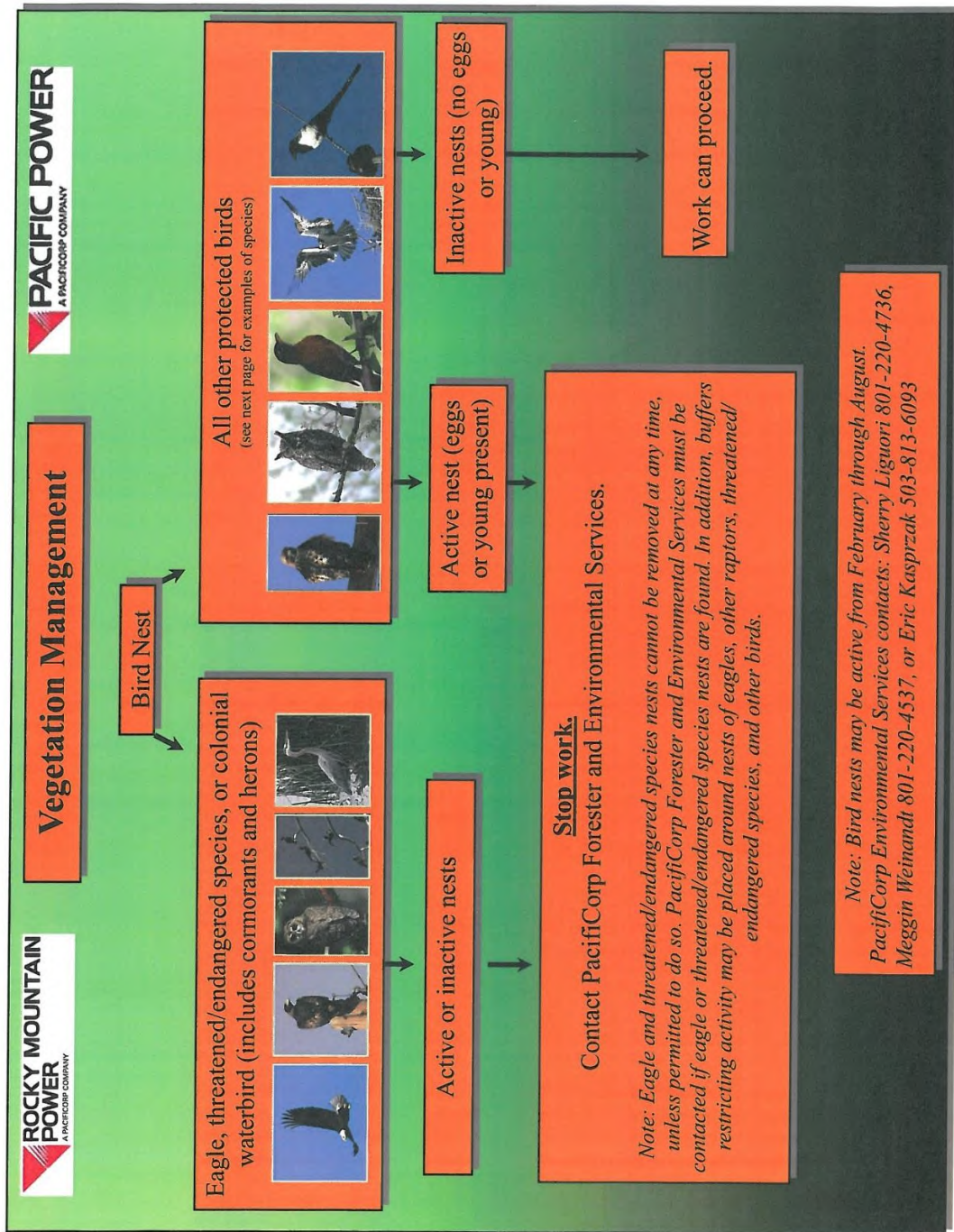


Table 2.2. Tree house clearances.

Tree houses may only be allowed in a tree if they are more than minimum distances from conductors and the tree can be pruned to kept to clearances specified in this table at all times. Specified tree clearances are those for persons other than qualified line-clearance arborists specified in Table 2 of ANSI Z133. Minimum tree house distances are twice ANSI Z133 Table 2 distances.

Voltage (kV phase to phase)	Minimum Tree House Distance From Conductors (ft.-in)	Tree Clearance (If tree house is built in a tree <u>more</u> than minimum distance from conductors)
0.31-0.75	20-00	10-00
0.751-15	20-00	10-00
15.1-36.0	20-00	10-00
36.1-50.0	20-00	10-00
50.1-72.5	21-06	10-09
72.6-121.0	24-08	12-04
138.0-145.0	26-04	13-02
161.0-196	28-00	14-00
230.0-242.0	32-10	16-05
345.0-362.0	40-10	20-05
500.0-550.0	53-04	26-08

Table 2.3. Work buffers around active nests of eagles and herons.

Species	Work Buffer
Herons	1000 feet
Owls	¼-mile
Hawks, ospreys, golden eagles	½-mile
Bald eagles	1 mile

Figure 2.3. Valuable archeological sites.

An ancient food storage structure along the Camp Williams-Four Corners 345 kV right-of-way in Southern Utah. This is an example of the type of valuable archeological site that needs to be identified and protected during vegetation management work.



Rich Buelte photo

Raptors (birds of prey) and herons require buffers around active nests to prevent them from being disturbed (Table 2.3), unless instructed otherwise by competent environmental or fish and wildlife authorities. In general, if a bird leaves a nest and does not return within an hour, it is being disturbed and the buffer should be increased. In these cases, environmental services should be contacted within 24 hours to monitor the nest and respond appropriately if the adults fail to return.

2.2.4.1 Reporting

Active bird nests and inactive eagle nests should be reported to the appropriate forester and environmental services following the procedure outlines in Figure 2.2. Anyone working in vegetation management encountering a dead bird should report it to environmental services.

2.2.5 Spills

To prepare for accidental spills, absorptive material shall be available. Mixing, loading and cleaning equipment are critical activities that present the greatest exposure to accidents or spills (Miller 1993).

In the event of a spill or herbicide misapplication:

- **STOP, CONTAIN, ISOLATE**
 - Stop the source of the spill
 - Contain the spill (it is especially important to prevent the spill from entering waterways)
 - Isolate the area – prevent people or vehicles from passing through the area.
- Report the spill to the Spill Hotline: 800.94.SPILL and provide:
 - Caller and manager's name
 - Date and time spill was discovered
 - Location (address or longitude and latitude)
 - Manufacturer name and serial number
 - Cause of spill
 - Amount of spill
 - Types of surfaces contaminated
 - Containment and/or clean-up activities performed so far
- Request the help of and notify supervisor/GF and PacifiCorp forester and environmental services.
- Remediate the spill
 - Clean up the spill or have it cleaned up, following directives from the Spill Hotline
 - Wash equipment and vehicles.
 - Properly dispose of cleanup materials
 - Follow up with appropriate cleanup documentation.
- Clean-up at or near PacifiCorp generating sites or substations must comply with site specific spill prevention and remediation plans.

2.3 Archaeological Sites

Vegetation management activities shall not disturb archeological sites. Known archeological sites (Figure 2.3)

shall be identified on the process checklist described in Chapter 4. If a contract utility forester or tree crew identifies something that might have archeological significance, they should move off site and contact the appropriate forester. The forester should contact environmental services for advice on whether or not to continue. Work should not proceed without environmental service's authorization.

Prior to beginning work on federal and state lands, PacifiCorp vegetation management shall contact the appropriate agency to determine whether or not such sites are present on or near the right-of-Way. PacifiCorp district offices may have field data inventories of known sites to assist in the determination. If present, foresters should secure the assistance of PacifiCorp environmental services. Archeological sites shall be located and marked. Work must conform to guidelines of the responsible governing agency. If archaeological artifacts are located on private lands, the finding shall be reported to PacifiCorp environmental services. Field data inventories of known sites could be on file in PacifiCorp district offices.

2.4 Communication

Communication should be open and interactive. It should include everyone involved: management, planners, vegetation management crews, property owners, public land managers, appropriate governmental officials, members of organizations dedicated to related causes and others.

2.4.1 Internal Communication

Communication within the vegetation management department needs to be clear and concise to ensure everyone involved understands the desired results. Decision

making authority should be delegated throughout the origination, as appropriate.

Communication between vegetation managers and workers ought to be both written and verbal. Written instruction should include PacifiCorp Vegetation Management Standard Operating Procedures. It should also include details regarding concerned customers and locations of environmentally sensitive or archeological areas. Written instruction should be reviewed verbally. Appropriate communication also involves post work debriefings to review challenges and prevent problems from recurring.

Communication between utility vegetation management staff and other internal employees, such as engineers and operations managers, includes why, where, when and how vegetation management projects will be conducted. This is important because people within PacifiCorp, but outside vegetation management, can help set priorities, anticipate and prevent potential problems, and provide historical perspectives. Communicating with operations staff during work can also add a margin of safety. By knowing there is a vegetation management job underway, operations staff may be able to provide a timelier and more appropriate incident response than they would if they were unaware of the project. At the beginning of every week, districts in which vegetation management work is being conducted shall be emailed a spreadsheet with the approximate tree crew work locations for the coming week.

2.4.1.1 Communication of Vegetation Conditions that is Likely to Cause an Outage At Any Moment)

Members of the vegetation management team must comply with

Transmission Grid Operations Operating Procedure PCC-215, which is designed to meet Requirement 4 of the *NERC Transmission Vegetation Management Program* standard FAC-003. Requirement 4 instructs utilities to notify the control center with switching authority for the applicable line of vegetation conditions that could cause an outage at any moment (see Figure 6.6 for the appropriate PacifiCorp dispatch center). PacifiCorp may implement temporary action, such as rating reductions or taking transmission lines out of service until vegetation can be cleared. Inspectors should report the exact location of the subject trees (providing longitude and latitude if possible) as part of the process.

2.4.1.2 Media

Requests from media (print, electronic, radio or television) shall be referred to PacifiCorp Media Relations and the community relations manager responsible for the area in which the request was made. Media Relations can be reached for each business unit at:

- Pacific Power: 800.570.5838
- RMP: 800.775.7950

Vegetation management personnel and contractors shall not speak to media representatives without prior authorization from PacifiCorp Media Relations.

2.4.1.3 Legal

No response shall be made to an attorney unless through PacifiCorp's General Counsel's office.

2.4.2 Communication with External Stakeholders

Public land managers, property owners, regulators, and civic organizations have interests in utility vegetation management activities.

Educating potentially affected parties about the need for, benefits of and science behind vegetation management can clarify expectations. Members of the vegetation management team, including crewmembers, should know the facts about the program, be prepared to answer basic questions and refer more complex issues through to their GF/Supervisor.

Communication should begin well in advance of work and involve listening to and understanding people's concerns. Work on governmentally-managed property can involve administrative procedures that take months of advance work, including navigating through permit processes and the concerns of specialists who have responsibility for stewardship over public lands. It is not always clear to lands specialists how vegetation management helps balance their (the land manager's) responsibilities against the public's need for a safe and reliable electric grid. A memorandum of understanding among Edison Electric Institute (EEI) member utilities and federal land management agencies (EEI 2006) established a framework for developing cooperative rights-of-way integrated vegetation management (IVM) practices among EEI shareholder-owned electric companies, federal land management agencies and the Environmental protection agencies. The MOU is expired and being renewed as of this writing.

2.5 Growth Rate Definitions

Slow-growing trees grow vertically less than one-foot a year. Moderate growing trees grow between one and three feet a year and fast-growing trees grow more than three feet a year.

2.6 Tree Removal

Tree removal is an important component of PacifiCorp's vegetation management program. Tree removal can reduce safety risks; improve access to facilities, clear lines of sight and moderate future workloads. Tree conditions are site and tree specific.

Tree removal on distribution facilities requires either written notification to or signed permission from the property owner, unless there is a right-of-way, easement or permit that expressly authorizes tree removal. If such an easement or permit exists, notification to the property owner may be verbal, provided it is documented. Signed permission may be obtained on the removal door hanger (see Section 8.2.1.3) or *Property Owner Permission Form* (see Section 8.2.2).

Stumps shall be cut to within six inches of the ground or as close to it as practical (for example, at the top of a barbed wire fence that has become imbedded in the trunk). Stumps of all deciduous trees, brush and vines that are removed shall be treated with an approved herbicide, where permitted (see Section 7.3.5).

PacifiCorp prefers to remove the entire tree in the following situations:

- Transmission rights-of-way where the conductors are fewer than 50 feet off the ground or between 50 and 100 feet off the ground depending on the size of the tree (see Table 6.1 and Figure 6.3).
- High risk trees (dead, dying, clearly diseased, deformed, or unstable trees which have a high probability of falling and contacting transmission or distribution conductors). Note that every tree is potentially hazardous. With millions of trees under management, it is impossible to

identify and correct every potentially hazardous tree. Nevertheless, PacifiCorp has a responsibility to maintain its system by making a reasonable effort to identify trees that are clearly hazardous, and correct the problems they could cause in a timely manner.

- Trees that will take no more than twice the time to remove than to prune during distribution cycle work. High risk trees are not limited by this constraint.
- Trees that take no more time to remove than to prune during interim and ticket work. High risk trees are not limited by this constraint.
- Readily climbable trees.
- Trees with tree houses not meeting the clearance to transmission or distribution conductors shown in (Table 2.2)
- Fast-growing trees that, through growth could interfere with distribution conductors or violate specific state regulatory clearances before the next scheduled maintenance work (cycle-busters).
- Volunteer trees less than six-inches in diameter (DBH), which, through growth, could eventually interfere with distribution conductors.

2.6.1 Equipment Mowing

Mowing is often more cost effective than manual methods of tree removal and should be pursued wherever practical (Figure 2.4). Mowing should be limited to fifteen feet either side of distribution primary wires within transmission rights-of-way and along access roads serving Company facilities

2.7 Mechanical and Helicopter Cutters

Mechanical and helicopter cutters can improve productivity in rural, densely vegetated areas (Figure 2.5). Mechanical cutting shall comply with ANSI A300 (Part 1) section 9.3.2. It should be limited to rural or remote locations and cuts should be made close to the main stem, outside of the branch bark ridge and branch collar. Precautions should be taken to avoid stripping or tearing of bark or excessive wounding.

In subsequent cycles, mechanical work should be monitored and repaired if need be to prevent high risk conditions from developing.

2.8 Slash Disposal

Slash is brush and limbs less than six-inches in diameter removed during tree operations.

2.8.1 Developed Areas

In developed areas, slash should be chipped and removed from the site unless an agreement has been reached with the property owner to leave it. Slash may be left temporarily, provided the crew has notified the property owner or tenant, and arrangements made to clean it up to the customer's reasonable satisfaction within two business days. Tree stems greater than six-inches in diameter should be left on site. Work locations shall left in a safe and orderly condition.

2.8.2 Rural Areas

In rural areas, slash should be disposed of on-site whenever possible. For off-road, wooded areas, brush should be lopped into three-foot maximum lengths, and scattered in piles no more than two-feet high. Stems larger than six-inches in diameter should be left on site.

Limbs and slash should be piled separately. Limbs and slash should be disposed of at the sides of distribution rights-of-way, and outside the wire zone of transmission rights-of-way, unless specified otherwise by the regional forester. If brush is chipped, it should be broadcast on site wherever possible. Resulting chip piles should be no higher than two-feet. Debris piles should not limit or block access to the right-of-way, or create fire risk.

Emergency work is done under the authority of the district operations managers in cooperation with Company foresters. Tree crews and contract utility foresters assigned to storms should work under the direction of circuit captains assigned by operations. Tree crews should report their progress at least daily to both the circuit captain and their GF/supervisor. The supervisor should report crew progress to the appropriate forester.

2.9 Emergency Response

Tree work will be required from time to time on emergency storm restoration. Crews shall be properly equipped to perform the work. PacifiCorp will be the sole determiner of equipment appropriateness. Travel and lodging during the storm is billable. Double occupancy is expected for crew members.

Contractor should provide a designated contact person for each region. Requests for crews should be routed through that contact. Contractor shall be responsible for dispatching crews whenever emergency restoration services are needed.

Crew rosters shall be provided by the contractor and maintained during restoration efforts. At a minimum, rosters shall include: crew member names and position, location, contact information, equipment and identification number.

Debris from storm work is left on site and not chipped or cleaned up, so chippers should not be taken into the field during restoration work. Notification is not required during emergency restoration work, but crews should conduct themselves respectfully.

Emergency work shall be reported on a *Weekly Vegetation Report* according to section 4.2.1.

Figure 2.4. Side mower used on distribution rights-of-way.



Figure 2.5. Jarraff mechanical “trimmer” that may improve productivity in remote areas.



Figure 2.6. Cracked pole – an example of the type of conditions tree crews should report.



Figure 2.7. PacifiCorp Vegetation Management Maintenance inspection report form.

Maintenance Conditions Found by Crews			
Week Of			
Location - closest address, meter number if available and facility point number.			
Address (city and state)			
Meter #		Facility Point #	
Description of Problem:			
Employee Name:			

All storm work must be conducted as if the line is energized. If the line cannot be worked safely under the assumption it is energized, it must be grounded in accordance with section 2.1.1. In general, PacifiCorp does not dispose of slash or debris resulting from storm damage. Trees that fall during storms would do so regardless of whether or not the lines are present. It should not be the Company's responsibility to clear the debris simply because the tree or trees from which it originated damaged Company facilities on the way down. However, if an outage is preventable, slash may be cleaned-up and removed from a property at the forester's discretion.

2.10 Facility Inspection

While tree crew members are not facility inspectors, they can be helpful in identifying pronounced conditions, such

as cracked poles (Figure 2.6) broken cross arms or insulators, loose guy wires, and other problems. Tree crew members should report the condition on the *Maintenance Condition Report Form* (Figure 2.7).

When contract utility foresters are lining out work, they should inspect the perimeter around substations for trees that could interfere with or hazard trees that could fall into the facility, or for climbable trees that could allow access into the substation.

2.11 Property Damage

Contractor shall be responsible for property damage arising out of or related to work. Restoration of surfaces and repair of property damage in the execution of the Contract shall be part of the work. Such restoration shall include, but is not limited to, ruts, disturbed drainage ditches,

broken drain tiles, cut fences and damaged fence posts.

Contractor shall inform PacifiCorp of claims within 24 hours of damaging the property. Contractor has 15 business days to resolve any damages or PacifiCorp will settle the claim and bill the contractor. Contractor must inform PacifiCorp personnel and get permission for an extension if the time frame cannot be met.

Contractor shall be responsible for any damage or claims against PacifiCorp resulting in violations of conservation measures as a consequence of Contractors actions.

2.12 Freelance Work

No one employed in PacifiCorp's vegetation management department or their contractor may solicit or perform arboricultural-consulting or tree work (pruning, removal, insect or disease control, fertilization etc.) for interests outside of officially authorized PacifiCorp projects on open feeders, grids, transmission projects, tickets, storm orders, work orders or other PacifiCorp assigned project. Outside projects may include side jobs for cash, work for private arboricultural firms (whether or not they are owned by the tree crew members doing the work), consulting or any other arboriculturally related enterprise.

2.13 Miscellaneous Items

2.13.1 Fences and Gates

Gates should be left open or closed as they were found, or as the property owner

instructs. Damage to fences or gates shall be reported to the property owner and the appropriate supervisor/GF, and repaired as soon as possible.

2.13.2 Climbing Spurs

Climbing spurs shall not be used when climbing to prune trees.

Exceptions:

- when limbs are more than throw line distance apart and there is no other safe means of climbing the tree.
- when the bark is sufficiently thick to prevent spur damage to the cambium.
- when working high risk trees that are to be reduced in height and left for wildlife.

2.13.3 Winching Vehicles.

Winch cables or ropes should not be wrapped directly around anchor trees. Doing so damages a tree's bark and cambium and can not only reduce its health and value, but also eventually create high risk to overhead lines. If the need arises to winch a vehicle (including an all-terrain vehicle), a nylon strap (or equivalent) at least 2-inches wide shall be used around the tree, and cables or ropes attached to the strap. Utility poles or towers shall not be used as winch anchors.

3. TREE BIOLOGY AND PRUNING

The primary purpose of utility line clearance work is to minimize safety and service reliability risks caused by tree-power line conflicts. Pruning is primarily performed on distribution facilities, although it can have application to transmission lines in some cases.

Pruning to clear conductors shall adhere to the principles of modern arboriculture. The *American National Standard for Tree Care Operations A300* (ANSI 2012a), International Society of Arboriculture (ISA) *Best Management Practices: Tree Pruning* (Gilman and Lilly 2002), *Best Management Practices: Utility Pruning of Trees* (Kempter 2004), and *An Illustrated Guide to Pruning* (Gilman 2002), among other references, convey those principles.

While proper utility line clearance work should be consistent with practices that promote tree health, utilities cannot place tree health over public welfare. Sometimes, there is no way to obtain proper clearance in a manner that ensures the health of a tree (Lilly 2010). This is particularly true regarding foliage retention. In cases where the tree cannot be pruned without harming its health, tree removal is often best for the tree, tree owner and utility. If tree removal is not permissible or practical, the tree should be pruned to specification clearances, even if that work is against a customer's wishes or could harm the tree.

3.1 Pruning for Clearance (directional pruning).

Directional pruning is natural target pruning applied to routing tree growth

away from utility lines (Miller 1998). ANSI A300 (2012a) and ISA's *Best Management Practices* (Kempter 2004) instruct that pruning to clear the utility space involves thinning cuts: removing at natural targets entire branches that are growing toward (or once cut will produce sprouts that will grow toward) the power lines.

While heading cuts produce sprouts that grow quickly back into the power lines, branch removal and reduction promotes growth away from conductors. Since the point of utility pruning is to train trees around power lines wherever practical, branches growing away from the electric facility should not be pruned. Instead, these stems should be allowed to develop to their natural height or length, provided that growth does not create unreasonable safety risks. This cannot be accomplished with strongly excurrent trees trapped directly beneath conductors.

Topping, round-overs, flush cuts, branch tipping and rip cuts are improper because they damage trees. Directional pruning is consistent with natural tree structure. Remaining branches retain their taper, strong attachments, growth regulators and spacing. They continue to grow and function normally, allowing the tree to reach to its natural height.

"V" shapes often result on properly pruned trees growing under power lines, particularly on decurrent, deciduous trees (Miller 1998, Shigo 1990, Gilman 2002, Kempter 2004) [Figure 3.1]). Limbs growing upward and toward the facility should be cut back to the trunk or to limbs growing away from the conductors.

Remaining branches should have sufficient clearance so they do not damage

the conductors in inclement weather common for the locality (high wind, freezing rain, snow or other conditions). Excurrent trees (such as many conifers) are more problematic, but should be reduced to appropriate laterals or whorls.

"L" or one-sided shapes often result on properly pruned trees to the side of conductors. (Shigo 1990, Gilman 2002 [Figures 3.2]). Limbs on the wire side of trees located adjacent to facilities should be cut back to the trunk; or to limbs growing vertically, sideways or downward; depending on the distance to the line or available natural target.

3.2 Tree Biology

Understanding fundamental tree biology is essential to applying proper pruning to utility line clearance (Miller 1998).

3.2.1 Leaves

Leaves are the tree's food source. Tree survival depends on the leaves' ability to manufacture carbohydrates from the sun's energy, carbon dioxide and water. Current thinking among scientists is that if a tree abruptly loses a large portion of its foliage, as can happen with over-pruning, it could lack the energy resources to meet its needs. Trees with insufficient foliage could be weakened to the point where they become subject to attack by opportunistic insect and disease pests. Damage can extend to the roots as well as to above ground portions of the tree (Shigo, 1986). Trees can suffer sun injury after sudden excessive foliage loss (Miller 1998).

Authorities disagree over how much foliage removal trees can tolerate in a given year. ANSI A300 (2008) recommends no more than 25%, while Gilman (2002) suggests less than 10 to 15 percent. Often, much more than 25% of

foliage must be removed from the tree in order to appropriately maintain electric facilities. The ANSI committee did not intend the 25% provision to impede utilities from achieving appropriate clearances (Smith 2002). Utility arborists faced with the choice of maintaining public welfare by clearing the tree to specifications and removing more than 25% of the foliage have no choice but to remove more than 25% of the foliage

3.2.2 Stem Anatomy

Trunks and branches are tree stems. Their function is support, energy storage, and water, mineral, carbohydrate and growth regulator transport. The point of origin of a branch or limb is a node. A lead is an upright trunk or major limb with a dominant role in the tree crown, and a lateral is a branch off a parent stem. Some leads can also be laterals.

3.2.3 Xylem

Xylem is wood tissue. Sapwood is young, living xylem that stores carbohydrates, provides support, and conducts water and essential elements. Heartwood is old, dead xylem that provides support, and often contains anti-microbial compounds.

Long, hollow conducting cells (tracheids or vessels) predominate xylem structure. While trees need this vascular structure to conduct water and essential elements, it can be exploited by pathogens to spread up and down the stem. Trees attempt to block or "wall" off disease spread by plugging conducting cells in various ways, but pathogens can use energy stored in the trunk or branch to breach these walls (Shigo 1986).

Figure 3.1. “V”-shapes can develop from crown reduction on deciduous trees (left). The ultimate objective is to train trees up and around the wire wherever possible, so the facility is clear and the tree is healthy. These two photos are of the same tree, in 1992 (left) and 2007 (right).

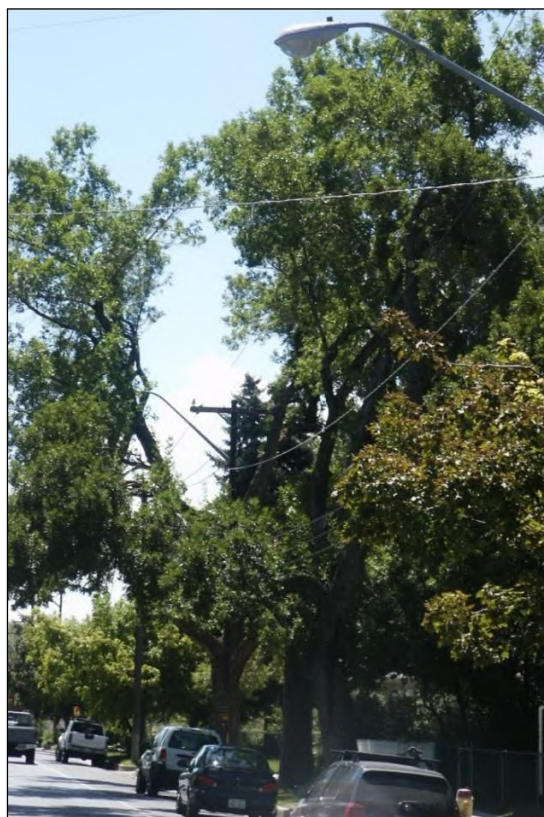


Figure 3.2 “L” or one-sided shapes.

“L” or one-sided shapes often result on properly pruned trees growing to the side of conductors. Pruning may be mechanical in rural areas, below right



3.2.4 Cambium

The tree's cambium is a thin layer of rapidly dividing cells around the outside of the sapwood. One of the functions of the

cambium is to produce wood to its inside, creating diameter growth. This is the only source of wood production in the tree system, and the tree has no ability to replace damaged or decayed wood.

Pathogens gain access to wood through wounds. In response to wounding, the cambium generates a "barrier zone" containing antimicrobial compounds (Figure 3.3). It protects new wood by separating it from potentially infected wood that existed at the time of wounding. Following infection, a "race" develops between the cambium and wood-rotting microorganisms, with the structural integrity of the tree at stake. The cambium must produce new wood faster than pathogens can digest the former stem if the tree is to remain viable (Figure 3.3).

While the barrier zone contains strong antimicrobials, it is weak structurally. This structural weakness can be problematic, as cracks may develop along the barrier zone when the stem twists and flexes due to wind, ice or other stress loads. These cracks allow pathogens to breach the barrier zone and enter new wood, further threatening the tree (Figure 3.3 [Shigo 1986]).

3.2.5 Branch Collars

Branch collars are a combination of parent stem and branch tissue generated through coordinated growth around the branch attachment (Figure 3.4). In the spring of the year, diameter growth begins at branch tips, and works toward the base. When new wood meets the branch base, it turns at 90°, and wraps around the juncture. Later in the growing

season, wood from the parent stem envelops branch wood laid down earlier. As a result, two layers of wood secure the branch every year, and the attachment increases in strength as the branch grows (Shigo 1986).

3.2.6 Branch Bark Ridge

An important structure associated with branch attachment is the branch bark ridge. The branch bark ridge is a line of raised bark, formed as the branch and parent stem grow together. It marks where branch wood meets stem wood (Figure 3.5). A raised branch bark ridge is often a sign of a strong attachment.

3.2.7 Branch Protection Zone

Branch protection zones are areas of antimicrobial compounds that form internally at the base of diseased or injured branches (Shigo 1986). They inhibit pathogens in the branch from passing to the parent stem. While protection zones are effective, pathogens can overcome them using energy stored in the branch.

3.2.8 Taper

Tree stems taper from their bases, where they are widest, to twig tips, where they narrow to buds or apical meristems. Taper provides flexibility and strength that disperses loads from branch weight and from wind, snow or ice loads. The adaptation reduces the likelihood of failure under stress.

Figure 3.3 The cambium creates a barrier zone that contains discoloration and decay in old wood, protecting new wood. Note on the right, a ring shake formed along the old barrier zone. This is a structural flaw.



Figure 3.4. Branch collars form at branch bases.



Figure 3.5. A raised branch bark ridge

A raised branch bark ridge is often a sign of a strong attachment. It marks where the branch meets the parent stem.

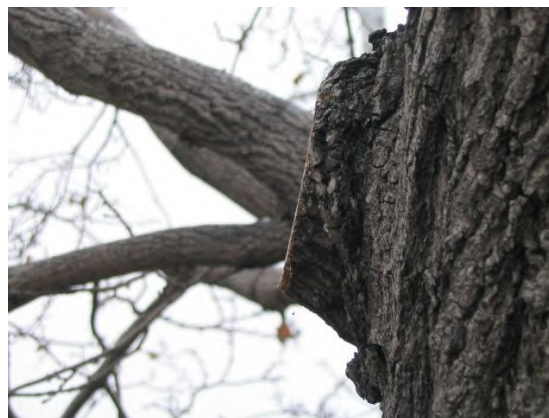
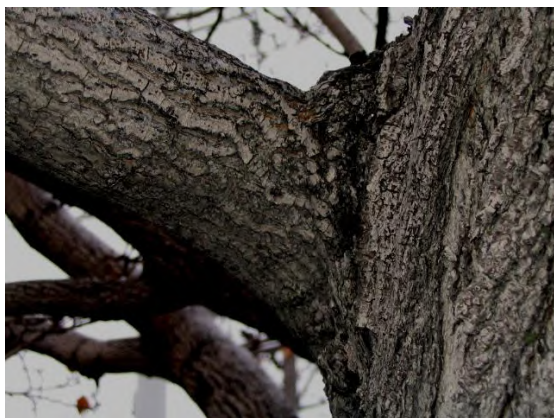


Figure 3.6. Codominant stems are at least 50% of the diameter of their parent stem.

They have no branch collars or branch protection zones. Codominant stems can grow together and have bark included (embedded) between the stems in the attachment.



Figure 3.7. A before and after collar cut.



3.2.9 Codominant Stems

Codominant stems are stems that are at least half the diameter of their parent stem, and compete for dominance in the tree crown (Gilman 2002). They are similar to branches, but have no branch collars or branch protection zones. Disease moves from one codominant stem to another as readily as it moves through ordinary stems. Codominant stems can have a branch bark ridge. However, they are structurally flawed because they do not have room to develop (Figure 3.6). As crowded branches grow in diameter, they can press together, creating wounds and squeezing bark in between the two stems (Figure 3.6).

The resulting wounds allow disease entry and weaken branch attachments. Moreover, stems with included bark often pry one another apart as they grow, further weakening their attachments. Attachments with included bark often fail, and can be recognized by a crease between stems near their juncture (Figure 3.6).

3.2.10 Growth Regulators

Growth regulators are chemicals that coordinate plant growth. A growth regulator can have confusing, even contradictory roles depending on its concentration, the concentration of other growth regulators, environmental conditions the species of tree, and other factors. Nevertheless, scientists understand that growth regulators are responsible for orderly plant growth and development.

For example, auxin is a growth regulator produced in apical meristems, while cytokinin is another type synthesized in root tips. In response to environmental factors, roots grow and make cytokinins that stimulate shoot growth, which can result in auxin production that promotes root development. The resulting cycle is one way the tree system “communicates” to stay in balance as it grows. Auxin also functions in apical dominance. Auxin produced in apical meristems inhibits lateral growth, and helps to account for orderly branch development and spacing. Conversely, removing an apical bud or

meristem promotes lateral growth, which alters the tree's normal growth habit, and can lead to codominant stems, poor spacing, and included bark.

Gibberellins are another class of growth regulators. Among other functions, gibberellins promote cell elongation. Marketed chemicals commonly known as "Tree Growth Regulators" (TGRs) are actually gibberellin inhibitors. By inhibiting gibberellins synthesis, TGRs reduce cell elongation, which in turn slows growth.

3.3 Natural Target Pruning

Natural targets are proper final pruning cut locations at strong points in the tree's disease defense system. Removing branches at natural targets rarely damages the joining trunk or limb (Miller 1998). The *ISA Best Management Practices: Tree Pruning* (Gilman and Lilly 2002) and *A300* (ANSI 2008) describe the technique. Targets vary depending on whether a branch is removed or reduced.

3.3.1 Collar Cuts

Branches should be removed at the collar (Figure 3.7). Cutting into the collar, known as flush cutting, is inappropriate because it creates a direct port of disease entry into the parent stem.

Disease can weaken stems, potentially creating safety risks. On the other hand, proper branch removal does not leave stubs that pathogens can use as an energy source to overcome the tree's defense system and spread into the trunk. If the branch is removed correctly, only the branch protection zone is exposed, giving an advantage to trees in keeping out disease. As a result, collar cuts virtually prevent decay from entering the parent stem (Figure 3.7 [Miller 1998]).

3.3.2 Approximating the Collar

Occasionally, branch collars are not readily evident and the collar must be approximated using the branch bark ridge (Figure 3.8). Start the cut in the branch crotch, just outside the branch bark ridge, and follow an outward angle that mirrors the inward angle the branch bark ridge makes with the trunk or parent stem. The cut should end roughly opposite the bottom of the branch bark ridge (Figure 3.8).

3.3.3 Reduction Cuts

Reduction cuts shorten leads to appropriate laterals. An appropriate lateral is no less than one-third the diameter of the original limb and retains at least three-quarters of the lead's foliage (ANSI 2008 [Figure 3.9]). The reason for these requirements is that branches are autonomous in their energy requirements. Removing too much foliage from a limb could deprive it of sufficient energy to establish apical dominance, maintain its taper, close the wound, and compartmentalize and "out-race" disease which will enter the wound.

As a result, the lateral will not develop into a structurally viable leader. Moreover, shortening a lead removes apical meristems and other points of growth regulator production, which can disrupt orderly growth. If, for example, auxin concentrations are insufficient, on some species a crowded mass of upright, rapidly growing, poorly attached shoots can sprout from the cut and grow directly back into the lines.

Therefore, removing more than 25% of foliage from a limb has the same damaging result as a random topping cut (Figure 3.10), regardless of whether or not the cut is made to a proper-sized lateral. Even under the best circumstances, reduction cuts are potentially harmful,

acting more like a heading than a thinning cut (Gilman 2002). Consequently, if a lead cannot be shortened to a limb at least one-third the diameter of the original lead, or if a cut removes more than 25% of the foliage, that limb should be either targeted for removal, or not pruned. Removal may be gradual over the course of several cycles.

3.3.4 Large Branches

Large branches (those 3-inches in diameter or greater) can seldom, if ever, be removed without harming the tree, particularly if they are codominant stems. Yet, large branches must be prevented from growing toward the utility space, and that nearly always means heading or removing them entirely. Either option can be harmful, but heading large branches not only injures the tree, but fails to effectively clear the conductors (Figure 3.10).

Removal may take a measured approach. For example, one or two large limbs might be removed out of three that are growing toward the conductors, and the remaining limb(s) targeted for removal on subsequent cycles.

Large branches selected for later removal can be subordinated, or removed gradually over subsequent cycles (either interim or cycle). Subordination thins a portion of a limb's foliage. Reducing a fraction of the foliage in this way suppresses the stem's growth, and allows the remaining tree parts to adjust and develop. In some cases, subordination can allow a codominant stem to develop into a branch over time, enabling a branch protection zone to form so a limb can be removed without unnecessarily subjecting a tree to disease (Gilman 2012). Using subordination over multiple cycles to remove large branches can reduce the effect of structural limb removal on tree health, while ultimately circumventing the

permanent problems heading cuts can cause, even if that means temporarily heading the branch.

3.3.5 Old Heading Cuts

Removing large stems that have been headed often leaves wide gaps in the tree, because shoots that proliferate from the old heading cuts often dominate the crown (Figure 3.10), and gaps result when branches containing these shoot clusters are removed. Moreover, previously headed branches usually lack natural targets. When such branches are growing toward the conductors, there might be no alternative but to remove them entirely. However, in some cases, headed limbs may be left as a temporary measure. Such headed branches could be removed on subsequent cycles.

Headed branches growing away from the facility space should not be pruned as a matter of standard practice. However, shoots growing from the old heading cuts should be inspected for structural integrity during subsequent visits. Corrective action, such as crown restoration (ANSI 2008), could be necessary if these sprouts are found to be structurally weak.

However, in some cases, structural defects resulting from heading cuts are so severe that they cannot be corrected (Dahle et al. 2006). In these cases, the customer should be contacted about removing the entire tree, or at least the subject branch or branches. If tree or branch removal is not possible, there could be no choice but to remove the weak growth with a new heading cut. This should be done only when extensive decay or hollow exists in the remaining branch, with the approval of the forester or GF/supervisor, for safety (not "aesthetic") purposes.

Figure 3.8 Approximated collar cut.



Figure 3.9. Crown reduction cut.

Figure 3.10. Old heading cut.

Shoots that proliferate from these cuts often dominate the tree's crown, and gaps result when branches containing these shoot clusters are removed.



3.3.6 Reduction

Reduction is selective pruning applied to reduce the top or side of a tree or individual limb (ANSI 2008). In a utility context, the goal of reduction is to promote future tree growth away from the conductors, at least on decurrent trees (Figure 3.1)

3.3.6.1 Deciduous Trees

The "V" in many crown reduced deciduous trees quickly fills in with shoots. These shoots eventually require pruning to be kept from interfering with the lines (Figure 3.1) In subsequent cycles, it is important not to strip all these sprouts away, since that causes lion's tailing and can stimulate resurgent growth in many species. Rather, about half of the shoots should be removed, and the other half retained (Figure 3.11).

Shoots selected for removal should be the largest and most vigorous, leaving smaller sprouts behind. Growth selected for retention should be pencil-thin at the

point of attachment. If need be, these remaining shoots may be headed back to obtain specification clearances. In this way, a rotation can be established where the largest, most vigorous shoots are removed each cycle, but smaller, suppressed shoots are left to soften the negative visual effect that many customers find objectionable.

Moreover, leaving shoots in the interior of a "V" provides shade and retains auxin production, both of which suppress vigorous sprouting, and helps the trees hold (Figure 3.11). Eventually the sides of the tree will overtop the wires, resulting in more of a "U," and shade the interior of the tree, suppressing shoot growth even more. In time, this top growth decreases the proportion of the crown occupied by the cleared utility space, and softens the negative aesthetics.

3.3.6.2 Conifers

Many conifers; such as pine (*Pinus spp.*), spruce (*Picea spp.*) and Douglas-fir

(Pseudotsuga menziesii); have strong central leaders (excurrent form). When these types of trees grow directly under the lines, they should be reduced to the whorl or largest available lateral that provides specification clearance. Cuts made to conifer whorls are typically flat-topped in order not to damage any branches in the whorl (Figure 3.12). Laterals should be tipped on conifers, which prevents them from forming compression wood and bending up toward the conductor.

Figure 3.11 On return visits to "V-Outs", under pruning should leave the smaller, suppressed shoots to retain foliage and soften the visual effect of crown reduction.



*Figure
3.12.*

Crown reduction.



4. SCHEDULING AND REPORTING WORK

Scheduled work involves systematic cycle or interim projects on both distribution and transmission lines. Schedules should be based on the time elapsed since the last scheduled work, compliance, voltage (particularly for transmission lines), the frequency of tree-caused outages, customer count, the existence of important accounts (hospitals, factories, mines or other high demand facilities), tree conditions, the number of customer complaints, the growth rate of predominant tree species, geography, customer density, rainfall and other environmental factors.

4.1 Process Checklist

Scheduled distribution and transmission work should follow the *PacifiCorp Vegetation Management Process Checklist* (Figure 4.1). The purpose of the process checklist is to facilitate systematic project management. The project should be identified along with the start date on the top of the process checklist.

4.1.1 Authorize Project Work

PacifiCorp foresters are responsible for work authorization. No work should begin on a project until foresters have authorized it to proceed as outlined.

4.1.1.1 Contractor Work Release

Before beginning a scheduled project, the forester shall open a *Work Release* (Figure 4.2). The *Work Release* authorizes a contractor to proceed with a specific maintenance project, and provides written instructions for the work. Contractors will not get compensated for work performed

on projects that have not been authorized through a work release.


The *Work Release* specifies the project type (distribution cycle or interim, transmission cycle or interim, TGR or chemical). It provides instructions on tree removals, tree replacement, tree growth regulators (TGRs) and other particulars. It also assigns desired starting and ending dates. Before work begins, the GF/supervisor shall distribute copies of the *Work Release* to each crew assigned to the project, and review instructions for proceeding.

After the project is finished, the supervisor/GF shall sign the *Work Release* to certify the project is completed and closed. The contractor shall provide the actual starting and completion dates, as well as any pertinent comments. Comments should note work that is either incomplete (due to refusals, for example) or does not meet specifications at the time the *Work Release* is closed. By signing off on a project, the contractor guarantees that the work has been completed to PacifiCorp's specifications, and assumes responsibility for any failures to meet Company requirements, outside of exceptions noted in the comments.

4.1.1.2 Set Labor-hour Goals

The forester should set goals for labor-hours a tree and mile for time and equipment distribution cycle and interim work. These goals should be based on production data drawn from the last work on the feeder or grid, with a stretch goal of 10% improvement. Goals should also be established for transmission facilities at labor-hours a mile from previous or similar projects.

Figure 4.1 Process Checklist



Vegetation Management Process Checklist

Work ID: _____

Date: _____

Authorize Project Work - Utility Forester

- Open Work Release and Set Goals. Distribute and Discuss with Vegetation Contract Supervisor
- Labor-hour Goals Set for Trees, Miles or acre (for transmission lines)
- Work Release Sent to Consultant LD/SR, Service Coordinator and System Forester
- N/A Notify Operations Managers, Community Relations Managers, Communications

Project Plan - Forester, Contract Supervisor and Forest Technician

- N/A Identify Overbuilt Transmission and Open Transmission Work Release
- N/A Research and Identify Governmental, Tribal, and Environmentally sensitive areas
- N/A Identify External Agencies and Notify if Necessary (Federal, State County, City and pertinent NGOs)
- N/A Conduct Pre-job Meetings With Government Agencies
- N/A Contract Expert to Delineate Sensitive Sites or Areas and Identify On Maps
- Forester Inventories, Compiles, Assembles, Checks Out Maps to Vegetation Contract Supervisor

Project Plan Developed - Contract Supervisor and Forest Technician

- Pre Job Meeting With Forester, Supervisor and Forest Tech Date: _____
- Identify Concerned/Dangerous Customers
- N/A Identify and Obtain Federal Special Use Permits:
- N/A Identify and Obtain Federal, State, and Local Herbicide Use Permit(s)
- N/A Identify and Obtain Other Required Permits: Specify:
- N/A Identify Outstanding Ticket Work
- N/A Identify Flagging Work
- N/A Distribution Configuration Wye Delta

Work Identification - Contract Forest Technician

- N/A Review of Special Precautions: (list)
- N/A Follow-up: Personal Contact Requirements, Special Access, Time Sensitive Instructions
- N/A Verify Facility Point Inspections Locations
- N/A Verify Aerial Waypoint Locations
- N/A Review Environmental and Cultural Requirements:
- Inspect, Prioritize Work Areas
- Notify Private Landowners and Public Land Managers

Work Assigned to Project Crews - Contract Forest Technician and Supervisor

- Activity Reports And Other Pertinent Feeder/grid Information Issued to Crews
- N/A Required Permits Issued to Crew
- Work Release and Project Specifics Communicated and Issued To Crews
- N/A Sensitive Sites or Areas Reviewed With Crews Date: _____
- N/A Special Instructions: (list below in comments section)

Figure 4.1. Continued

Project Closure - Contract Supervisor and Forest Technician

- Post Inspection of Work to Verify Completion
- Inventory and Check In Maps
- Maps and Documentation Submitted
- N/A Concerned Customer Forms Submitted
- N/A Refusal Information Submitted
- N/A Dangerous Customer Information Submitted
- N/A Tree Replacement Voucher Copies Submitted
- N/A Hazard Forms - Copy in File and Copy to Utility General Foreman
- Daily Logs for Project Sent to Utility Area Forester

Date: _____

Project Closure - Forester

- Verify Receipt of All Maps, Daily Logs, Activity Reports, Tree Replacement Vouchers, and Hazard Forms
- Verify Receipt of Refusal and Concerned/Dangerous Customer Information
- Verify Receipt of Signed Work Release
- Close Work Release (Send to Consultant LD/SR, Service Coordinator and System Forester)

X _____
Contract Supervisor / Date

X _____
Area Forester/ Date

Comments:

Figure 4.2. Vegetation Management Contractor Work Release

PacifiCorp Vegetation Management Contractor Work Release

This work release authorizes *Contractor* to proceed with the specified maintenance project. All work shall conform to PacifiCorp's Vegetation Management Specifications. Following project completion, a *Contractor* representative shall sign this work release, and return it to PacifiCorp. Refusals or any work performed that does not conform to PacifiCorp Specifications shall be noted.

District: _____

Project #: _____

Contractor: _____

Supervisor/GF: _____

_____ **Distribution Cycle Maintenance**

Feeder/Grid #: _____

Work according to PacifiCorp *Specifications*. Identify and correct all climbable tree and tree house hazards, and remove danger trees.

_____ **Tree Removals:** Limit removals to cases where removal time equals twice pruning time. Forester approval is required for removals outside of this constraint.

_____ **Tree Replacement:** Use coupons to pursue removals as needed.

_____ **Tree Growth Regulators:** Pursue TGRs on cycle busters.

_____ **Bulk Transmission:** Work bulk transmission with distribution.

_____ **Other:** _____

Desired Starting Date: _____

Completion Date: _____

Area Forester Approval: _____

Date: _____

To be completed by the Contractor:

Starting Date: _____

Completion Date: _____

Comments: _____

Supervisor/GF Signature: _____

4.1.1.3 Work Release Forwarded to Senior Business Specialist and Director of Vegetation Management

The forester should forward the work release and goals to the PacifiCorp senior business specialist and director of vegetation management. The consultant will authorize payment for work on the project.

4.1.1.4 Notify Appropriate Company Personnel

The forester should notify internal stakeholders of a project prior to beginning work. Internal stakeholders include operations managers, customer-community managers, line patrolmen, hydro facility site managers and other personnel. PacifiCorp tariff policy should be notified if work will be conducted in a location where either past or current state public utility commission complaints have been received. PacifiCorp communications department should be informed if work will be conducted in the vicinity where public relations issues have surfaced in the past or could be reasonably expected to arise during currently planned work.

4.1.2 Project Plan

The project plans section provides direction for foresters, contract supervisors and contract utility foresters.

4.1.2.1 ID Overbuilt Transmission and Open Transmission Work Release

Transmission overbuilt on distribution lines should be worked in conjunction with distribution feeder or grid projects.

4.1.2.2 Research and Identify Governmental, Tribal and Environmentally Sensitive Areas.

Governmental, tribal and environmentally sensitive lands present particular demands. Lands under governmental or tribal management and environmentally sensitive areas should be identified early to allow time to work through the required processes.

4.1.2.3 Identify External Agencies and Notify if Necessary.

Identify federal, state, county, city and pertinent non-governmental organizations potentially affected by the project. The appropriate entity should be notified of the impending project, and asked whether or not they have any concerns.

4.1.2.4 Conduct Pre-job Meetings with Governmental Agencies

Before any field work begins, a meeting shall be conducted with governmental agencies that have interest in the project. This is especially important for federal land managers and tribal leaders. In particular, no work may begin on Bureau of Land Management or Forest Service managed lands without a pre-work meeting among federal officials and vegetation management. Multiple projects and multiple agencies may be covered by a single meeting.

The meeting(s) shall be organized by the forester and PacifiCorp's environmental services must be notified and invited to attend. The meeting may be held either in person or through a conference call. Work shall not begin until vegetation management receives written notice to proceed from the appropriate agency.

4.1.2.5 Contract Expert to Delineate Sensitive Areas

If environmentally or culturally sensitive areas are identified on governmentally-managed lands, a contractor with appropriate expertise should be retained to delineate subject sites or areas. Target locations should be marked on maps and on site. Care should be taken with field marking to ensure it is sufficiently clear to alert crews, while at the same time being sufficiently discreet to avoid casual detection.

4.1.2.6 Forester Inventories, Compiles, Assembles, Checks Out Maps to Vegetation Contract Supervisor

It is critical for foresters to be gatekeepers over company maps in order to ensure there is only a single master version of each. If paper map copies are necessary, the forester will check out copies of the master version, which should include sensitive environmental or cultural sites. Effort should be made to work off of digitized maps wherever possible. Contract utility foresters should work with mapping to secure digital maps and communicate with the Company forester responsible for the region. Foresters should ensure that there is a digital master with all pertinent information.

4.1.3 Project Plan Developed

The contract supervisor and contract utility forester are responsible for developing the project plan.

4.1.3.1 Pre-Job Meeting

The contract supervisor and contract utility forester must have a pre-job meeting to discuss the upcoming project. They should discuss elements of the

project plan and focus on solving problem issues that arose during the initial stages of the planning process.

4.1.3.2 Identify Concerned or Dangerous Customers

Contract utility foresters should research the feeder or grid file to identify customers with a history of concerns. Contract utility foresters should be proactive in working with these customers. Contract utility foresters, supervisors/general forepersons and foresters should discuss strategies for avoiding violence with dangerous customers.

4.1.3.3 Identify and Obtain Federal Special Use Permits

PacifiCorp facilities that cross federally-managed lands are in place under the authority of special use permits. Contract utility foresters and supervisors should study and ensure the conditions in the pertinent special use permits are satisfied. Any concerns about the potential of not complying with provisions in special use permits shall be communicated to the forester.

4.1.3.4 Identify and Obtain Federal, State and Local Herbicide Use Permits.

Herbicide or pesticide use permits are required in certain jurisdictions, particularly on federally-managed land. If a permit is required, foresters must ensure that contract utility foresters or supervisors/GFs have obtained it before herbicide application may proceed.

4.1.3.5 Identify and Obtain Other Required Permits.

Permits may be required. Examples may include projects along state road rights-of-way, in some communities, county or state forests or riparian areas. All required permits shall be obtained by the contractor before work may proceed.

4.1.3.6 Identify Outstanding Ticket Work.

From time to time, customers who have called in work requests have been told that their request did not present an immediate threat to safety or electric service and could wait until regularly scheduled work. Contract utility foresters should research tickets associated with a feeder or grid, ensure contact is made with those customers, and either explain the reasons why the work does not need be done or schedule it for completion

4.1.3.7 Identify Flagging Work.

Many areas require flaggers and traffic control. Contract utility foresters should identify areas where flagging support is necessary. Those locations should be identified on both the *Activity Report* and a map. Planning should maximize the number of tree crews working with each flagging crew.

4.1.3.8 Identify Circuit Configuration

The overwhelming majority of PacifiCorp distribution circuits are built with wye configuration, which includes a neutral wire. However, delta construction, which does not have a neutral wire, is found in some areas.

The difference is of little consequence on wires attached to cross arms, as all cross arm-mounted wires should be cleared to primary specifications (see section 5.6.5). However, there is a significant distinction on lines without

cross arms. Wye construction has a low neutral, while the low wire on delta carries primary voltage. This could lead to safety and clearance risks if the low primary is mistakenly identified as a neutral. In noting that a circuit is delta construction, contract utility foresters should alert tree crew leaders of the potential of a low-mounted primary, so safe work practices can be conducted and proper clearances obtained.

4.1.4 Work Identification

Contract utility foresters are responsible for work identification.

4.1.4.1 Review Special Precautions

Before beginning field work on a project, contract utility foresters should review special precautions. These might include areas where difficulties have arisen in the past, such as a particularly sensitive community or neighborhood, areas where the media has been called to help oppose line clearance work, locations where there is a concentration of people who object to herbicide application, environmentally or culturally sensitive areas, or other matters of concern.

4.1.4.2 Follow-up On Items of Concern

Contract utility foresters should follow-up with customers who requested personal contact in the past, note special access (property owners who have requested tree crews not use a gate or drive, for example), or time sensitive instructions. Examples of time sensitive instructions include advisories not to work prior to hay harvest, not to drive in a field during the raining season in the Pacific Northwest, or some other matter.

4.1.4.3 Verify Facility Point Locations

Contract utility foresters should print outstanding facility points for the feeder, grid or transmission lines on which they are planning work. They should inspect outstanding conditions and assign work where necessary.

4.1.4.4 Verify Aerial Waypoint Locations

For transmission projects, contract utility foresters should print outstanding locations from recent aerial patrols and ensure they are inspected and worked if necessary.

4.1.4.5 Review Environmental and Cultural Requirements

For work crossing governmentally managed land, contract utility foresters should review any existing environmental and cultural requirements. These can include threatened and endangered species, riparian areas or the location of culturally sensitive sites.

4.1.4.6 Inspect, Prioritize Work Areas

Contract utility foresters shall document their contact with property owners or land managers, and organize work for tree crews on an *Activity Report* (Figure 4.3).

The *Activity Report* should identify the district in which work is to be conducted, the project number (the discrete number assigned to the district), the contractor assigned to the job and the feeder or grid number for distribution or plant locality number for transmission.

For each work location, the contract utility forester should note the date they inspected the site, a detailed location, the identity of the tenant or property owner (if known), the type of contact (door hanger, letter, personal visit, telephone or no contact), the crew type required to perform

the work (lift, climb, flagging, mowing or other), a description of the work, and comment, if necessary. Comments could include special considerations such as how to access the work, whether or not there is a dog on site, a sensitive area of the yard such as flower beds, cultural or environmental sites, or other matters.

4.1.4.7 Hydroelectric Facilities

PacifiCorp hydroelectric facilities and adjacent rights-of-way could have restrictions on vegetation management activities. PacifiCorp's hydro operations and implementation (compliance group), PacifiCorp right-of-way services, or PacifiCorp environmental services shall be contacted before activities on or adjacent to hydroelectric facilities begin.

Herbicide use on or adjacent to PacifiCorp hydroelectric facilities shall be reported to the plant manager weekly. Tree crews working on property that is part of a hydroelectric project site should check in with the plant office before beginning work and check out after work each day.

4.1.4.8 Substations and Transition Stations

Contract utility foresters should provide a limited visual assessment of the vicinity around substations and transition stations for trees that have a high probability of falling into or interfering with the facility. Trees identified in the limited visual assessment should undergo a basic assessment. If the basic assessment indicates trees are likely to interfere with or fail and strike the sub or transition station, the trees should be assigned to a tree crew for removal or mitigation. Limited visual and basic assessments are described in Smiley, Matheny and Lilly (2011). Climbable trees that could provide access into the fenced area should

also be identified and corrected along with any vegetation growth that could interfere with the facility. Tree crew substitution

4.1.4.9 Notify Private Landowners and Public Land Managers

Prior to any tree crew work, contract utility foresters should attempt to contact the property owner or tenant on whose property the work will occur. Customer contact shall follow procedures outlined in Section 8.2.

Public land managers should have been consulted before this stage (see section 4.1.2.4). However, during the notification process, contract utility foresters should follow-up with appropriate land managers to inform them that work is proceeding as planned, and provide an update on when crews are expected to begin work.

4.1.4.10 Schools

School main or administrative offices should be notified of work to be done within school grounds or on property adjacent to schools. An effort should be made to schedule work without children present or specific accommodations made for pupils' safety. Particular effort should be made to identify targets within drop zones, climbable trees, access issues and other safety matters on site.

4.1.4.11 Mobile Home Parks and Apartment Complexes

Mobile home park and apartment complex managers should be notified in advance of planned work. Managers could be aware of tenants with specific concerns. Mobile home park and apartment managers should be encouraged

activity should be charged to a work order supplied by sub operations.

to communicate with affected renters. Individual units may still need notification of impending work.

4.1.5 Work Assigned to Project Crews

Work assignments are the responsibility of both contract utility foresters and supervisors/GFs.

4.1.5.1 Activity Reports and Other Pertinent Information Issued to Tree Crews

Contract utility foresters or supervisors/GFs should distribute completed *Activity Reports* to the tree crews.

4.1.5.2 Required Permits Issued to Tree Crews

Appropriate permits shall be issued to tree crews. Tree crew members should have them available to produce to the appropriate authorities on demand.

4.1.5.3 Work Release and Project Specifics Communicated and Issued to Crews

Before beginning work on a project, the tree crew should be issued the pertinent work release. Tree crews should be able to produce the work release to foresters during audits.

4.1.5.4 Sensitive Site or Area Review With Crews

Sensitive site locations should be communicated to tree crews.

4.1.5.5 Special Instructions

If there are special instructions, such as working in sensitive areas, contract utility foresters should communicate this in writing and ensure that tree crews have read and understand them.

4.1.6 Project Completion

After completing work, the crew leader shall note the date it was performed and initial the location entry.

4.1.6.1 Post Inspection to Verify Completion

The vegetation management contractors are ultimately responsible for ensuring that all work on a project is completed to PacifiCorp specifications. Supervisors/GFs should either inspect the work themselves, or delegate that inspection. If the work is delegated to the contract utility foresters, supervisors/GFs still have the responsibility for ensuring the project is completed to specifications. Any exceptions to specifications for any reason must be noted on the work release (see section 4.1.1.1).

4.1.6.2 Inventory and Check in Maps

Supervisors/GFs and contract utility foresters should collect all maps that have been distributed to tree crews and return them to the forester from whom they were initially issued. Foresters shall account for all maps originally issued, and file them appropriately.

4.1.6.3 Maps and Documentation Submitted

Supervisors should submit maps, completed activity reports and other pertinent documentation to foresters.

4.1.6.4 Concerned Customer Tracking

Contract utility foresters and supervisors should gather information on customers that might require follow-up the next time a project is worked. Examples are customers who refuse to allow work or access, customers who express concerns about work or customers or property owners who threaten vegetation management employees. Information should be presented to the forester in writing on the customer refusal form and appropriately filed, preferably digitally.

4.1.6.5 Tree Replacement Voucher Copies Submitted

Contract utility foresters and supervisors should submit digitized copies of tree replacement coupons to the forester.

4.1.6.6 Hazard Forms Copied, Filed and Submitted to the Utility General Foreman

Forms documenting facility points (Figure 2.7) that need to be corrected (broken cross arms, broken insulators, leaning or unstable poles, for example) should be submitted to the PacifiCorp district general foreman or operations manager.

4.1.6.7 Daily Logs for Project Submitted to Area Forester

Supervisors should collect *Daily Logs* from each crew member under their direction. These should be digitized and emailed to the forester, as well as filed by the forester.

4.1.6.8 Sign Work Release

Once they have determined that all work on a project is completed to specifications, GF/supervisor should sign and date the work release. Any locations that have not been worked to specifications should be documented on the work release with an explanation of the circumstances (see section 4.1.1.1).

4.1.7 Project Closure

Foresters are responsible for closing projects by completing the tasks in 4.1.7.1-4.1.7.3.

4.1.7.1 Verify Receipt of Maps and Other Pertinent Information

Foresters should inventory maps and collect daily logs, tree replacement vouchers, hazard forms as well as concerned customer, dangerous customer and refusal information from the supervisor. Foresters should file this information digitally so it can be retrieved when work is conducted the next time through. Foresters should ensure to keep one master digital map.

4.1.7.2 Verify Receipt of Signed Work Release

Foresters should ensure they have received and filed a copy of the signed work release from the contractor. They should examine the comment section for any work that was not completed to specification, and if necessary, make provisions to correct those outstanding conditions.

4.1.7.3 Close Work Release

The forester should close the work release and inform the lead/senior consultant and director of vegetation management of the closure by electronic mail.

4.2 Reporting Work

After completing work, the crew leader shall document tree work on *Weekly and Daily Reports*. Note the date the work was performed, the crew ID number and the crew leader's initials.

4.2.1 Weekly Vegetation Report

Tree work shall be reported on the *Weekly Time & Vegetation Report* (Figure 4.4) or other approved method. The report is a combination contractor time sheet and PacifiCorp weekly production report. The back of the report provides instructions and definitions for each cell (Figure 4.5). Weekly Reports, along with the corresponding invoice should be submitted to the forester responsible for the area in which the report was completed,

Most of the items on the *Weekly Report* are self explanatory. A few cells warrant clarification, (reference Figures 4.4 and 4.5).

- Item 23. General Work Location: The general location should be the approximate address. For example, the 4000 block of Dead Elm Memorial Road. Note that for audit purposes, crew leaders will be responsible to find and identify all the trees they worked over the course of a week. Consequently, more detailed information should be kept in the *Daily Report* (covered in Section 4.2.2 [Figure 4.6]).
- Items 31 and 32. Woody plants (including vines) less than 4-inches in diameter at breast height are classified as saplings. The actual square footage occupied by the above ground portion of the plant should be measured and recorded, with a 100 ft² maximum per plant for both pruned and removed vegetation. Note that multi-stemmed

woody plants where no single stem is over 4-inches in diameter are classified as saplings, with a maximum of 100 ft² per plant.

- Item 37. Stump Spraying: Document the time spent treating stumps of trees and brush feet that have been removed during the day. Use quarter-hour increments.
- Items 43-45. To obtain the diameters of multi-stemmed trees, add the diameters at breast height of individual stems. For example, if a tree has three stems of 8, 4 and 3- inches in diameter, the tree would be 15 inches in diameter and reported as a 12-24 inch removal. An exception would be if no stems on the plant are over 4-inches in diameter at breast height, in which case the plant should be classified as a sapling (see items 31 and 32). If only one stem is over 4-inches in diameter and the remaining stems are less, report the diameter of that specific removal as the diameter of the single largest stem.
- Item 47 and 48. Saplings pruned and removed. Saplings are trees under four-inches in diameter at breast height (they could also be 6-inches or less in diameter at the stump). Report area covered by the crown of the plant, with a 100 ft² maximum for each plant. There must be six inches of soil between stems of the same species to count as multiple plants.
- Items 54 and 55. For transmission cycle work, capture the number of acres cleared or sprayed respectively using linear feet.

4.2.2 Daily Report

The *Daily Report* shall be used by crew leaders to keep detailed records on their productivity (Figure 4.6). It is particularly important as a reference for locating trees during audits and tracking

chemical use. Like the *Weekly Report*, the *Daily Report* provides instructions on a cell by cell basis. The *Daily Report* is the property of PacifiCorp, and when completed, supervisors/GFs shall digitize it, and sent to the appropriate forester.

4.3 Tree Crew Audits

The primary purpose of a crew audit is quality control. Furthermore, crew audits offer an opportunity for the forester to provide tree crew leaders and their supervisors/GFs with a clear understanding of PacifiCorp's expectations.

Foresters shall audit one full week of work as many times a year as specified in their goals. All work, including transmission and pole clearing, shall be audited. Each audit should have the forester, the crew's GF/supervisor and the crew leader in the field together reviewing completed work. Audits should begin with the first tree, and progress in order to the last tree worked during the week. Over the course of the audit, the forester, supervisor/GF and crew leader should open a dialog regarding the week's results.

The audits should objectively assess quality, adherence to specifications, tree counts, herbicide and other matters. Moreover, audits should provide the tree crew leader with feedback on production, professionalism, equipment, safety and crew efficiency. Results shall be documented on a *Tree Crew Audit Report* (Figure 4.8).

4.3.1 Objective Components

Objective audit components shall be determined on the straight percentage of trees that meet expectations compared to the total trees worked in each category. The percent score shall be averaged for the final rating.

4.3.1.1 Quality

The quality component documents crew adherence to natural target pruning as described in Section 3.3. Before conducting an audit, the forester and supervisor/GF should agree on a day to examine cut quality. One way would be to roll a die. In this case, 1 would designate Monday as cut quality day, 2 Tuesday and so on. Six would represent Saturday, so it would require further rolls until a different number turns up.

All final cuts made by the crew that day should be counted and examined for proper technique. A minimum of 20 cuts shall be inspected. If a crew did not make 20 cuts on the selected day, another day should be added until a minimum of 20 cuts have been evaluated. Note that if Friday is the selected day and 20 cuts were not made, the crew leader should alert the forester and GF/supervisor before the audit begins so another day can be added for cut quality.

Rip cuts, flush cuts and improper lateral selections violate the principles of natural target pruning, and shall be counted against the category score. Foresters should grant tree crews one grace faulty cut (the "Mulligan"). In addition, each "hanger" left in the tree will count as one improper cut per inch of the hanger's diameter. For every two hangers

under one-inch in diameter, a single cut penalty should be assessed.

Lombardi poplar, Douglas hawthorn and other species are exempted from cut quality examination at the PacifiCorp director of vegetation management's discretion.

4.3.1.2 Specification Adherence

The *Specification* section examines all trees worked over the course of a week, both pruned and removed. It takes a straight percentage of trees that comply with clearances specified in Chapters 5 and 6 against all those worked during the week. Brush feet sprayed may be counted as brush feet removed. In addition, if climbing spurs were used in violation of section 2.6.3, the crew will be penalized for a tree out of specification.

4.3.1.3 Tree Count

The tree count section is used to validate numbers in the *Weekly Report* against those actually identified in the field on a straight percentage basis. Reported trees pruned, secondary trees, and brush feet equivalents ($\text{ft}^2 \div 100 \text{ft}^2$ of saplings pruned or removed) should be validated for discrepancies in these categories. Note that no plant should be reported at more than 100ft^2 . Smaller, pencil-diameter stems may be counted at 10ft^2 each.

Figure 4.5. PacifiCorp Weekly Time and Vegetation Management Report Instructions and Definitions.

Instruction & Definitions

1. Week Ending: The week ending date (Saturday).
2. District: The PacifiCorp district where the work occurred.
3. Project #: District identification number
4. Cr. Leader: Crew Leader's name.
5. Crew #: Three-digit crew number assigned to crew leader.
6. Crew Type: Two-character crew-type code (2-Lift, 2-Mow, 3-Lift, 3-Climb, 4-Climb, 5-Climb, F. Tech, Others)
7. Certified Appl. #: The certified applicators license number.
8. Supervisor: Crew's Supervisor's name.
9. Local Trans Cycle, TID#: Transmission line six-digit Tech ID number.
10. Local Trans Ticket: Check when working transmission tickets. Tech ID number not required.
11. Local Trans Hot-Spot, TID#: Transmission line six-digit Tech ID number.
12. Local Trans Chemical: Transmission line six digit Tech ID number.
- 13 Local Trans Inspection: Transmission line six digit Tech ID number.
14. Local Trans Pole Clear: Transmission line six digit Tech ID number California Only
15. Dist. Cycle, F/G#: Feeder or grid number, maximum eight characters.
16. Dist. Ticket: Check when working distribution ticket. Feeder or grid numbers not required.
17. Dist. Hot-Spot, F/G#: Feeder or grid number, maximum eight characters.
18. Dist. Chem. F/G#: Chemical Cycle Maintenance: Enter Feeder/Grid #.
19. Dist. Pole Clear F/G#: Feeder or grid number. maximum eight digits. This activity is only in California.
20. Main Grid Cycle: Transmission line six digit Tech ID number
21. Main Grid Hot-Spot: Transmission line six digit Tech ID number
22. Main Grid Chemical: Transmission line six digit Tech ID number
23. Main Grid Inspection: Transmission line six digit Tech ID number
24. Main Grid Pole Clear: Transmission line six digit Tech ID number California Only
25. District Work Order or Storm Work: Plant Maintenance (PM) Order and Cost Center.
26. Shop Location: Shop location.
27. General Work Location: General work location for the day. Detailed locations are to be kept separately in the "yellow books." For audit purposes, crew leaders are responsible to find and identify all trees they worked.
28. Travel & Misc. Man-hours: Number of travel and miscellaneous (meetings, stand-by, etc.) man-hours a day.
29. Inspection/Notification: Number of inspection and notification man-hours a day. Includes facility inspection property owner notification.
30. Traffic Flagging: Number of traffic flagging man-hours a day.
31. Chip/Cleanup/Dump: Number of chipping, cleanup, and dumping man-hours a day. Stump grinding should be accounted for here.
32. Tree Prune: Number of man-hours a day spent pruning, including setup.
33. Tree Removal: Number of tree removal man-hours a day, including setup.
34. Saplings Pruned: Man-hours a day spent pruning saplings, including setup. Saplings are woody plants under 4" DBH (diameter at 4.5 feet above the ground) of species which have the potential to reach wire height at maturity. Report no more than 10 ft² a plant.
35. Sapling Removed: Man-hours a day removing saplings, including setup. Saplings are woody plants under 4" DBH (diameter at 4.5 feet above the ground) of species which have the potential to reach wire height at maturity. Report no more than 10 ft² a plant.
36. TGR: Man-hours a day applying TGRs. including setup.
37. Pole Clear/Treating: Pole clearing man-hours a day.
38. ROW Clearing: Transmission ROW clearing man-hours a day.
39. ROW Spraying: Transmission ROW spraying man-hours a day.
40. Stump Spraying: Man-hours a day spent spraying stumps and stubble from removed saplings. Use 1/4 hour increments
41. Total Man-Hours: Total number of man-hours a day and week. Use 1/4 hour increments.
42. Intentionally blank.
43. Primary pruning. Total trees pruned on primary conductor each day.
44. Intentionally blank.
45. Sec/Serv. Pruning: Total trees pruned each day for secondary, service, or street light where there is no primary.
46. Removals 4"-11": Total trees removed between 4"-11" DBH
47. Removals 12"-23": Total trees removed between 12"-23" DBH
48. Removals 24" and greater: Total trees removed 24" DBH and greater.
49. TOTAL PRUNED/REMOVED: Total trees pruned or removed a day and week.
50. Sq. Ft. Saplings Pruned: Square feet (length x width) of saplings pruned. Saplings are woody plants under 4" DBH (diameter at 4.5 feet above the ground) of species which have the potential to reach wire height at maturity. Report no more than 100 ft² a plant.
51. Sq. Ft. Saplings Removed: Square feet (length x width) of saplings removed. Saplings are woody plants under 4" DBH (diameter at 4.5 feet above the ground) of species which have the potential to reach wire height at maturity. Report no more than 100 ft² a plant.
52. Stump Application: Total trees that were stump treated with herbicides.
53. Stumps Ground: Stumps ground out.
54. TGR Application: Trees treated with Tree Growth Regulators (TGRs [(Implants, soil drench, and soil injection])).
55. Poles Cleared: Poles cleared of trees and brush. This activity is only in California.
56. Poles Treated: Poles treated with herbicides.
57. ROW Acres Cleared: Transmission ROW acres cleared of trees and saplings.
58. ROW Acres Sprayed: Transmission ROW acres where trees and saplings were treated with herbicides.
59. Sq. Ft. Sprayed: Report the square feet of undesirable vegetation sprayed.
60. Loads of Chips: Loads of chips dumped.
61. # Survey cards: Total number of survey cards distributed
62. CREW LEADER SIGNATURE: Crew leader signs the report to authenticate its accuracy.

Figure 4.7 Vegetation Management Daily Report

PacifiCorp Vegetation Management Daily Report

Instruction and Definitions

1. **Crew Leader:** The name of the crew leader for the day.
2. **Date:** Date work was performed.
3. **Feeder/Grid #, Ticket work, Trans TID #, After Hours Trans or Dist. Storm Work, Worker Order #:** Identify the work with the appropriate number, or as ticket work.
4. **Detailed Location:** Report a detailed work location for each job site.
5. **Side Pruning:** Report the number of trees pruned to the side of the primary conductors.
6. **Crown Reductions:** Report the number of trees pruned under the primary conductors.
7. **Overhang Pruned:** Report the number of pruned overhanging the primary conductors.
8. **Sec/Service Pruned:** Report the number of trees pruned for secondary, service, or street lights where there is no primary.
9. **# Ft² Saplings Pruned:** Report the area of power line right-of-way where saplings were pruned. Report the area occupied by the crown of the plant(s), with no more than 10 ft² reported for an individual plant. Saplings are defined as woody plants under 4" DBH (diameter at breast height) of species which have the potential to reach wire height at maturity.
10. **# Ft² Saplings Removed:** Report the area of power line right-of-way where saplings were removed. Report the area occupied by the crown of the plant(s), with no more than 10 ft² reported for an individual plant. Saplings are defined as woody plants under 4" DBH (diameter at breast height) of species which have the potential to reach wire height at maturity.
11. **# Removals 4"-11", 12"-23", and 24" and up:** Report the number of trees removed in each size class measured 4½ feet above the ground).
12. **# Stump Applications:** Report the number of trees that were stump treated with herbicides.
13. **# Stumps Ground:** Report the number of stumps that were ground.
14. **# TGR Applications:** Report the number of trees treated with tree growth regulators.
15. **# Poles Cleared:** Report the number of poles cleared of trees and brush to bare ground.
16. **# Poles Treated:** Report the number of poles treated with herbicides.
17. **# ROW Acres Cleared:** Report the number of transmission ROW acres were cleared.
18. **# ROW Acres Spayed:** Report the number of ROW acres sprayed with herbicides.
19. **# Ft² Sprayed:** Report the number of square feet of right-of-way sprayed with herbicides.
20. **Loads of chips:** loads of chips dumped that day.
21. **Herbicide Product:** Report the herbicide product used at the site. Refer to Herbicides A-F.
22. **# Oz., or # Gal. Applied:** Report the number of herbicide ounces or gallons applied at the site.
23. **Temperature (F):** Report the temperature when the herbicide application is made.
24. **Wind Direction:** Report the wind direction at the site when the herbicide application was made.
25. **Wind Speed (MPH):** Report the wind speed in miles per hour at the site when the herbicide application was made.
26. **Start Time:** Report the time when the herbicide application was started.
27. **Finish Time:** Report the time when the herbicide application was completed.
28. **Certified Applicator:** The name of the licensed applicator.
29. **Certified Applicator #:** The number of the applicator's license.

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Figure 4.8 Tree Crew Audit Form.

CREW FOREMAN: _____ DATE: _____
 CREW: _____
 CONTRACTOR: Trees Inc. QUARTER: _____ DISTRICT: _____
 SCORE WEIGHT % FACTOR
 100.0% 0.25 25%

QUALITY: # Cuts inspected: _____ # Proper cuts: _____
 COMMENTS: (Laterals, flush cuts, bark rips, wounds, stubs, hangers) _____

CLEARANCE: # Trees inspected: _____ # Trees Spec. Clearance: _____ 100% 0.25 25%
 # Trees non-spec. clearance: 0
 COMMENTS: _____

TREE COUNT: # Trees reported: _____ # Trees verified: _____ 100% 0.25 25%
 COMMENTS: _____

HERBICIDE: # Trees reported: _____ # Trees verified: _____ 100% 0.25 25%
 Pesticide Applicators Lic. # _____
 (Proper Material, Application, Tools, & Knowledge): _____

AVERAGE RATING: Of all categories (0 to 100% adherence) TOTALS: 100.0%

Specification Manual (yes/no) _____
 PRODUCTION: _____

PROFESSIONALISM: _____

EQUIPMENT: (Appearance, condition, operational) _____
 SAFETY: *evaluated by contractor supervisor* - (Work techniques, traffic control, personal protective equip) _____

CREW EFFICIENCY: (Job planning, multiple tasking idle labor, clean up chip disposal) _____

SUPERVISOR: _____ FORESTER: _____

*Crew Type & Equip: _____
 Customer Surveys: Good? _____ Comments: _____
 *Week ending date: _____

Table 4.1 Herbicide category deductions. Deductions are added together.

Penalty Description	Deduction
Failing to treat stumps or ft ² of brush requiring treatment	Percentage of stumps or ft ² of brush missed against the total of those requiring treatment.
Misreported stumps or ft ² of brush	Percentage of over or under reported stumps, or ft ² of brush against the total that were actually treated
Crews without a crew leader or an applicator (if required by state regulations) holding a current applicator's license	100% (crew may be shut down at the forester's discretion).
Crew leader or applicator (if required by state regulations) who have a current applicator's license, but does not have it on site.	10%
Missing herbicide SDS or Label	10% for each missing chemical document of on the truck

On transmission projects, work in the right-of-way should be reported as acres cleared if there are more than 40 trees per acre. If there are fewer than 40 trees per acre, work should be reported as individual trees. Trees outside the right-of-way should be reported as individual trees.

4.3.1.4 Herbicide

The herbicide component should compare total treated stumps and brush feet equivalents (total ft² ÷ 100 ft²) against those that should have been treated. It should also compare stumps and brush feet equivalents treated with herbicide against the total number reported. Deductions for over or under treatment or reporting should be made on a straight percentage basis and added together (Table 4.1). For example, if in an area where herbicide use was acceptable, a tree crew removed five deciduous trees, but

only treated four stumps, they would receive a 20% deduction ($[(1 \div 5) \times 100 = 20\%]$). Moreover, if they reported only three out of the four stumps actually treated, the crew would receive an additional 25% demerit. The total deduction in this example would be 45%, and the crew's herbicide score would be 55% (assuming everything else was in order).

Moreover, foresters should apply penalties for violations of herbicide policy. Penalties include a 100% category deduction for cases where the crew leader or applicator did not hold a valid applicator's license (California excepted). The crew may be shut down until the crew is properly credentialed. Further penalties include a 10% penalty for crew leaders or applicators that have valid applicator's licenses, but do not have it on site, and a 10% penalty for each required pesticide

document that is missing (SDS and labels, for example [Table 4.1]).

Failing to report treated trees is a violation of law, in addition to not providing PacifiCorp with accurate information. Examples of trees and brush that do not require treatment include conifers that do not sprout from the stump (pines, firs, spruces, cedars and others), and stumps located in areas where herbicide use is prohibited (certain Federal jurisdictions, municipal watersheds and private property where the owner objects to herbicide use).

4.3.2 Subjective Components

While not included in the final audit score, subjective factors such as productivity, professionalism, equipment and safety are also critical to program success. The audit process allows the forester to comment on these items.

4.3.2.1 Production

For time and equipment work, foresters should provide the tree crew's *Statistics Report* (Figure 4.11) and a *Crew Productivity Report* from PVM for the year to date. On the *Statistics Report*, foresters should review the percentage of removals, the type of removals, the amount of nonproductive time and other factors that affect a tree crew's productivity and quality. The *Crew Productivity Report* compares the subject crew's data with the average productivity of crews working in similar areas. It enables crew members to compare their performance against that of their peers.

While productivity data is objective, valid comparisons involve subjective judgment because specific work types are different from one another. For example, a climb crew's production results will invariably be lower than those of lift crews, ticket work will be worse than

cycle work, and one cycle crew working in a vegetation-dense area will have different production from crews working in urban areas. Nevertheless, 70% of PacifiCorp's contractor performance formula is based on productivity; so, audits should stress productivity's importance to program success.

4.3.2.2 Professionalism

Since vegetation management has more interaction with PacifiCorp customers than any other department, it is vitally important for tree crews to exhibit professionalism. Foresters should comment on factors such as ISA Certification, appearance, and other considerations.

4.3.2.3 Equipment

The condition of equipment relates to professionalism and productivity. Well cared for equipment and organized tool boxes are not only a positive reflection on the crew, but they also make work safer and more efficient. Foresters should comment on the appearance and functionality of equipment and organization of the bins.

4.3.2.4 Safety

Safety should be evaluated by the supervisor/GF. However, if a forester observes unreasonable safety risks or obvious safety violations (such as someone failing to wear personal protective equipment), he/she should relate their concerns to the crew, and inform that crew's GF/supervisor so that he or she may correct the situation. All crew members should know the safety requirements applicable to their positions and take responsibility for following those requirements.

4.3.2.5 Crew Efficiency

Reviewing work systematically from the first to last tree worked allows foresters and supervisors/GF to gain an

Figure 4.9. Herbicide Audit Form.

Herbicide Crew Audit Form
 CREW FOREMAN: _____ CREW # _____ DATE: _____
 DISTRICT: _____ WEEK OF WORK AUDITED: _____
 QUARTER: _____

QUALITY: # Stumps reported: _____ # Stumps treated properly: _____ SCORE WEIGHT %FACTOR
 100% 0.33 33%

COMMENTS: _____
 Ft brush/Acres: _____ Ft brush/Acres treated properly: _____

COUNT: # Trees deciduous stumps: _____ # Deciduous stumps treated verified: _____
 Ft saplings/Acres recorded: _____ Ft saplings/Acres treated verified: _____ SCORE WEIGHT %FACTOR
 100% 0.33 33%

COMMENTS: _____

HERBICIDE: Pesticide Applicators Lic. # _____ Label & MSDS Sheets (Y/N) _____ SCORE WEIGHT %FACTOR
 100% 0.33 33%

Material, Tools & Knowledge: _____ # Stumps/Acres reported _____ # Stumps acres verified _____
 Herbicide application looked good _____

AVERAGE RATING: Of all categories (0 to 100% adherence)
 Specification Manual (yes/no) _____
 PRODUCTION: _____

TOTALS: 100%

impression of job planning, which is a reflection of crew efficiency. Foresters should share their impression of crew efficiency and also comment on methodology, clean up and chip disposal. Inefficient work organization may be the responsibility of the contract utility forester who originally lined-out the work. Trends in disorganization may require contract utility forester counseling.

4.3.2.6 Crew Composition

Foresters will note the number of crew members and equipment type on the crew being audited. The field notes will be compared to an itemized invoice for accuracy. Foresters should also note the week ending date to help access the proper invoice. Results should be reported monthly on the invoice audit.

4.3.2.7 Customer Surveys

Foresters should compare surveys distributed against the occupied buildings along the audit. The score will be based on the number of surveys distributed against the number that ought to have been distributed. It will not count toward the overall audit score.

4.4 Herbicide Crew Audit

The primary purpose of the herbicide crew audit is quality control. Audits should evaluate one full week of herbicide crew work. Each audit should have the forester, the crew's GF/supervisor and the crew leader in the field together observing completed work. Audits should begin with the first area treated, and progress in order to the last area worked during the week. Over the course of the audit, the forester, supervisor/GF and crew leader should open a dialog regarding the week's results.

Moreover, audits should provide the herbicide crew leader with feedback on

production, professionalism, equipment, safety and crew efficiency. Results shall be documented on an *Herbicide Crew Audit Report* (Figure 4.9).

4.4.1 Objective Components

Objective audit components shall be determined on the straight percentage of trees that meet expectations compared to the total trees reported in each category. The percent score shall be averaged for the final rating.

4.4.1.1 Quality

The quality section examines proper square footage of brush treated following specifications described in Chapter 7. Calculate the score by using percentages of proper brush or acres treated against the total number reported.

4.4.1.2 Count

To complete the *Count* section, the square feet of brush or acres treated against which should have been sprayed.

4.4.1.3 Herbicide

Foresters should apply penalties for violations of herbicide policy. Penalties include a 100% category deduction for cases where the crew leader or applicator did not hold a valid applicator's license (California excepted). The crew may be shut down until the crew leader or applicator are properly credentialed. Further penalties include a 10% penalty for crew leaders or applicators that have valid applicator's licenses, but do not have it on site, and a 10% penalty for each required pesticide document that is missing (SDS and labels, for example [Table 4.1]).

Failing to report treated trees is a violation of law, in addition to not providing PacifiCorp with accurate information. Examples of trees and brush that do not

require treatment include conifers that do not sprout from the stump (pines, firs, spruces, cedars and others), and stumps located in areas where herbicide use is prohibited (certain Federal jurisdictions, municipal watersheds and private property where the owner objects to herbicide use). Foresters should also comment on material, proper tools and crew knowledge.

4.4.2 Subjective Components

While not included in the final audit score, subjective factors such as productivity, professionalism, equipment and safety are also critical to program success. The audit process allows the forester to comment on these items. Failing to report herbicide treatment or not having a licensed applicator on the crew is a violation of the law.

4.4.2.1 Professionalism

Same instructions as 4.3.2.2

4.4.2.2 Equipment

Same instructions as 4.3.2.3

4.4.2.3 Safety

Same instructions as 4.3.2.4

4.4.2.4 Crew Efficiency

Same instructions as 4.3.2.5

4.4.2.5 Crew Composition

Same instructions as 4.3.2.6

4.4.2.6 Customer Surveys

Same instructions as 4.3.2.7

4.5 Worksite Inspection

PacifiCorp has a *Worksite Inspection Form* (Figure 4.10), which is designed to check tree crew safety. Foresters are required to perform a number of worksite

inspections as specified in their annual goals. Foresters may use the form during crew visits. The form provides a general review, as well as tailboard, bucket or climb setup, vehicle, herbicide and other safety provisions.

4.6 PVM

PacifiCorp Vegetation Management (PVM) is a PacifiCorp intranet-based program available at:

<http://pdxappw51vp.pacificcorp.us:8080/OE/BI?startFolder=AVPSDml489dAILbJ3JVVZzE&isCat=false>. The database organizes data downloaded from the *Weekly Report* (Figure 4.4). PVM offers a variety of reports, such as the *Statistics Report* (Figure 4.11), which enable program analysis.

The statistics reports are designed to be flexible. They allow data examination on a program level (it contains data since 1996 for Pacific Power, for example), down to a crew level for a specific week of work. They also provide cost and man-hours per tree, the percentage of various work types (tree removals, the size of trees removed, the number of side pruned trees, crown reduction and others), the percentage of time spent on travel, flagging, cleanup and other activities.

Other PVM reports compare the productivity of individual crews, or breakdown production by district, state, and work code. The reports provide objective information upon which foresters and supervisors/GFs can make sound management decisions based on objective information.

4.7 Monthly Reports

Vegetation management has monthly reports tracking distribution cycle and

interim progress, distribution spray progress, tree crew deployment, cycle progress, California Pole Clearing and transmission progress reports. These reports can be found at the PacifiCorp T&D Support Services Website: http://idoc.pacificorp.us/pacificorp_organization/rmp/rmpto/rtss/vm.html. A description of three prominent reports follows.

4.7.1 Distribution Progress Report

The distribution progress report (Figure 4.12) accounts for line miles achieved on systematic distribution work compared to goals for a given year. Systematic distribution work is cycle work throughout the six state service territory, as well as interim work in the Pacific Power service territory. The goal is the recommended scheduled miles prorated by the week of the year.

The report provides a summary of line miles achieved, breaks down progress by Pacific Power and Rocky Mountain Power's service territory, includes monthly miles ahead or behind goals, a chart depicting monthly line mile progress, and progress in each state by district and where appropriate, by forester.

4.7.2 Distribution Cycle Progress Report.

The distribution cycle report records line miles achieved over the course of the current recommended cycle compared to goals (Figure 4.13). Goals are prorated monthly and compared to actual progress.

4.7.3 Tree Crew Deployment Report

The tree crew deployment report (Figure 4.14) lists tree crews, contract utility foresters and supervisors/general foremen by forester and district as of the first of each month. In addition to providing information on tree crew locations, the tree crew deployment is used for budget projections.

4.7.4 Invoice Audit Report

Foresters will compare invoices to crew composition information obtained during the crew audits (see sections 4.3.2.6 and 4.4.2.5). Each month, results will be submitted to the director of vegetation management and senior business specialist on the Invoice Audit Report (Figure 4.15). The senior business specialist will ensure discrepancies are reconciled with the appropriate contractor.

Figure 4.11. A sample PVM Statistics Report showing distribution cycle data for Oregon 2010.

PacifiCorp Vegetation Management						
Data Updated on 6/13/11 15:10:25 PM						
Statistics Report						
FISCAL YEAR:	2011					
WORK ENDING:	01/03/2010	TO	01/01/2011	INVOICE		
COMPANY NAME				CREW CODE		
STATE	OR			CREW TYPE		
DISTRICT				CODE	DST	
PROJECT				WORK ID		
SUPERVISOR				FOREMAN		
TRIM TOTAL	% SIDE TRIMS	%CROWN REDUCTION TRIMS	%OVERHANG TRIMS	SEC/SERV TRIMS	# BRUSH TRIMS	
103,658	44.99	41.95	1.90	4,563.00	70,109	
REMOVALS TOTALS	%TREE REMOVALS	#BRUSH FT REMOVED	% BRUSH FEET REMOVED	% 4 - 11 REMOVED	% 12 - 23 REMOVED	% 24+ REMOVED
90,956	46.74	772,283	84.91	12.56	2.02	0.51
TOTAL TREESBRUSH	#STUMP APPLICATIONS	#ACRES SPRAYED	#ACRES CLEARED	#TGR APPLICATIONS		
194,614	6,098	0	0	668		
	#STUMP GROUND	#POLES CLEARED	#POLES TREATED			
	6	15	0			
TOTAL MANHOURS	%TRAVEL./ MISC MANHOURS	%INSPECT/ NOTIFY MANHOURS	%TRAFFIC/ FLAGGING MANHOURS	%CHIP/ CLEANUP MANHOURS		
147,737	7.66	13.09	9.73	41.35		
%TRIM MANHOURS	%REMOVAL MANHOURS	%TGR MANHOURS	%POLE CLEARING MANHOURS	%ROW CLEARING MANHOURS	% SPRAYING MANHOURS	%STUMP TREAT MANHOURS
22.42	3.64	0.17	0.00	0.00	0.00	0.28
TOTAL COST	TOTAL \$/TREE	TRIMMING \$/TRIM	REMOVAL \$/REMV			
\$7,797,560	\$40.07	\$63.34	\$11.73			
TOTAL MH/TREE	TRIMMING MH/TRIM	REMOVAL MH/REMV	TRIM MH/10FT2 SAPPRUN	REMV MH/ 10FT2 SAPREM		
0.76	1.20	0.22	0.06	0.03		

Figure 4.13. Cycle Progress Report.

PACIFICORP VEGETATION MANAGEMENT 2011 CYCLE DISTRIBUTION PROGRESS REPORT												
Pacific Power - Rocky Mountain Power												
Through December 3, 2011												
	CYCLE WORK				INTERIM WORK				COMBINED			
	Line Miles	Completed	Line Mile	Miles Ahead/Behind	Line Miles	Completed	Line Mile	Miles Ahead/Behind	Line Miles	Completed	Line Mile	Miles Ahead/Behind
Pacific	43,047	20,663	23,826	-3,173	14,840	16,887	16,887	-2,047	35,483	40,713	34,200	-5,220
California	2,323	1,529	1,698	-169	1,602	1,698	-96	3,131	3,395	3,395	-264	
Oregon	14,184	11,043	13,905	-2,862	11,661	13,480	-1,819	22,704	27,385	27,385	-4,681	
Washington	3,557	1,283	1,710	-417	1,577	1,710	-133	2,870	3,420	3,420	-550	
Total	20,064	13,865	17,312	-3,447	14,840	16,887	-2,047	28,705	34,200	34,200	-5,494	
Rocky Mt												
Idaho	4,358	1,135	1,341	-206				1,135	1,341	1,341	-206	
Utah	11,377	3,528	3,500	28				3,528	3,500	3,500	28	
Wyoming	7,248	2,125	1,672	453				2,125	1,672	1,672	453	
Total	22,983	6,788	6,514	274	0	0	0	6,788	6,514	6,514	274	
SUMMARY OF SYSTEMATIC WORK* BY FORESTER												
	Total	Line Miles	Line Mile	Miles	Line Miles	Completed	Line Mile	Miles	Line Miles	Completed	Line Mile	Miles
	43,047	20,663	23,826	-3,173	14,840	16,887	16,887	-2,047	35,483	40,713	34,200	-5,220
Forester/Pacific		*	*	*								
Hoohey	2,830	1,578	2,776	-1,197	2,362	2,776	-414	3,940	5,651	5,651	-1,611	
Partridge	3,919	2,861	3,770	-909	2,808	3,770	-962	5,669	7,541	7,541	-1,871	
Phillips	5,823	4,685	5,203	-548	4,742	5,203	-461	9,397	10,407	10,407	-1,010	
Armstrong	7,492	4,771	5,653	-792	4,928	5,138	-210	9,699	10,701	10,701	-1,002	
Total	20,064	13,865	17,312	-3,447	14,840	16,887	-2,047	28,705	34,200	34,200	-5,494	
Forester/Rocky Mt												
Evans	6,030	1,690	1,855	-166								0
Jones	2,351	831	723	208								0
Vanderhoof	14,602	4,167	3,935	232								0
Total	22,983	6,788	6,514	274	0	0	0	0	0	0	0	0

5. DISTRIBUTION

Distribution lines are overhead facilities that are energized less than 46 kV. Distribution primary voltage ranges from 600 to 45,000 volts, while lines energized below 600 volts are secondary.

5.1 Distribution New Construction Clearing

Every effort should be made by the Company not to build new line over or through trees that will need to be cleared from the facilities in the future. New distribution rights-of-way should be cleared to specification before the lines are energized. Initial clearing is important because it sets a pattern for future work.

5.2 Distribution Cycle Maintenance

Trees and vegetation should be cleared from distribution facilities on scheduled cycles. Cycle work is methodical, and facilities shall be worked systematically, either by feeder or grid map. Cycles should be based on considerations such as the time elapsed since the last scheduled work, the type of facilities, tree conditions, the number of customer complaints, the growth rate and density of predominant tree species, geography, the frequency of tree-caused outages, customer count, the existence of important accounts (hospitals, factories, mines or other facilities) customer densities, single or multiple phase wires and other factors. Trees and vegetation should be cleared from distribution facilities to last until the next scheduled cycle work.

The intent of the cycle program is to:

- Systematically obtain specification clearance and maintain compliance with state regulatory rules, laws or regulations.
- Reduce inventories of trees that could potentially grow into Company facilities. This includes removing non-landscape trees 6-inch DBH or less, after providing the property owner notification (following Section 8.2).
- Improve access to facilities.
- Identify and correct readily climbable trees.
- Identify and remove tree houses built inside of criteria specified in Table 2.2.
- Clear insulated services that have stems causing strain to the point of deflection (Figure 5.1) or that are abrading the insulation to the extent they could cause an outage before the next scheduled cycle. If pruning or removal is not practical, arrangements should be made with operations to re-route facilities or have suitable material or devices installed to avoid insulation damage by abrasion.
- Prune non-insulated services and streetlight wire for one-foot of clearance.
- Prune pole to pole insulated secondaries to 2-feet of clearance from the conductors
- Prune pole to pole non-insulated services. and secondaries for three feet of clearance from the conductors
- Identify and remove high risk trees that could fall through facilities.
- Apply herbicide to saplings (< 4" DBH) of tall-growing species after property owner notification (presuming the property owner has not expressed objection to herbicide application) on the property on which other work is being performed. Spray work in other locations may be authorized at foresters discretion as directed in a work release.

SPECIFICATIONS

- Apply tree growth regulators (TGR's) to fast-growing tree species after providing property owner notification.

5.3 Distribution Interim Maintenance

Interim work is a cycle performed half way between cycles to address fast-growing trees that will not hold for an entire cycle. On PacifiCorp's system, interim work should be prescribed in California and Oregon. Identified tree conditions on a feeder or grid should be corrected systematically in the interim half way through the scheduled cycle. Work should be limited to trees that grow six feet or more a year or hazard trees.

Interim work should be restricted to critical conditions, including:

- High risk trees.
- Trees violating specific state regulatory agency regulations.
- Trees that have grown within work thresholds specified in Table 5.2.
- Readily climbable trees inside of work thresholds in Table 5.2
- Identifying and removing tree houses built inside of criteria specified in Table 2.2.
- All work should be completed to company specifications. Non-critical conditions should be monitored until the next scheduled cycle work.
- Non-primary facilities do not require work on interim cycles unless they present a clear safety or service reliability risk.

5.4 Distribution Ticket Maintenance

Customers, district operations staff, governmental bodies, regulatory agencies or others alert vegetation management to real or perceived conflicts between trees and power lines from time to time. The intent of ticket maintenance is to determine whether or not the reported conditions present immediate, unreasonable safety or electrical service risks, and if they do, correct them.

Emergency situations should be corrected within 24 hours. Critical conditions reported by regulatory agencies and other urgent situations should be inspected within 48 hours and corrected within 7 days. Other tickets should be inspected within 10 business days from the date of request, and a determination made regarding whether or not the reported condition warrants work.

The concerned party shall be contacted regarding the inspection determination. This contact may be face to face if the customer is present, or by door hanger, letter, or telephone if they are not present.

Ticket work should be limited to critical conditions, including:

- Trees representing an unreasonable safety risk as determined by the responsible contract utility forester.
- Trees that have caused an outage.
- Trees violating specific state regulatory regulations.
- Limbs that are deflecting secondary conductors to the extent they present a high probability of tearing down the wire before the next scheduled cycle work.
- Trees that are likely to start a fire.
- Readily climbable trees.
- Trees where the property owner requires clearance so non-utility line clearance workers may work the tree. This work complies with various state line safety act and may be billed to the requesting party.

All work should be completed to Company specifications. Non-critical conditions should be monitored and corrected on the next scheduled maintenance work.

5.5 Distribution Herbicide Maintenance

Distribution herbicide maintenance should be prescribed in the interim between cycles. Saplings (< 4" DBH) of tall-growing species after property owner notification (presuming the property owner has not expressed objection to herbicide application). Procedures outlined in Chapter 7 shall be followed.

5.6 Distribution Clearance Specifications

Removal of trees that could potentially grow into distribution facilities should be pursued. When trees are pruned, branches should be cut to natural targets rather than predetermined clearance limits (following section 3.3). Consequently, the clearances in these standard operating procedures should not be used as strict boundaries requiring cuts at the precise distances indicated. Rather, they are guidelines to use in obtaining proper clearances. Accurate natural target pruning is the overriding principal, with tree structure dictating appropriate cut locations. In many cases, the best targets are outside established clearance limits. So, many properly pruned trees will have more than specified clearance from conductors.

The type of facility, tree growth rate and prescription determine distribution clearance. Trees should be removed or pruned to provide for specification clearances as described in Figures 5.2, 5.3 and 5.4 and tables 5.1, 5.2 and 5.3. The figures and table provide work thresholds and specification clearances for slow, medium and fast-growing trees. Trees that exceed work threshold distances should hold until the next scheduled cycle and not need to be pruned. However, these trees should still be considered to be removal candidates if they could grow

into distribution facilities or they present a high risk of failure. If trees violate thresholds, they shall be removed or pruned to provide specification clearances.

5.6.1 Growth Rate Definitions

Slow-growing trees grow vertically less than one-foot a year. Moderate growing trees grow between one and three feet a year and fast-growing trees grow more than three feet a year.

5.6.2 Side Clearance

Side work thresholds and side clearances from conductors can be found in Tables 5.1, 5.2 and 5.3, as well as Figures 5.2 to 5.4.

Side clearances from conductors may be reduced to 18-inches for structurally sound limbs greater than 6-inches in diameter at wire height, provided the tree is not readily climbable and the tree shows no evidence of conductor contact due to wire or tree sway. High risk trees should be removed or pruned to reduce the potential threat they pose.

5.6.3 Under Clearance

Under clearances work thresholds and clearances from conductors can be found in Tables 5.1 and 5.2, as well as Figures 5.2 to 5.4.

5.6.4 Overhang Clearance

Trees overhanging primary conductors should be removed or pruned to provide at least ten feet of clearance from the conductors (Figures 5.2, 5.3 and 5.4). Increased clearance should be considered by the forester or GF/supervisor under the following types of circumstances: three-phase lines (particularly to the first protective device), rural or difficult to access areas, for weak-

wooded or fast-growing tree species, on poorly-structured trees and to accommodate foreseeable weather conditions such as frequent high wind, heavy rains, ice and snow. Dead wood that could fall or be blown into the primary conductors shall be removed. In some cases, such as three phase lines or remote areas, all overhanging branches may be removed. Overhang may be tapered, with the greatest side clearance at minimum clearance height, with gradually more overhang higher in the tree.

Figure 5.1. Trees with branches applying sufficient pressure to cause damage to insulated service and street light lines should be pruned on cycle to relieve the pressure.



Figure 5.2 Vegetation Management Distribution Primary Clearances – Slow Growing Trees

Figure 5.2. PacifiCorp Vegetation Management
Distribution Primary Clearances

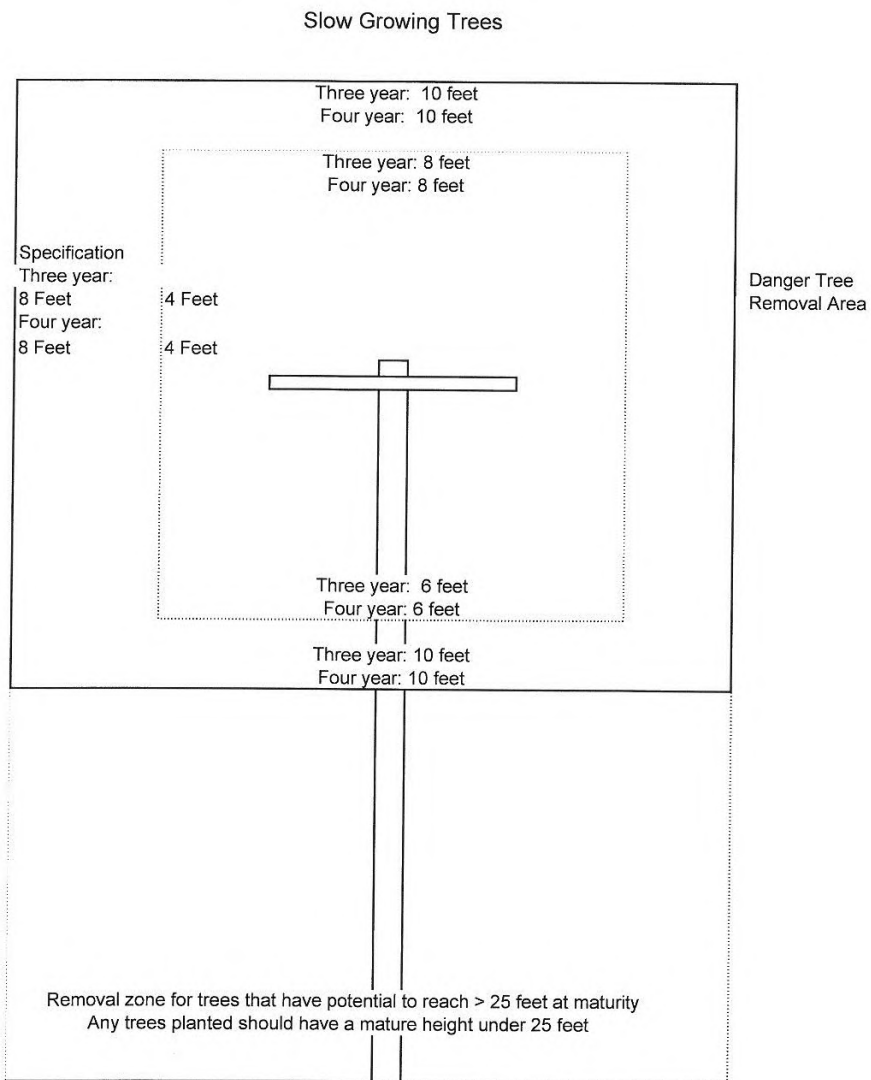


Figure 5.3 Vegetation Management Distribution Primary Clearances – Moderate Growing Trees

Figure 5.3. PacifiCorp Vegetation Management
Distribution Primary Clearances

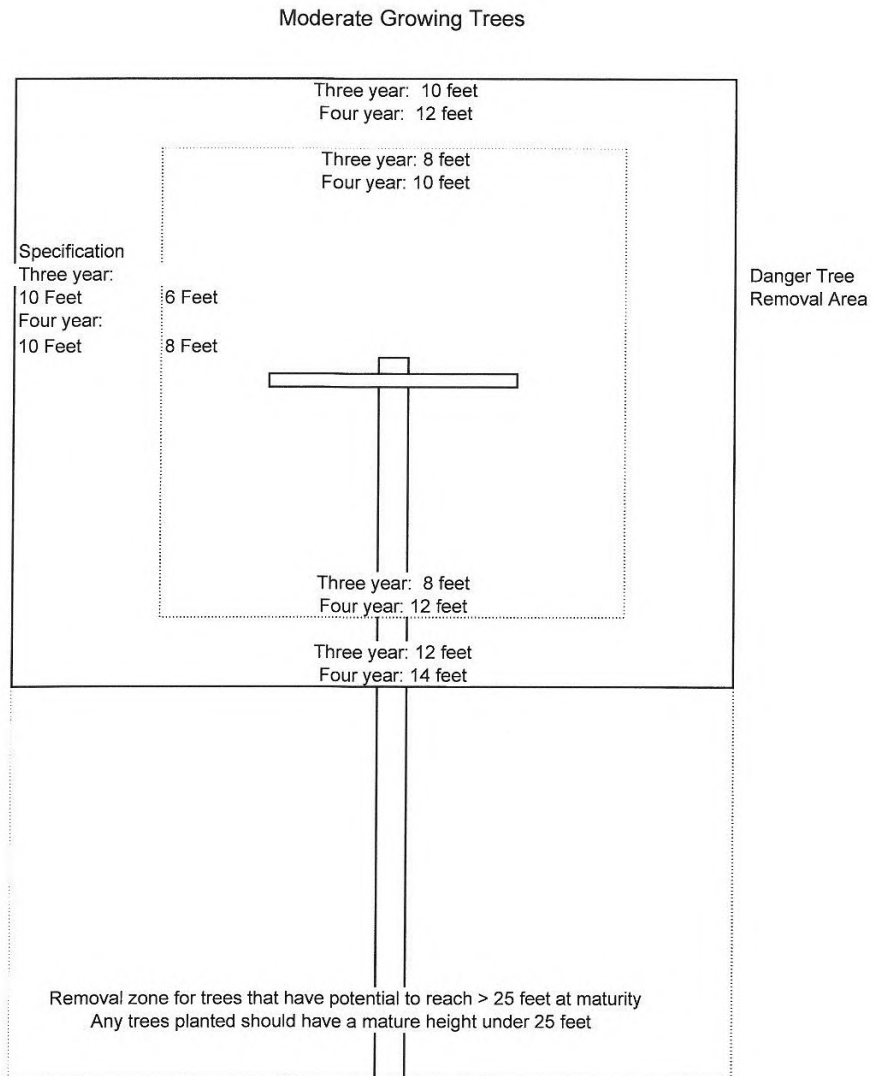


Figure 5.4 Vegetation Management Distribution Primary Clearances – Fast Growing Trees

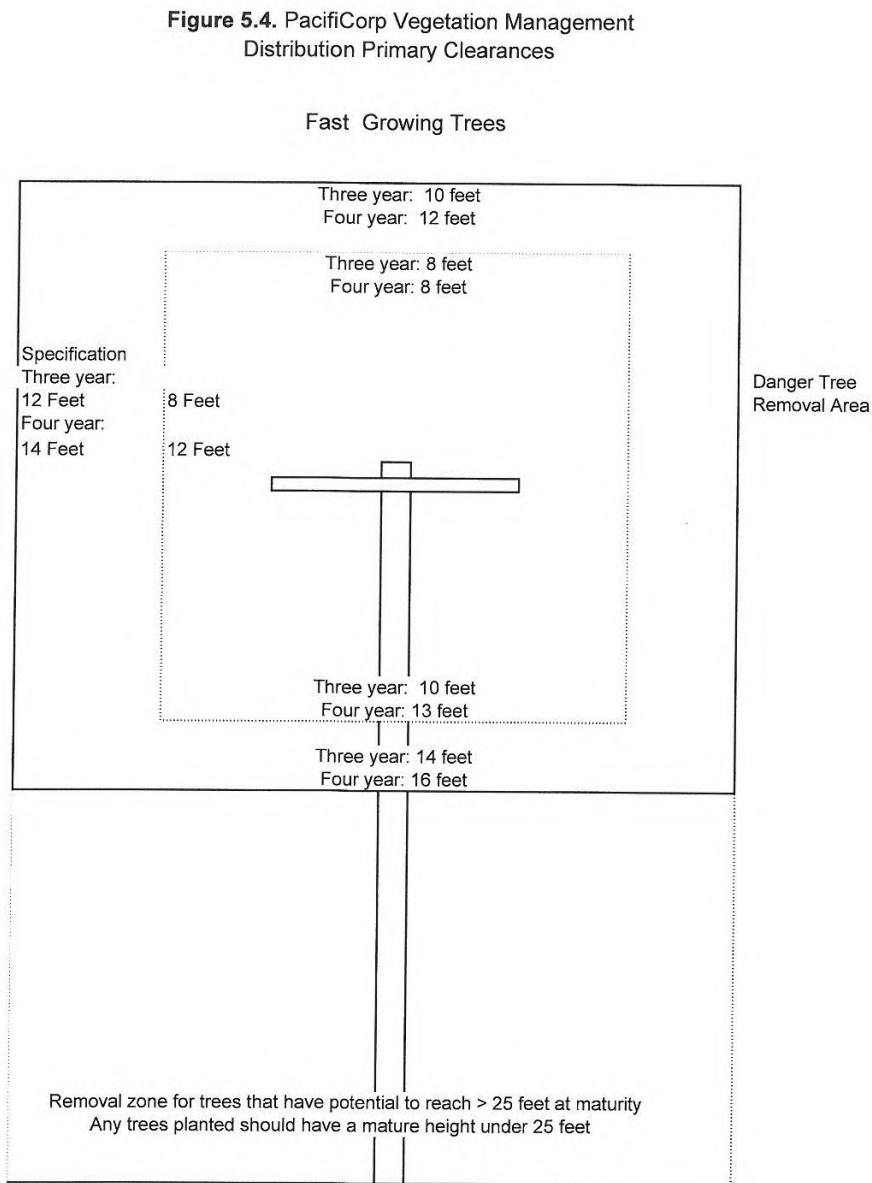


Table 5.1. Distribution primary cycle clearances.

	Slow-Growing < 1 foot/year		Moderate-growing 1-3 feet/year		Fast-growing > 3-feet/year*	
	Work Threshold	Specification Clearance	Work Threshold	Specification Clearance	Work Threshold	Specification Clearance
Three-year cycle						
Side Clearance	4 feet	8 feet	6 feet	10 feet	8 feet	12 feet
Under Clearance	6 feet	10 feet	8 feet	12 feet	10 feet	14 feet
Overhang Clearance	8 feet	10 feet	8 feet	10 feet	8 feet	10 feet
Four-year cycle						
Side Clearance	4 feet	8 feet	8 feet	10 feet	12 feet	14 feet
Under Clearance	6 feet	10 feet	12 feet	14 feet	13 feet	16 feet
Overhang Clearance	8 feet	10 feet	10 feet	12 feet	8 feet	12 feet

*Note: Specified clearance distances are assumed to be from conductors, Growth-rate definitions refer to vertical growth. Side and overhang growth toward the conductors are assumed to be slower. Specification clearances are minimum, and actual distances achieved at the time of work will often need to exceed those itemized above. Trees with clearances that exceed the pruning threshold should not require work, provided they will not interfere with the primary conductors or violate state tree clearance requirements before the next scheduled cycle work. Work thresholds may have to be expanded for fast-growing trees.

*Fast-growing work thresholds on four-year cycles assume interim work. Wyoming will require at least 25% greater clearances.

Table 5.2. Minimum Distribution primary interim clearances.

	Slow-Growing < 1 foot/year		Moderate-growing 1-3 feet/year		Fast-growing > 3-feet/year	
	Work Threshold	Specification Clearance	Work Threshold	Specification Clearance	Work Threshold	Specification Clearance
Four-year cycle						
Side Clearance	2 feet	8 feet	3 feet	10 feet	8 feet	14 feet
Under Clearance	2 feet	10 feet	5 feet	14 feet	9 feet	18 feet
Overhang Clearance	2 feet	10 feet	3 feet	10 feet	8feet	10 feet

Table 5.3. Non-primary wire cycle clearances.

Line Type	Work Threshold	Specification Clearance
Triplex service	Deflection/abrasion	Relieve pressure
Triplex pole-to-pole secondary/streetlight wire	Deflection/abrasion	2-feet
Non-insulated wire service/street light wire	Contact	1-foot
Non-insulated wire pole-to-pole secondary	Contact	3-feet
Neutral low position	Contact	2-feet
Neutral on cross arm	Primary as in Table 5.1	Primary as in Table 5.1
Guy wire	2-inch or greater diameter limb applying pressure, threatened by high risk trees	Relieve pressure or remove high risk trees.

5.6.5 Neutral and Insulated Pole-to-Pole Secondary Clearance

During cycle work, trees should be maintained to provide at least two-feet of clearance around insulated pole-to-pole secondary and neutral conductors (Table 5.3). Except trees that have already reached their maximum anticipated mature height. Tree limbs should not be allowed to remain between primary and neutral or insulated secondary conductors. Neutral conductors in a raised (primary) position should be provided secondary clearance distances during ticket or interim work, and primary specification clearance distances during cycle work.

5.6.6 Non-Insulated Open/Spaced Secondary Clearances

Trees growing around non-insulated open/spaced secondary conductors shall be pruned on cycle to provide a minimum of three-feet of clearance from the secondary wires (Table 5.2). During cycle work, trees shall be cleared from the space between primary and non-insulated open/spaced secondary conductors. Side clearances may be reduced to one foot for structurally sound limbs greater than 6-inches in diameter at wire height.

5.6.7 Insulated Service and Insulated Street Light Line Clearances

Stems that are causing strain to the point of deflection (Figure 5.1) or that are abrading the insulation to the extent they could cause an outage before the next scheduled cycle should be pruned to relieve the pressure (Table 5.2). If pruning or removal is not practical, arrangements should be made with operations to have the facility re-routed or have suitable

material or devices installed to avoid insulation damage by abrasion.

If the customer desires to remove other limbs or trees around these lines, they must arrange for a temporary disconnection to allow the desired work to be done safely. PacifiCorp does not clear trees for street light illumination, unless required to by specific language in a franchise agreement.

5.6.8 Non-insulated Service Line and Non-Insulated Street Light Line Clearances

Trees should be pruned on cycle to provide at least one-foot of clearance around non-insulated service and street light lines (Table 5.3). If the customer desires to remove other limbs or trees around these lines, contract utility foresters or crew leaders should inform the customer to call the customer service line to arrange for a temporary disconnection of the facilities to allow safe completion the desired tree work, as required by law.

5.6.9 Other Facility Clearances

5.6.9.1 Guy Wires.

Trees or branches two-inches or more in diameter applying direct pressure to or threatening to fall on or through poles or guy wires shall be removed or pruned on cycle (Table 5.3).

5.6.9.2 Poles

One-third of the circumference around poles shall be cleared of vegetation to a distance of 5-feet to allow linemen a climbing path.

5.6.9.2.1 Vines

Vines shall be removed on cycle from poles and guys, cut at ground level, and treated with an approved herbicide (see Section 7.3). They shall be reported as

brush or tree removed (if they are over 4" in dbh). Vines clearly part of a landscape and rooted well away from the pole may be pruned and reported as saplings pruned. Vines shall be pulled off the bottom 5-feet of poles after they have been cut. The facility point shall be documented by the tree crew and given to their supervisor/GF, who shall report it to operations to clear the remainder of the pole, and arrangements made with PacifiCorp journeymen linemen for the job.

5.6.9.3 Telecom and Private Electrical Lines

Trees should not be pruned or removed expressly to provide clearance for television cable, telephone lines or private electrical facilities unless authorized in advance by the appropriate forester.

5.6.9.4 Street Light Illumination

Trees shall not be pruned to improve street light illumination, unless required by specific language in a franchise agreement.

5.7 Pole Clearing

California Resource Code 4292, requires a ten-foot radius cylinder of clear space from pole top to bare ground around "subject" poles in delineated resource areas during designated fire season. Trees or saplings with trunks within clearance zone should have eight feet of vertical clearance from the ground to the highest limb (Figure 5.5).

Subject poles have fuses, air switches, clamps or other devices that could create sparks and start fires (Nichols et al. 1995). This cleared space should be established and maintained by pruning and removing above ground branches and plant parts. After removing vegetation to bare ground for a 10-foot radius around subject poles,

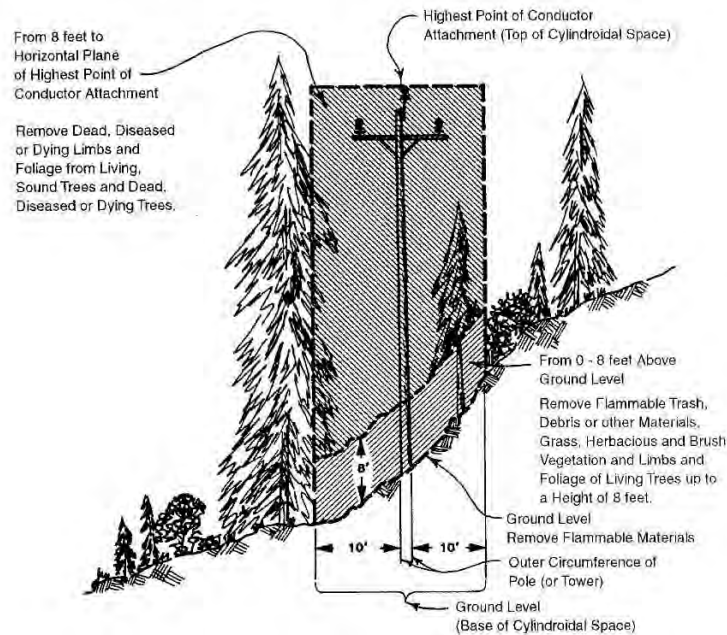
herbicides, including soil sterilants, should be applied, unless expressly prohibited or is against the customer's wishes.

5.8 Padmount Transformers

Padmount transformers should not be cleared as part of normal distribution cycle or interim maintenance. They may be cleared in response to facility point inspection requests should operations

require access and a work order is provided. Qualified line clearance tree workers are not required to clear padmount transformers, so contractors responsible for landscape maintenance around substations may be assigned to remove shrubs and other low-growing vegetation that is interfering with padmount transformers

Figure 5.5. California pole clearing requirements (from Nichols et al. 1995).



6. TRANSMISSION VEGETATION MANAGEMENT PLAN (STANDARD OPERATING PROCEDURES)

Transmission facilities are overhead lines energized to greater than 45kV. Typical transmission voltages on PacifiCorp's system are 46kV, 69kV, 115kV, 138kV, 161kV, 230kV, 345kV and 500kV. Facility voltage and type determine the amount of transmission clearance needed. Table 6.1 provides specification clearances for transmission rights-of-way.

Transmission work shall comply with the ANSI A300 (Part 7): *American National Standard for Tree Care Operations (Integrated Vegetation Management a Electric Utility Rights-of-way* [ANSI 2012a]) and the ISA *Best Management Practice: Integrated Vegetation Management for Electric Utility Rights-of-way* (Miller 2014). As well as Tree Risk A300 (Part 9): *American National Standard for Tree Care Operations (Tree Risk Assessment)* and ISA *Best Management Practice: Tree Risk Assessment* (Smiley, Matheny and Lilly, 2011).

Transmission work on lines at or above 200 kV and those designated by the Western Electricity Coordinating Council as an element of the major transfer path in the bulk electric system, including those that extend greater than one mile beyond the fenced area of the generating station switchyard to the point of interconnection with a Company facility or do not have a clear line of site from the generating station switchyard fence to the point of interconnection with a Company facility shall also conform to the North American Electric Reliability Corporation's (NERC) Reliability Standard FAC-003 (NERC 2008) along with other chapters in this manual.

6.1 Work Objective

The objective of systematic transmission work is to improve the reliability of PacifiCorp's transmission system by preventing outages from vegetation located on transmission rights-of-way and minimizing outages from vegetation located adjacent to the right-of-way.

6.2 Philosophy

PacifiCorp's vegetation management philosophy for transmission lines is to utilize integrated vegetation management best practices wherever possible to conduct cover type conversion and to cultivate stable, low-growing plant communities comprised of plants that will never interfere with transmission lines in their lifetime.

Reliability and safety are most effectively protected through establishing and maintaining a right-of-way consistent with the wire-border zone concept (see section 6.8.1.4.1). When the line is less than 50 feet off the ground, the wire-border zone should be cleared of all incompatible vegetation unless an easement fails to provide appropriate authority or there are legal impediments preventing it.

6.3 Initial Clearing and Construction

Newly constructed transmission lines should be cleared to full specifications prior to being energized. In densely vegetated areas, rights-of-way usually have to be completely cleared as the initial stage of establishing a wire-border zone (Figures 6.1 and 6.1)

6.4 Inspection

Transmission lines falling under the auspices of FAC-003 should be inspected at least once a year by ground or air, depending on the anticipated growth of vegetation and any other environmental or operational factors that could affect the relationship of vegetation to the transmission line.

Local transmission (non-FAC-003 lines) over built on distribution should be inspected in conjunction with distribution cycle work.

Line Patrolmen have responsibility for inspecting transmission lines subject to FAC-003 and reporting conditions to vegetation management. In addition, each area forester shall meet twice each year to discuss vegetation conditions with the line patrolman assigned to the area.

Line Patrolmen encountering a tree that poses a threat of causing a transmission outage at any moment shall follow procedures in PacifiCorp Operating Procedure PCC-215, in order to comply with Requirement R4 of NERC Standard FAC-003 (*Transmission Vegetation Management Program*). Line patrolmen must:

- Immediately notify the grid operator by phone and describe the nature and extent of the threat.
- Complete and process the Emergency Tree Action Form.
- Communicate the vegetation conditions to vegetation management for urgent attention.

Examples of tree conditions that pose a threat of causing a transmission outage at any moment include (but are not limited to) trees that violate or pose a risk within 72 hours of violating NERC Minimum Vegetation Clearance Distance (MVCD), uprooted trees that are leaning toward the line and pose a risk of immediate failure

and trees with structural failures that may cause them to break in part or whole onto the transmission facilities (See Smiley, Matheny and Lilly 2011).

6.4.1 Additional Inspection

Foresters should annually select lines among those subject to FAC-003 for annual inspection. This inspection is to be done in addition to that performed by line patrolmen. These inspections supplement, rather than substitute for, those conducted by line patrolmen. Foresters should assign representatives to complete these inspections. Using Level 1 assessments from the *ISA Best Management Practices: Tree Risk Assessment (Smiley Matheny and Lilly 2011)*.

Such inspection should identify trees that pose a threat of causing an outage at any moment, and trees that could possibly violate work thresholds within the next year. Company plan and profiles should be used in the field itemizing maximize sag and sway along with range finders to confirm the MVCD has not been violated. Locations should be noted on an activity report, and assigned to a tree crew for work, with the appropriate forester's approval.

If the inspections discover a tree that poses a high likelihood of posing an outage at any moment, contract utility foresters shall contact the appropriate forester within three hours. Foresters shall immediately request the appropriate line patrolman to inspect the line according to the imminent threat procedure described in section 6.4.

6.5 Work Plan

The Vegetation Management A300 standard (ANSI 2012a) and the ISA integrated vegetation management best management practice (Miller 2014) recommend against cycle-based

transmission work thresholds. Rather, work should be scheduled depending on line voltage, line importance, vegetation conditions that violate the action thresholds in Table 6.1, location, predominant species' growth rates, threatened and endangered species, archeological sites, topography and other factors.

A comprehensive approach that exercises the full extent of legal rights is superior to incremental management in the long term because it reduces overall encroachments, and it ensures that future planned work is sufficient at all locations on the right-of-way. Removal of trees in the right-of-way is superior to pruning and shall be pursued whenever legal rights exist to do so. Removal minimizes the possibility of conflicts between energized conductors and vegetation.

6.5.1 Annual Work Plan

PacifiCorp performs vegetation management work in accordance with annual work plans that details the circuits and facilities to be managed during a calendar year. MS Project is encouraged as planning software. Plans should include:

- A list of facilities subject to scheduled work.
- If only a portion of a line is scheduled, the line segment must be identified (e.g. structure to structure).
- Dates when work is anticipated to start and end on each project (Gantt charts are recommended).
- A description of the type of control methods, (cycle, herbicide, mowing, aerial, etc.)

6.5.1.1 Annual Work Plan Adjustments

The annual work plan may be adjusted during the year to account for

changes in conditions that require a circuit, line segment or project to be moved into or out of the work plan. Examples of reasons for adjustments include, but are not limited to, vegetation growth in excess of anticipated levels, vegetation inspection results, new construction projects or removal of existing facilities. Adjustments to the annual work plan shall be documented as they occur and shall be authorized by the director of vegetation management.

6.6 Action Thresholds

The action thresholds in Table 6.1 provide roughly ten-foot buffers from the NERC MVCD. Trees identified within the action thresholds should be scheduled for work within twelve months.

6.7 Clearances

6.7.1 Minimum Clearances Following Work

Minimum clearances from conductors to be achieved at the time of work are in Table 6.1. These distances should be increased, depending upon local conditions and the expected time frame to return for future vegetation management work. Local conditions may include appropriate vegetation management techniques, fire risk, reasonably anticipated tree and conductor movement, species types and growth rates, species failure characteristics, local climate and rainfall patterns, line terrain and elevation, location of the vegetation within the span, worker approach distance requirements and other factors.

6.7.1.1 Side Clearance in Transmission Rights-of-Way

Specification side clearances to be obtained following work s are presented in Table 6.1. Consider potential sway of

conductors in fresh gale-force (36 mph) or greater wind, particularly mid span, where clearances could need to be increased to accommodate conductor sag and swing in high temperature and winds. If there is any

question regarding the need to extend clearances, error should be made on the side of caution.

Table 6.1. Transmission clearance requirements (in feet).

	500 kV	345 kV	230 kV	161 kV	138 kV	115 kV	69 kV	45 kV
Maximum Flash Distances (MVCD)	8.5	5.3	5.0	3.4	2.9	2.4	1.34	N/A
Action thresholds	18.5	15.5	15.0	13.5	13.0	12.5	10.5	5
*Minimum clearances following work	50	40	30	25	25	25	25	20

The Minimum Vegetation Clearance Distance (MVCD) represents minimum clearances that should be maintained from conductors at all times, considering the effects of ambient temperature on conductor sag under maximum design loading, and the effects of wind velocities on conductor sway. MVCDs in this chart are for 10,000-11,000 feet above sea level (the maximum in Table 2 of FAC-003-04) and apply across PacifiCorp's service territory regardless of elevation. Action thresholds indicate work should be scheduled within the next year. They are roughly MVCD plus 10 feet, with the exception of the 46kV, for which no MVCD exists.

6.7.2 MVCD

NERC Minimum Vegetation Clearance Distances (MVCD) are established in FAC-003 (NERC 2008), and represent radial distances from the lines inside of which trees should not encroach (Table 6.1) Trees that violate MVCDs shall be corrected within 24 hours of their identification following PacifiCorp SOP-PCC-215. *Transmission Grid Operations Operating Procedure*.

6.7.3 Structure Clearances

Trees and brush should be cleared within a twenty-five foot radius of transmission "H" or metal structures, a ten-foot radius of single pole construction and a five-foot radius of guy anchors. Clearing activities shall not damage poles, structures, guys or anchors. Grasses, forbs, ferns and other herbaceous species may be left around structures and guys.

6.7.4 Guy Wires

Trees or branches two-inches or more in diameter applying direct pressure to or threatening to fall on or through poles or guy wires shall be removed or pruned.

6.8 Integrated Vegetation Management

The purpose of vegetation management on utility rights-of-way is to Establish sustainable plant communities that are compatible with the electric facilities, wherever possible. These communities are stable, low-growing, compatible with conductors, diverse, and establish a sustainable supply of forage, escape and nesting cover, movement corridors for wildlife, reduced fire risk, and more open access to the line (Yanner and Hutnik 2004). Establishing native vegetation will also reduce the invasion of

noxious weeds into the corridor (BPA 2000).

6.8.1 IVM Control Methods

Control methods are the processes used to achieve objectives. Many cases call for a combination of methods. There are a variety of controls from which to choose, including manual, mechanical, chemical, biological, and cultural options (Miller 2014). Ground disturbance shall be minimized on all rights-of-way.

6.8.1.1 Manual Control Methods

Manual methods involve workers using hand-carried tools, such as chainsaws, handsaws, pruning shears. Manual techniques are selective and can be used where others may not be appropriate, including urban or developed areas, environmentally sensitive locations (such as wetlands or places inhabited by sensitive species), in the vicinity of archeological sites and on steep terrain.

6.8.1.2 Mechanical Control Methods

Machines are used for mechanical control. They are efficient and cost effective, particularly for clearing dense vegetation during initial establishment, or reclaiming neglected or overgrown rights-of-way (Figure 6.3). On the other hand, mechanical control methods can be non-selective and disturb sensitive sites, such as wetlands, archeologically rich localities or developed areas. At times, machines leave behind petroleum products, leaks and spills from normal operation. Furthermore, heavy equipment can be risky to use on steep terrain, where they may be unstable. So, they are not always appropriate.

6.8.1.3 Chemical Control Methods

Tree growth regulators and herbicides must be used according to directives on

their labels. Applicators are not only required to comply with label instructions, but also all other laws and regulations pertaining to tree growth regulator and herbicide use (see Chapter 7).

6.8.1.3.1 Tree Growth Regulators

Tree growth regulators (TGRs) are designed to reduce growth rates by interfering with natural plant processes. TGRs can be used to slow some fast-growing species, and be helpful where removals are prohibited or impractical.

6.8.1.3.2 Herbicides

Herbicides control plants by interfering with specific botanical biochemical pathways. There are a variety of herbicides, each of which behaves differently in the environment and in their effects on plants, depending on the formulation and characteristics of the active ingredient. While appropriate herbicide use reduces the need for future intervention, if misused they can cause unintended environmental harm due to drift, leaching and volatilization.

6.8.1.4 Biological Control Methods

Biological control uses natural processes to control undesirable vegetation. For example, some plants, including certain grasses, release chemicals that suppress other species growing around them. Known as allelopathy, this characteristic can serve as a type of biological control against incompatible species. Promoting wildlife populations is also a form of biological control. Birds, rodents and other animals can encourage compatible plant communities by eating seeds or shoots of undesirable plants.

A biological control known as cover-type conversion provides a competitive advantage to short-growing, early

successional plants, allowing them to thrive and eventually out-compete unwanted tree species for sunlight, essential elements and water. Cultural methods also take advantage of seed banks of native, compatible species lying dormant on site. In the long run, cultural control is the most desirable method where it is applicable.

The early successional plant community is relatively stable, tree-resistant and reduces the amount of work, including herbicide application, with each successive treatment.

While it is a type of biological control, cover-type conversion employs a combination of manual, mechanical, herbicide and cultural methods. For example, although encouraging allelopathic plants and increasing wildlife populations by improving habitat are types of biological controls, they are also forms of cultural control.

Tree-resistant communities are created in two stages. The first involves non-selectively clearing the right-of-way of undesirable trees using the best applicable control method or methods. The second develops a tree-resistant plant community using selective techniques, including herbicide applications to release the seed bank of native, compatible species for germination.

Cover type conversion, uses herbicides to remove incompatible tall-growing trees and other vegetation from the right-of-way in order to establish a stable, low-growing plant community. The specific IVM technique selected for a particular site is based upon various conditions, which include terrain, accessibility, environmental considerations (wetlands, streams, etc.) cultural factors, worker and public health, economics and other factors.

6.8.1.4.1 Wire-Border Zone

Over sixty years of research on transmission rights-of-way has demonstrated that integrated vegetation management applied to creating distinct, compatible plant communities not only effectively manages vegetation on rights-of-way, but also enhances wildlife habitat, at least in forested areas (Yanner and Hutnik 2004). The wire zone-border zone concept was developed by W.C. Bramble and W.R. Byrnes (Bramble et al 1991).

On flat terrain, the wire zone is the right-of-way portion directly under the wires and roughly 10-feet to the field side of the outside phases. The border zone ranges from ten-feet outside the outer phases to the right-of-way edge (Figure 6.4a). The border zone should be reduced or eliminated on up-slopes where wire sag and sway may preclude leaving trees of any type. It may also extend on down-slopes (Figure 6.4b). Species that could grow into the wires at any time in their lives should not be allowed in the border zone.

Properly managed, wire zone-border zone linear corridors not only effectively protect the electric facilities, but also can become an asset for forest ecology and forest management (Bramble et al 1991, Yanner, Bramble and Byrnes 2001, Yanner and Hutnik 2004).

6.8.1.4.1.1 Region A

Region A is the area where lines are less than 50 feet off the ground (Figure 6.5). The 50 foot height should be from maximum engineered sag mid-span, with attention to side slope and potential sway of conductors in high wind. The right-of-way in Region A should be cleared following the wire zone - border zone recommendations of Bramble and Byrnes (Bramble et. al. 1991 [Figure 6.4a]).

After clearing, the Region A wire zone should consist of grasses, legumes, herbs, ferns and low-growing shrubs (under 5-feet at maturity). The border zone should consist of tall shrubs or short trees (up to 25 feet in height at maturity), grasses and forbs. These cover types benefit the right-of-way by competing with and excluding undesirable plants.

6.8.1.4.1.2 Region B

Region B occurs where the lines are between 50 and 100 feet off the ground from maximum engineered sag (Figure 6.5). In Region B, a border zone regime should be established throughout the right-of-way.

Note that many transmission structures are over 50 feet high. In cases where they are, a border zone community can be maintained near structures. Care should be taken to maintain access to the structure.

6.8.1.4.1.3 Region C

Region C is where the lines are 100 feet or more off the ground (Figure 6.5). Tall-growing trees may be allowed in Region C, provided they have at least 50 feet of clearance. Trees with less than 50 feet of clearance should be selectively removed.

6.8.1.5 Cultural Control Methods

Cultural methods modify habitat to discourage incompatible vegetation. Cultivated landscapes of compatible plants and agricultural crops are examples of cultural control.

6.9 Transmission Rights-of-Way - Widths

Right-of-way clearing should conform to the width indicated on the easement or permit. Removals in Regions A and B shall be done in transmission

rights-of-way wherever legal rights allow. They should also be done when trees have grown within 50 feet of the line in Region C.

Transmission lines may be constructed on the edge of dedicated road right-of-way where there may or may not be an easement or permit on the adjoining property allowing encroaching vegetation to be cleared. In these cases or others where the easement or permit does not specify a width, right-of-way dimensions in Table 6.2 apply. However, if no authority exists to remove trees, at minimum work should conform to Tables 6.1.

Easements should be researched through PacifiCorp Right-of-Way Services referencing the *Plan and Profile*. The *Plan and Profile* may also be useful in determining if the age of the line qualifies it for a prescriptive easement (see Section 8.3.1.1 and Table 8.1). Ground disturbance should be minimized on all rights-of-way.

6.10 Post Work Assessment

Foresters should audit transmission work following procedures outlined in Section 4.4. The audits should objectively assess quality, adherence to specifications, production, herbicide and other matters. Moreover, audits should provide the tree crew leader with feedback on production, professionalism, equipment, safety and crew efficiency. Results shall be

documented on an *Audit Report* (Figure 4.7). Following systematic work, the entire length of completed line shall be inspected by the contractor to verify work complies with PacifiCorp specifications.

6.11 Mitigation Measures

NERC Requirement R5 directs transmission owners to develop mitigation measures to achieve sufficient clearances for protection of the transmission facilities when it identifies locations on the right-of-way where the transmission owner is restricted from performing work that may lead to a vegetation encroachment into the MVCD prior to the implementation of the next annual work plan, the owner shall take corrective action to ensure continued vegetation management to prevent encroachments.

Whenever the restriction is caused by a landowner, the refusal process in Chapter 8 shall be followed. If the refusal process has been completed without attaining clearances that would prevent encroachment into the MVCD before the next scheduled work, such locations should be documented on the *Work Release* (Figure 4.2). These sites should be reported in writing to the appropriate line patrolmen within 30 days. The line patrolmen should report annually on these site's status. Moreover, foresters or their contract designee should inspect the site biannually.

Figure 6.1 In densely vegetated areas, rights-of-way usually have to be completely cleared as the initial stage of establishing a wire-border zone.



Figure 6.2. Line 4 in California following work (note the trees mid-span where the line is more than 100-feet off the ground).



Lorelei Phillips photo

Figure 6.3. Right-of-way reclamation using mechanical control. In this case, a slashbuster.



TABLE 6.2. Active transmission right-of-way widths.

Facility	Distance from Center	Urban Width	Rural Width
46 kV Single pole	25 feet	50 feet	50 feet
69 kV Single pole	25 feet	50 feet	50 feet
115 kV Single pole	30 feet	60 feet	60 feet
138 kV Single pole	30 feet	60 feet	60 feet
161 kV Single pole	40 feet	80 feet	80 feet
230 kV Single pole	40 feet	80 feet	80 feet
69 kV H frame	40/50 feet	80 feet	100 feet
115 kV H frame	40/50 feet	80 feet	100 feet
138 kV H frame	40/50 feet	80 feet	100 feet
161 kV H frame	40/50 feet	80 feet	100 feet
230 kV H frame	62½ feet	125 feet	125 feet
345 kV H frame	75 feet	150 feet	150 feet
345 kV Steel tower	75 feet	150 feet	150 feet
500 kV Steel tower	87½ feet	175 feet	175 feet

Note rights-of-way should be cleared to those specified in the easement. If no easement exists or if no width is specified in the easement, rights-of-way in this table apply. Widths conform to PacifiCorp Transmission Construction Standard TA 181

Figure 6.2. Line 4 in California following work (note the trees mid-span where the line is more than 100-feet off the ground).



Lorelei Phillips photo

Figure 6.4a. Bramble and Byrnes Wire Zone - Border Zone (adapted from Yahner, Bramble and Byrnes, 2001).

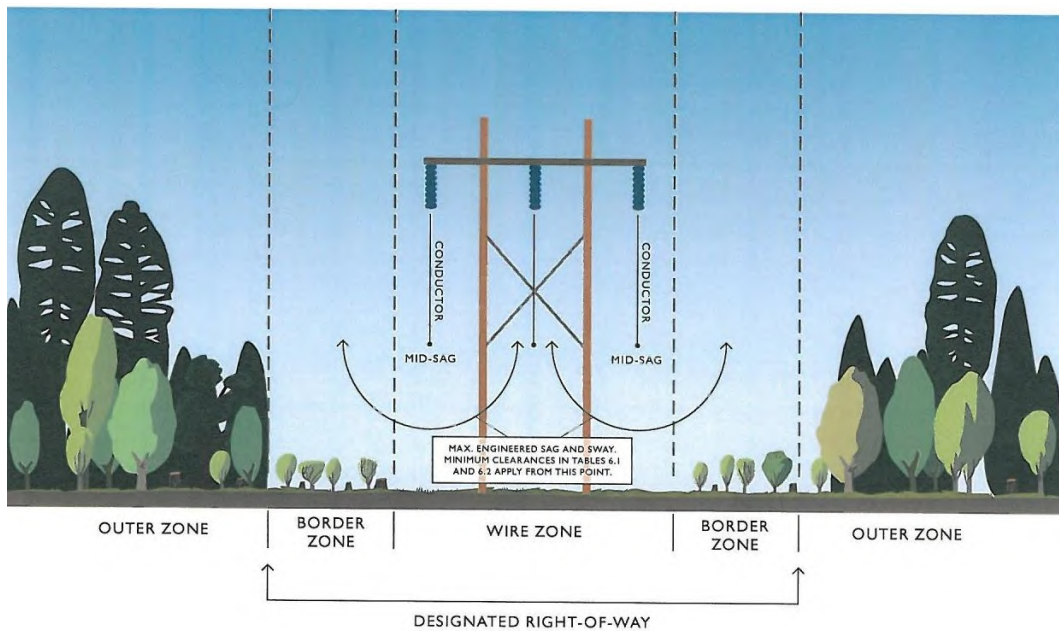
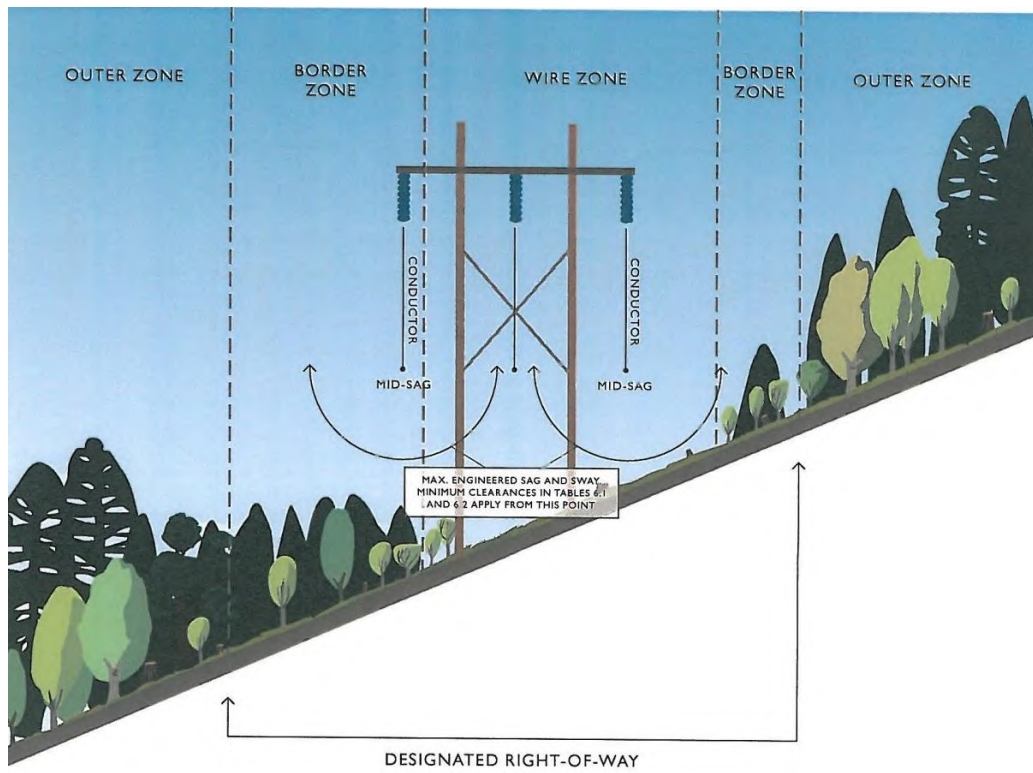
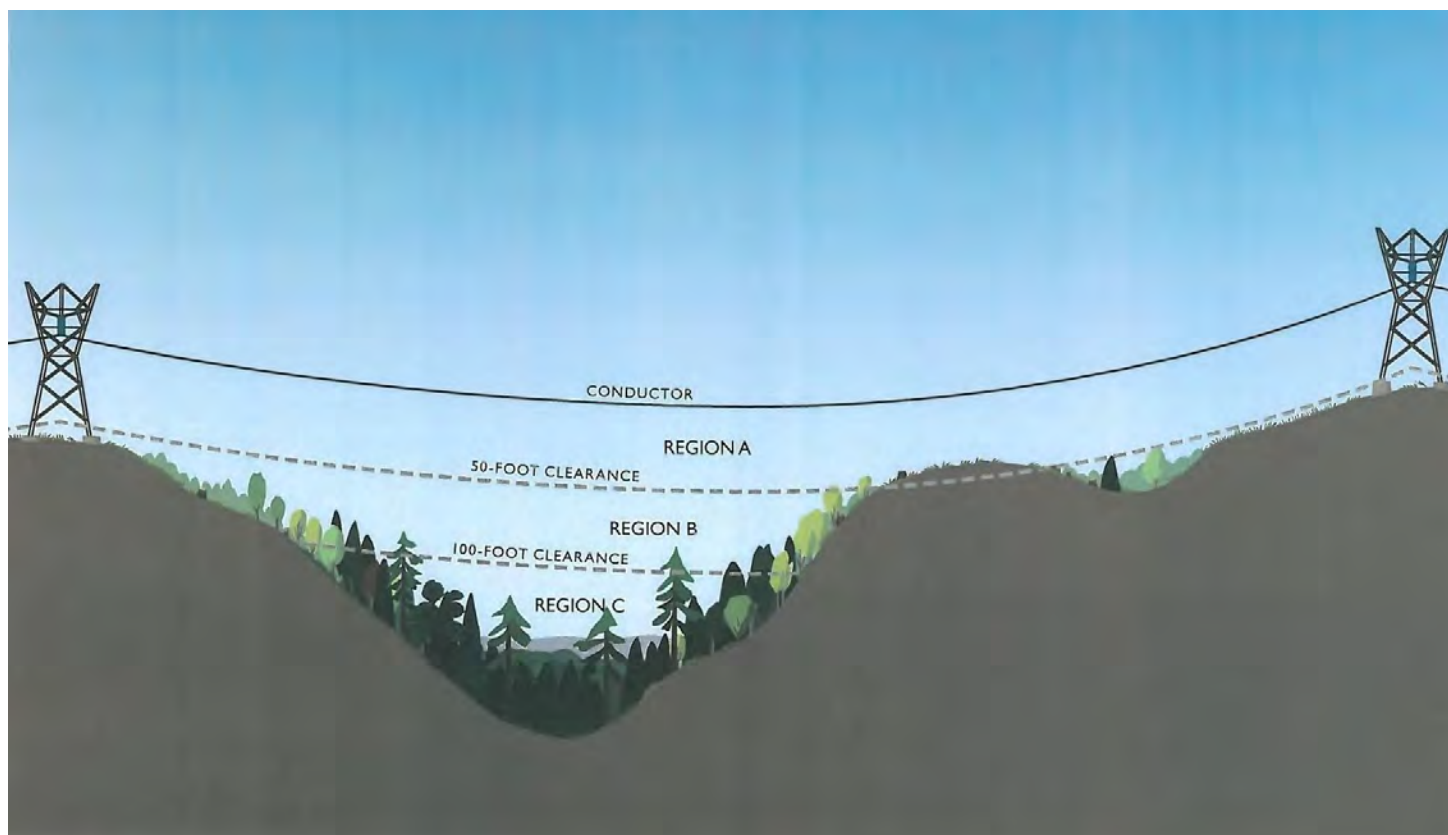


Figure 6.4b. The border zone may be reduced or eliminated on up-slopes where wire sag and sway could bring it into contact with trees, and can be extended on down-slopes.



Brad Gouch drawings (Figures 6.4 and 6.5).

Figure 6.5. Under clearance regions.



Region Definitions:

- Region A: Where conductor to ground clearance is less than 50 feet (from maximum engineered sag and sway).
- Region B: Where the conductor to ground clearance is 51-100 feet (from maximum engineered sag and sway).
- Region C: Where the conductor to ground clearance is over 100 feet (from maximum engineered sag and sway).

Appropriate Region Plant Species:

- Region A: Grasses, legumes, ferns and low-growing shrubs (<5' at maturity).
- Region B: Region A species as well as large shrubs and short-growing trees (<25' at maturity).
- Region C: All tree and shrub species.

6.12 High Risk Trees

High risk trees are structurally unsound and could strike a target (such as electric facilities) when they fail. Off right-of-way hazard trees shall be identified following Smiley, Matheny and

Lilly (2011) using an initial Level 1 assessment and bearing prevailing winds in mind.

Trees on the uphill and windward sides of rights-of-way should receive particular scrutiny. Hazard trees should be either removed or pruned to reduce the exposure. Work shall be performed in a manner that neither damages trunks nor disturbs root systems of adjacent trees. Damaged trees could decline, decay or die, threatening the conductors if they fall.

Federal and state agencies could request high risk trees to be topped to create "wildlife trees". PacifiCorp may honor such requests provided the safety of the tree workers or the integrity of facilities are not compromised, and the trees are topped below a height that would allow them to contact Company facilities should they fall.

PacifiCorp manages multitudes of trees across its over 15,000 mile transmission system. In every mile of line, the Company potentially has hundreds or thousands of trees, any one of which could compromise public safety and electrical service reliability. It is impossible to completely secure an electrical system from that level of exposure. Nevertheless, PacifiCorp has a responsibility to make a reasonable effort to maintain vegetation to reduce risks to both the public and power supply.

6.13 Vegetation Screens

Vegetation screens may be required by federal or local authorities in some locations at high visibility areas such as major road crossings. Where these mandates exist, vegetation screens should consist of border zone communities and be located near structures (where the line is unlikely to sag), if possible. If no border zone species are present, tall-growing trees may be left provided they have at least the minimum clearances in Table 6.1 following scheduled work.

Leaving tall-growing trees in transmission rights-of-way should be discouraged because they impede cover type conversion. So, trees should be removed (gradually over a number of years, if need be), rather than be pruned to obtain proper clearances, if at all possible. Vegetation screens should be no more than twenty-five feet from frequented vantage points into the right-of-way. Areas where tall-growing species are retained as screens shall be documented and monitored annually by line patrolmen. If remaining trees violate work thresholds specified in Table 6.1, within 30 days line patrolmen should report them to Vegetation Management for correction.

6.14 Merchantable Timber

Rights-of-way could contain merchantable timber. Merchantable timber is defined as trees with at least six-inch diameter at breast height (DBH), that are recoverable and have a market in the local area. Merchantable timber belongs to the property owner unless the easement or permit states otherwise. If merchantable timber needs to be felled, the property owner should be contacted regarding timber recovery.

After the merchantable timber is felled, it should be de-limbed and left in total tree length on the right-of-way for recovery by the owner. In limited cases, PacifiCorp may decide to purchase merchantable timber from the property owner and retain or transfer ownership to

another party. A forest practice permit from the appropriate state department of forestry may be required for timber recovery.

6.15 Transmission Safety Procedures

The following safety procedures shall be followed by all tree crews on PacifiCorp transmission facilities.

6.15.1 Pre-work Communication with Dispatch

Operative communication capability is mandatory at all times on transmission rights-of-way. Communication with dispatch is critical for tree crew safety. Every morning before starting transmission work, tree crews shall call the dispatcher from the right-of-way by radio or telephone and provide the following information to comply with *Power Delivery System Operations System policy SOP-152* (Figure 6.6):

- Name of crew leader
- Name of company
- Contact information (radio or cell number)
- Name of transmission line
- Line section (substation names between which work is to occur, such as "Alvey to Dixonville," or "Ben Lomond to Terminal")
- Location of work (structure number, address or both)
- How long the crew will be working at that location
- Radio or cellular telephone number of the crew
- Name of GF/supervisor and their cellular telephone number

If radio or telephone contact cannot be made with the dispatcher from the right-of-way, non-emergency work shall not be performed at that site. The crew should relocate to work where they can communicate with the dispatcher. Satellite phones might be necessary in remote locations to provide the required communication.

6.15.2 Post-Work Communication with Dispatch

Each afternoon after completing transmission work for the day, tree crews shall call the dispatcher and provide the following information (Figure 6.6):

- Name of crew foreman
- Name of company.
- Contact information (radio or cell number)
- Name of transmission line
- Line section (substation names between which work occurred, such as "Alvey to Dixonville," or "Ben Lomond to Terminal").
- Location where work was performed

Crew members and equipment are off the right-of-way or in the clear.

6.15.3 Safe Working Procedure

If a tree cannot be felled or pruned safely, work shall not proceed. If a tree or limb falls into the conductors, work shall stop immediately and emergency procedures outlined in Figure 2.1 followed. Minimum approach distances (Table 2.1) shall not be violated. Remember, transmission conductors can sag considerably at mid-span during hot

weather, ice buildup and heavy electrical loads. Trees that have safe clearance in the morning may not have safe clearance in the afternoon. Conditions could require a hold or clearance. Clearances on some transmission lines can take weeks or months to schedule. See Section 2.1.1 for hold and clearance instructions.

6.16 Monthly Progress Tracking

Figure 6.6. Transmission communication procedure with Dispatch (operative communication is mandatory at all times on transmission rights-of-way. Satellite phones could be necessary in remote locations).

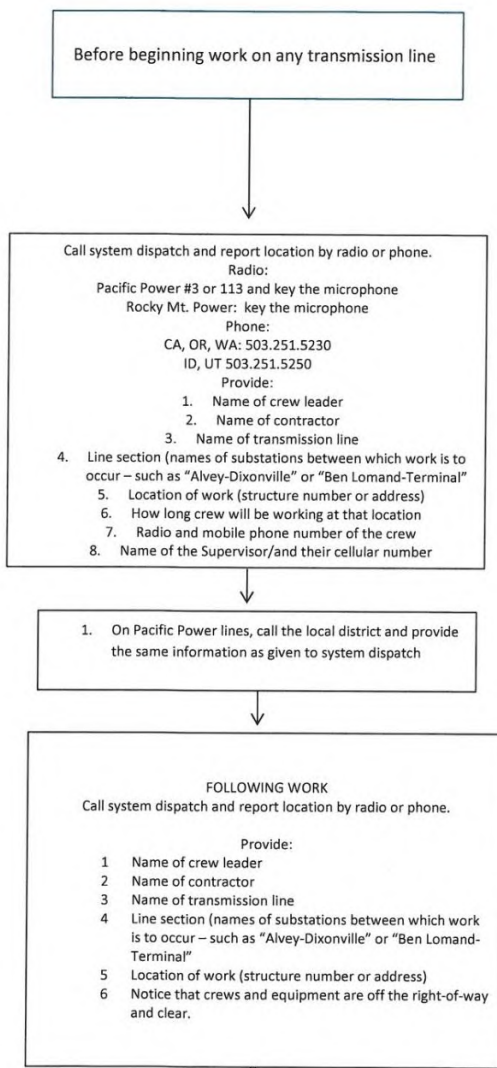


Figure 6.7. Summary pages of main grid and local transmission monthly reports.

PACIFICORP VEGETATION MANAGEMENT 2011 MAIN GRID TRANSMISSION PROGRESS REPORT					
Through Dec 31, 2011					
STATE SUMMARY					
	TOTAL	Line Miles	Line Miles	Line Miles	Line Miles
	Line Miles	Scheduled	Completed	Goal	Ahead/Behind
	7,160	795	803	795	8
State					
California	129	23	11	23	-11
Idaho	1,206	99	99	99	0
Misc States	66	0	0	0	0
Montana	137	46	30	46	-16
Oregon	1,131	224	224	224	0
Utah	2,329	207	230	207	23
Washington	284	160	168	160	8
Wyoming	1,877	37	41	37	4
TOTAL	7,160	795	803	795	8
FORESTER SUMMARY					
	TOTAL	Line Miles	Line Miles	Line Miles	Line Miles
	Line Miles	Scheduled	Completed	Goal	Ahead/Behind
	7160	795	803	795	8
Forester					
Armstrong	609	306	311	306	5
Evans	1865	127	142	127	14
Jones	64	21	21	21	0
Partridge	284	35	42	35	8
Phillips	734	58	46	58	-12
Vanderhoof	3,534	239	237	239	-2
Hoooley	71	9	4	9	-5
Total	7,160	795	803	795	8

PACIFICORP VEGETATION MANAGEMENT 2011 LOCAL TRANSMISSION PROGRESS REPORT					
Summary					
Through Dec 31, 2011					
LOCAL TRANSMISSION WORK					
	Total	Total Miles	Line Miles	Line Mile	Miles
	Line Miles	Scheduled	Completed	Completed Goal	Ahead(Behind)
	7,936	2,136	2,316	2,136	180
State					
California	572	106	116	106	10
Idaho	797	38	46	38	8
Oregon	1,836	279	340	279	61
Utah	3,747	1,445	1,587	1,445	142
Washington	324	131	89	131	-42
Wyoming	660	137	138	137	1
Total	7,936	2,136	2,316	2,136	180
SUMMARY OF WORK BY FORESTER					
	Total	Total Miles	Line Miles	Line Mile	Miles
	Line Miles	Scheduled	Completed	Completed Goal	Ahead(Behind)
	7,936	2,136	2,316	2,136	180
Forester		*	*	*	*
Hoooley	356	9	41	9	32
Evans	2,304	977	1,035	977	58
Jones	766	330	413	330	83
Partridge	594	259	191	259	-68
Phillips	1,038	90	138	90	48
Vanderhoof	2,134	313	323	313	10
Armstrong	744	158	176	158	18
Total	7,936	2,136	2,316	2,136	180
Weeks					
	52				

Progress on the annual work plan for NERC Transmission Lines shall be tracked on the *PacifiCorp Main Grid Transmission MASTER* for lines under the auspices of NERC Standard FAC-003. Progress on the annual work plan for other transmission lines shall be tracked on the monthly *Local Transmission Progress Report*. Both reports track miles achieved against plan on a monthly basis (Figure 6.7).

6.17 Quarterly WECC Audit Report

PacifiCorp is required to report outages on transmission lines subject to FAC-003.

7. CHEMICAL PRODECURES

Herbicides and tree growth regulators (TGRs) are an integral part of PacifiCorp's Vegetation Management program. Chemical applications shall be performed according to federal, state and local regulations. Labels are the law, and chemical use must comply with labeling. PacifiCorp's director of vegetation management shall approve all products and mixes. Property owners shall be notified at least five days, but no more than six weeks in advance, whenever chemicals are to be used on their property. Property owner objection to herbicide use shall be honored.

The company making the application is responsible for chemical purchase and storage, record keeping as well as container disposal. Crew leaders in all states except California shall hold a valid applicator's license. Applicators shall either hold that license, or work under the direct supervision of a certified applicator as required in the state in which they are working. Tree crews found working without a crew leader or applicator without a valid applicators license for the state in which they are working may be shut down at the forester's discretion. Supervisors/GFs of qualified applicators shall hold a certified applicator's license in the state or states in which they supervise crews.

7.1 Closed Chain of Custody

Closed chain of custody best practices are encouraged. *CUtility Arborist Association Best Management Practices: Field Guide to Closed Chain of Custody for Herbicides n the Utility Vegetation Management Industry* (Goodfellow and Holt 2011).

Closed chain of custody is a concept in which ready-to-use, diluted concentrate

formulations are utilized in closed delivery systems. Closed chain of custody includes herbicide shipping, distribution, storage, and mixing, which includes returning empty containers for refilling and reuse.

7.2 Chemical Reports

All chemical applications shall be documented in the *Daily Report* (Figure 4.6) or other method approved by a Company forester. The company making the application shall be responsible for maintaining reports for review by the state departments of agriculture.

When chemical work is done on or adjacent to PacifiCorp Hydro properties, copies of chemical reports shall be provided to the plant manager weekly.

7.3 Herbicide Applications

Herbicide applications shall be pursued wherever possible as a vegetation management tool. Herbicides prevent sprouting from stumps of deciduous trees and should be used on saplings of tall-growing species to reduce future inventories (Figures 7.1 and 7.2). Herbicides are essential in cover type conversion necessary in establishing the wire zone-border zone method on transmission lines.

When properly used, herbicides are effective and efficient, minimize soil disturbance, and enhance plant and wildlife diversity. Herbicide application can benefit wildlife by improving forage as well as escape and nesting cover. In some instances, noxious weed control is a desirable objective on utility rights-of-way that can be satisfied through herbicide treatment.

Herbicide use can control individual plants that are prone to re-sprout or sucker

after removal. When trees that re-sprout or sucker are removed without herbicide treatment, dense thickets develop, impeding access, swelling workloads, increasing costs, blocking lines-of-site, and deteriorating wildlife habitat (Yanner and Hutnik 2004 [Figures 7.1 and 7.2]).

Treating suckering plants allows early successional, compatible species to dominate the right-of-way and out-compete incompatible species, ultimately reducing work.

7.3.1 Selectivity

Herbicides can be selective or non-selective depending on their type. Selective herbicides only control specific kinds of plants, when applied according to the label. For example, synthetic auxins are a class of selective herbicides that control broadleaved plants, but do not harm grass species. By contrast, non-selective herbicides work against both broadleaved plants and grasses. Non-selective herbicides can be effective where a wide variety of target plant species are present, like those often found during initial clearing or reclaiming dense stands of invasive or other undesirable vegetation.

Application techniques can also be either selective or non-selective. Selective applications are used against specific plants or pockets of plants. Non-selective techniques target areas rather than individual plants (see *Application Methods*). Non-selective use of non-selective herbicides eliminate all plants in the application area. Non-selective use of a selective herbicide controls treated plants that are sensitive to the herbicide, without differentiating between compatible or incompatible species. Selective use of either would only control

targeted vegetation. Selective use is preferable unless target vegetation density is high.

7.3.2 Herbicide Best Management Practices

PacifiCorp is dedicated to ensuring proper application of approved herbicides to minimize the effects on non-target vegetation, human health, fish and wildlife species, and water quality (Childs 2005).

Herbicide applications shall (Childs 2005):

- Follow all product label mandatory provisions such as registered uses, maximum use rates, application restrictions, worker safety standards, restricted entry levels, environmental hazards, weather restrictions, and equipment cleansing.
- Follow all product label advisory provisions such as mixing instructions, protective clothing and others matters.
- Have on site a copy of the label and SDS sheets.
- Be made in the presence of a licensed applicator valid for the state in which work is performed.

7.3.3 Wetlands and Waterbodies

The effects of herbicides on wetland and water resources should be minimized by utilizing buffer zones (Table 7.1). Buffer zones reduce the movement of herbicides from the application site into adjoining water bodies. They must be followed unless instructed otherwise by competent authorities. Climate, geology and soil types should be considered when selecting the herbicide mix with the lowest relative risk of migrating to water resources (Childs 2005)

Figure 7.1. Untreated rights-of-way quickly fill in with thickets of sprouts following mowing



Jay Neil photo

Figure 7.2. Incompatible species treated in the Line 72 right-of-way in, Oregon two years after reclamation. Herbicide treatments help maintain the right-of-way and are used to convert it to a wire zone-border zone prescription (Figure 6.3)



Table 7.1. Buffer Widths to Minimize Impacts on Non-Target Resources (adapted from Childs 2005).

Herbicide Ecological Toxicities and Characteristics	Buffer Width from Water Resource per Application Method			
	Spot	Localized	Broadcast	Mixing, Loading, Cleaning
Practically Non-toxic to Slightly Toxic	Up to the Edge	Up to Edge	50 feet	100 feet
Moderately Toxic, or Label Advisory for Ground/Surface Water	25 feet	35 feet	300 feet	250 feet
Highly Toxic to Very Highly Toxic	35 feet	100 feet	Noxious weed control only. Buffers shall comply with local regulations	250 feet

7.3.4 Spills

Mixing, loading and cleaning equipment are critical activities that present the greatest exposure to accidents or spills (Miller 1993). Spills should adhere to Section 2.2.5. Spills can be avoided by using closed chain of custody best management practices.

7.3.5 Inappropriate Applications

There are situations where herbicide applications are inappropriate. If application company representatives are uncertain whether or not applications are appropriate, they shall consult the appropriate forester. Inappropriate situations include (but are not limited to):

- Areas where the property owner expresses objections to herbicide use.
- Areas where herbicide could drift or leach into organic farms.
- Governmental lands where herbicides are prohibited.
- Conditions of heavy precipitation or strong winds. If these conditions exist, the treatment should be deferred until weather improves.

- Periods of high temperatures, which can cause product volatility and damage off-target plants. This is particularly important for foliar applications. During high temperatures, treatment should be deferred until weather cools. Note that vineyards can be especially sensitive to synthetic auxins.
- Trees that could be root grafted to desirable trees.
- Trees that are near desirable plants where the herbicide could move into contact with off target foliage or roots.
- Trees that are sufficiently close agricultural crops or harvestable, edible plants that contamination could be reasonably expected

If there is any uncertainty regarding whether or not an application is appropriate, contact the forester with responsibility for the area.

7.3.6 Application Methods

Herbicide application methods are categorized by the quantity of herbicide

used, the character of the target, vegetation density and site parameters. Dyes can be used in the herbicide mix to mark areas that have been treated. Treatments include individual stem, broadcast and aerial treatments. Ninety-five percent control shall be obtained.

7.3.6.1 Individual Stem Treatment

Individual stem treatments are selective applications. They include stump, basal, injection, frill, selective foliar and side-pruning applications. Due to their specific nature, proper individual stem applications work well to avoid damage to sensitive or off target plants. However, they are impractical against broad areas or sites dominated by undesirable species.

Stump applications are a common individual stem treatment, where herbicides are applied to the stump cut surface around the cambium and to the top side of the bark. Water-based formulations require immediate stump treatment, while oil herbicides can be applied hours, days or even weeks after cutting.

Injections involve inserting herbicide into a tree. Frill (commonly called “hack and squirt”) treatments, consist of herbicide application into cuts in the trunk. Injections or frill treatments are especially useful against large incompatible trees to be left standing for wildlife.

Basal applications often use a herbicide in an oil-based carrier at the base of stems and root collar. The oil penetrates the bark, carrying the herbicide into the plant. Although basal applications can be made year round, dormant treatment is often best on deciduous plants, when they do not have foliage that can obstruct access to individual stems.

Selective foliar applications are done by spraying foliage and shoots of specific

target plants. They can be either low or high volume treatments. For low volume applications, comparatively high concentrations of herbicide active ingredient are made in lower volumes of water than would be used with high volume treatment. Foliar applications are only made during the active growing season, normally late spring to early fall.

Side pruning is a technique where non-translocatable herbicides are applied to control specific branches growing toward the electric facility. Treating large branches could damage trees in the same way as removing them through pruning.

7.3.6.2 Broadcast Treatment

Broadcast treatments are nonselective because they control all plants sensitive to a particular herbicide in a treatment area. They can provide a degree of selectivity with proper herbicides. Even then, broadcast treatments do not differentiate between compatible and incompatible plants that the herbicide controls. Broadcasting is particularly useful to control large infestations of incompatible vegetation (including invasive species) in rights-of-way or along access roads.

Broadcast techniques include high-volume foliar, cut-stubble and bare ground applications. High volume foliar applications are similar to high volume selective foliar applications. The difference is that broadcast high volume foliar treatments target a broad area of incompatible species, rather than individual plants or pockets of plants. Cut-stubble applications are made over areas that have just been mowed. Bare-ground treatments are used for clearing all plant material in a prescribed area, such as in substations or around poles to protect against fire. Bare-ground applications are usually granular or liquid applications following mechanical removal of

vegetation, or used as a pre-emergent in maintaining graveled areas such as substations.

7.3.6.3 Aerial Treatment

Aerial treatments are made by helicopter (rotary wing) or small airplane (fixed wing). Rotary wing aircraft provide the most accuracy, because helicopters can fly more slowly and are more maneuverable than airplanes. However, airplanes are less expensive to operate than helicopters. Aerial control methods are also nonselective, but can provide a level of selectivity with proper herbicides. Aerial applications can be useful in remote or difficult to access sites, and be cost effective and quick, especially if large areas need to be treated. They also can be used where incompatible vegetation dominates a right-of-way. The primary disadvantage of aerial application is that it carries the threat of off-target drift, so it must be performed under low-wind conditions with low toxicity herbicides.

7.4 Approved Herbicides

A list of approved products appears in the following sections. PacifiCorp's director of vegetation management must authorize other chemicals.

7.4.1 Stump Application

- 2, 4-D
- Glyphosate
- Picloram
- Triclopyr

7.4.2 Low Volume Basal Application

- Imazapyr
- Triclopyr

7.4.3 Foliar Application

- 2, 4-D
- Aminopyralid
- Fosamine ammonium
- Glyphosate

- Imazapyr
- Metasulfuron methyl
- Picloram
- Sulfometuron methyl
- Triclopyr

7.4.4 Soil Application

- Diuron
- Imazapyr
- Picloram
- Sulfentrazone
- Tebuthiuron

7.5 Tree Growth Regulators

Tree Growth Regulator (TGR) applications are intended to retard fast-growing trees so that they will not interfere with facilities or violate state regulatory agency tree policy before the next scheduled maintenance.

7.5.1 Approved TGR Application Chemicals

- Fluprimidol
- Paclobutrazol

8. CUSTOMER RELATIONS

Representatives of vegetation management meet with more customers than any other Company department. As a result, customers often develop an impression of the entire Company based on their experience with PacifiCorp vegetation management. Since vegetation management work is often controversial, excellent customer service is imperative for a successful program. Company and contract personnel must be professional, prompt, fair and courteous to customers.

8.1 Educational Information

PacifiCorp has a variety of educational materials about tree-power line conflicts and planting the right tree in the right place.

8.1.1 Trees and Power Lines Brochure

The *Trees and Power Lines* brochure is a companion to the "yellow door card" (see Section 8.2.1). It explains the need for line clearance work, as well as natural target pruning. It also provides color pictures of how properly pruned trees could look following line clearance.

8.1.2 Small Trees for Small Places

The *Small Trees for Small Places* is a publication in PDF format available at PacificPower.net or RockyMountainPower.net. It provides tree selection tree planting and electrical safety information. It offers an easy to use chart on ornamental and adaptive characteristics of 100 different species that can be used adjacent to power lines. Not all these trees can be used everywhere in PacifiCorp's service territory. However, with a choice of 100 small-

statured trees, there should be several to use in any given location around PacifiCorp's system.

8.1.3 Right Tree in the Right Place Poster

The *Right Tree in the Right Place* poster provides illustrations and descriptions of small trees that are suitable across PacifiCorp's service territory. It also relates information about proper utility tree pruning and tree planting.

8.2 Notification for Tree Work

Notification for tree work is not required by any state tariff in PacifiCorp's service territory. However, PacifiCorp vegetation management attempts to notify property owners or tenants prior to vegetation management work at home and business sites. PacifiCorp area foresters should authorize any line clearance work to be done without property owner or tenant notification. In cases of municipal, county, state or federal properties, the proper agency representative shall be notified. The appropriate customer and community relations manager should be notified prior to meeting with governmental officials.

Notification, including that for tree or chemical work, should be by letter, phone, personal visit or door card at least five business days, but no more than six weeks, prior to the crew arriving. Notification shall be documented on an *Activity Report* (Figure 4.3). Notification cards shall not be placed in U.S. Mail boxes. Notification cards should be used only where the owner or tenant is likely to be present on a regular basis. Some circumstances, such as work on historic, unique or unusual trees, could

warrant personal contact with the customer.

8.2.1 Door hangers

PacifiCorp has a variety of door hangers (Figure 8.1). These door hangers come in Pacific Power and Rocky Mountain Power versions. Pacific Power door hangers shall be used in California, Oregon and Washington. Rocky Mountain Power printings shall be used in Idaho, Utah and Wyoming.

8.2.1.1 Distribution (Yellow)

PacifiCorp's yellow distribution door hanger, and should be used to notify customers of upcoming distribution cycle or interim work. The door hanger has contract utility forester contact information, an explanation of the need for line clearance work, of how the work will be performed and how much clearance is required. The door hanger informs customers that volunteer trees (those not planted as part of a landscape) six or fewer inches in diameter at breast height will be removed. It also includes drawings of shapes customers could expect from the work, and tips about tree planting (Figure 8.2). Grow into facilities at some time in their life approx. 10 ft. each side of center

8.2.1.2 Ticket (Blue)

The blue door hanger should be used to communicate with customers who have called in requests for tree work. It has four check boxes with the most common responses to customer requests. The tree(s):

- Do not pose an immediate threat to electric service.
- Are not affecting PacifiCorp facilities.

- Are growing in proximity to service lines, but do not threaten electric service. If a customer wishes to have the tree pruned, PacifiCorp can disconnect the line to enable the customer to safely perform the work or hire a professional tree care company to do it for them.
- Are the customer's responsibility because they have more than ten feet from distribution primary conductors.

The form also has space for comments, and contract utility forester contact information.

8.2.1.3 Distribution Removal (Ivory)

The white door hanger is a tree removal request, to fulfill PacifiCorp's requirement for written permission to remove trees where no easement granting authority exists to do so (see Section 2.7.1). The white door hanger identifies trees to be removed, has check boxes indicating whether or not the logs will be cut to firewood length and the stumps treated with herbicide. The door card also provides contact information for the forest tech, or comments and a sketch to help the customer understand the request.

8.2.1.4 Rural Transmission (Purple)

The rural transmission door hanger explains the need to remove trees under transmission lines. It relates the process the customer can expect, how trees and debris will be left. It informs customers that herbicide could be used on their property, and that we have a coupon program for tree replacement. It provides information on the voltage of the line and widths of the right-of-way. The door hanger also has a wire zone-border zone

Figure 8.1 Various PacifiCorp Vegetation Management door hangers .



illustration and offers contract utility forester contact information.

trees will be treated and contract utility forester contact information.

8.2.1.5 Urban Transmission (Forest Service Green)

The green transmission door hanger is for use in urban or developed areas. It differs from the rural door hanger insofar as it doesn't have a diagram of the wire-border zone concept. It still stresses removal.

8.2.1.6 TGR (Grey)

The grey TGR door hanger is for notifying customers about upcoming tree growth regulator application on their property. It provides space to see what

8.2.1.7 Herbicide (Grey)


The grey herbicide door hanger is for notifying customers about upcoming herbicide application on their property.

8.2.1.8 Tree Crew Request (Orange)

The orange door hanger is for tree crews to use to ask customers for their cooperation with upcoming tree work. It provides information about when a tree crew will arrive on site, and has check




Figure 8.2. "Yellow" door hanger.



The Steps for Tree Removal, Pruning and/or Herbicide Application


- This door card is the first step in the process. We are leaving it between one and six weeks before work on your property is planned.
- Please call the arborist listed on the other side of this door card within a week of receiving the verbal or this written notice, with questions or to notify us of any issues on your property.
- Tree crews will remove, prune or treat the trees with herbicides or tree growth regulators as indicated on the front of the card. The main trunk and large limbs will be left for your use. In addition, brush and trees that are under 6-inches in diameter and not intentionally planted as part of the landscape will be removed and treated with herbicide.
- We offer coupons to replace incompatible trees with utility-friendly species that you can plant in appropriate locations on your property. Talk with the forest technician about this option.
- This service is provided at no cost to you.
- If you have questions, please contact the arborist listed on the other side of this door card.

Here are some shapes you may expect from proper pruning around power lines.



For more information on electrical safety, tree pruning or planting the right tree in the right place, we invite you to visit rockymountainpower.net/trees.

Para más información, llame al 1-888-225-2611 y podrá hablar con un representante que hable español. Este servicio se ofrece sin ningún costo para usted.



Tree Maintenance & Power Line Safety

It's a pleasure to provide you with safe, reliable, reasonably priced electricity. Keeping trees away from power lines is one of the most important ways to ensure you and your neighbors receive reliable electric service. It also helps keep you and our employees safe.

- After routinely inspecting the power lines on your property it's prudent to remove the following trees:

- Additionally, we need to prune trees on your property to provide clearance of at least 10 to 14 feet of the overhead power line and/or from the power line running along the side of the trees:

- The trees listed below will be treated with tree growth regulator to reduce the rate at which the tree(s) regrow into overhead power lines and also to reduce the frequency in which the tree(s) need to be pruned by our tree crews.

- An herbicide will be applied in low volumes to non-landscape trees and brush stumps to prevent future growth. The herbicide is registered with the U.S. Environmental Protection Agency and will be applied in accordance with label requirements and federal, state and local regulations.

We hope you understand the reasons for the actions mentioned above and apologize for any inconvenience. **To understand what happens next, please review the steps for this work on the reverse side of this card.**

For more information on electrical safety, tree pruning or planting the right tree in the right place, we invite you to visit rockymountainpower.net/trees.

If you have questions please call:


Arborist: _____

Phone: _____ Date: _____

Comments: _____

Para más información, llame al 1-888-225-2611 y podrá hablar con un representante que hable español. Este servicio se ofrece sin ningún costo para usted.

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yellow



boxes for requests to move something (like a car) from under the tree or secure a dog. It also can be used for permission to dive on property and has space for comments.

8.2.1.9 Pole Clearing

The pole clearing door hanger is to notify California customers of upcoming work to comply with California Resource Code 2492 (see Section 5.6)

8.2.2 Other Customer Contact Forms

In addition to door hangers, PacifiCorp has two forms for use in customer communication. The *Property Owner Permission* form has check boxes requesting authorization for tree removal, tree and brush disposal, mowing, notification of herbicide and TGR application. It provides a space for the property owner's signature. Property owner signatures are required for tree removal, but not brush disbursement or herbicide application.

PacifiCorp also has a *Refusal/Complaint Form*. This form should be completed by contract utility foresters, supervisors/GFs, tree crews or foresters whenever a customer has concerns about upcoming or recently completed work. It identifies the property owner, the type of project and the nature of the refusal or complaint. These documents should be kept in a permanent file.

8.2.3 Crew Arrival on Site

When crews arrive for work at a residential site, they should make a courtesy knock on the door and let the homeowner or tenant know they are about to begin work. If no one is home, the crew should proceed with the planned tree work.

8.3 Customer and Property Owner Refusal Procedure

The customer refusal process is presented in Figure 8.3. Detailed records must be kept of every conversation, including the date and time it occurred, and summary of the matters discussed. If a vegetation management representative makes a failed attempt to contact a refusal by phone, the date and time of the call should also be noted.

8.3.1 Contract Utility Forester Refusal Procedure

When a property owner refuses to allow the work necessary to satisfy PacifiCorp specifications, the contract utility forester shall complete a *Property Owner Refusal/Complaint Report* and notify their supervisor/GF, and area forester within two working days and before any work is performed on the property. Contract utility foresters shall not compromise clearances.

8.3.1.1 Easements

After documenting the refusal, the contract utility forester should research the right-of-way to determine PacifiCorp's property rights for that location. PacifiCorp often owns easements, copies of which are available from PacifiCorp right-of-way services. In addition, states grant prescriptive rights if the line has existed for specified length of time. This time period varies depending on the state (Table 8.1). This information should be provided to the appropriate GF/supervisor.

8.3.2 Crew Leader Refusal Procedure

When a property owner refuses to allow the crew leader to obtain specification clearances, the crew leader shall complete a *Property Owner*

Refusal/Complaint Report and notify their GF/supervisor, contract utility forester, or area forester within two working days and before any work is performed on the property. Crew leader notification initiates the refusal procedure from the beginning.

8.3.3 General Foreman/Supervisor Procedure

The supervisor/GF should contact the property owner within two weeks of being informed of a refusal to try to resolve the situation. The GF/Supervisor should review the documentation surrounding the refusal before contacting the customer. GF/supervisors should not compromise work below the specification without written authorization from the responsible area forester. If a prescriptive or written easement exists, the supervisor/GF should inform the customer of our rights under those easements. Notwithstanding, the general foreman/supervisor should not have the trees worked without customer consent.

If the general foreman/supervisor cannot resolve the refusal to full specification, he or she shall refer it to their area forester by turning in the *Property Owner Refusal/Complaint Report.*, along with any associated easement information.

8.3.4 Regional Forester Procedure

When a regional forester receives a refusal that the contract utility forester and general foreman/supervisor have been unable to resolve, within two weeks he or she shall contact the property owner to attempt to resolve the refusal. The forester may compromise work below the specifications, provided that trees have not grown within work thresholds in Tables 5.1 or 6.1 and the agreement will not present unreasonable safety or electric service risks. This section is not intended

to defer judgment to property owners on how much clearance to allow. Neither is it intended to justify clearances outside of specification in order to avoid dealing with an escalated complaint.

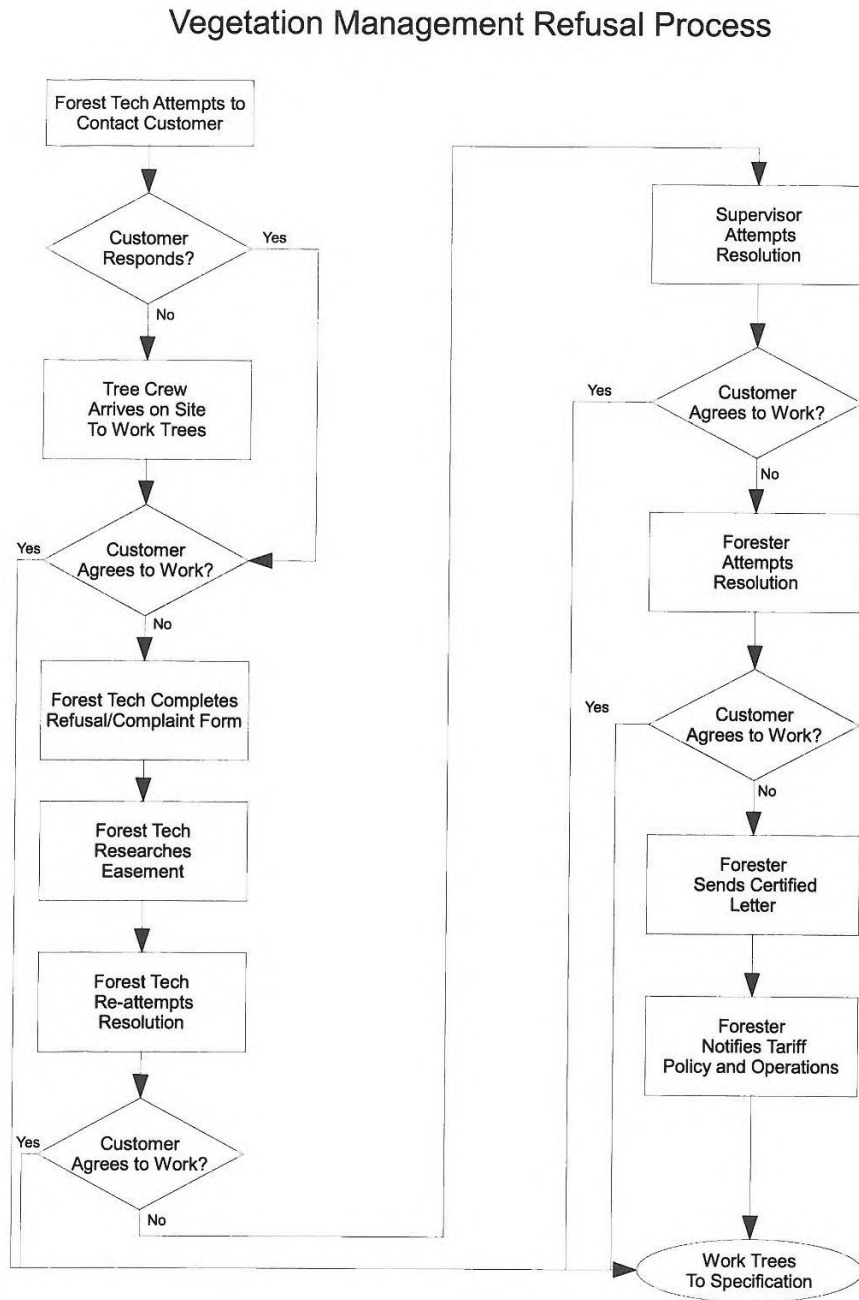
If the forester cannot resolve the refusal, the customer shall be sent two letters by the same certified post. One is a description of the legal authority under which the Company is acting and the other letter summarizing the circumstances of the refusal and setting date and time that the tree will be worked. The date shall be at least five business days from the time the letter is postmarked. The refusal letter should reference the applicable written or prescriptive easement if they exist. The forester shall alert the director of vegetation management, transmission and distribution support managing director, as well as the appropriate operations manager, customer and community manager, wires director, and regulatory analyst about the letters. The regulatory analyst will inform the proper regulatory agency about the action. If it appears the media could become involved, the Media Hotline should be notified.

Once the letter is sent, tree crews shall be dispatched to work the site to specifications at the assigned date and time, regardless of whether or not a right-of-way or prescriptive easement exists. The forester or GF/supervisor should be on site during work. Records shall be kept for use in potential litigation. Before and after photos of the site should be taken.

TABLE 8.1. Prescriptive easement time requirements by state

State	Time
California	5 years
Idaho	20 years
Oregon	10 years
Utah	20 years
Washington	10 years
Wyoming	10 years

Figure 8.3. Refusal process.



REV 06-02-2011

Figure 8.4. Information surrounding refusals should be documented and electronically filed with the appropriate project.



8.4 Customer and Property Owner Complaints

Customer and property owner complaints regarding any aspect of the vegetation management program shall be addressed promptly, fairly and professionally. PacifiCorp should be notified of complaints using a *Property Owner Refusal/ Complaint Report*. Customers will be contacted within 48 hours of receipt of the complaint. Documentation surrounding the refusal should be digitally filed to be accessed with other information from the specific project for use the next time through.

- Our notification clearly explained the work we would be doing.
- The workers were friendly and courteous.
- The work was completed as you understood it would be.
- The property was left neat and orderly.
- Overall, I am satisfied with how the work was handled.
- It also allows space for comments and for the customer to identify him/herself.

Tree crews should leave customer surveys on each property on which utility tree work is performed. For work on municipal or other government agency trees, a survey should be provided to the appropriate management authority. The area forester should also see that surveys are left on properties where they conduct crew audits. The survey is self-addressed and postage paid for the respondent's convenience.

8.5 Commission Complaints

Response to commission complaints should take the highest priority. Commission responses should be made the same day and go through tariff policy with assistance from the vegetation management service coordinator. It is important to provide timelines with appropriate summaries of vegetation management's interaction with the subject party. Response for data request should be provided by the next business day if at all possible, but no later than three business days. Foresters should take the lead in Commission responses.

8.6 Customer Survey

PacifiCorp has Pacific Power and Rocky Mountain Power customer surveys. Surveys are vitally important for quality control, and for giving customer's a voice regarding vegetation management's performance.

The survey asks customers to rate from 1 (lowest) to 5 (highest) Vegetation Management's performance relative to five questions:

9. DEFINITIONS

Allelopathy. Production of a chemical by one plant to suppress competing plants of other species.

BMP. Best management practice

Border zone. The Region A right-of-way portion that extends from the right-of-way edge to 10 feet from the outside phases.

Branch bark ridge. Area of raised bark between two stems. The ridge is formed as the two stems grow together, pushing the bark outward. A raised branch bark ridge is often a sign of a strong branch attachment.

Branch collar. Wood formed around a branch attachment. It contains wood from both the branch and parent stem.

Branch core. Area in the trunk of a tree that traces the branch back to its origins as a bud on a twig.

Branch protection zone. Area in the branch core that undergoes chemical change in response to wounding or disease in the branch. The chemicals protect the tree by inhibiting or preventing diseases from passing from the branch to the parent stem.

Caliper. The diameter of a tree six inches off the ground.

Cambium. Area of cell division responsible for stem diameter growth.

Clearance. Line de-energizing for safety purposes. Clearances require 48 hour

notices to all customers that will be effected by the outage.

Company. PacifiCorp.

Crown reduction. Reduction of the top or sides of the tree by thinning cuts (lateral or branch collar cuts).

Crown Restoration. Restoring a previously headed stem's natural structure by thinning sprouts emanating from the old wound. Crown restoration should be done incrementally over the course of several cycles. The crowns of many third order trees may be so damaged they may never be restored.

Cycle buster. Fast-growing tree species that will not hold for a complete cycle.

Cycle work. Cycle work is described in section 5.2. It involves systematic work, addressing trees that have grown within work thresholds outlined in Tab 5.1, and includes removals, herbicide and TGR treatments as outlined in the *Work Release*.

DBH. Diameter at breast height.

Danger tree. A tree on or off the right-of-way that may contact electric facilities either through growth or if it should fall.

Decurrent form. Trees lacking a strong central leader, resulting in a spreading crown (for example, American elm [*Ulmus americana*]).

-
- Distribution line. Lines energized between 600 and 45,000 volts.
- Drip line. The horizontal extent of the crown out to the branch tips.
- Drop-crotch. Archaic term for lateral cut.
- Excurent form. Tree with a strong central leader (for example, Ponderosa pine [*Pinus ponderosa*]).
- Fast -growing species. Tree species that vertically grows more than three feet per year.
- Flush cut. A final pruning cut flush with the parent stem (the trunk, for example) that cuts into or removes the branch collar. Flush cuts are damaging and inappropriate.
- GF. General foreman.
- Hazard tree. Dead, dying, diseased, deformed, or unstable trees which have a high probability of falling and contacting a substation, distribution or transmission conductors, structure, guys or other Company electric facility.
- Heading cut. Internodal cut on a stem, or a cut made to an inappropriate lateral.
- Hold. Deactivating the automatic reclosers and the line. Holds are issued to a Journeyman lineman who, in the event of an outage, is responsible for ensuring that it is safe to re-energize the line.
- Included bark. Bark included in the juncture between two stems. It is a structural defect that can lead to stem failure.
- Integrated Vegetation Management (IVM). Integrated vegetation management is a system of managing vegetation in which undesirable vegetation is identified, action thresholds are considered, all possible control options are evaluated, and selected control(s) are implemented (ANSI 2012a).
- Interim Work. Scheduled work in the interim half way between cycles. For example, most of Oregon is on a four years cycle. Two years after completing cycle work, feeders will be scheduled for a systematic pass to work trees that will interfere with primary conductors before the end of the current cycle. Work should be limited to trees that grow six feet or more a year or hazard trees.
- ISA. International Society of Arboriculture.
- kV. One thousand volts.
- Lateral cut. A cut that shortens a branch to a lateral no less than one-third the diameter of the original stem and removing no more than one-half the lead's foliage.
- Lead. An upright trunk or major limb with a dominant role in the tree crown, and a lateral is a branch off a parent stem
- Low-growing tree species. Trees with a potential mature height under 25 feet.
- Merchantable timber. Trees with a DBH of 6 inches or more, which are

recoverable and have a market in the area.	from PacifiCorp facilities to specification.
Moderate-growing species. Tree species that can be expected to vertically grow between one and three feet per year under normal conditions.	Region A. The area in transmission rights-of-way where the wire is less than 50 feet off the ground.
MVCD. Minimum vegetation clearance distance. Maximum flash distance established by FAC-003.	Region B. The area in transmission rights-of-way where the wire is between 50 feet and 100 feet off the ground.
Natural target. Proper final pruning cut location at a strong point in a tree's disease defense system. They are branch collars and proper laterals.	Region C. The area in transmission rights-of-way where the wire is more than 100 feet off the ground.
Pruning. Scientifically-based arboricultural practice of removing tree parts.	Round over. A traditional line clearing technique that lowers a tree to a specified clearance distance and sculpts it into a ball. Round overs are a damaging practice that expressly violate PacifiCorp specifications.
Readily climbable tree. Readily climbable trees have low limbs that are accessible from the ground and sufficiently close together so that the tree can be climbed by a child or average person without using a ladder or special equipment. Vehicles do not render trees climbable. Climbable trees should have a main stem or major branch that would support a child or average person either within arm's reach of an uninsulated energized electric line or within such proximity to the electric line that the climber could be injured by direct or indirect contact. They are located near homes, schools, parks, businesses or other locations where people (particularly children) frequent.	Sapling. Tree under four inches in diameter at breast height.
	Secondary line. Wire energized to less than 600 volts.
	Service line. A secondary line that runs between the electric supply and the customer.
	Shall. A mandatory requirement.
	Short-growing tree. A tree with a potential mature height of 25 feet or less.
	Should. A strongly advisory recommendation. It shall be followed unless there is a compelling reason not to.
Refusal. A case where a property owner does not allow trees to be cleared	Slash. Brush and stems under 6 inches in diameter removed from trees during vegetation management operations.

Slow-growing species. Tree species that can be expected to vertically grow less than one foot per year.

Subordination. Removing the terminal, typically upright or end portion of a parent branch or stem to slow the growth rate so other portions of the tree grow faster (Gilman 2002).

Tall-growing species. Tree species that grow to 25 feet or more at maturity.

TGR. Tree Growth Regulator. In the context of these specifications, TGR refers to chemicals that slow growth of some tree species.

Transmission lines. Wire energized over 45 kV

Trimming. Reducing the length of toenails, hair, the amount of budgets and other things, Christmas tree decoration and unskilled removal of tree parts.

Volunteer. A naturally seeded, non-landscape tree.

Wetland. Wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (EPA 2004) <http://www.epa.gov/owow/wetlands/vital/what.html>.

Whorl. A node in a pine tree where three or more limbs commonly originate.

Wire zone. Right-of-way portion that is directly under the wires and within 10 feet to the field side of the outside phases (Bramble et al. 2001).

Work threshold. Distance from conductors inside of which trees should be pruned or removed during cycle work.

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ATTACHMENT P1-5
DRAFT NOXIOUS WEED PLAN

Draft Noxious Weed Plan

**Boardman to Hemingway Transmission
Line Project**



1221 West Idaho Street
Boise, Idaho 83702

September 2018; July 2020 (Modified by Oregon Department of Energy
during ASC – PO Phase)

Agency Review Process

The agency review process outlined in this section aligns with the OAR 345-025-0016 agency consultation process applicable to monitoring and mitigation plans.

As described in the draft Noxious Weed Plan, the certificate holder, or its contractor(s), will develop preconstruction noxious weed inventories and will control and treat weed prior to, during and after construction. The draft Noxious Weed Plan will be finalized, as described throughout the plan. In addition, the plan may be amended at any time during construction, subject to the agency review process outlined below.

To afford an adequate opportunity for applicable local, state and federal agencies to review the draft plan prior to finalization and implementation, and any future plan amendments, the certificate holder shall implement the following agency review process.

Step 1: Certificate Holder's Update of Draft Plan or Future Plan Amendment: The certificate holder may develop one Noxious Weed Plan to cover all noxious weed control activities for the entire facility; or, may develop individual plans per county, segment or phase, as best suited for facility construction. Based on the draft Noxious Weed Plan included as Attachment P1-5 of the Final Order on the ASC, the certificate holder shall update the draft plan(s) based on the final facility design and agency review. If the plan(s) are amended following finalization, the certificate holder shall clearly identify and provide basis for any proposed changes.

Step 2: Certificate Holder and Department Coordination on Appropriate Review Agencies and Agency Review Conference Call(s): Prior to submission of the updated draft plan, or any future amended plans, the certificate holder shall coordinate with the Department's Compliance Officer to identify the appropriate federal, state and local agencies to be involved in the plan review process. In this instance, "appropriate" federal agencies are based on landownership where facility components would be sited. "Appropriate" local agencies include the local planning department of the jurisdiction where facility components would be sited. Once appropriate federal, state and local agency contacts are identified by the Department and certificate holder, the Department's Compliance Officer will initiate coordination between agencies to schedule review/planning conference call(s). The Department and certificate holder may agree to schedule separate conference calls per county.

The intent of the conference call(s) are to provide the certificate holder, or its contractor, an opportunity to describe details of the updated draft or amended plan; and, agency plan review schedule. Agencies may provide initial feedback on requirements to be included in the plan during the call, or may provide written comments during the 14-day comment period. The Department will request that any comments provided be supported by an analysis and local, state or federal regulatory requirement (citation).

The certificate holder may coordinate with appropriate review agencies, in advance of or outside of the established agency review process; however, this established agency review process is necessary under OAR 345-025-0016 and may result in more efficient plan finalization and amendment if managed in a consolidated process, utilizing the Department's Compliance Officer as the lead Point of Contact.

- Step 3: Agency Review Process: Either with, or prior to, the agency conference call(s), the certificate holder shall distribute electronic copies of the draft, or future amended, plan(s) requesting that the Department coordinate agency review comments within 14-days of receipt, or as otherwise determined feasible. Following the 14-day agency review period, the Department will consolidate comments and recommendations into the draft, or amended, plan(s), using a Microsoft Word version of the plan provided by certificate holder. Within 14-days of receipt of the agency review comments, the certificate holder shall provide an updated final version of the plan, incorporating any applicable regulatory requirements, as identified during agency review or must provide reasons supporting exclusion of recommended requirements. Final plans will be distributed to applicable review agencies by the Department, including the certificate holder's assessment of any exclusions of agency recommendations, and a description of their opportunity for dispute resolution.
- Step 4: Dispute Resolution: If any review agency considers the final, or amended, plan(s) not to adhere to applicable state, federal or local laws, Council rules, Council order, or site certificate condition or warranty, the review agency may submit a written request of the potential violation to the Department's Compliance Officer or Council Secretary, requesting Council review during a regularly scheduled Council meeting. The Council would, as the governing body, review the violation claim and determine, through Council vote, whether the claim of violation is warranted and identify any necessary corrective actions.

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ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
BOR	Bureau of Reclamation
DOI	Department of the Interior
EFSC	Energy Facility Siting Council
GPS	Global Positioning System
IPC	Idaho Power Company
kV	kilovolt
O&M	operation and maintenance
ODA	Oregon Department of Agriculture
ODOE	Oregon Department of Energy
ORS	Oregon Revised Statute
OSWB	Oregon State Weed Board
Plan	Noxious Weed Plan
Project	Boardman to Hemingway Transmission Line Project
PUP	Pesticide Use Proposal
ROW	right-of-way
SPCC	Spill Prevention, Control, and Countermeasures
USFS	United States Forest Service

1.0 INTRODUCTION

1.1 Background

Idaho Power Company (IPC) is proposing to construct and operate approximately 296.6 miles of new transmission line known as the Boardman to Hemingway Transmission Line Project (Project). The Project will include a 500-kilovolt (kV) single-circuit line, rebuilding of a portion of a 230-kV transmission line, rebuilding of a 138-kV transmission line, and a removal of a portion of an existing 69-kV transmission line between Boardman, Oregon, and the Hemingway Substation (located approximately 30 miles southwest of Boise, Idaho). The Project includes ground-disturbing activities associated with the construction of above-ground, single- and double-circuit transmission lines involving towers, access roads, multi-use areas, light-duty fly yards, pulling and tensioning sites as well as associated stations, communication stations, and electrical supply distribution lines.

The Project area, or Site Boundary, as defined in Oregon Administrative Rule 345-001-0010(55) includes “the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micro-siting corridors proposed by the applicant.” The Site Boundary for this Project includes the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kV electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B, and the location of the Project features and the Site Boundary is described in Exhibit C and Table C-24. The location of the Project features and the Site Boundary is outlined in Exhibit C.

This Noxious Weed Plan (Plan) includes a discussion of 1) the Plan purpose, goals, and objectives, 2) the regulatory framework, 3) current status of noxious weeds within the Site Boundary, 4) noxious weed management practices, 5) monitoring and reporting, and 6) herbicide application, handling, and cleanup.

1.2 Purpose

Invasive plant species are non-native, aggressive plants with the potential to cause significant damage to native ecosystems and/or cause significant economic losses. Invasive plants are opportunistic plant species that readily flourish in disturbed areas, are difficult to control, and thereby, can compete with and/or prevent native plant species from re-establishing. Invasive plants are a concern for federal, state, and local agencies because of their potential to degrade wildlife habitat, reduce native plant diversity, adversely affect agricultural production, and impact the general ecological health and diversity of native ecosystems. Noxious weeds are a subset of invasive plants that are officially designated by a federal, state, or local agency as injurious to public health, agriculture, recreation, wildlife, or property (Sheley and Petroff 1999).

Soil disturbances, such as those caused by the construction and operation and maintenance (O&M) of the Project, could result in the establishment of new populations and spread of existing populations of noxious weeds. The purpose of this Noxious Weed Plan is to describe the measures IPC will undertake to control noxious weed species and prevent the introduction of these species prior to construction and during construction and O&M of the Project. It is the responsibility of IPC and the Construction Contractor(s), working with the appropriate land management agencies and the Oregon Department of Energy (ODOE), to ensure noxious weeds are identified and controlled during the construction and O&M of Project facilities and that all federal, state, county, and other local requirements are satisfied.

This Plan is applicable Project-wide, and it is expected that modifications to this Plan will be made once final Project design is complete and agreements are reached with applicable federal and state land management agencies and ODOE, as well as with counties and individual landowners. The Final Noxious Weed Plan (see Section 7.0) will meet the standards of all applicable federal and state land management agencies, ODOE, as well as county weed boards.

Measures that will be taken to restore areas that have been impacted by construction activities are discussed in the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3). Methods in which vegetation along the transmission line will be managed during O&M of the Project are described in the Vegetation Management Plan (Exhibit P1, Attachment P1-4).

1.3 Goals and Objectives

The goal of this Plan is to describe methods for early detection, containment, and control of noxious weeds that will be implemented during Project construction and operation. This Plan describes the known status of noxious weed species within the Site Boundary, the regulatory agencies responsible for the control of noxious weeds, and steps IPC will take in controlling and preventing the establishment and spread of noxious weed species during Project construction and O&M activities. General preventive and treatment measures are described in Section 4.0 of this Plan. Monitoring (Section 5.0) to evaluate of the effectiveness of the prescribed noxious weed prevention and control measures will be implemented during the operational phase of the Project. In addition to providing updated information, the final Noxious Weed Plan (Section 7.0) will include information on locations of significant noxious weed populations within the Project construction footprint and proposed treatment methods, as applicable.

The objectives of this Plan and the focus of IPC's noxious weed control efforts will be to prevent and control the spread of new infestations resulting from Project activities. While this Noxious Weed Plan discusses noxious weeds across the entirety of the Site Boundary, for Energy Facility Siting Council (EFSC) purposes, IPC will only be responsible for the control of noxious weeds that are within Project rights-of-way (ROW) and that are a result of the company's

construction- or operation-related, surface-disturbing activities. For EFSC purposes, IPC is not responsible for controlling noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weed species that were present prior to the Project. With respect to pre-existing weed infestations, IPC recognizes Oregon Revised Statute (ORS) Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.

Goals, objectives, and noxious weed control activities for the Project include:

- Inventory the existing occurrence, distribution, and abundance of noxious weeds in the Project ROW prior to construction;
- Monitor and document the occurrence, distribution, and abundance of noxious weeds in the Project ROW following the completion of construction activities along each Project segment;
- Reduce infestations of noxious weeds caused by Project-related activities and prevent the spread of new and existing populations within the Project ROW both during construction as well as operations of the Project;
- Ensure any occurrences of threatened and endangered plants along the transmission line are not negatively impacted by weed-control activities by including site-specific planning where needed; and
- Coordinate and consult with appropriate land-management personnel, as appropriate, regarding noxious weed inventory and control activities conducted by IPC.

2.0 REGULATORY FRAMEWORK

The following provides a brief overview of federal and state legislation and regulatory compliance applicable to noxious weeds that have been considered in development of this Plan.

2.1 State of Oregon

In Oregon, noxious weeds are defined under ORS 569.175 as “terrestrial, aquatic, or marine plants designated by the State Weed Board under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs.” Noxious weeds have been declared by ORS 569-350 as a menace to public welfare and control of these plants is the responsibility of private landowners and operators, and county, state, and federal governments. The Oregon State Weed Board (OSWB) was established under ORS 561.650. The OSWB provides direction to control noxious weeds at the state level and develops and maintains the State Noxious Weed List. The OSWB and the Oregon Department of Agriculture (ODA) classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System (ODA 2016a). There are three designations under the State’s system:

- **Class “A” State Listed Noxious Weed:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or /containment possible; or is not known to occur in Oregon, but its presence in neighboring states makes future occurrence seem imminent.
- **Recommended action:** Infestations are subject to eradication or intensive control when and where found.

- **Class “B” State Listed Noxious Weed:** A weed of economic importance that is regionally abundant but may have limited distribution in some counties.
- **Recommended action:** Limited to intensive control at the state, county, or regional level as determined on a site-specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.
- **Class “T” Designated State Noxious Weeds:** Priority noxious weed species selected and designated by the OSWB as the focus of prevention and control actions by the Noxious Weed Control Program. “T”-designated noxious weeds are selected annually from either the “A” or “B” list and the ODA is directed to develop and implement a statewide management plan for these species.

In addition to the state-listed noxious weeds, the five Oregon counties crossed by the Project (Baker, Malheur, Morrow, Umatilla, and Union) each maintain a county-designated noxious weed list. These lists also classify noxious weeds into different categories (typically Class A, B, and C); however, the definition of each class differs slightly from the state classification system and differs slightly by county. IPC will review the county lists on a regular basis to ensure that monitoring and control actions are targeting the appropriate species. Recommended actions for noxious weeds in the five Oregon counties crossed by the Project are as follows:

- **Class “A” County Noxious Weed:** Recommended for mandatory control county-wide in Baker, Malheur, and Morrow counties and subject to intensive control where found in Umatilla and Union counties.
- **Class “B” County Noxious Weed:** Recommended for moderate to intensive control at the county level in Baker County; subject to intensive control or eradication where feasible at the county level in Malheur and Morrow counties; limited to intensive control county-wide as determined on a case-by-case basis in Umatilla County; recommended for moderate control and/or monitoring at the county level in Union County.
- **Class “C” County Noxious Weeds:** Recommended for moderate control at the county level in Baker County; treated at landowner’s discretion in Malheur County. Morrow, Umatilla, and Union counties do not currently list Class C noxious weeds.
- Baker, Malheur, Morrow, Umatilla, and Union county weed management agencies were contacted to inquire about weed species of highest concern in each of the counties, as well as to determine if each county requires or implements specific noxious weed control methods or best management practices. No specific best management practices were requested by any of the county weed management personnel contacted.

2.2 Federal Noxious Weed Act of 1974 (as amended 1990)

The Federal Noxious Weed Act of 1974 (7 United States Code 2801-2813) defines a noxious weed as “a plant which is of foreign origin, is new to, or is not widely prevalent in the United States, and can directly or indirectly injure crops or other useful plants, livestock, or the fish and wildlife resources of the United States, or the public health.” This act directs each federal agency to develop and coordinate a management program for control of undesirable plants on federal lands under the agency’s jurisdiction.

2.3 Executive Order 13112

Executive Order 13112 (1999) directs federal agencies to: (1) identify actions that may affect the status of an invasive species; (2)(a) prevent introduction of such species; (b) detect and control such species; (c) monitor population of such species; (d) provide for restoration of native

species; (e) conduct research on invasive species and develop technologies to prevent introduction of such species; (f) promote public education of such species; and (3) not authorize, fund, or carry out actions likely to cause the introduction or spread of invasive species in the United States or elsewhere unless the benefits of the action clearly outweigh the harm and the agencies take steps to minimize the harm.

2.4 U.S. Department of Agriculture, Forest Service

United States Forest Service (USFS) Manual 2900 - Invasive Species Management directs each Forest Supervisor to “manage aquatic and terrestrial invasive species (including vertebrates, invertebrates, plants, and pathogens)” on all National Forest System lands. Per the manual, invasive species management activities of National Forest System lands will be conducted according to the following objectives: 1) prevention, 2) early detection and rapid response, 3) control and management, 4) restoration, 5) organizational collaboration. Additionally, the Decision Memo for Forest Plan Amendment #48 (USFS 2017) outlines the use of the 11 herbicides approved for use on the Wallowa-Whitman National Forest.

2.5 Bureau of Land Management

The Bureau of Land Management (BLM) defines a noxious weed as “a plant that interferes with management objectives for a given area of land at a given point in time.” BLM Manual 9015 (BLM 1992) directs the BLM to manage noxious weeds and undesirable plants on BLM lands by preventing establishment and spread of new infestations, reducing existing population levels, and managing and controlling existing stands. Required management for ground-disturbing actions includes determining the risk of spreading noxious weeds associated with the project and ensuring contracts contain provisions which hold contractors responsible for the prevention and control of noxious weeds caused by their operations if the activity is determined to be moderate to high risk. Additionally, herbicide treatment of noxious weeds on BLM lands in Oregon follows the guidelines outlined in the Decision Record for Integrated Invasive Plant Management for the Vale District (BLM 2016a). The district-wide decision identified 17 herbicides available for use on BLM lands crossed by the Project.

2.6 Bureau of Reclamation

The Bureau of Reclamation (BOR) is responsible for identification and proper management of pests on BOR lands in accordance with federal, state, and local policies, laws, and standards. The BOR’s Reclamation Manual (BOR 1996a, 1996b) includes standards and directives for pest management and Integrated Pest Management (Reclamation Manual ENV-01). Additionally, the Department of the Interior (DOI) Departmental Manual (609 DM 1; DOI 1995) states that “it is the DOI’s policy to control undesirable plants on the lands, waters, or facilities under its jurisdiction to the extent economically practicable and as needed for resource/environmental protection and enhancement, as well as the accomplishment of resource management objectives and the protection of human health.” This manual also provides directives and standards for control of undesirable plants and implementation of Integrated Pest Management programs on DOI lands including BOR land. In keeping with this policy, the use of Integrated Pest Management techniques is emphasized. These techniques combine the use of chemical controls (pesticides), mechanical controls (mowing, pulling), environmental controls (cultural methods), and biological controls (insects).

3.0 NOXIOUS WEEDS IN THE SITE BOUNDARY

This section of the Plan describes the known status of noxious weed species within the Site Boundary based on existing information, as well as results of field surveys of the Site Boundary. Section 3.1 discusses the state of Oregon listed noxious weeds that have the potential to occur in the counties crossed by the Project. Section 3.2 discusses the noxious weed species identified within the Site Boundary based on existing BLM and USFS databases and those observed during field surveys.

3.1 Oregon State Noxious Weeds Lists

The ODA updates the state of Oregon noxious weed list each year (ODA 2016a). Currently, 131 plant species are listed as noxious in Oregon. As stated above, in addition to the state list of noxious weeds, the five Oregon counties crossed by the Project each maintain a county designated noxious weed list.

Table 1 lists the Oregon state listed noxious weeds known to occur within the counties that will be crossed by the Project. This list is based on information obtained from publicly available sources including the Oregon WeedMapper (ODA 2016b), Oregon Noxious Weed Profiles (ODA 2016c), the INVADERS database (University of Missoula-Montana 2016), and the U.S. Department of Agriculture Natural Resources Conservation Service PLANTS database (NRCS 2016). Based on these sources, 91 state and/or county listed noxious weed species have the potential to occur within the Site Boundary (Table 1).

Table 1. Designated Noxious Weeds Known to Occur or with the Potential to Occur within the Site Boundary

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category ¹	Oregon County Noxious Weed Category ²	Project Counties in Which Known to Occur
<i>Abutilon theophrasti</i>	Velvetleaf	B	–	Union
<i>Acroptilon repens</i> (<i>Centaurea repens</i>)	Russian knapweed	B	A (Union) B (Baker, Malheur ³ , Morrow, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Aegilops cylindrica</i>	Jointed goatgrass	B	A (Baker, Malheur) B (Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Ailanthus altissima</i>	Tree of heaven	B	–	Baker, Malheur, Morrow, Umatilla, Union
<i>Alhagi maurorum</i> (<i>A. pseudalhagi</i>)	Camelthorn	A	A (Malheur, Umatilla)	Umatilla
<i>Alliaria petiolata</i>	Garlic mustard	B, T	–	Umatilla
<i>Ambrosia artemisiifolia</i>	Ragweed	B	B (Umatilla) C (Malheur)	Malheur, Morrow, Umatilla, Union
<i>Amorpha fruticosa</i>	False indigo bush	B	–	Baker, Malheur, Morrow, Umatilla
<i>Anchusa officinalis</i>	Common bugloss	B, T	A (Union) Watch List ⁴ (Baker)	Baker, Umatilla, Union
<i>Avena fatua</i>	Wild oat	–	C (Union)	Union
<i>Bassia scoparia</i> (<i>Kochia scoparia</i>)	Kochia; burning bush	B	B (Morrow, Umatilla) Agricultural Class B ⁵ (Union) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Bromus tectorum</i> ⁶	Cheatgrass	–	C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Buddleja davidii</i> (<i>B.</i> <i>variabilis</i>)	Butterfly bush	B	–	Umatilla
<i>Butomus umbellatus</i>	Flowering rush	B, T	–	Umatilla
<i>Cannabis sativa</i>	Marijuana	–	A (Umatilla)	Malheur
<i>Cardaria chalepensis</i> (<i>Lepidium chalepensis</i>)	Lens-podded whitetop	B	–	Malheur

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category ¹	Oregon County Noxious Weed Category ²	Project Counties in Which Known to Occur
<i>Cardaria draba</i> (<i>Lepidium draba</i>)	Whitetop; hoary cress	B	A (Baker ⁷ , Morrow, Union) B (Baker ⁷ , Malheur, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Carduus nutans</i>	Musk thistle	B	A (Morrow) B (Malheur, Umatilla) Watch List (Baker)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea calcitrapa</i>	Purple starthistle	A, T	A (Malheur, Umatilla)	Umatilla
<i>Centaurea diffusa</i>	Diffuse knapweed	B	A (Baker, Malheur) B (Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea nigrescens</i> (<i>C. debeauxii</i> ; <i>C. jacea</i> x <i>nigra</i> ; <i>C. pratensis</i>)	Meadow knapweed Short-fringe knapweed	B	A (Malheur, Union)	Baker, Umatilla, Union
<i>Centaurea solstitialis</i>	Yellow starthistle	B	A (Baker, Malheur, Morrow, Union) B (Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea stoebe</i> subsp. <i>micranthos</i> (<i>C. maculosa</i>)	Spotted knapweed	B, T	A (Baker, Malheur, Umatilla) B (Morrow, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea virgata</i> (<i>C. triumfetti</i>)	Squarrose knapweed	A, T	A (Malheur)	Baker, Malheur, Union
<i>Centromadia pungens</i> subsp. <i>pungens</i> ⁸ (<i>Hemizonia pungens</i>)	Spikeweed; common tarweed	B	A (Morrow)	Morrow, Umatilla
<i>Ceratocephala testiculata</i> (<i>Ranunculus testiculatus</i>)	Bur buttercup	–	C (Baker)	Baker, Malheur, Morrow, Umatilla, Union
<i>Chondrilla juncea</i>	Rush skeletonweed	B, T	A (Baker, Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Cichorium intybus</i>	Chicory	–	B (Baker)	Morrow, Umatilla, Union
<i>Cicuta douglasii</i> ⁹	Water hemlock	–	B (Morrow) C (Baker)	Malheur, Morrow, Umatilla, Union
<i>Cirsium arvense</i>	Canada thistle	B	B (Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category ¹	Oregon County Noxious Weed Category ²	Project Counties in Which Known to Occur
<i>Cirsium vulgare</i>	Bull thistle	B	B (Baker) Agricultural Class B ⁵ (Union) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Conium maculatum</i>	Poison hemlock	B	B (Morrow) Agricultural Class B ⁵ (Union) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Convolvulus arvensis</i>	Field bindweed	B, T	B (Morrow) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Conyza canadensis</i> ⁹	Horseweed; mares tail	–	Agricultural Class B ⁵ (Union)	Malheur, Union
<i>Crupina vulgaris</i>	Common crupina	B	A (Malheur, Morrow)	Baker, Umatilla
<i>Cuscuta</i> spp.	Dodder	B	B (Baker, Morrow, Umatilla) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Cynoglossum officinale</i>	Houndstongue	B	A (Morrow) Agricultural Class B ⁵ (Union) B (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Cyperus esculentus</i>	Yellow nutsedge	B	C (Malheur)	Malheur, Morrow, Umatilla
<i>Cytisus scoparius</i>	Scotch broom	B	A (Union)	Baker, Umatilla, Union
<i>Datura stramonium</i>	Jimsonweed	–	A (Malheur)	Morrow, Union
<i>Dipsacus fullonum</i>	Fuller's teasel	–	B (Baker)	Baker, Morrow, Umatilla, Union
<i>Elymus repens</i> (<i>Agropyron repens</i>)	Quackgrass	–	B (Umatilla) Agricultural Class B ⁵ (Union) C (Malheur)	Malheur, Umatilla
<i>Equisetum arvense</i> ⁹	Western horsetail	–	C (Malheur)	Baker, Malheur, Umatilla, Union
<i>Euphorbia esula</i>	Leafy spurge	B, T	A (Baker, Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Euphorbia myrsinites</i>	Myrtle spurge	B	B (Baker, Morrow)	Baker, Malheur, Morrow, Umatilla, Union
<i>Galium aparine</i> ⁹	Catchweed bedstraw	–	Agricultural Class B ⁵ (Union)	Baker, Malheur, Morrow, Umatilla, Union

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category ¹	Oregon County Noxious Weed Category ²	Project Counties in Which Known to Occur
<i>Halogeton glomeratus</i>	Halogeton	B	C (Malheur)	Malheur
<i>Hedera helix</i>	English ivy	B	–	Union
<i>Hibiscus trionum</i>	Venice mallow	–	B (Baker)	Malheur
<i>Hieracium aurantiacum</i> (<i>Pilosella aurantiacum</i>)	Orange hawkweed	A, T	A (Union)	Morrow, Union
<i>Hieracium caespitosum</i> (<i>H. pratense</i> ; <i>Pilosella caespitosum</i>)	Meadow hawkweed	B, T	A (Union)	Umatilla, Union
<i>Hieracium piloselloides</i> (<i>Pilosella piloselloides</i>)	King-devil hawkweed Tall hawkweed	A	A (Union)	Umatilla
<i>Hyoscyamus niger</i>	Black henbane	–	A (Baker)	Baker, Morrow, Umatilla
<i>Hypericum perforatum</i>	St. Johnswort; Klamathweed	B	A (Malheur) Agricultural Class B ⁵ (Union) B (Baker, Morrow, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Iris pseudacorus</i>	Yellow flag iris	B	A (Baker, Union)	Baker, Malheur, Umatilla, Union
<i>Isatis tinctoria</i>	Dyer's woad	B	A (Malheur) Watch List ⁴ (Baker)	Baker, Malheur, Umatilla, Union
<i>Lathyrus latifolius</i>	Perennial peavine	B	–	Baker, Morrow, Umatilla, Union
<i>Lepidium latifolium</i>	Perennial pepperweed	B, T	A (Baker, Malheur ¹⁰ , Union) B (Malheur ¹⁰ , Morrow, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Linaria dalmatica</i>	Dalmation toadflax	B, T	A (Baker, Malheur, Morrow) B (Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Linaria vulgaris</i>	Yellow toadflax	B	A (Malheur, Morrow) B (Baker)	Baker, Morrow, Umatilla, Union
<i>Lythrum salicaria</i>	Purple loosestrife	B	A (Baker, Morrow, Umatilla) B (Malheur, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Melilotus officinalis</i>	Sweet clover	–	C (Malheur)	Baker, Malheur, Umatilla, Union
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	B	-	Morrow, Umatilla, Union

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category ¹	Oregon County Noxious Weed Category ²	Project Counties in Which Known to Occur
<i>Onopordum acanthium</i>	Scotch thistle	B	A (Baker, Morrow) B (Malheur, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Orobanche minor</i>	Small broomrape	B	–	Baker
<i>Panicum miliaceum</i>	Wild proso millet	–	A (Malheur)	Baker
<i>Phalaris arundinacea</i>	Reed canarygrass; ribbongrass	B, T	–	Baker, Malheur, Morrow, Union
<i>Phragmites australis</i>	Common reed	B	B (Malheur)	Malheur, Morrow, Umatilla, Union
<i>Polygonum cuspidatum</i> (<i>Fallopia japonica</i>)	Japanese knotweed	B	A (Baker, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Polygonum sachalinensis</i> (<i>Fallopia sachalinense</i>)	Giant knotweed	B	A (Union)	Morrow, Umatilla
<i>Potentilla recta</i>	Sulfur cinquefoil	B	A (Malheur, Union ¹¹) B (Baker, Union ¹¹)	Baker, Malheur, Morrow, Umatilla, Union
<i>Rorippa sylvestris</i>	Creeping yellow cress	B	A (Umatilla)	Morrow, Umatilla, Union
<i>Rubus armeniacus</i>	Armenian (Himalayan) blackberry	B	–	Baker, Malheur, Morrow, Umatilla, Union
<i>Salsola tragus</i> (<i>S. iberica</i> ; <i>S. kali</i>)	Russian thistle	–	Agricultural Class B ⁵ (Union) C (Baker, Malheur)	Malheur, Morrow, Umatilla
<i>Salvia aethiopsis</i>	Mediterranean sage	B	A (Malheur, Morrow) Watch List (Baker)	Baker, Malheur, Morrow, Umatilla Union
<i>Secale cereal</i>	Cereal rye	–	B (Morrow, Umatilla)	Union
<i>Senecio jacobaea</i>	Tansy ragwort	B, T	A (Baker, Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Silybum marianum</i>	Milk thistle	B	A (Malheur)	Umatilla
<i>Solanum elaeagnifolium</i>	Silverleaf nightshade	A	A (Malheur)	Baker, Umatilla
<i>Solanum rostratum</i>	Buffalobur	B	A (Baker, Malheur)	Baker, Malheur, Umatilla, Union
<i>Sonchus arvensis</i>	Perennial sowthistle	–	B (Morrow)	Baker, Morrow, Umatilla
<i>Sorghum halepense</i>	Johnsongrass	B	A (Malheur) B (Morrow, Umatilla)	Malheur, Morrow, Umatilla
<i>Sphaerophysa salsula</i>	Swainsonpea; Alkali swainsonpea	B	A (Malheur) B (Umatilla)	Morrow, Umatilla

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category ¹	Oregon County Noxious Weed Category ²	Project Counties in Which Known to Occur
<i>Taeniatherum caput-medusae</i>	Medusahead rye	B	A (Union) B (Morrow) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Tamarix ramosissima</i>	Saltcedar	B, T	A (Baker) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Tanacetum vulgare</i>	Common tansy	–	B (Baker)	Baker, Umatilla
<i>Tribulus terrestris</i>	Puncturevine	B	B (Baker, Morrow, Umatilla, Union) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Ventenata dubia</i>	Ventenata; North Africa grass	–	B (Malheur, Morrow)	Baker, Umatilla, Union
<i>Verbascum blattaria</i>	Moth mullein	–	C (Baker)	Baker, Malheur, Umatilla, Union
<i>Verbascum thapsus</i>	Common mullein	–	C (Baker)	Baker, Umatilla, Union
<i>Xanthium spinosum</i>	Spiny cocklebur	B	A (Malheur)	Baker, Malheur, Morrow, Umatilla, Union

¹ – = not applicable

² This column includes county listed noxious weeds for the five counties in Oregon crossed by the Project.

³ Owners or occupants in Malheur County with Russian knapweed infestations are required to control a minimum 20 percent of their annual infestation per discreet parcel of land per year. This includes a 50-foot buffer plus additional amounts that total 20 percent of the infestation.

⁴ Watch List – Few known sites; controlled by Weed Supervisor county-wide (Baker County).

⁵ Agricultural Class B is defined as "...a weed of economic importance, specifically in Union county agriculture, which is both locally abundant and abundant in neighboring counties."

⁶ Due to the widespread nature of cheatgrass (*Bromus tectorum*) within the Site Boundary, this species was not mapped during surveys and is not included in Table 2.

⁷ Whitetop is listed as a "B" weed in the portion of Baker County that the Project overlaps, though considered an "A" weed in nearby areas of the county, including West Baker Valley, where control is mandatory.

⁸ Considered native in California, but introduced in Oregon (Baldwin and Strother 2006; Jaster et al. 2016).

⁹ This species is native to Oregon.

¹⁰ Perennial pepperweed is a "B" weed in the portion of Malheur County that the Project overlaps, though considered an "A" weed in a portion of Malheur County south of the Project.

¹¹ This species is listed on both the Class A and Class B lists in Union County.

3.2 Current Noxious Weed Inventories and Surveys

Surveys for Oregon State and/or Baker, Malheur, Morrow, Umatilla, or Union county listed noxious weeds were conducted within the Site Boundary between 2011 through 2016 (Exhibit P1, Attachment P1-7a, Biological Survey Summary Report). Populations of target noxious weeds (i.e., species on the state or county lists) observed were mapped using Trimble Global Positioning System (GPS) units. Additionally, existing site-specific disturbances and land uses (e.g., grazing, grading, etc.) that could be contributing to the introduction, spread, or viability of weed populations were also recorded. Surveys were based on the current state and county noxious weed lists at the time of the surveys; therefore, some species listed in Table 1 were not surveyed for in all years.

Approximately 67 percent of the Site Boundary was surveyed during Terrestrial Visual Encounter Surveys, which included surveys for noxious weeds, conducted between 2011 through 2016 (Figure 1). Surveys were conducted in all areas with signed right-of-entry agreements. Those areas that were not surveyed, due to unsigned right-of-entry agreements or changes in the Proposed Route and alternative route, will be surveyed following issuance of the site certificate. Additionally, a preconstruction noxious weed inventory of areas that will be disturbed during construction will be conducted (see Section 3.3).

In addition to surveys of the Site Boundary conducted by Tetra Tech between 2011 through 2016, the BLM National Invasive Species Information Management System and USFS Current Invasive Plants Inventory databases (BLM 2016b; USFS 2016) were queried to determine known populations of noxious weeds within the Site Boundary. Table 2 lists the 36 noxious weed species observed within the Site Boundary during the 2011 through 2016 field surveys or recorded as occurring within the Site Boundary in the BLM and USFS databases and summarizes the acres of observed or recorded noxious weed species that occur within the Project construction and operation footprint.

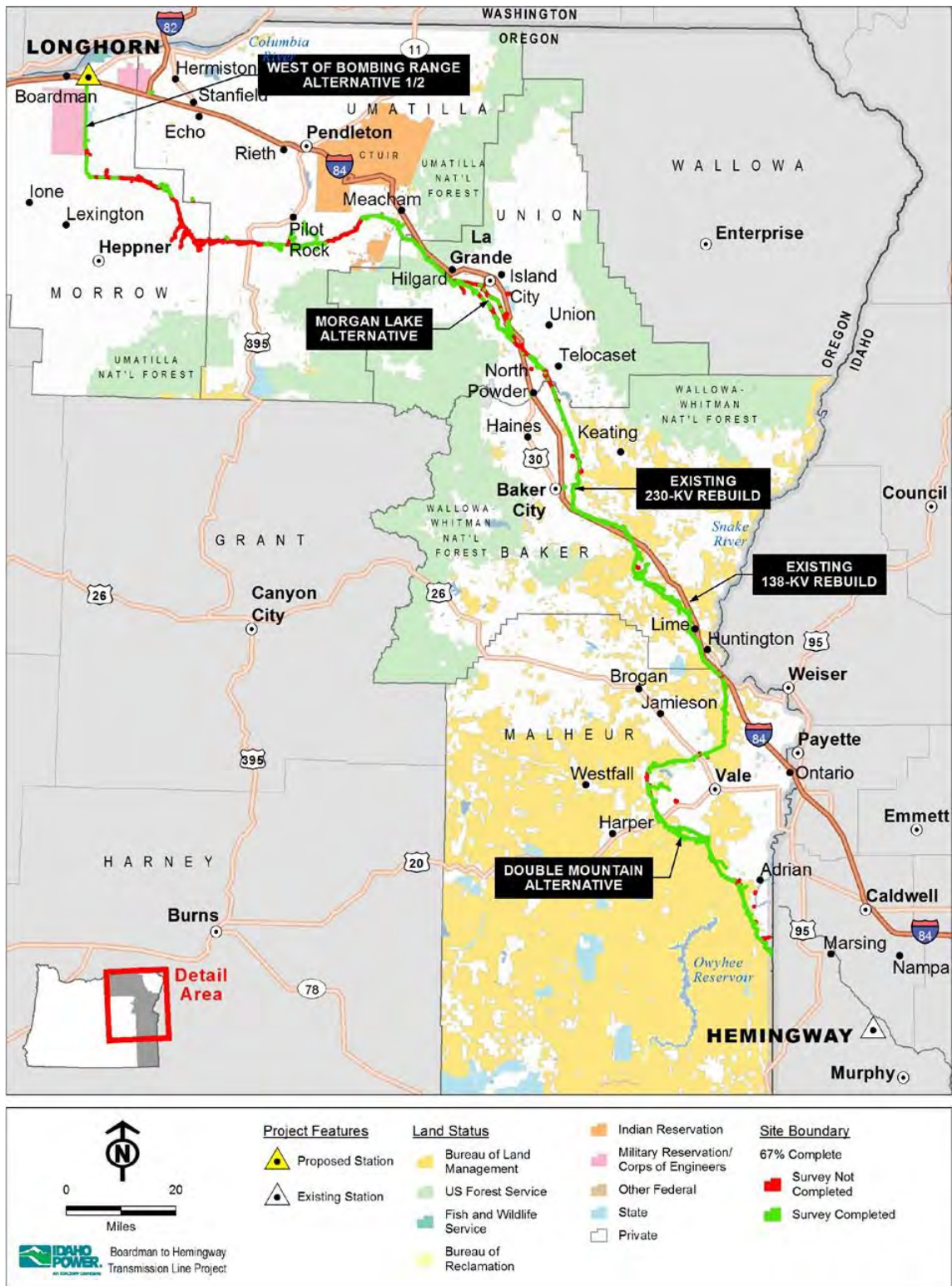


Figure 1. Terrestrial Visual Encounter Surveys within the Site Boundary 2011–2016

Table 2. Oregon State and County Listed Noxious Weeds Observed during 2011–2016 Field Surveys or From Existing Databases

Scientific Name (Synonym Name)	Common Name	Counties Where Observed ¹	Estimated Acres within Site Boundary	Estimated Acres within Construction Footprint ²	Estimated Acres within Operation Footprint ²
<i>Acroptilon repens</i> (<i>Centaurea repens</i>)	Russian knapweed	Morrow	5.51	1.42	0.49
		Umatilla	12.95	9.92	–
		Union	0.50	0.50	–
<i>Aegilops cylindrica</i>	Jointed goatgrass	Baker	37.06	3.43	2.11
		Umatilla	21.74	4.70	1.88
		Union	0.50	0.13	0.06
<i>Ailanthus altissima</i>	Tree of heaven	Umatilla	0.50	0.06	0.05
<i>Bassia scoparia</i> (<i>Kochia scoparia</i>)	Kochia; burning bush	Baker	6.18	1.23	0.78
		Malheur	6.27	1.27	0.11
		Morrow	4.92	1.80	0.20
		Umatilla	1.19	–	–
		Union	0.50	0.50	0.00
<i>Cardaria draba</i> (<i>Lepidium draba</i>)	Whitetop; hoary cress	Baker	208.80	40.10	9.31
		Malheur	185.80	44.50	7.42
		Union	6.08	5.98	–
<i>Carduus nutans</i>	Musk thistle	Baker	4.26	0.59	0.23
		Malheur	6.50	1.24	0.35
		Union	10.07	0.23	0.16
<i>Centaurea diffusa</i>	Diffuse knapweed	Baker	4.98	1.11	0.19
		Malheur	1.81	0.08	0.04
		Morrow	23.58	4.53	0.77
		Umatilla	0.45	0.32	0.04
		Union	11.79	1.69	0.19
<i>Centaurea stoebe</i> subsp. <i>micranthos</i> (<i>C. maculosa</i>)	Spotted knapweed	Baker	0.58	0.08	0.04
		Malheur	1.91	0.11	0.06
		Morrow	0.10	–	–
		Umatilla	1.99	–	–
<i>Centromadia pungens</i> subsp. <i>pungens</i> (<i>Hemizonia pungens</i>)	Spikeweed; common tarweed	Morrow	0.46	–	–
<i>Ceratocephala testiculata</i> (<i>Ranunculus testiculatus</i>)	Bur buttercup	Baker	26.95	9.69	1.23
		Malheur	185.07	43.91	9.61
		Umatilla	0.10	0.10	–
<i>Chondrilla juncea</i>	Rush skeletonweed	Baker	9.07	0.21	0.17
		Malheur	326.80	67.73	16.65
		Morrow	0.06	–	–
<i>Cichorium intybus</i>	Chicory	Baker	0.10	0.03	0.02
		Union	10.85	2.68	0.59

Scientific Name (Synonym Name)	Common Name	Counties Where Observed ¹	Estimated Acres within Site Boundary	Estimated Acres within Construction Footprint ²	Estimated Acres within Operation Footprint ²
<i>Cirsium arvense</i>	Canada thistle	Baker	10.70	3.26	0.46
		Malheur	3.95	0.56	0.35
		Morrow	7.23	1.30	0.23
		Umatilla	28.61	4.94	1.14
		Union	21.61	4.08	0.83
<i>Cirsium vulgare</i>	Bull thistle	Baker	1.70	0.17	0.09
		Morrow	0.10	–	–
		Umatilla	3.45	0.33	0.14
		Union	3.15	0.67	0.32
<i>Conium maculatum</i>	Poison hemlock	Baker	1.90	0.18	0.16
		Morrow	0.33	0.33	–
		Umatilla	0.16	0.06	–
<i>Convolvulus arvensis</i>	Field bindweed	Baker	67.77	8.90	2.96
		Malheur	59.52	22.24	2.71
		Umatilla	27.34	3.71	1.43
		Union	4.88	0.71	0.56
<i>Cynoglossum officinale</i>	Houndstongue	Baker	24.20	3.41	2.29
		Umatilla	21.81	5.70	1.46
		Union	63.42	8.67	2.50
<i>Dipsacus fullonum</i>	Fuller's teasel	Baker	3.52	0.49	0.42
		Morrow	0.33	–	–
		Umatilla	23.21	3.66	1.21
		Union	3.82	0.11	0.06
<i>Euphorbia esula</i>	Leafy spurge	Baker	0.69	0.04	0.03
<i>Galium aparine</i>	Catchweed bedstraw	Baker	1.09	–	–
		Union	0.10	0.01	–
<i>Halogeton glomeratus</i>	Halogeton	Malheur	6.45	1.14	0.70
		Umatilla	0.10	0.02	0.01
<i>Hypericum perforatum</i>	Klamathweed; St. Johnswort	Baker	0.10	0.05	0.02
		Umatilla	24.38	6.27	1.23
		Union	10.48	2.06	0.21
<i>Lepidium latifolium</i>	Perennial pepperweed	Baker	4.24	0.65	–
		Malheur	5.52	0.33	0.16
<i>Linaria dalmatica</i>	Dalmation toadflax	Malheur	0.24	0.04	0.03
<i>Linaria vulgaris</i>	Yellow toadflax	Umatilla	9.92	9.92	–
<i>Melilotus officinalis</i>	Sweet clover	Baker	0.82	0.03	0.02
		Malheur	1.00	0.02	0.01
		Umatilla	0.10	–	–
<i>Onopordum acanthium</i>	Scotch thistle	Baker	156.38	25.30	9.61
		Malheur	263.13	72.69	10.71
		Morrow	2.51	0.13	0.07
		Umatilla	3.19	0.37	0.15
		Union	16.43	5.56	0.88

Scientific Name (Synonym Name)	Common Name	Counties Where Observed ¹	Estimated Acres within Site Boundary	Estimated Acres within Construction Footprint ²	Estimated Acres within Operation Footprint ²
<i>Potentilla recta</i>	Sulfur cinquefoil	Baker	0.09	–	–
		Union	19.06	1.86	1.29
<i>Salsola tragus</i> (<i>S. iberica</i> ; <i>S. kali</i>)	Russian thistle	Baker	20.33	7.81	1.50
		Malheur	75.94	18.19	3.62
		Morrow	38.89	17.80	6.10
		Umatilla	5.32	1.47	0.33
		Union	0.46	0.09	0.08
<i>Salvia aethiopsis</i>	Mediterranean sage	Malheur	5.61	1.38	–
<i>Taeniatherum caput-medusae</i>	Medusahead rye	Baker	156.28	23.79	6.83
		Malheur	101.65	29.35	4.64
		Morrow	0.10	0.03	0.02
		Umatilla	124.58	24.92	5.20
		Union	41.92	7.88	2.22
<i>Tamarix ramosissima</i>	Saltcedar	Malheur	102.86	17.59	4.87
		Umatilla	0.74	0.22	0.10
<i>Tribulus terrestris</i>	Puncturevine	Baker	0.23	0.16	0.04
		Union	0.40	0.10	0.08
<i>Ventenata dubia</i>	Ventenata; North Africa grass	Baker	0.50	0.31	0.05
		Union	0.50	0.49	0.04
<i>Verbascum blattaria</i>	Moth mullein	Baker	0.09	–	–
		Malheur	0.10	–	–
		Umatilla	0.10	–	–
<i>Verbascum thapsus</i>	Common mullein	Baker	17.23	3.31	1.41
		Malheur	0.10	–	–
		Umatilla	0.50	0.03	0.02
		Union	9.01	3.07	0.31

¹ Not every noxious weed listed is considered noxious in the state of Oregon or in every county where observed. Refer to Table 1 for state and county designations.

² “–” = not observed within construction or operation footprint.

4.0 PRECONSTRUCTION NOXIOUS WEED INVENTORY

4.1 Procedures for Preconstruction Inventory

Prior to commencing preconstruction noxious weed surveys, IPC will contact all appropriate land management agencies to review noxious weed lists, discuss noxious weed identification, and exchange existing data on known noxious weed locations. The surveys will be conducted during the growing season that is appropriate for observing and identifying relevant noxious weed species. IPC will conduct the preconstruction noxious weed inventory in the following areas:

- Transmission line: Entirety of the ROWs and/or easements;
- New roads: Entirety of the ROWS and/or easements;

- Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
- Communication stations: Entirety of the ROWs and/or easements;
- Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
- Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

4.2 Results of Preconstruction Inventory

The results of the preconstruction surveys will be included in the Final Noxious Weed Plan and will appear in the following form:

- A preconstruction noxious weed inventory map delineating pre-existing noxious weed infected areas; and
- A table(s) identifying the acreage(s) of each noxious weed species by county and areas set forth above in Section 4.1.

5.0 NOXIOUS WEED MANAGEMENT

This section of the Plan describes the steps IPC will take to prevent and control the establishment and spread of noxious weed species during both construction and operation of the Project. For EFSC purposes, IPC will only be responsible for controlling noxious weeds that are within Project ROWs and that are a result of the company's construction- or operation-related, surface-disturbing activities in the following areas:

- Transmission line: Entirety of the ROWs and/or easements;
- New roads: Entirety of the ROWs and/or easements;
- Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
- Communication stations: Entirety of the ROWs and/or easements;
- Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
- Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

For EFSC purposes, IPC is not responsible for controlling noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weed species that were present prior to the Project. With respect to pre-existing weed infestations, IPC recognizes ORS Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.

The management of noxious weeds will be considered throughout all stages of the Project and will include:

- Educating all construction personnel regarding locations of noxious weed infestations and the importance of preventive measures and treatment methods.
- Implementing measures to prevent the spread of noxious weeds during construction, operation, and maintenance activities.
- Treating noxious weed infestations both before and after Project construction.

Weed control and prevention measures will adhere to all agency standards and guidelines.

5.1 Education and Personnel Requirements

Prior to construction, all construction personnel will be instructed on the importance of controlling noxious weeds. As part of start-up activities, and to help facilitate the avoidance of existing infestations and identification of new infestations, Idaho Power will provide information and training to all construction personnel regarding noxious weed identification and management. The importance of preventing the spread of noxious weeds in areas not currently infested, and controlling the proliferation of noxious weeds already present in the Project ROW, will be emphasized.

IPC will ensure that weed management actions will be carried out by specialists with the following qualifications:

- Experience in native plant, non-native and invasive plants, and noxious weed identification specific to listed noxious weeds per affected county;
- Experience in noxious weed mapping;
- If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;
- Training in weed management or Integrated Pest Management with an emphasis in weeds; and
- Experience in coordination with agency and private landowners.

5.2 Prevention

Measures will be implemented to prevent the spread of noxious weeds during construction activities, reclamation efforts, and O&M activities. Detailed information regarding reclamation is contained in Exhibit P1, Attachment P1-3, Reclamation and Revegetation Plan.

5.2.1 Vehicle Cleaning

To help prevent the spread of noxious weeds during construction, all Construction Contractor(s) vehicles and equipment will be cleaned using high-pressure air or water equipment prior to arrival at the work site. IPC will include in the Final Noxious Weed Plan additional protocols for frequency of cleaning vehicles as construction progresses along the ROW. 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 or vacuumed. Additionally, when moving from weed-contaminated areas to other areas along the transmission line ROW, all construction vehicles and equipment will be cleaned using compressed water or air in designated wash stations before proceeding to new locations. All washing of construction vehicles and equipment must be performed in approved wash stations.

Vehicle cleaning stations will be located within each of the Project multi-use areas as identified in Exhibit B and Exhibit C of this application as well as other locations as necessary. IPC will include in the Final Noxious Weed Plan a detailed design identifying all of the components of the wash stations, including rock surface and geomembrane layer to provide a barrier between noxious weeds and seeds and the soil for approval by the appropriate land management agency and ODOE. IPC will also provide a description of how residue from the wash station will be disposed of for approval by the appropriate land management agency and the ODOE. Where feasible, construction will begin in weed-free areas before operating in weed-infested areas. The feasibility of this approach will be determined after survey data is completed to identify weed-free and weed-infested areas.

5.2.2 Flagging and Restricted Access

Prior to construction, areas of noxious weed infestations identified during the preconstruction surveys will be flagged by the Construction Contractor(s) and reviewed by the appropriate land management agency and ODOE. This flagging will alert construction personnel to the presence of noxious weeds and will prevent access to these areas until noxious weed control measures, as applicable, have been implemented.

All movement of construction vehicles outside of the ROW will be restricted to pre-designated access, contractor-acquired access, or public roads. All construction sites and access roads, including overland access routes, will be clearly marked or flagged at the outer limits prior to the onset of any surface-disturbing activity. All personnel will be informed that their activities must be confined within the marked or flagged areas. Disturbance of soils and vegetation removal will be limited to the minimum area necessary for access and construction.

Preventive measures, such as quarantine and closure, will be implemented to reduce and contain existing noxious weed populations. Flagging will alert personnel and prevent access into areas where noxious weeds occur. Construction disturbance will be minimized in these areas until control measures have been implemented, with the exception of reclamation treatments, as applicable. Construction personnel will inspect, remove, and appropriately dispose of weed seed and plant parts found on their clothing and equipment.

5.2.3 Soil Management

Where preconstruction surveys have identified noxious or invasive weed species infestations, topsoil and other soils will be placed next to the infested area and clearly identified as coming from an infested area. Movement of stockpiled vegetation and salvaged topsoil will be limited to eliminate the transport of soil-borne noxious weed seeds, roots, or rhizomes, and will be marked as containing noxious seed materials to avoid mixing with weed-free soil. Topsoil will be returned to the area it was taken from and will not be spread in adjacent areas. If the topsoil is not suitable for backfill, it will be spread in another previously disturbed area and clearly identified for future weed treatments as applicable. As directed by the BLM or USFS, the Construction Contractor(s) may be required to provide additional treatments (i.e., pre-emergent pesticides) to prevent return of noxious weeds.

Soil stockpiles in areas containing noxious weeds will be kept separate from soil removed from areas that are free of noxious weed species, and the soil will be replaced in or near the original excavation. If requested by the applicable land management agency, soil stockpiles will be covered with plastic if the soil stockpile will be in place for 2 weeks or longer and is not actively being used. On lands managed by the USFS or per private landowner request, stockpiles will not be covered with plastic.

5.2.4 Reclamation

To help limit the spread and establishment of noxious weed species in disturbed areas, desired vegetation needs to be established promptly after disturbance. IPC will rehabilitate significantly disturbed areas as soon as possible after ground-disturbing O&M activities and during the optimal period. To minimize potential damage from wildland fires, IPC will not reseed areas within a 20-foot radius around structures. IPC will treat and reseed disturbed areas in accordance with the Final Reclamation and Revegetation Plan. This includes reseeding significantly disturbed areas with a non-invasive seed mix approved by the applicable land management agency, ODOE, or landowner and the Oregon Seed Certification Service.

5.2.5 Materials Management

Straw, hay, mulch, gravel, seed, and other imported materials must be certified weed-free. If certified weed-free materials are not available, then alternative materials will be used with agency approval. For example, certified weed-free gravel is not available in Oregon. The Final Noxious Weed Plan will address noxious weed inventory and treatment of gravel pits from which material will be drawn.

5.3 Treatments

Noxious weed control measures will be implemented prior to construction, during construction, and following construction. Control of noxious weeds will be implemented through mechanical, biological, and chemical control measures. IPC will be responsible for providing the necessary personnel or hiring a contractor, with qualifications demonstrating experience in listed noxious weeds in each of the five counties for which facility components would be sited, to implement noxious weed control procedures. In the event new noxious weed populations are identified on the Project in the future, the protocols and methods outlined in this Plan will be followed.

Methods to control noxious weeds associated with Project activities may include mechanical, biological, or chemical measures. Each of these control methods is briefly described below. Noxious weed control measures will be implemented in accordance with existing state and county regulations and applicable land management agency or ODOE requirements. Control measures will be based on species-specific and site-specific conditions (e.g., proximity to water or riparian areas, agricultural areas, occurrence of special status plant species, and season of application) and will be coordinated with the appropriate land management agencies and ODOE, as well as the OSWB and county weed boards or weed control districts, and the Construction Contractor(s) weed management specialist. Following preconstruction surveys, the Construction Contractor(s) weed management specialist will provide a detailed control methodology for each noxious weed species to be controlled. These species-specific control methodologies will be documented in the Final Noxious Weed Plan.

For EFSC purposes, IPC will only be responsible for treating noxious weeds that are within Project ROWs and that are a result of the company's construction- or operation-related, surface-disturbing activities in the following areas:

- Transmission line: Entirety of the ROWs and/or easements;
- New roads: Entirety of the ROWs and/or easements;
- Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
- Communication stations: Entirety of the ROWs and/or easements;
- Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
- Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

For EFSC purposes, IPC is not responsible for treating noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weed species that were present prior to the Project. With respect to pre-existing weed infestations, IPC recognizes ORS Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.

5.3.1 Types of Treatments

5.3.1.1 Mechanical

Mechanical control methods rely on removal of plants and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc weed populations. Mechanical methods are useful for smaller, isolated populations of noxious weeds in areas of sensitive habitats, or if larger populations occur in agricultural lands, where tillage can be implemented. Some rhizomatous plants can spread by discing or tillage; therefore, implementation of this method 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 noxious weeds. Discing or other mechanical treatments that disturb the soil surface within native habitats will be avoided in favor of herbicide application, which is an effective means of reducing the size of noxious weed populations as well as preventing the establishment of new colonies.

5.3.1.2 Biological

Biological control involves the use of living organisms (insects, diseases, and livestock) to control noxious weeds to achieve management objectives. Many noxious weed and invasive plants species 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. One component of the ODA's Weed Control Policy is developing and managing a biological weed control program (ODA 2016a). Biological controls will be utilized where appropriate along the Project ROW in coordination with county weed supervisors or appropriate land management agency.

5.3.1.3 Chemical

Chemical control can effectively remove noxious weeds through 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. The type of herbicide and method of use will be approved by the applicable land-managing agency prior to their use. On private and state lands, appropriate federal and state approved herbicides will be used.

BLM (2016a) lists herbicides acceptable for use on BLM-administered lands in the Vale District. In addition to being approved by the BLM nationally, the herbicides are registered with the Environmental Protection Agency and the State of Oregon (BLM 2016a). USFS (2017) outlines the use of the 11 herbicides approved for use on the Wallowa-Whitman National Forest. The herbicides listed in Appendix A – Agency-Approved Herbicides may be used in the Project area after coordination with the Construction Contractor(s) and after submittal of a Pesticide Use Proposal (PUP) (see below). Revisions to the approved pesticide list will occur in conjunction with agency-approved pesticide list updates.

Application of herbicides on BLM or USFS land will also require submittal of PUPs, which identify and describe the location of the area to be treated, the target species, the herbicide and application rate, and application method to be used, as well as describing all anticipated impacts to non-target species and susceptible areas (BLM 2016a). PUPs may also be required for treatment on BOR-managed lands. Herbicides approved for use within the Project ROW will be reviewed and approved by the BLM, USFS, ODA, and County Weed Supervisors or Superintendents prior to beginning construction and/or prior to use. Prior to any herbicide application on federally controlled lands, a PUP that includes the dates and locations of application, target species, herbicide, adjuvants, and application rates and methods (e.g., spot spray vs. boom spray) and anticipated impacts to non-target species and susceptible areas will

be submitted. Herbicide will not be applied prior to notification and receipt of written approval from the applicable land management agency, ODOE, or private landowner.

A licensed commercial pesticide (herbicide) operator (or IPC staff licensed applicator or supervised trainee), certified by the ODA, will perform the application using herbicides selected and approved by the appropriate land management agency and ODOE in accordance with applicable laws, regulations, and permit stipulations. The pesticide applicator will have readily available copies of the appropriate safety data sheets for the herbicides used. All pesticide applications must follow Environmental Protection Agency label instructions, as well as federal, state, and/or county regulation, BLM and USFS recommendations, and landowner agreements. Application of herbicides will be suspended in accordance with herbicide labels and county, state, and federal regulations (e.g., strong winds, etc.), and all herbicide spills will be reported in accordance with applicable laws and requirements.

Transportation, mixing, and storage of herbicides will include the following provisions:

- Concentrate will be transported only in approved containers in a manner that will prevent tipping or spilling, and in a location isolated from the vehicle's driving compartment, food, clothing, and safety equipment.
- Mixing will be done over a drip-catching device in an area devoid of sensitive vegetation and in an area that will limit human, pet, and wildlife exposure. Flowing water, wetlands, or other areas of sensitive resources where herbicides may be applied will be detailed in the Final Noxious Weed Plan. Areas of flowing water, wetlands, or other sensitive resources where herbicide use will be prohibited will be described in the Final Noxious Weed Plan and be identified on construction maps and flagged.
- All herbicide equipment and containers will be inspected daily for leaks.
- Disposal of spent containers will be in accordance with the herbicide label.

Herbicides may be applied using a broadcast applicator mounted on a truck or all-terrain vehicle, backpack sprayers, hand sprayers, or any other agency-approved method as conditions dictate. Herbicide applications will be conducted by licensed operators or under the supervision of a licensed operator in accordance with state laws and BLM and USFS weed policies. Vehicle-mounted sprayers (e.g., handgun, boom, and injector) may be used in open areas readily accessible by vehicle. Where allowed, a broadcast applicator will likely be used. In areas where noxious weeds are more isolated and interspersed with desirable vegetation, noxious weeds will be targeted by hand application methods (e.g., backpack spraying), thereby avoiding other plants. Herbicide applications will follow all label and land manager guidelines, especially for treatments near threatened and endangered species and waterbodies. Calibration checks of equipment will be conducted at the beginning and periodically during spraying to ensure proper application rates are achieved.

State and federal herbicide recording requirements, including BLM and USFS recording requirements, will be followed. The Final Noxious Weed Plan will contain a list of approved herbicides that may be used, target species, best time for application, and application rates. If the federal land-managing agency determines that a previously approved pesticide and/or plan is unacceptable, they will notify IPC. Revisions to the approved herbicide list will occur in conjunction with agency-approved herbicide/pesticide list updates.

Final species-specific noxious weed control methodologies will be included by the Construction Contractor(s) in the Final Noxious Weed Plan. Herbicide applications will be controlled, as described in Section 7.0 – Pesticide Application, Handling, Spills, and Cleanup, to minimize the impacts on the surrounding vegetation.

5.3.2 Preconstruction Treatments

Based on the preconstruction noxious weed inventory, Idaho Power will identify areas where preconstruction noxious weed control measures will be implemented. Treatments will be conducted prior to the start of ground-disturbing activities and at the time most appropriate for the target species.

Noxious weed species on Oregon's OSWB Class A and T lists; Baker, Malheur, Morrow, Umatilla, and Union county Class A lists; and priority invasive plant species on the Wallowa-Whitman National Forest will be treated prior to the start of ground-disturbing activities. For other noxious weed species, the decision whether to treat the weeds prior to the start of construction activities will be based on the nature and extent of the infestation, surrounding conditions (e.g., the predominance and density of infestations noxious weeds adjacent to the ROW), landowner permission, land-managing agency requests, timeliness of land-managing agency approval, and the construction schedule. Treatment options could consist of mechanical control, hand spraying of herbicides, and biological controls; the exact method of control will be approved by the land-managing agency or landowner prior to use and will be documented in the Final Noxious Weed Plan. All use of herbicides will comply with the label restrictions, as well as federal, state, and/or county regulations and landowner agreements. All areas treated will be documented using GPS technology and will be included in an annual report.

5.3.3 Treatments during Construction

The prevention measures described above in Section 5.2 include certain treatment measures that will be taken during construction to avoid, minimize, and mitigate the risk of spreading or introducing noxious weed species due to Project construction activities.

5.3.4 Post-Construction Treatments

Noxious weed control efforts will occur on an annual basis for the first 5 years post-construction. When it is determined that an area of the Project has successfully controlled noxious weeds at any point during the first 5 years of control and monitoring, IPC will request concurrence from ODOE. If ODOE concurs, IPC will consult with ODOE to design an appropriate plan for long-term weed control. If control of noxious weeds is deemed unsuccessful after 5 years of monitoring and noxious weed control actions, IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC may suggest additional noxious weed control techniques or strategies, or monitoring, or IPC may propose mitigation to compensate for any permanent habitat loss.

As described above, control efforts will be limited to noxious weed species on Oregon's OSWB Class A and T lists; Baker, Malheur, Morrow, Umatilla, and Union county Class A lists; and priority invasive plant species on the Wallowa-Whitman National Forest. Using the prior years' treatment and monitoring information, post-construction noxious weed treatment will be planned by IPC and coordinated with the applicable land-managing agencies to ensure treatment will be conducted at the proper growing period and during favorable environmental conditions. Herbicide use will be planned and coordinated with the applicable agencies and will be based on the results of the prior years' monitoring data to ensure spraying is conducted only where necessary, in areas approved for herbicide use, during the proper growing period, during favorable environmental conditions, and using only the appropriate and agency-approved chemicals to control target noxious weed species.

5.4 Reclamation Actions

As specified in Exhibit P1, Attachment P1-3, Reclamation and Revegetation Plan, reclamation activities will assist in:

- Restoring plant communities and associated wildlife habitat and range;
- Preventing substantial increases in noxious weeds in the Project area;
- Minimizing Project-related soil erosion; and
- Reducing visual impacts on sensitive areas caused by construction activities.

Measures that will be implemented during reclamation activities that will help prevent the spread and establishment of noxious weed species include applying agency-approved seed mixes Project-wide (except in agricultural areas) to the appropriate habitat type, unless directed otherwise by the land management agency and/or landowner. Additionally, the Construction Contractor(s) or weed specialist may recommend modified seeding application rates and timing of implementation to achieve site-specific noxious weed management objectives. Seed mixes will be determined by soil type and site-specific conditions and will be provided to the Construction Contractor(s) by a BLM or USFS specialist, ODOE, or landowner. If areas are not immediately seeded after construction because of weather or scheduling constraints, all noxious weeds will be adequately controlled before seeding. Appropriate herbicides will be used to ensure fall seedings are not affected by residual herbicides.

6.0 MONITORING AND REPORTING

6.1 Monitoring

The objectives of the noxious weed monitoring surveys are to: 1) identify any new noxious weed populations or infestations, and 2) monitor existing infestations and affected/disturbed areas. Monitoring will be initiated during the first summer following construction and will occur during the appropriate growing season when noxious weeds located during the preconstruction surveys are still identifiable. Growing seasons will vary from year to year, and consequently, the timing of monitoring will vary as well.

As stated above, noxious weed monitoring and control will occur during the first 5-year period. When it is determined that an area of the Project has successfully controlled noxious weeds at any point during the first 5 years of control and monitoring, IPC will request concurrence from ODOE. If ODOE concurs, IPC will conclude that it has no further obligation to monitor and control noxious weeds in that area of the Project. If control of noxious weeds is deemed unsuccessful after 5 years of monitoring and noxious weed control actions, IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC may suggest additional noxious weed control techniques or strategies, or monitoring, or IPC may propose mitigation to compensate for any permanent habitat loss. Noxious weed control measures recommended during monitoring will follow the preventive and control measures outlined in the Final Noxious Weed Plan.

6.2 Reporting

An annual Noxious Weed Monitoring Report will be prepared by the Construction Contractor(s) and submitted to IPC and ODOE and made available to the appropriate land management agencies as required. Annual reporting will include geographic information systems data as part of the deliverable. The purpose of the report is to provide a status update on progress toward meeting the goals of controlling and preventing the spread and introduction of noxious weed species within the ROW due to Project activities.

Areas where the spread of a noxious weed infestation are noted, particularly in previously unaffected locations, will be evaluated to help determine if these areas require remedial action and treatment. The Construction Contractor(s) will note these areas in the annual report and will document any additional noxious weed control treatments implemented or recommended.

6.3 Ongoing Monitoring and Control

IPC will be responsible for monitoring and control of noxious weed infestations as set forth in the terms and conditions of the ODOE Site Certificate, BLM ROW grant, and USFS special-use authorization. The BLM, USFS, ODOE, and counties may contact IPC to report on the presence of noxious weed populations of concern within the ROW.

IPC's operations personnel will be trained in the identification of the predominant noxious weed populations within the Project ROW, and IPC will control the weeds on a case-by-case basis in consultation with the land management agency and/or landowner, as appropriate. If determined necessary, a report on actions taken will be provided to the BLM and USFS on a predetermined schedule.

7.0 HERBICIDE APPLICATION, HANDLING, SPILLS, AND CLEANUP

7.1 Herbicide Application and Handling

The current list of BLM and USFS approved herbicides is provided in Appendix A. Before application, the list of herbicides to be used will be approved by the BLM, USFS, and other land management agencies as appropriate. Additionally, all required permits from the local authorities (e.g., Oregon County Weed Superintendents or weed districts, BLM, BOR, and/or USFS) will be obtained. Permits may contain additional terms and conditions that go beyond the scope of this Plan. Application of herbicides will follow the measures listed in Section 4.3 – Control Measures.

7.2 Herbicide Spills and Cleanup

All reasonable precautions will be taken to avoid herbicide spills. Construction spills, including herbicide and pesticide spills, will be promptly cleaned up, and contaminated materials will be transported to a disposal site that meets local, state, and federal requirements. If a spill occurs whose cleanup is beyond the capability of on-site equipment and personnel, an Emergency Response Contractor available to further contain and clean up the spill will be identified. Potential contractors will be identified prior to the start of construction activities.

For spills in standing water, including herbicide and pesticide spills, absorbent materials will be used as appropriate by the contractor to recover and contain released materials on the surface of the water. If the standing water is considered a water of the state, it will be reported immediately to the appropriate agency. Materials such as fuels, other petroleum products, chemicals, and hazardous materials including wastes will be located in upland areas away from streams or wells and away from storm drains or other drainages.

Hazardous material, including herbicides and pesticides, will not be drained onto the ground or into streams or drainage areas. Totally enclosed containment will be provided for all Project-generated trash. All construction waste, including trash and litter, garbage, other solid waste, petroleum products, concrete curing fluid, and other potentially hazardous materials, will be removed as necessary to a disposal facility authorized to accept such materials.

As identified in Exhibit G, Materials Analysis, concentrated liquid herbicides will be stored in the hazardous materials portion of multi-use areas during construction. During construction, hazardous materials will be delivered to the Project as needed, unless regular use requires

storage at the multi-use areas. During operations, small amounts (less than 20 gallons per year) will be used to control vegetation. No herbicide will be stored on-site during the operations phase. Herbicides will be brought to the site as needed. No hazardous materials of any type will be stored on-site during the operations phase.

Spill preventive and containment measures or practices will be incorporated as described in Exhibit G, Materials Analysis, and Attachment G-4, Draft Spill Prevention, Control, and Countermeasures (SPCC) Plan.

During operations, small amounts will be used to control vegetation. No herbicide will be stored on-site during the operations phase. Herbicides will be brought to the site as needed. Additional information regarding the handling of hazardous materials, including herbicides and pesticides, may be found in the Draft SPCC Plan (Exhibit G, Attachment G-4).

7.3 Worker Safety and Spill Reporting

All pesticide contractors will obtain and have readily available copies of the appropriate safety data sheets for the herbicides used. All herbicide spills will be reported in accordance with applicable laws and requirements as discussed in Exhibit G, Materials Analysis, and Attachment G-4, Draft SPCC Plan. Persons should attempt to clean up or control a spill, including herbicide and pesticide spills, only if they have received proper training and possess the appropriate protective clothing and clean-up materials. Untrained individuals should notify the appropriate response personnel. In addition to these general measures, persons responding to spills will consult the SPCC Plan and the safety data sheets (SDSs) or U.S. Department of Transportation Emergency Response Guidebook (to be maintained by the Construction Contractor[s] on-site during all construction activities), which outlines physical response guides for hazardous materials spills. The Construction Contractor(s) will verify and update emergency phone numbers before and during construction. The Construction Contractor(s) (or other person in charge) will notify the applicable land management agency and ODOE of all spills or potential spills, including herbicide and pesticide spills, within the Project area.

8.0 PLAN UPDATES

The Construction Contractor(s) will be responsible for development of the Final Noxious Weed Plan, which will include documentation of existing infestations adjacent to the survey area, documenting results of the preconstruction noxious weed inventories, mapping areas subject to preconstruction noxious weed treatment, and providing a detailed control methodology for each noxious weed species. The Construction Contractor(s) will also be responsible for reporting noxious weed species identified during preconstruction surveys to the applicable land-managing agencies, and submitting PUPs prior to weed treatment on BLM or USFS lands.

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APPENDIX A
AGENCY-APPROVED HERBICIDES

BLM-APPROVED HERBICIDES

(Source: BLM 2016a)

- 2,4-D
- Aminopyralid
- Chlorsulfuron
- Clopyralid
- Dicamba
- Diflufenzopyr + Dicamba
- Diuron
- Fluridone
- Fluroxypyr
- Glyphosate
- Hexazinone
- Imazapic
- Imazapyr
- Metsulfuron methyl
- Picloram
- Rimsulfuron
- Sulfometuron methyl
- Triclopyr

USFS WALLOWA-WHITMAN NATIONAL FOREST APPROVED HERBICIDES

(Source: USFS 2017)

- Aminopyralid
- Chlorsulfuron
- Clopyralid
- Glyphosate
- Imazapic
- Imazapyr
- Metsulfuron methyl
- Picloram
- Sethoxydim
- Sulfometuron methyl
- Triclopyr

**ATTACHMENT P1-6
FISH AND WILDLIFE HABITAT MITIGATION PLAN**

Fish and Wildlife Habitat Mitigation Plan

Boardman to Hemingway Transmission Line Project



*1221 West Idaho Street
Boise, Idaho 83702*

September 2018

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Appendix A. Habitat Mitigation Sites
Appendix B. Wolf Creek Mitigation Site Expanded Assessment

ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
EFSC or Council	Energy Facility Siting Council
HMP	Habitat Mitigation Plan
ILF	in-lieu fee
IPC	Idaho Power Company
MZ	Management Zone
OAR	Oregon Administrative Rules
ODOE	Oregon Department of Energy
ODFW	Oregon Department of Fish and Wildlife
Project	Boardman to Hemingway Transmission Line Project
WAGS	Washington ground squirrel

1.0 INTRODUCTION

To obtain an Oregon Energy Facility Siting Council (EFSC or Council) site certificate for the Boardman to Hemingway Transmission Line Project (Project), Idaho Power Company (IPC) must show that the design, construction, and operation of the Project, taking into account mitigation, is consistent with the Oregon Department of Fish and Wildlife's (ODFW) Habitat Mitigation Policy at Oregon Administrative Rule (OAR) 635-415-0025 (see OAR 345-022-0060, EFSC's Fish and Wildlife Habitat Standard). This Fish and Wildlife Habitat Mitigation Plan (HMP) sets forth the mitigation measures IPC will implement to achieve the goals and standards of ODFW's Habitat Mitigation Policy with respect to fish and wildlife species other than the greater sage-grouse (*Centrocercus urophasianus*), which is addressed in the Greater Sage-Grouse Habitat Mitigation Plan (Exhibit P2, Attachment P2-3).

As background, IPC considered avoidance of sensitive resources a priority throughout the siting process, as explained in the Project's Siting Study (Exhibit B, Attachment B-1), 2012 Siting Study Supplement (Exhibit B, Attachment B-2), and 2015 Supplemental Siting Study (Exhibit B, Attachment B-3). In particular, IPC's initial siting process avoided sensitive resource areas to the extent practical, including Bureau of Land Management (BLM) designated areas of critical environmental concern, BLM-designated wilderness study areas, waterbodies (including wetlands, wild and scenic rivers, streams that support special status species), areas with sensitive wildlife resources (e.g., sage-grouse leks, Washington ground squirrel colonies, raptor nests), U.S. Department of Agriculture Forest Service designated visual resource retention and preservation lands and inventoried roadless areas, city and town boundaries, and irrigated agriculture. Furthermore, the Project is designed to follow existing developments and utility corridors, such as existing roads and transmission lines, to the extent practical and without violating the Western Electricity Coordinating Council's reliability criteria, in order to consolidate impacts on areas that have already been disturbed as opposed to impacting undisturbed areas. IPC will also implement measures during construction and maintenance that are intended to minimize impacts on the environment, and specifically fish and wildlife habitat. Regardless of the efforts to site the Project to avoid high value fish and wildlife habitat and the implementation of measures to minimize impacts on fish and wildlife habitat, unavoidable impacts from the Project will occur.

This Fish and Wildlife HMP presents the direct and indirect impacts to fish and wildlife habitats, provides an approach for quantifying the impact debits resulting from the Project and the mitigation credits created through the proposed mitigation projects, and sets forth a schedule for implementing the necessary mitigation projects. Consistent with the ODFW Habitat Mitigation Policy, mitigation measures will be implemented and completed either prior to or concurrent with the Project.

If, after review and potential approval by EFSC of the Fish and Wildlife HMP, should the approved mitigation projects no longer be available, or if IPC decides to select another mitigation project not previously considered by EFSC, or if the reviewed mitigation projects do not provide sufficient mitigation credit and additional mitigation is necessary, IPC will amend the Fish and Wildlife HMP and submit the same to Oregon Department of Energy (ODOE) for its approval.

2.0 APPLICABLE RULES AND AGENCY GUIDANCE

2.1 General Standards for Siting Facilities

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

For the Council to issue a site certificate, it must find that the design, construction, and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

2.2 Implementation of ODFW Habitat Mitigation Recommendations

OAR 635-415-00252 provides the following:

(1) "Habitat Category 1" is 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.

(a) The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality.

(b) The Department shall act to protect Category 1 habitats described in this subsection by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) No authorization of the proposed development action if impacts cannot be avoided.

(2) "Habitat Category 2" is 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.

(a) The mitigation goal 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.

(b) The Department shall act to achieve the mitigation goal for Category 2 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) Mitigation of impacts, if unavoidable, through reliable in-kind, in-proximity habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity or quality must be provided. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

(c) If neither 635-415-0025(2)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.

(3) *“Habitat Category 3” is 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.*

(a) The mitigation goal is no net loss of either habitat quantity or quality.

(b) The Department shall act to achieve the mitigation goal for Category 3 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) Mitigation of impacts, if unavoidable, through reliable in-kind, in-proximity habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

(c) If neither 635-415-0025(3)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.

(4) *“Habitat Category 4” is important habitat for fish and wildlife species.*

(a) The mitigation goal is no net loss in either existing habitat quantity or quality.

(b) The Department shall act to achieve the mitigation goal for Category 4 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) Mitigation of impacts, if unavoidable, through reliable in-kind or out-of-kind, in-proximity or off-proximity habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

(c) If neither 635-415-0025(4)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.

(5) *“Habitat Category 5” is habitat for fish and wildlife having high potential to become either essential or important habitat.*

(a) The mitigation goal, if impacts are unavoidable, is to provide a net benefit in habitat quantity or quality.

(b) The Department shall act to achieve the mitigation goal for Category 5 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) Mitigation of impacts, if unavoidable, through actions that contribute to essential or important habitat.

(c) If neither 635-415-0025(5)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.

(6) "Habitat Category 6" is habitat that has low potential to become essential or important habitat for fish and wildlife.

(a) The mitigation goal is to minimize impacts.

(b) The Department shall act to achieve the mitigation goal for Category 6 habitat by recommending or requiring actions that minimize direct habitat loss and avoid impacts to off-site habitat.

(7) For proposed developments subject to this rule with impacts to greater sage-grouse habitat in Oregon, mitigation shall be addressed as described in OAR 635-140-0000 through 635-140-0025, except that any energy facility that has submitted a preliminary application for site certificate pursuant to ORS 469.300 et seq. on or before the effective date of this rule is exempt from fulfilling the avoidance test contained in 635-140-0025, Policy 2, subsections (a), (b), (c) and (d)(A). Other mitigation provisions contained in 635-140-0025, Policy 2, subsections (d)(B) and (e), and Policies 3 and 4 remain applicable.

2.3 ODFW Mitigation Framework for Indirect Road Impacts to Rocky Mountain Elk Habitat

In April 2015, ODFW provided IPC with guidance on mitigation for impacts to Rocky Mountain elk (*Cervus canadensis nelsoni*). The guidance document is entitled *Mitigation Framework for Indirect Road Impacts to Rocky Mountain Elk Habitat* (Elk Mitigation Framework) (ODFW 2015). The Elk Mitigation Framework provides a methodology for quantifying the area of indirect impacts from energy facility roads and provides guidance for how ODFW will consider indirect impacts to elk habitat under their Habitat Mitigation Policy. Indirect impacts are calculated in Exhibit P3 and are presented in summary in this Fish and Wildlife HMP.

3.0 ANALYSIS

3.1 Avoidance

ODFW's Habitat Mitigation Policy sets forth a mitigation goal for each of Habitat Category 1 through 6, and provides recommendations or requirements ODFW shall take to achieve the mitigation goals. Depending on the habitat category, ODFW's recommendations or requirements provide that the project proponent must avoid impacts to the habitat or at least consider avoidance of the habitat.

3.1.1 Habitat Category 1

For Habitat Category 1, ODFW's recommendations or requirements provide that impacts to the habitat must be avoided through alternatives to the proposed development action or the project should not be authorized (see OAR 635-415-00252(1)(b)). Here, the Project Site Boundary includes Category 1 habitat associated with raptor nests. Although trees or structures with raptor nests are managed as Category 1 habitat, they are not included in the habitat categorization analysis for acres of Category 1 habitat because of their relatively small size on the landscape. To ensure that Category 1 raptor nests and raptor breeding activities are not

disturbed by Project activities, the seasonal and spatial restrictions identified in Exhibit P1, Attachment P1-10 and listed in Exhibit P1, Section 3.5.3.1 will be applied.

There is potential for Category 1 Washington ground squirrel (*Urocitellus washingtoni*, WAGS) habitat to be identified within the Site Boundary during future surveys. IPC has modified the Project location to avoid Category 1 WAGS habitat in the past and will perform WAGS surveys in the future within previously unsurveyed areas to identify Category 1 WAGS habitat for avoidance. IPC is proposing site certificate conditions that will ensure that surveys for raptor nests and WAGS are conducted within an appropriate timeframe prior to construction, that seasonal restrictions are applied to raptor nests to avoid impacts to Category 1 habitat, and that all construction activities avoid Category 1 WAGS habitat. WAGS surveys will be used to complete final design, facility layout, and micrositing of facility components and IPC will not construct any facility components within areas of Category 1 habitat and will avoid temporary disturbance of Category 1 habitat. Refer to Fish and Wildlife Condition 18, Fish and Wildlife Condition 19, and Threatened and Endangered Species Condition 1 in Exhibit P1 and Exhibit Q, Section 4.0. Accordingly, the Project will avoid impacts to Category 1 habitat consistent with ODFW's Habitat Mitigation Policy, and no compensatory mitigation is required or proposed.

3.1.2 Habitat Categories 2 through 6

ODFW's recommendations or requirements for meeting the mitigation goals for Habitat Categories 2 through 6 provide that the project proponent must consider avoiding impacts to the relevant habitats. However, unlike with Habitat Category 1, strict avoidance is not a requirement in Habitat Categories 2 through 6. Rather, unavoidable impacts to Habitat Categories 2 through 5 may be excused by showing the impacts will be mitigated for, and unavoidable impacts to Habitat Category 6 need only be minimized (see OAR 635-415-00252(2)(b)(B), (3)(b)(B), (4)(b)(B), (5)(b)(B), and (6)(b)). Here, as discussed in Exhibit P1, Section 3.5.6, IPC considered avoidance of sensitive resources related to fish and wildlife habitat during initial routing of the Project. IPC is proposing measures to be implemented during construction and operation that will avoid and minimize impacts to fish and wildlife habitats (see Exhibit P1, Section 3.5.6).

3.2 Minimization

3.2.1 Habitat Categories 2 through 5

ODFW's Habitat Mitigation Policy does not specify that unavoidable impacts to Habitat Categories 2 through 5 must be minimized, in addition to being mitigated. Regardless, the minimization measures that IPC is proposing (Exhibit P1, Section 3.5.6) will be implemented Project-wide and across all habitat categories. Therefore, the measures will minimize impacts to Habitat Categories 2 through 5 even though the Habitat Mitigation Policy does not expressly provide for the same.

3.2.2 Habitat Category 6

ODFW's Habitat Mitigation Policy provides for minimizing impacts to Habitat Category 6 and does not require compensatory mitigation for such impacts (see OAR 635-415-00252(6)(b)). Implementation of the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3) will minimize impacts to Habitat Category 6 consistent with ODFW's Habitat Mitigation Policy, and no compensatory mitigation is required or proposed.

3.3 Compensatory Mitigation

For unavoidable impacts to Habitat Categories 2 through 5, compensatory mitigation will be required. The following discussion presents the potential impacts to Habitat Categories 2 through 5 and proposed mitigation projects that could be used to offset the Project impacts.

3.3.1 Quantifying Project Impacts

IPC determined the number of fish and wildlife habitat acres impacted by the Project as follows:

- **Direct impacts to habitat:** IPC identified habitat types within the Site Boundary consistent with the Habitat Mitigation Policy (see Exhibit P1 and Attachment P1-1). IPC then identified the direct impacts of the Project to each habitat type by calculating the number of acres of each habitat type within the construction and operation footprints. Direct impacts are defined as the impacts that will have an adverse effect upon species habitat or individuals, and that will occur at the same, or in close proximity to, time and place. Direct impacts may be permanent or temporary. Permanent impacts will exist for the entire life of the Project. Temporary impacts are those impacts that will last for a time less than the life of the Project. Here, permanent direct impacts may occur in the form of vegetation clearing at the transmission line, communication stations, and access roads; and direct mortality. Temporary direct impacts may occur in the form of vegetation clearing at construction areas used during construction or retirement. For a more-detailed description of the types of activities considered under direct impacts, see Exhibit P1, Section 3.5.3. The analysis of direct impacts to the habitat types is discussed in more detail below in Section 3.3.1.1, and the resulting impact acres are set forth below in Table 1.
- **Indirect impacts to elk summer and winter range:** Indirect impacts are defined as the impacts that will have an adverse effect upon fish and wildlife habitat or individuals, and that will occur later in time or in a different place than the Project activities. Indirect impacts may be permanent or temporary. Permanent impacts will exist for the entire life of the Project. Temporary impacts are those impacts that will last for a time less than the life of the Project. In this instance, permanent indirect impacts may occur in the form of habitat fragmentation at the transmission line and access roads. Temporary indirect impacts may occur in the form of noise, traffic, dust, and other nuisances resulting from construction activities at the access roads; and potential invasive species introduction during construction. For a more-detailed description of the types of activities considered under indirect impacts, see Exhibit P1, Section 3.5.4. Consistent with ODFW guidance, IPC did not quantify indirect impacts to fish and wildlife habitat, except with respect to elk and sage-grouse. Exhibit P2 discusses sage-grouse impacts and mitigation. IPC quantified the indirect impacts of the Project to elk summer and winter range based on the methodology and principles set forth in the Elk Mitigation Framework. Indirect impacts are calculated in Exhibit P3 and presented in summary in this Fish and Wildlife HMP.
- **Impacts to greater sage-grouse:** IPC addresses impacts to sage-grouse in Exhibit P2 and Attachment P2-3.

3.3.1.1 Impacts to Habitat

The location of the Project presented in this application is based on a preliminary design developed in September of 2016. Direct and indirect impacts, both temporary and permanent, to fish and wildlife habitat have been estimated using the preliminary design. IPC will update the estimated impacts contained within this Fish and Wildlife HMP based upon the final design of the Project which will occur after issuance of a site certificate and prior to construction. In the third year of operation, IPC will submit a report to ODOE presenting the final compensatory

mitigation calculations based on the as-constructed footprint of the Project and showing mitigation is commensurate with those final numbers. The report will come in the third year of operation and not sooner, because the elk mitigation calculations are dependent on the post-construction traffic study that will take place during Year 2 of operation.

Direct Impacts to Habitat

Exhibit P1, Section 3.5.2.4 quantifies the direct impacts of the Proposed Route and alternatives by habitat category, habitat type, and impact type (temporary or permanent). Table 1 quantifies the direct impacts of the Proposed Route and alternatives by habitat category, general vegetation type, and impact type. The general vegetation types are groupings of similar habitat types (see Exhibit P1, Attachment P1-1).

Table 1. Estimated Acreage of Temporary and Permanent Direct Impacts by General Vegetation Type

Habitat Category and General Vegetation Type	Proposed Route		West of Bombing Range Road Alternative 1		West of Bombing Range Road Alternative 2		Morgan Lake Alternative		Double Mountain Alternative	
	Temp ¹	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm
Category 2										
Agriculture / Developed ²	95.0	10.6								
Bare Ground	2.0	0.3	–	–	–	–	–	–	2.0	0.5
Forest / Woodland	6.8	536.1	–	–	–	–	68.1	12.5	–	–
Open Water / Wetlands	1.0	0.5	–	–	–	–	0.0	0.0	0.0	0.0
Riparian Vegetation	0.6	0.4	–	–	–	–	0.0	0.0	–	–
Shrub / Grassland	1,990.9	334.2	6.3	0.4	6.3	0.4	137.9	19.3	21.9	1.2
Subtotal	2,123.1	882.7	6.3	0.4	6.3	0.4	206.1	31.9	23.9	1.6
Category 3										
Agriculture / Developed	10.1	0.8	–	–	–	–	–	–	–	–
Bare Ground	0.3	0.1	–	–	–	–	–	–	0.1	0.0
Forest / Woodland	16.0	458.0	–	–	–	–	31.4	5.8	–	–
Open Water / Wetlands	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Riparian Vegetation	5.5	0.1	–	–	–	–	–	–	–	–
Shrub / Grassland	312.4	29.9	0.0	0.0	0.8	0.8	–	–	36.5	3.5
Subtotal	344.6	489.1	0.0	0.0	0.8	0.8	31.4	5.8	36.6	3.5
Category 4										
Open Water / Wetlands	0.0	0.0	–	–	–	–	–	–	–	–
Shrub / Grassland	165.3	26.1	4.9	0.7	6.2	1.2	–	–	15.8	2.5
Subtotal	165.3	26.1	4.9	0.7	6.2	1.2	–	–	15.8	2.5

Habitat Category and General Vegetation Type	Proposed Route		West of Bombing Range Road Alternative 1		West of Bombing Range Road Alternative 2		Morgan Lake Alternative		Double Mountain Alternative	
	Temp ¹	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm
Category 5										
Forest / Woodland	–	–	–	–	–	–	0.0	0.0	–	–
Shrub / Grassland	329.3	43.3	13.4	2.5	5.7	1.7	–	–	57.3	16.3
<i>Subtotal</i>	<i>329.3</i>	<i>43.3</i>	<i>13.4</i>	<i>2.5</i>	<i>5.7</i>	<i>1.7</i>	<i>–</i>	<i>–</i>	<i>57.3</i>	<i>16.3</i>
Category 6										
Agriculture / Developed	310.5	259.8	2.3	1.6	1.9	1.5	0.3	15.5	0.1	4.8
<i>Subtotal</i>	<i>310.5</i>	<i>259.8</i>	<i>2.3</i>	<i>1.6</i>	<i>1.9</i>	<i>1.5</i>	<i>0.3</i>	<i>15.5</i>	<i>0.1</i>	<i>4.8</i>
TOTAL	3,272.9	1,701.0	26.9	5.3	20.9	5.7	237.8	53.3	133.7	28.8

¹ Temporary impacts will be reclaimed as described in Exhibit P1, Attachment P1-3, Reclamation and Revegetation Plan.

² The Category 2 Agriculture / Developed general vegetation type includes areas that appear to be in CRP within elk or mule deer winter range.

0.0 = less than 0.05 acre; – = 0.

In categorizing fish and wildlife habitat pursuant to the ODFW Habitat Mitigation Policy, ODFW directed IPC to overlay the following species-specific habitats on the Site Boundary: WAGS habitat, elk winter and summer range, mule deer (*Odocoileus hemionus*) winter and summer range, and California bighorn sheep (*Ovis canadensis californiana*) herd range (see Exhibit P1, Attachment P1-1, Appendix A). The preceding quantification of direct impacts includes, in part, impacts to those species-specific habitats. However, in many instances, those species-specific habitats overlap with each other—for example, a particular acre may be considered both elk winter range and mule deer winter range. For purposes of quantifying total acres of direct impacts, IPC counted each acre within the construction and operation footprint only once, even though certain acres may include more than one of the relevant species-specific habitats. Even so, Table 2 shows the acres of direct impacts that occur within each species-specific habitat.

Table 2. Estimated Acreage of Direct Impacts within Wildlife Habitat Layers

Wildlife Habitat Layer	Habitat Category	Acres of Impact				
		Proposed Route	West of Bombing Range Road Alt. 1	West of Bombing Range Road Alt. 2	Morgan Lake Alternative	Double Mountain Alternative
WAGS Habitat	2	22.4	6.7	6.7	–	–
Elk Winter Range	2	416.3	–	–	89.6	–
Elk Summer Range	3	132.1	–	–	61.3	–
Mule Deer Winter Range	2	2,951.8	–	–	235.2	25.6
Mule Deer Summer Range	3	894.6	–	–	100.3	–
California Bighorn Sheep Herd Range	2	15.8	–	–	–	–

Indirect Impacts to Habitat

Indirect impacts to fish and wildlife habitat will occur during construction and operation of the Project as described in Exhibits P1 and P3. The nature and extent of indirect impacts varies depending on the species and habitat being affected. There is no guidance on quantifying indirect impacts to fish and wildlife species or their habitat, other than for elk (see Exhibit P3) and sage-grouse (see Exhibit P2). Further, ODFW has advised IPC that ODFW does not require compensatory mitigation for indirect impacts to habitat beyond such impacts to elk habitat and sage-grouse habitat. Therefore, compensatory mitigation for indirect impacts is required only for elk habitat and sage-grouse habitat to meet the goals and objectives of ODFW's Habitat Mitigation Policy. IPC is only proposing compensatory mitigation for indirect impacts to elk habitat within this HMP. Compensatory mitigation for indirect impacts to sage-grouse is presented in Exhibit P2, Attachment P2-3.

3.3.1.2 Impacts to Elk Summer and Winter Range

Direct Impacts to Elk Summer and Winter Range

Direct impacts to elk summer and winter range are included in the direct impacts set forth above in Section 3.3.1.1, Table 2.

Indirect Impacts to Elk Summer and Winter Range

The description and quantification of indirect impacts to elk are detailed in Exhibit P3, Section 3.5.4. For the Proposed Route, indirect impacts to summer range total 5.6 acres and indirect impacts to winter range total 428.0 acres. For the Morgan Lake Alternative, indirect impacts to summer range total 152.7 acres and indirect impacts to winter range total 175.8 acres.

3.3.1.3 Direct and Indirect Impact Summary

Approximately 5,052 acres of Category 2 through Category 6 habitat will be directly affected during construction of the Proposed Route and approximately 434 acres of elk habitat will be indirectly affected due to anticipated traffic increases from new and improved roads associated with the Proposed Route. These disturbances will occur over 270.8 miles of transmission line, crossing five counties in Oregon. The Project crosses four Level III ecoregions: the Columbia Plateau, the Blue Mountains, the Snake River Plain, and the Northern Basin and Range (EPA 2011).

Summarizing impacts within an ecoregional framework will assist in describing potential mitigation (Section 4.2) and accounting for mitigation debits and credits (Section 4.3). For purposes of this Fish and Wildlife HMP, the boundaries of the four ecoregions crossed by the Project are modified slightly and referred to as mitigation zones (MZ) (Figure 1). Mitigation Zone 1 (MZ1) corresponds to the Columbia Plateau ecoregion. MZ2 corresponds to the Blue Mountain ecoregion, without its Continental Zone Foothills Level IV ecoregion. MZ3 combines the Snake River Plain, Northern Basin and Range, and the Continental Zone Foothills of the Blue Mountains ecoregion into a single zone. This was done to group the mitigation debits and credits from the shrub/grassland vegetation type within the Baker, Keating, and Durkee valleys with those in the Northern Basin and Range and Snake River Plain.

Impacts are summarized for the Proposed Route only. The two West of Bombing Range Road alternatives are in MZ1, the Morgan Lake Alternative is in MZ2, and the Double Mountain Alternative is in MZ3. Since each of the alternatives is wholly contained within an MZ, Table 1 and Table 2 above can be referenced for direct impacts. Section 3.3.1.2 quantifies the indirect impacts on elk habitat associated with the Morgan Lake alternative contained within MZ2.

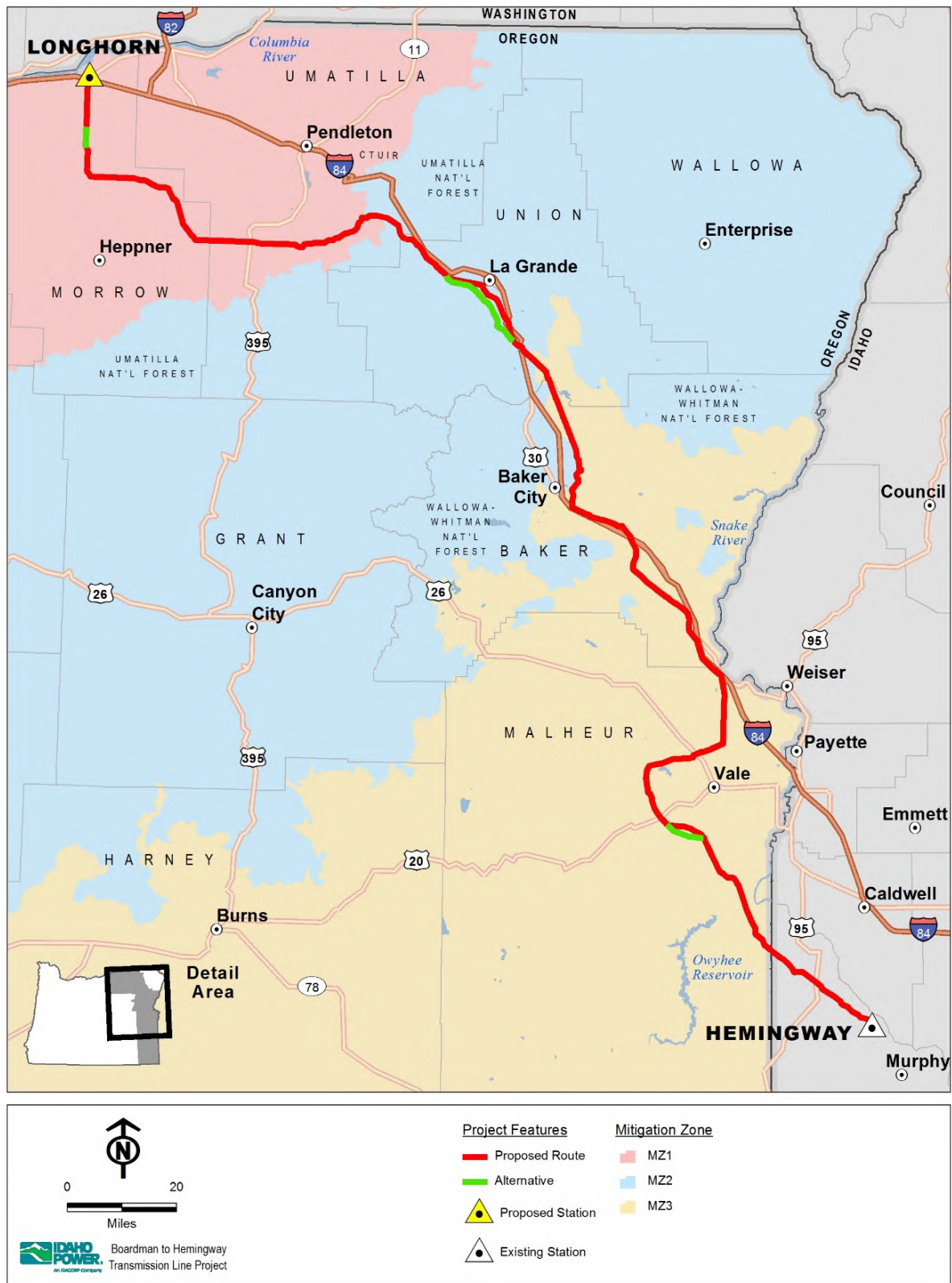


Figure 1. Mitigation Zones

MZ1 Impacts

MZ1 encompasses the northern portion of the Proposed Route from the Longhorn Station, through the Naval Weapons System Training Facility Boardman, east from Morrow County into Umatilla County, across highway 395 and into the foothills of the Blue Mountains south and east of Pilot Rock, Oregon. Approximately 1,173 acres of direct impacts and 0 acres of indirect impacts are anticipated within MZ1, with a majority of impacts occurring within agriculture/developed and shrub/grassland general vegetation types (Table 3). Impacts on the shrub/grassland general vegetation type occur mostly within the introduced upland vegetation and native grassland habitat types, with fewer impacts occurring in shrubland habitat types. The impact acreage in MZ1 originates from the proposed construction of 60 miles of existing roads requiring substantial modification, 66.9 miles of new roads, 336 tower structures to support 77.6 miles of transmission line, and 13 multi-use areas.

Table 3. Direct and Indirect Impacts from the Proposed Route on General Vegetation Types by ODFW Habitat Categories in MZ1

General Vegetation Type	ODFW Habitat Categories (acres)					Total	General Veg. Type Subtotal Temporary	General Veg. Type Subtotal Permanent
	2	3	4	5	6			
Direct Impacts								
Agriculture/Developed	105.6	10.9	–	–	290.9	407.4	300.8	106.7
Forest/Woodland	7.6	–	–	–	–	7.6	–	7.6
Open Water/Wetlands	0.5	0.0	–	–	–	0.5	0.3	0.2
Riparian Vegetation	0.5	0.1	–	–	–	0.6	0.4	0.2
Shrub/Grassland	609.0	14.6	19.2	113.8	–	756.5	643.5	113.0
Indirect Impacts								
Impact Area ¹	–	–	–	–	–	–	–	–
Totals								
Total	724.0	25.6	19.2	113.8	290.9	1,173.4	945.7	227.7
Category Subtotal Temporary	614.1	21.5	15.8	98.8	195.6	945.7	–	–
Category Subtotal Permanent	109.9	4.1	3.5	15.0	95.2	227.7	–	–

¹The vegetation composition of the indirect impact area in elk summer and winter range has not been attributed at this time. Currently, no indirect impacts to elk summer or winter range have been identified within MZ1.

Note: 0.0 = less than 0.05 acre; – = 0

Within MZ1, impacts overlap with habitat for WAGS, elk, and mule deer. Table 4 identifies the acreage of each wildlife habitat layer within MZ1 that will be affected by the Proposed Route. MZ1 contains all of the Project's impacts on WAGS habitat.

Table 4. Direct and Indirect Impacts from the Proposed Route on Wildlife Habitat in MZ1

Wildlife Habitat Layer ¹	Habitat Category	Impact Type			Total
		Temp	Perm	Indirect	
WAGS	2	19.7	2.7	–	22.4
Elk winter range	2	54.6	8.5	–	63.2
Elk summer range	3	20.4	2.8	–	23.2
Mule deer winter range	2	593.8	106.4	–	700.2
Mule deer summer range	3	–	–	–	–

¹ Habitat layers overlap each other; therefore, acres of impact between habitat layers should not be added together.

Note: – = 0

MZ2 Impacts

MZ2 encompasses the central portion of the Proposed Route from the foothills of the Blue Mountains east of Pilot Rock, Oregon, from Umatilla County across the Blue Mountains into Union County past La Grande, Oregon, to where the Project crosses Interstate 84 near Ladd Canyon and Craig Mountain in the Clover Creek Valley area. Approximately 1,453 acres of direct impacts and 6.3 acres of indirect impacts are anticipated within MZ2, with a majority of impacts occurring within forest/woodland and shrub/grassland general vegetation types (Table 5). Impacts on the forest/woodland general vegetation type occur mostly within the Douglas-fir / mixed grand fir habitat type, as well as ponderosa pine habitat type. A 250-foot-wide corridor around the centerline is assumed to be a permanent disturbance to the forest/woodland general vegetation type within MZ2 because of the vegetation management that will occur under the line. To keep vegetation clear of the conductors, a 250-foot-wide area will be treated and maintained such that a forest/woodland vegetation type cannot reestablish. This is reflected by the greater amount of permanent impacts than temporary impacts to forest/woodland in MZ2. Impacts on shrub/grassland general vegetation type occur mostly within the native grassland and shrub-steppe habitat types. The impact acreage in MZ2 originates from the proposed construction of 42 miles of existing roads requiring substantial modification, 20.4 miles of new roads, 217 tower structures to support 49.6 miles of transmission line, and 9 multi-use areas.

Table 5. Direct and Indirect Impacts from the Proposed Route on General Vegetation Types by ODFW Habitat Categories in MZ2

General Vegetation Type	ODFW Habitat Categories (acres)						Total	General Veg Type Subtotal Temporary	General Veg Type Subtotal Permanent
	1	2	3	4	5	6			
Direct Impacts									
Agriculture/ Developed	–	–	–	–	–	100.7	100.7	59.2	41.4
Bare Ground	–	–	–	–	–	–	–	–	–
Forest/ Woodland	–	388.5	474.0	–	–	–	862.5	22.2	840.4
Shrub/ Grassland	–	187.8	163.5	15.4	12.6	–	379.4	345.7	33.7
Open Water/ Wetlands	–	26.1	0.2	0.0	–	–	26.3	25.9	0.4
Riparian	–	0.0	5.4	–	–	–	5.4	5.4	0.1

General Vegetation Type	ODFW Habitat Categories (acres)						Total	General Veg Type Subtotal Temporary	General Veg Type Subtotal Permanent
	1	2	3	4	5	6			
Vegetation									
Indirect Impacts									
Impact Area ¹	–	–	6.3	–	–	–	6.3	–	6.3
Totals									
Total	–	602.4	649.4	15.4	12.6	179.2	1,380.6	458.3	922.3
Category Subtotal Temporary	–	198.5	176.4	12.5	11.6	137.7	458.3	–	–
Category Subtotal Permanent	–	403.9	473.0	2.9	1.1	41.4	922.3	–	–

¹The vegetation composition of the indirect impact area in elk summer and winter range has not been attributed at this time.

Note: 0.0 = less than 0.05 acre; – = 0.

Within MZ2, impacts overlap with habitat for elk and mule deer. Table 6 identifies the acreage of each wildlife habitat layer within MZ2 that will be affected by the Proposed Route. Table 6 includes the indirect impacts within elk winter range and elk summer range. Elk and deer seasonal ranges cover a vast majority of the impacts from the Proposed Route that occur within MZ2, speaking to the importance of this zone to big game species.

Table 6. Direct and Indirect Impacts from the Proposed Route on Wildlife Habitat in MZ2

Wildlife Habitat Layer ¹	Habitat Category	Impact Type			Total
		Temp	Perm	Indirect	
Elk winter range	2	83.2	137.9	–	221.1
Elk summer range	3	23.0	86.2	6.3	115.6
Mule deer winter range	2	169.8	403.2	–	573.0
Mule deer summer range	3	180.0	503.4	–	683.4

¹ Habitat layers overlap each other; therefore, acres of impact between habitat layers should not be added together.

Note: – = 0

MZ3 Impacts

MZ3 encompasses the southern portion of the Proposed Route, from south of Ladd Canyon and Craig Mountain in the Clover Creek Valley area, across the Union/Baker county line, east of the Baker Valley across the Burnt River Canyon towards Huntington, Oregon and the remainder of the Project area in Malheur County. MZ3 is the largest mitigation zone and is where most of the Project’s direct impacts occur. Approximately 2,642 acres of direct impacts and 432.7 acres of indirect impacts are anticipated within MZ3, with a vast majority of impacts occurring within the shrub/grassland general vegetation type (Table 7). Impacts on the shrub/grassland general vegetation type occur mostly within the shrub-steppe with big sage and introduced upland vegetation habitat types, with fewer impacts in native grassland and other shrub habitat types. The impact acreage in MZ3 originates from the proposed construction of 121.2 miles of existing roads requiring substantial modification, 118.9 miles of new roads, 635 tower structures to support 145.4 miles of transmission line, and 22 multi-use areas.

Table 7. Direct and Indirect Impacts from the Proposed Route on General Vegetation Types by ODFW Habitat Categories in MZ3

General Vegetation Type	ODFW Habitat Categories (acres)						Total	General Veg Type Subtotal Temporary	General Veg Type Subtotal Permanent
	1	2	3	4	5	6			
Direct Impacts									
Agriculture/ Developed	–	–	–	–	–	178.8	178.8	55.7	123.2
Bare Ground	–	2.3	0.5	–	–	–	2.7	2.3	0.4
Forest/ Woodland	–	146.8	–	–	–	–	146.8	0.6	146.2
Shrub/ Grassland	–	1,528.3	164.3	156.8	246.1	–	2,095.6	1,808.7	286.9
Open Water/ Wetlands	–	1.6	0.3	0.0	–	–	1.9	1.3	0.6
Riparian Vegetation	–	0.5	0.0	–	–	–	0.5	0.3	0.2
Indirect Impacts									
Impact Area ¹	–	427.3	–	–	–	–	427.3	–	427.3
Totals									
Total	–	2,106.7	165.0	156.8	246.1	178.8	2,853.5	1,868.9	984.6
Category Subtotal Temporary	–	1,310.5	146.7	137.1	219.0	55.7	1,868.9	–	–
Category Subtotal Permanent	–	796.2	18.3	19.7	27.2	123.2	984.6	–	–

¹ The vegetation composition of the indirect impact area in elk summer and winter range has not been attributed at this time.

Note: 0.0 = less than 0.05 acre; – = 0

Within MZ3, impacts overlap with habitat for elk, mule deer, and California bighorn sheep. Table 8 identifies the acreage of impacts to each wildlife habitat layer within MZ3 that will be affected by the Proposed Route. Table 8 includes the indirect impacts within elk winter range and elk summer range. The East Beulah Management Unit is managed by ODFW as an elk de-emphasis area and occurs within MZ3. Project impacts' habitat categories are not modified by overlap with elk winter and summer range within the de-emphasis area.

Table 8. Direct and Indirect Impacts from the Proposed Route on Wildlife Habitat in MZ3

Wildlife Habitat Layer ¹	Habitat Category	Impact Type			Total
		Temp	Perm	Indirect	
Elk winter range	2	100.8	32.3	427.3	566
Elk summer range	3	–	–	–	–
Mule deer winter range	2	1,309.9	368.7	–	1,678.7
Mule deer summer range	3	108.7	102.5	–	211.2
California Bighorn Sheep Herd Range	2	1.6	14.2	–	15.8

¹ Habitat layers overlap each other; therefore, acres of impact between habitat layers should not be added together.

Note: – = 0

3.3.2 Calculating Debits

Permanent impacts will be mitigated through the restoration, establishment, enhancement, and/or preservation of similar habitat. Table 9 outlines the approach to calculating the mitigation debit accrued from permanent impacts.

Table 9. Accounting for Mitigation Debit for Permanent Direct Impacts

Habitat	Impact Acres	Mitigation Debit	Mitigation Explanation
Category 2	1	>1	The mitigation goal for Category 2 habitat is “no net loss” and “net benefit.” Accordingly, mitigation for permanent impacts on Category 2 habitat needs to demonstrate a net benefit in quality or quantity. Mitigation debits are accrued at a greater amount of acreage than what is impacted by the Project.
Category 3 & Category 4	1	1	The mitigation goal for Category 3 & 4 habitat is “no net loss” in quantity or quality. Mitigation debits are accrued at an equal amount of acreage to what is impacted by the Project.
Category 5	1	<1	The mitigation goal for Category 5 habitat is a “net benefit in habitat quantity or quality.” Mitigation debits are accrued at a lesser amount (but greater than zero) of acreage than what is impacted by the Project; however, mitigation actions performed to offset the Category 5 debits will be improving the quality of Category 2, 3, or 4 habitats and result in a net benefit to quality.
Category 6	1	0	The mitigation goal for impacts on Category 6 habitat is minimization; no compensatory mitigation proposed. A majority of impacts on Category 6 habitat occurs within agricultural areas. IPC has prepared an Agricultural Impacts Mitigation Plan (Exhibit K, Attachment K-1) to address these impacts.

Temporary impacts will be restored during reclamation. IPC plans for reclamation to be successful. IPC will mitigate beyond reclamation for temporary impacts on Category 2 habitat to meet the net benefit requirement. IPC is also proposing to mitigate beyond reclamation for the temporal loss of Category 2, 3, and 4 habitat functionality that occurs from temporary impacts during recovery of habitat. Table 10 outlines the approach to calculating the mitigation debit accrued from temporary impacts.

Table 10. Accounting for Mitigation Debit for Temporary Direct Impacts

Habitat	Impact Acres	Mitigation Debit	Mitigation Explanation
Category 2	1	>1	The mitigation goal for Category 2 habitat is “no net loss” and “net benefit.” Accordingly, mitigation for temporary impacts on Category 2 habitat needs to demonstrate a net benefit in quality or quantity. Mitigation debits are accrued at a greater amount of acreage than what is impacted by the Project. All areas of temporary disturbance will be revegetated at the site of impact. Mitigation debits are accrued to meet the “net benefit” requirement and to account for the temporal loss of habitat function during reclamation.
Category 3 & Category 4	1	<1	The mitigation goal for Category 3 & 4 habitat is “no net loss” in quantity or quality. Mitigation debits are accrued at a lesser amount (but greater than 0) of acreage than what is impacted by the Project. All areas of temporary disturbance will be revegetated at the site of impact. Mitigation debits are accrued to account for the temporal loss of habitat function during reclamation.
Category 5	1	0	The mitigation goal for Category 5 habitat is a “net benefit in habitat quantity or quality.” IPC assumes that reclamation activities will result in a higher functioning habitat and therefore be a “net benefit” in habitat quality for all temporary impacts on Category 5 habitat; therefore, no mitigation debits are accrued.
Category 6	1	0	The mitigation goal for Category 6 habitat is minimization; no mitigation debits are accrued. A majority of impacts on Category 6 habitat occurs within agricultural areas. IPC has prepared an Agricultural Impacts Mitigation Plan (Exhibit K, Attachment K-1) to address these impacts.

Indirect impacts on elk winter range, a Category 2 habitat, and elk summer range, a Category 3 habitat, will be mitigated similar to permanent impacts. Table 11 outlines the approach to calculating the mitigation debit accrued from indirect impacts. The elk and deer habitat layers contain significant overlap, so the mitigation debits accrued for each should not be considered additive. Section 3.3.4.3 includes a discussion on how the wildlife habitat layer overlap may be addressed in the accounting process.

Table 11. Accounting for Mitigation Debit for Indirect Impacts

Habitat	Impact Acres	Mitigation Debit	Mitigation Explanation
Elk winter range Category 2	1	>1	The mitigation goal for Category 2 habitat is “no net loss” and “net benefit.” Accordingly, mitigation for impacts on Category 2 habitat needs to demonstrate a net benefit in quality or quantity. Mitigation debits are accrued at a greater amount of acreage than what is impacted by the Project.
Elk summer range Category 3	1	1	The mitigation goal for Category 3 habitat is “no net loss” in quantity or quality. Mitigation debits are accrued at an equal amount of acreage to that impacted by the Project.

3.3.3 Purchasing Credits

IPC proposes offsetting fish and wildlife habitat impacts by either purchasing credits or conducting its own compensatory mitigation projects. With respect to purchasing credits, IPC proposes that it may do so through one or both of the following mechanisms:

- **Mitigation Banking.** Purchasing mitigation credits from mitigation banks to address Project impacts where available; no mitigation banks are currently available within the mitigation service area. In the event that a habitat mitigation bank becomes available within the mitigation service area, IPC would seek to accomplish all or part of its mitigation for the Project by participation in the bank.
- **In-Lieu Fee (ILF).** Fees paid to an approved ILF sponsor which are then used to develop an on the ground mitigation project within a certain time period. IPC is not aware of any ILF sponsors within the Project's mitigation service area. In the event that an ILF sponsor becomes available within the mitigation service area, IPC would seek to accomplish all or part of its mitigation for the Project by participation through an ILF sponsor.

3.3.4 Creating Credits through Mitigation Projects

If IPC creates credits through a mitigation project or projects rather than purchase all of the required credits, IPC will secure the necessary mitigation sites prior to commencing construction on the Project. In this section, IPC describes the mitigation site selection process, the mitigation credit score assessment approach, the standards for each mitigation project, and the documentation and verification processes for the mitigation projects. In Appendix A, IPC provides a desktop analysis of certain potential mitigation sites that currently are on the market, demonstrating there are mitigation site opportunities sufficient to meet the needs of the Project.

3.3.4.1 Mitigation Project Standards

Mitigation Zones and Service Area

Because the Project crosses multiple habitat types and habitat categories, mitigation will need to occur at multiple locations. The mitigation zones and the mitigation service area¹ were developed to support mitigation planning. As an example, for impacts to the shrub/grasslands general vegetation type within MZ3, IPC will make every effort to identify mitigation within the portion of the service area that is within MZ3 that provides uplift to the shrub/grasslands general vegetation type. Following this approach will simplify the presentation of and accounting for potential mitigation. It may not be possible or necessary to mitigate for all impacts within a MZ with mitigation actions within that same MZ and it may not be possible or necessary to locate all mitigation actions within the mitigation service area (for instance, mitigation for impacts to Category 4 and Category 5 habitat can be located off-proximity).

Bare Ground General Vegetation Habitat

IPC will not seek out specific mitigation opportunities for the bare ground general vegetation type. The bare ground general vegetation type is made up of features that are typically found within the shrub/grassland and forest/woodland general vegetation types; such as rock outcrops, scree slopes, cliffs or canyons, and bare soil. Proposed mitigation of shrub/grassland

¹ The mitigation service area consists of the subbasins (i.e., hydrologic unit boundary 8) in Oregon that are crossed by the Project. See discussion in Section 4.1.1 for a list of subbasins crossed.

and forest/woodland general vegetation types will contain features that are part of the bare ground general vegetation type. Mitigation actions that provide ecological uplift to shrub/grassland and forest/woodland general vegetation types will provide a benefit to those species that utilize bare ground. Bare ground is found within most of the potential mitigation that IPC has identified to date (Appendix A).

Agriculture/Developed Habitat

To address mitigation for areas identified as agriculture/developed, IPC has prepared an Agricultural Impacts Mitigation Plan (Exhibit K, Attachment K-1). Impacts on agricultural habitats presented in this Fish and Wildlife HMP did not consider the methods used to assess impacts on agricultural land in Exhibit K.

Agency Input

IPC has requested input from the following federal, state, and local agencies regarding potential mitigation actions and areas within the mitigation service area. The agencies and organizations that have been or will be contacted include:

- BLM Vale, Oregon Field Office
- BLM Idaho State Office
- Wallowa-Whitman National Forest
- ODFW, La Grande Field Office,
- Idaho Department of Fish and Game
- Natural Resources Conservation Service
- Grande Ronde Model Watershed
- Various Rural Fire Protection Districts that occur along the Project
- Various land trusts
- Private individuals

IPC has worked closely with ODFW to identify potential mitigation for consideration in this Plan. IPC will continue to work with all the listed agencies and organizations as mitigation continues to be developed.

Conservation Actions

Credits may be generated by a combination of the following types of conservation actions:

- **Enhancement:** Measures that increase the quantity and/or quality of fish and wildlife habitat and are aimed at transitioning an area of habitat from a less than desirable state to something more desirable. Appropriate enhancement measures may vary among sites, depending on the initial and desired states of a site.
- **Avoided loss:** Measures that prevent undesirable state changes in areas that are at a demonstrated risk of degradation from threats such as development, wildfire, and invasive species. Depending on the current and anticipated future threats at a given site, appropriate avoided loss activities may include legal protection, fire prevention, and management of invasive species. Avoided loss is not being proposed as a stand-alone mitigation action; it will be considered alongside enhancement actions.

Specific conservation actions will be developed upon identification of a mitigation site and formal valuation of site conditions and possible habitat improvement measures. Table 12 below includes a preliminary list of potential conservation actions that IPC might apply to its mitigation projects.

Further, IPC will continue to seek out mitigation opportunities that would fund private, state, or federal programs and/or projects that would not necessarily involve a land acquisition component. IPC will work with the stakeholders to identify any unfunded or underfunded projects that could benefit from additional funding sources, as well as determining how much mitigation credit each of these projects will represent to the Project. These types of mitigation must remain functional and legally protected through the duration of impacts being mitigated and cannot include programs that have sufficient funding now or are likely to have sufficient funding in the future.

Table 12. Other Potential Mitigation Actions

Mitigation Action	Habitat Benefit	General Vegetation Type ¹	MZ	Size (acres)
Road Closure or Decommissioning	Reduces chronic sediment delivery to riparian areas, reduces potential of human caused fire and invasive species introduction	All	Unknown	Unknown
Stream Habitat Enhancement	Improve water quality, and fish and riparian wildlife habitat	Open Water/Wetlands	Unknown	Unknown
Culvert Removal / Replacement	Improve water quality and aquatic species passage	Open Water/Wetlands	Unknown	Unknown
Upland Habitat Enhancement	Multiple benefits	Shrub/Grassland Forest/Woodland	Unknown	Unknown
Juniper Removal	Improve/restore native grassland and shrub-steppe habitats, improve sage-grouse habitat	Shrub/Grassland	Unknown	Unknown
Fence Removal / Marking	Reduce wildlife collisions	Shrub/Grassland	Unknown	Unknown
Boardman Conservation Area	Preservation and enhancement of native grasslands, WAGS habitat	Shrub/Grassland	MZ1	22,642

3.3.4.2 Mitigation Project Documentation

Mitigation Management Plan

For each habitat mitigation site (mitigation site), IPC will produce a site-specific Mitigation Management Plan that identifies the extent, type, and description of all proposed conservation actions, including the following:

- **Introduction and background** – mitigation site name, date acquired, time period covered by the management plan, plan preparer, mitigation site manager and technical staff, mitigation site size, location, access, and adjacent land use. Also describe the purpose of the mitigation site and how it relates, if at all, with other mitigation properties or existing agency management areas.

- **Mitigation Durability** – description of the management, legal protection, and financial assurances that ensure the mitigation will be in place and effective for the intended duration. The mitigation duration should be commensurate with the duration of the impact, which can range from 3 to 5 years through the Project life.²
- **Baseline Ecological Setting** – vegetation mapping via field visit or some combination of remote classification and field verification, wildlife species that are likely to be present, mapped soil types, and a description of hydrologic features and current water rights and usage. Invasive species and noxious weed locations should also be identified and discussed.
- **Proposed Mitigation Goals and Actions** – description of the desired future condition for each habitat type. Describe the mitigation actions and operation and maintenance activities being proposed to achieve the desired future condition (juniper removal, seeding, noxious weed treatment, land management change).
- **Effectiveness** - proposed mitigation actions should be effective or reasonably likely to deliver expected conservation benefits. Mitigation actions should follow reliable methods. Reliable mitigation methods, meaning “a mitigation method that has been tested in areas with site factors similar to the area proposed for mitigation and that has been found (e.g., through field trials, demonstration projects or scientific studies) to produce the habitat effects required to meet the mitigation goal for that action.” OAR 635-415-0005(29). The mitigation methods should be clearly stated or included by reference.
- **Monitoring and Performance Measures** – description of monitoring procedures (including baseline data collection), timeframes, and success criteria. Monitoring plans will incorporate standard monitoring procedures, timeframes, and success criteria. The purpose of the monitoring plans will depend on the mitigation action, but in general they will address long-term project monitoring, corrective actions, and maintenance responsibilities, if applicable, including performance objectives, methods for measuring effectiveness/success, reporting requirements, funding source, and responsible parties. IPC will implement monitoring efforts as soon as is reasonable depending on the mitigation action being implemented. Monitoring efforts will occur at appropriate intervals for each individual mitigation action for the life of the Project. Below are some examples of generalized monitoring schedules and success criteria. Inclusion of these examples does not commit IPC to following them during implementation of mitigation.
 - **Monitoring:** Monitoring will occur annually until success criteria are met. Annual reports will be supplied to agencies for review. If the mitigation is not trending towards the defined success criteria within the first 3-5 years, adaptive management strategies will be implemented. Long-term monitoring and reporting will occur at 5 to 10 year intervals after success criteria are met.
 - **Performance Measures:** performance measures are typically very specific to the mitigation site where actions are being applied and the desired outcomes determined in consultation with a permitting agency. However, the following is a non-specific list of examples.
 - Native grass establishment with greater than 25 percent total canopy cover with 60 percent of the plant cover from planted species within 4 years.

² Under OAR 635-415-0005(27), “Project life” means “the period of time during which a development action is subject to regulation by local, state or federal agencies.” For the B2H Project, that period will be continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

- Increase in density or cover of desirable native species.
 - Increase in desirable perennial plants over five years.
 - Elimination of noxious weeds or other undesirable plant species or reduced to a level that does not interfere with mitigation goals.
 - 20 to 40 percent of planted sagebrush seedlings survey after the third growing season following planting.
 - Site is trending toward its ecological site description over five years.
 - Juniper is removed from a site and long-term treatment maintains the absence of juniper trees.
 - Natural recruitment of sagebrush is occurring.
 - Successful establishment of important shrub species for big game winter range.
 - Demonstrate effectiveness in excluding livestock from and allowing big game access to the mitigation site.
 - Demonstrate effectiveness of new water source in providing water.
 - Demonstrate effectiveness in reducing erosion.
 - The conditions on the rest of the mitigation site do not pose a threat to maintaining the habitat quality where mitigation actions have improved habitat.
 - Fencing has been properly constructed and continues to be effective.
 - Traffic volume is reduced through access control device or road decommissioning.
- **Management Restriction and Prohibitions** – if the mitigation site is a conservation easement, describe landowner reserved rights and when, where, how much, and how those rights are managed. Define each prohibited use and explain any exceptions. Describe any findings from the Phase I environmental site assessment that may affect management.
 - **Other Management Actions** – water usage and water rights management, infrastructure management, proposed access control, describe existing access rights or easements, and protection of historical resources.
 - **Adaptive Management** – describe potential issues that could delay or eliminate the mitigation site from achieving mitigation goals and provide a framework process to address the issues.
 - **Reporting** – list all reporting requirements for baseline, mitigation monitoring, and general management reports.
 - **Appendices** – include all pertinent supporting information (mining permits, water rights certificates, access easements, previous baseline studies, etc.)

Legal Protections and Financial Assurances

Mitigation projects must be durable—that is, the period of time that mitigation is effective must be commensurate with the duration of the impacts being offset. Demonstrating project durability requires that legal protections be put in place to ensure the mitigation project benefits are not disturbed for the life of the credits. Legal protection may be demonstrated through term or permanent conservation easements or through other tools ensuring the protections will last for the duration of the impacts.

Financial assurances must be in place to ensure appropriate management will occur throughout the life of the credits. Funding for site management may occur through various mechanisms, provided they ensure management will persist throughout the life of the mitigation project.

Each Mitigation Management Plan will either include or reference all of the documentation of legal protections and financial assurances.

3.3.4.3 *Calculating Credits*

IPC will accrue one credit for one acre of habitat acquired or put into easement. For instance, if a 100-acre mitigation site is acquired, IPC would receive 100 credits once certain success criteria are met for the mitigation site. The type and area of ecological uplift actions necessary to meet success criteria and secure mitigation credits will be determined on a site-specific basis. However, IPC assumes that mitigation actions may occur on a portion, but not the entirety, of the mitigation site. That is, IPC does not need to conduct mitigation actions on all 100 acres of the mitigation site to receive 100 credits.

IPC will account for the location (MZ), general vegetation type, wildlife habitat layer, and habitat category when evaluating mitigation sites against the mitigation debit balance. IPC may need to account at the habitat type level instead of the general vegetation type level, such as to ensure adequate credits are developed in habitat types with a big sagebrush component to account for mitigation debits accrued within big sagebrush habitat types. The habitat type and category attributed to acres within each mitigation site will follow the same methodology performed to attribute Project impacts (Exhibit P1, Attachment P1-1).

The mitigation sites included in Appendix A have had a desktop assessment performed that identified habitat types and habitat categories within the mitigation site. Most of the mitigation sites in Appendix A were selected by IPC with input from ODFW because of their overlap with the wildlife habitat layers used to attribute habitat categories to Project impacts. Therefore, a vast majority of the available mitigation credits within the mitigation sites occurs within Category 2 and Category 3 habitats.

Stacking

In calculating credits accrued by a mitigation site, IPC will provide for “stacking” of habitat credit requirements (FWS 2014). Credit stacking occurs where more than one resource or credit type occurs on spatially overlapping areas. Here, IPC must offset Project impacts to habitat types (Table 1), WAGS habitat, elk winter and summer range, mule deer winter and summer range, California bighorn sheep herd range (Table 2), and sage-grouse (Exhibit P2 and Attachment P2-3). To the extent a mitigation site includes an area comprising more than one of those habitats, IPC will receive credit towards each of the habitats. For example, a single credit may satisfy compensatory mitigation needs on an impact site where elk winter range and mule deer winter range overlap. IPC may propose mitigation that enhances one acre of habitat that is within elk winter range and mule deer winter range that would count as 1 credit against the total debits for both elk winter range and mule deer winter range as well as the total debits for Category 2 habitat. Within the geographical information system used to maintain the project impacts and resulting habitat categorization of those impacts, IPC is able to identify how much wildlife habitat overlap occurs on each acre impacted and the types of habitat overlapping.

3.3.4.4 *Verification*

Monitoring conducted at reclamation sites related to temporarily disturbed areas, and the associated annual reports to the applicable agencies, are discussed in IPC’s Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3). The following discussion addresses monitoring related to mitigation sites. Mitigation site monitoring is also part of the Mitigation Management Plan discussed in Section 3.3.4.2.

Performance Measures

The criteria used to measure success will depend on the extent of impacts and the final mitigation strategy (e.g., success criteria could be different if mitigation is conducted through payments to a conservation bank as opposed to permittee-responsible mitigation sites). The criteria used to measure mitigation success will be site-specific, will depend on the goals and objectives of the mitigation site, and will need to be developed for each individual mitigation site prior to the onset of mitigation efforts.

Reporting

IPC will document the progress of mitigation efforts to applicable federal and state-management agencies in a progress report that will be provided following the periodic monitoring surveys. These reports will also contain recommendations from IPC regarding any additional remedial actions that may be necessary. It is expected that the applicable federal and state management agencies will provide comments and counter suggestions, or approval of IPC's suggestions if remedial efforts are required (i.e., corrective measures if revegetation or mitigation efforts were not successful). Separate monitoring reports may be prepared for each individual mitigation site. Reports will contain information regarding the mitigation actions taken during the reporting period, the success of these actions (based on predefined success criteria established for that mitigation site), and a description of the methods used to monitor the mitigation site.

4.0 DRAFT MITIGATION SITE ASSESSMENTS

Prior to commencement of construction, IPC will secure mitigation sites with sufficient credits to offset the impacts of the Project. In order to show there are mitigation site opportunities sufficient to meet the needs of the Project and to demonstrate how IPC's debiting and crediting approach will be implemented, in the following discussion and in the HMP appendices, IPC discusses potential mitigation sites and provides a desktop-level assessment of the credits available at each site.

4.1 Desktop Habitat Mitigation Site Assessment

There are a number of factors that influence the suitability of potential mitigation. In order to assess the potential mitigation opportunities consistently, IPC (in cooperation with ODOE) developed a desktop habitat mitigation site assessment (desktop assessment) form that was used to assess more than 40 potential mitigation properties. Properties that passed the desktop assessment were then reviewed by IPC and ODOE to determine which properties provided the greatest opportunity for IPC to meet its mitigation needs for the Project. IPC has included in this HMP the properties that provide the greatest opportunity, with their respective desktop assessment forms in Appendix A.

The desktop assessment has two parts, as described below.

4.1.1 Desktop Assessment – Part 1

The first part of the desktop assessment is to complete the desktop assessment worksheet that describes the location and ecological setting of the property. During this step, a determination is made as to whether a property passes or fails the desktop assessment. If the property passes, because it is located in an appropriate ecological setting, the second part of the desktop assessment is completed.

Location – When reviewing the location of a property, preference is given to a location that:

- Is within the mitigation service area (Figure 2). The mitigation service area consists of the subbasins (i.e., hydrologic unit boundary 8) in Oregon that are crossed by the Project. Implementing mitigation projects within this area will ensure that ecological uplift will result in a beneficial effect to species and habitat impacted by the Project. The mitigation service area includes the following subbasins: Umatilla; Middle Columbia-Lake Wallula Subbasin (restricted to Oregon); Upper Grande Ronde; Burnt; Powder; Bully; Willow; Lower Malheur; Lower Owyhee; and Brownlee Reservoir (the area south of where the Burnt River enters the reservoir). Mitigation actions and areas outside of the mitigation service area will still be considered if agreement is reached with permitting agencies that the mitigation would benefit species/habitats affected by the Project.
- Involves large parcels of land, or parcels whose size corresponds to specific mitigation needs.
- Is adjacent to existing wildlife management areas or parcels sought after by a state or federal land management agency to achieve wildlife habitat goals.
- Is not located close to land uses that will obviate long-term success of the mitigation. A qualitative discussion is presented regarding adjacent land use and infrastructure occurrence.

Ecological Setting – When reviewing the ecological setting of a property, preference is given to settings where:

- Baseline habitat quality and conditions are similar in kind to habitat structures and functions that will be displaced by the Project.³
- Regional Gap Analysis Project (USGS 2011) data were used to identify the habitat types that occur within the mitigation site and correspond to habitat disturbed by the Project.
- Potential mitigation sites within designated wildlife habitat ranges disturbed by the Project were prioritized. These included those for WAGS, sage-grouse, elk, and deer.
- Implementation of mitigation on the property is likely to create a “net benefit” as defined in OAR 635-415-0005(21).
- Soil types – The Soil Survey Geographic database (NRCS 2011) contains soil maps that provide insight into the potential vegetation that may be considered during restoration efforts.
- Hydrologic features – The National Hydrography Dataset (USGS 2010) and the Oregon Wetlands Cover (Oregon Natural Heritage Information Center & The Wetlands Conservancy 2009) data were reviewed to identify potential wetland and water resources within each potential mitigation site.

³ "In-kind Habitat Mitigation" means habitat mitigation measures that recreate similar habitat structure and function to that existing prior to the development action (OAR 635-415-0005(12)).



Figure 2. Mitigation Service Area and Mitigation Zones

Pass/Fail – Parameters associated with a property's failure to pass the desktop assessment include:

- 40 percent or more of the property is within the agriculture/developed general vegetation type.
- Infrastructure on the property significantly increased the market value of the property above other properties with similar habitat and similar potential mitigation credit value.
- Property contains a high-voltage transmission line(s).
- Property is too far removed from the mitigation service area.
- Property is made up of disjunct parcels that could not be effectively managed.

4.1.2 Desktop Assessment – Part 2

The second part of the desktop assessment discusses how the property would function as a mitigation site, lists the mitigation actions that may be implemented on the mitigation site, and provides a financial outline.

Mitigation Function – A general description of the Project impacts that the mitigation site would mitigate for:

- Identifies the general vegetation type or specific habitat types the site would offer mitigation for;
- Identifies the wildlife habitat layers that overlay with the mitigation site (e.g., elk winter range); and
- Identifies the ODFW habitat categories that the mitigation site contains.

Mitigation Actions – Lists potential mitigation actions that may be performed within the mitigation site to provide an ecological uplift to the habitat. These potential mitigation actions were often discussed during field visits to the mitigation site. If no field visits occurred, applicable mitigation actions were listed based on known land use and land cover. In general, IPC considered mitigation actions that would improve habitat quality, such as:

- Preserve essential habitats through acquisition and easements;
- Provide general improvement of habitat condition through revegetation efforts;
- Perform treatments to prevent, reduce, or eradicate invasive plants and noxious weeds;
- Implement access control to the mitigation area;
- Implement grazing management techniques that could improve habitat;
- Conduct Phase 1 and Phase 2 juniper removal;
- Remove or mark (e.g., fence marking to avoid collision) anthropogenic structures;
- Conduct fire rehabilitation with native vegetation; and
- Reduce risk of catastrophic fire with creation of a fire readiness plan and use of fire breaks.

Financial Outline – The cost of acquisition of the property and yearly operation and maintenance costs were estimated for each mitigation site. In some instances, the cost of acquisition is unavailable.

4.1.3 Further Development of Desktop Assessments

One desktop assessment has been further developed as an example of how mitigation sites will be brought forward for consideration and ultimately inclusion in a final Fish and Wildlife HMP. IPC sees this format as the next step in the mitigation process from identifying opportunities to proposing mitigation sites that account for the balance of mitigation debits accrued per Section 4.3. The Wolf Creek mitigation site expanded assessment (Appendix B) has been further developed to include mitigation actions that IPC is proposing to gain full mitigation credit for the site (one credit for each acre within the property's boundary). Ongoing coordination with ODOE will identify other mitigation sites, either from those currently included in Appendix A or new opportunities brought to IPC's attention, to move forward in a similar fashion as part of a formal mitigation proposal to be included in the final Fish and Wildlife HMP.

4.2 Habitat Mitigation Sites

Through the desktop assessment and field reviews, IPC has brought forward 14 mitigation sites, which demonstrate that adequate mitigation opportunities exist to address all of the Project's impacts on wildlife habitat. The 14 mitigation sites included in this Fish and Wildlife HMP collectively exceed the quantity of mitigation that will ultimately be needed for the Project by approximately ten- to twenty-fold. IPC will continue to coordinate with ODOE in preparation of a final Fish and Wildlife HMP that will be sufficient to compensate for the Project's impacts on wildlife habitats and achieve the mitigation goals set forth in ODFW's Habitat Mitigation Policy. IPC will begin funding mitigation once a site certificate is issued by EFSC and prior to construction of the Project.⁴

Mitigation sites are presented by their location relevant to the MZs described under Section 3.3.1.3. Presentation of mitigation sites by the MZ will show which Project impacts are being mitigated for at each mitigation site.

4.2.1 MZ1 Mitigation Sites

Within MZ1, IPC has identified four mitigation sites. These include Government Mountain, Olex, Lone, and Eightmile (Appendix A). The Olex and Lone mitigation sites are both potential conservation easements while the Government Mountain and Eightmile mitigation sites are currently for sale and would be fee simple title acquisitions. Government Mountain is also partially within MZ2. For purposes of this HMP, the mitigation site will be considered under MZ1.

All four mitigation sites within MZ1 are outside of the mitigation service area (Figure 3). The focus of mitigation efforts within MZ1 have been to address Project impacts on WAGS habitat. The availability of mitigation sites that contain WAGS habitat is lacking within the mitigation service area in MZ1; therefore, IPC went outside of the mitigation service area to identify mitigation sites. Both the Olex mitigation site and Lone mitigation site were recommended to IPC by ODFW as potential WAGS mitigation.

⁴ For all mitigation, IPC will provide ODOE with proof of funding prior to construction. For actions involving land acquisition, IPC will acquire the legal right to create, maintain, and protect habitat mitigation areas for the life of the facility by means of an outright purchase, conservation easement, or similar conveyance or contract.

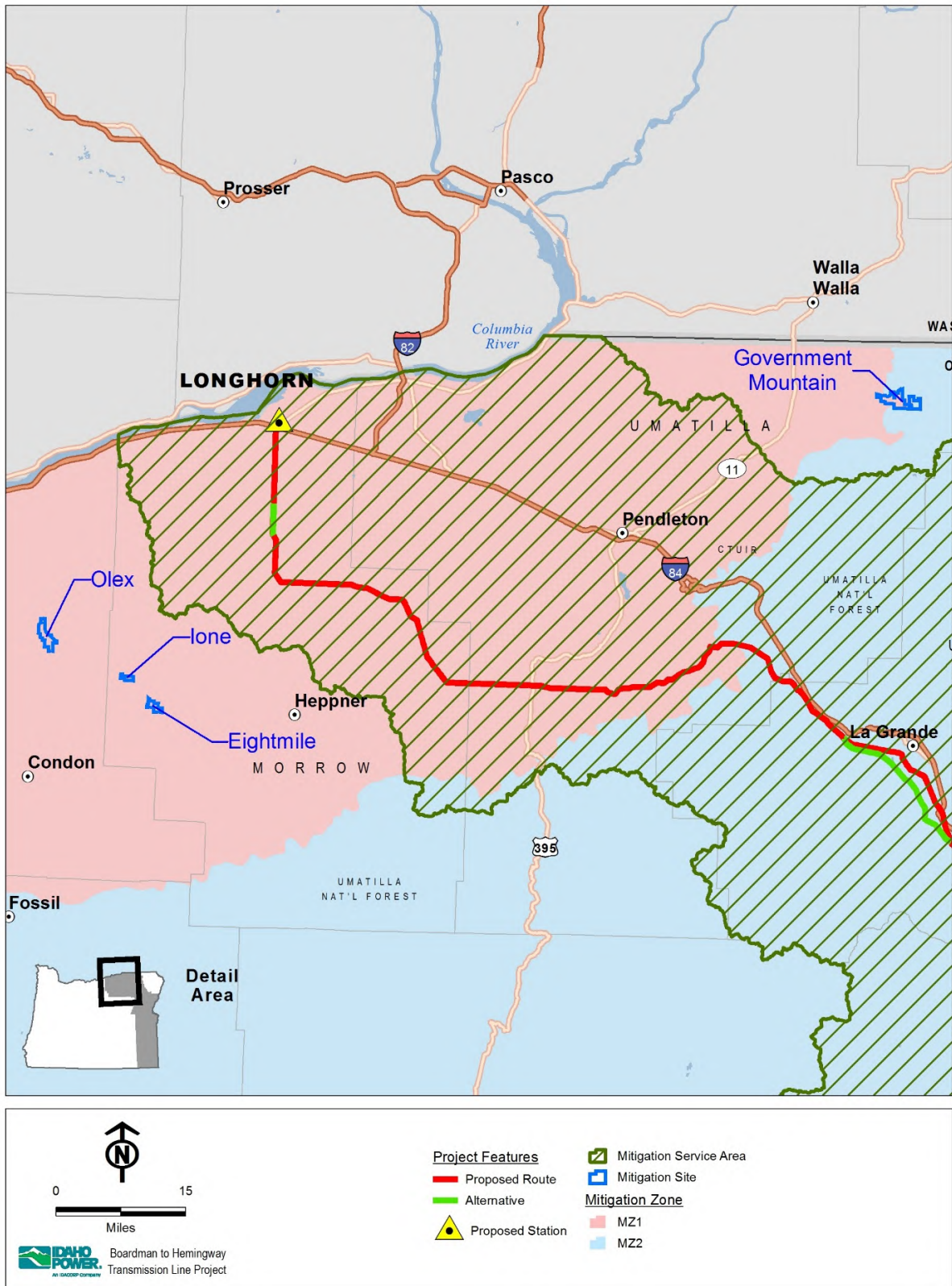


Figure 3. Mitigation Sites within MZ1

Table 13 shows that the mitigation sites identified by IPC within MZ1 provide abundant opportunity to mitigate for Project impacts based on general vegetation types and habitat categories. When considering wildlife habitat layers, the mitigation sites identified within MZ1 provide abundant opportunity to mitigate for Project impacts on WAGS habitat, mule deer winter range, elk winter range, mule deer summer range, and elk summer range (Table 14).

Table 13. Acres of General Vegetation Types by Habitat Category for Mitigation Sites in MZ1

Mitigation Site	General Vegetation Type	ODFW Habitat Categories (acres)						Total
		1	2	3	4	5	6	
Government Mountain	Forest/Woodland	–	1,243.0	399.7	–	–	–	1,642.7
	Shrub/Grassland	–	1,572.0	13.8	–	–	–	1,585.8
	Agriculture/Developed	–	–	–	–	–	82.7	82.7
	Open Water/Wetlands	–	141.2	–	–	–	–	141.2
Olex ¹	Agriculture/Developed	–	–	–	–	–	68.2	68.2
	Shrub/Grassland	418.6	1,583.2	–	–	–	–	2,001.8
Ione	Agriculture/Developed	–	–	–	–	–	–	–
	Shrub/Grassland	–	108.0	–	–	–	–	108.0
Eightmile	Agriculture/Developed	–	429.9	–	–	–	36.7	466.6
	Shrub/Grassland	–	369.5	–	–	–	–	369.5
MZ1 Mitigation Site Total		418.6	5,446.8	413.5	–	–	187.6	6,466.5

¹ IPC is aware that significant portions of the Olex site are not available for mitigation but the exact amount is not currently known.

Note: – = 0

Table 14. Acres of Wildlife Habitat within Mitigation Sites of MZ1

Wildlife Habitat Layer ¹	Mitigation Site				
	Gov. Mtn.	Olex ²	Ione	Eightmile	MZ1 Mitigation Site Total
WAGS	–	1,406.4 ³	–	–	1,406.4³
Elk winter range	3,038.3	–	–	–	3,038.3
Elk summer range	2,774.3	–	–	–	2,774.3
Mule deer winter range	1,626.4	2,070.0	–	836.1	2,906.1
Mule deer summer range	1,822.2	–	–	–	1,822.2

¹ WAGS = Category 1 and Category 2; elk winter range = Category 2; elk summer range = Category 3; mule deer winter range = Category 2; mule deer summer range = Category 3.

² IPC is aware that significant portions of the Olex site are not available for mitigation but the exact amount is not known at this time.

³ This includes 418.6 acres of Category 1 habitat and 987.8 acres of Category 2 habitat for WAGS. However, not all this habitat is available for mitigation; the exact amount is not currently known.

Note: – = 0

4.2.2 MZ2 Mitigation Sites

Within MZ2, IPC has identified five mitigation sites (Figure 4). These include High Valley, Glass Hill, County Line, Wolf Creek, and Antelope Mountain (Appendix A). All of these mitigation sites would be fee simple title acquisitions. Only the Antelope Mountain mitigation site is currently for sale, the remaining properties' owners have been contacted and have shown some interest in selling all or a portion of their property. In addition to the five mitigation sites, IPC is developing the wetland mitigation property within MZ2. The Government Mountain mitigation site is partially within MZ2, but a majority is within MZ1 and therefore addressed above.

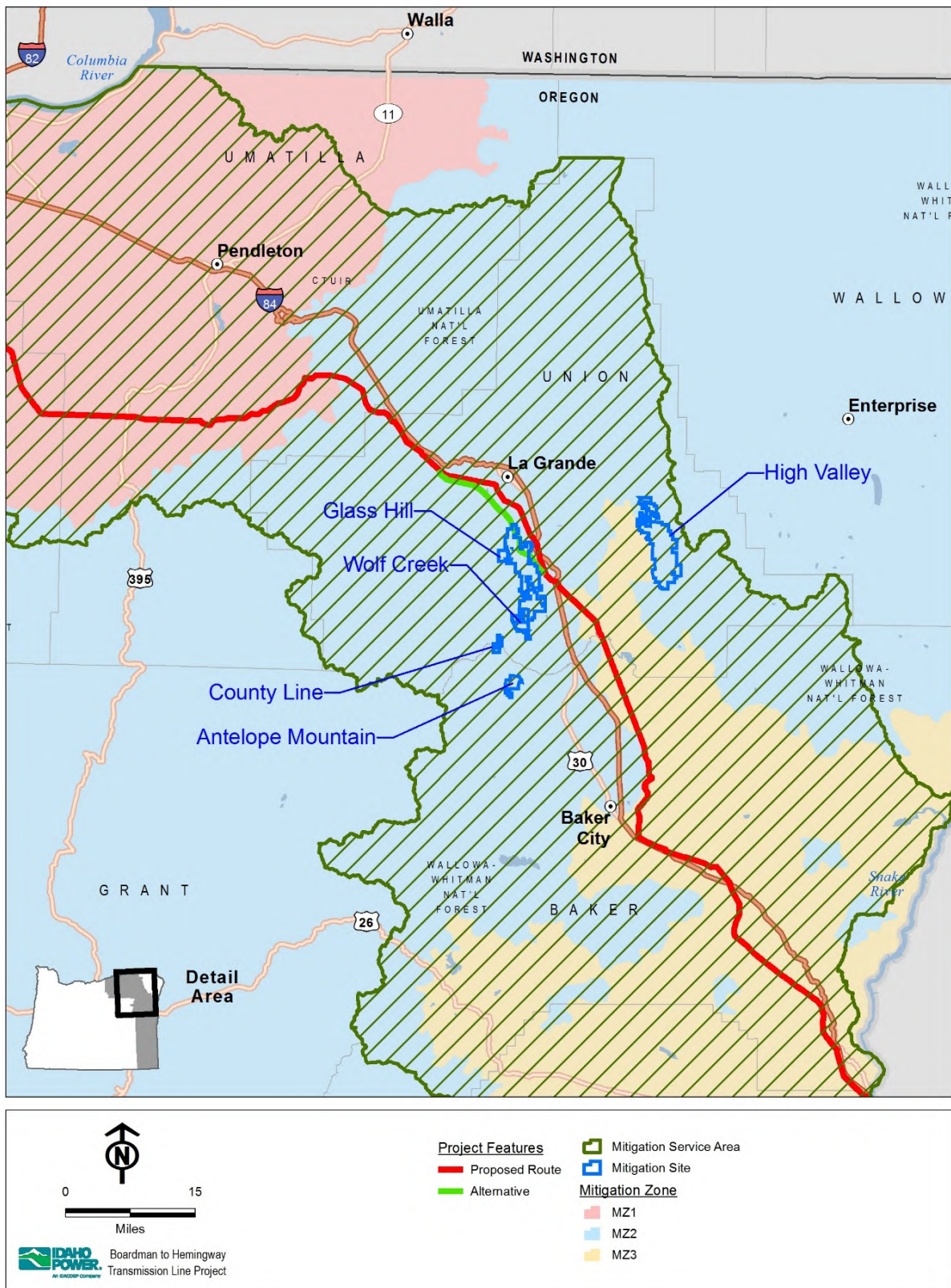


Figure 4. Mitigation Sites within MZ2

The focus of mitigation efforts within MZ2 have been to address Project impacts on the forest/woodland general vegetation type and impacts on elk and mule deer winter and summer range.

Table 15 shows that the mitigation sites identified by IPC within MZ2 provide abundant opportunity to mitigate for Project impacts based on general vegetation types and habitat categories. When considering wildlife habitat layers, the mitigation sites identified within MZ2 provide abundant opportunity to mitigate for impacts on mule deer winter range, elk winter range, mule deer summer range, and elk summer range (Table 16).

Table 15. Acres of General Vegetation Types by Habitat Category for Mitigation Sites in MZ2

Mitigation Site	General Vegetation Type	ODFW Habitat Categories (acres)						Total
		1	2	3	4	5	6	
Antelope Mountain	Forest/Woodland	–	1,239.8	–	–	–	–	1,239.8
	Shrub/Grassland	–	325.4	–	–	–	–	325.4
	Open Water/Wetlands	–	37.3	–	–	–	–	37.3
Wolf Creek	Forest/Woodland	–	1,361.4	–	–	–	–	1,361.4
	Shrub/Grassland	–	344.2	–	–	–	–	344.2
	Open Water/Wetlands	–	66.9	–	–	–	–	66.9
County Line	Forest/Woodland	–	707	–	–	–	–	707
	Shrub/Grassland	–	40	–	–	–	–	40
	Open Water/Wetlands	–	24.9	–	–	–	–	24.9
Glass Hill	Forest/Woodland	–	8,458	3,734	–	–	–	4,002
	Shrub/Grassland	–	1,306	96	–	–	–	1,402
	Open Water/Wetlands	–	211	80	–	–	–	291
High Valley	Forest/Woodland	–	6,934	7,083	–	–	–	14,017
	Shrub/Grassland	–	212	126	–	–	–	338
	Open Water/Wetlands	–	268	196	–	–	–	464
	Agriculture/Developed	–	–	–	–	–	12	12
MZ2 Mitigation Site Total		–	21,536	11,315	–	–	12	32,863

Note: – = 0

Table 16. Acres of Wildlife Habitat within Mitigation Sites of MZ2

Wildlife Habitat Layer ¹	Mitigation Site					
	Antelope Mtn.	Wolf Creek	County Line	Glass Hill	High Valley	MZ2 Mitigation Site Total
Elk winter range	1,602.5	1,772.5	771.9	9,975.0	7,426.0	21,547.9
Elk summer range	1,079.5	1,263.4	771.9	13,215.0	11,850.0	28,179.8
Mule deer winter range	1,602.5	2,070.0	771.9	5,498.0	745.0	10,687.4
Mule deer summer range	–	1,772.5	771.9	13,823.0	14,516.0	30,883.4

¹ Elk Winter Range = Category 2; Elk Summer Range = Category 3; Mule Deer Winter Range = Category 2; Mule Deer Summer Range = Category 3.

Note: – = 0

4.2.3 MZ3 Mitigation Sites

Within MZ3, IPC has identified five mitigation sites (Figure 5). These include Trail Creek, Glasgow, Upper Timber, Pole Creek, and Alder Creek (Appendix A). The mitigation sites within MZ3 would all be fee simple title acquisitions.

The focus of mitigation efforts within MZ3 have been to address Project impacts on the shrub/grassland general vegetation type and specifically the shrub-steppe with big sagebrush habitat type and impacts on sagebrush obligate species and big game species.

Table 17 shows that the mitigation sites identified by IPC within MZ3 provide abundant opportunity to mitigate for Project impacts based on general vegetation types and habitat categories. When considering wildlife habitat layers, the mitigation sites identified within MZ3 provide abundant opportunity to mitigate for impacts on mule deer winter range, elk winter range, mule deer summer range, and elk summer range (Table 18).

Table 17. Acres of General Vegetation Types by Habitat Category for Mitigation Sites in MZ3

Mitigation Site	General Vegetation Type	ODFW Habitat Categories (acres)						Total
		1	2	3	4	5	6	
Pole Creek	Forest/Woodland	–	1,527.9	–	–	–	–	9,605.3
	Shrub/Grassland	–	1,652.1	–	–	–	–	
	Open Water/Wetlands	–	47.4	–	–	–	–	
Alder Creek	Forest/Woodland	–	18.6	–	–	–	–	
	Shrub/Grassland	–	2,704.3	–	–	–	–	
	Open Water/Wetlands	–	18.9	–	–	–	–	
Glasgow	Forest/Woodland	–	30.7	–	–	–	–	
	Shrub/Grassland	–	1,404.2	–	–	–	–	
	Open Water/Wetlands	–	1.8	–	–	–	–	
Trail Creek	Forest/Woodland	–	20.9	–	–	–	–	
	Shrub/Grassland	–	600.9	–	–	–	–	
	Open Water/Wetlands	–	0.7	–	–	–	–	
Upper Timber	Forest/Woodland	–	4.5	–	–	–	–	
	Shrub/Grassland	–	1,556.4	–	–	–	–	
	Open Water/Wetlands	–	8.9	–	–	–	–	
	Agriculture/Developed	–	7.1	–	–	–	–	
MZ3 Mitigation Site Total		–	9,605.3	–	–	–	–	9,605.3

Note: – = 0

Table 18. Acres of Wildlife Habitat within Mitigation Sites of MZ3

Wildlife Habitat Layer ¹	Mitigation Site					
	Pole Creek	Alder Creek	Glasgow	Trail Creek	Upper Timber	MZ3 Mitigation Site Total
Elk winter range	–	2,947.0	611.8	624.5	153.8	4,337.1
Elk summer range	2,287.7	–	622.7	624.5	888.6	4,423.5
Mule deer winter range	3,227.4	773.8	1,436.7	–	1,576.9	7,014.8
Mule deer summer range	3,178.5	–	–	624.5	–	3,803.0

¹ Elk winter range = Category 2; Elk summer range = Category 3; Mule deer winter range = Category 2; Mule deer summer range = Category 3.

Note: – = 0

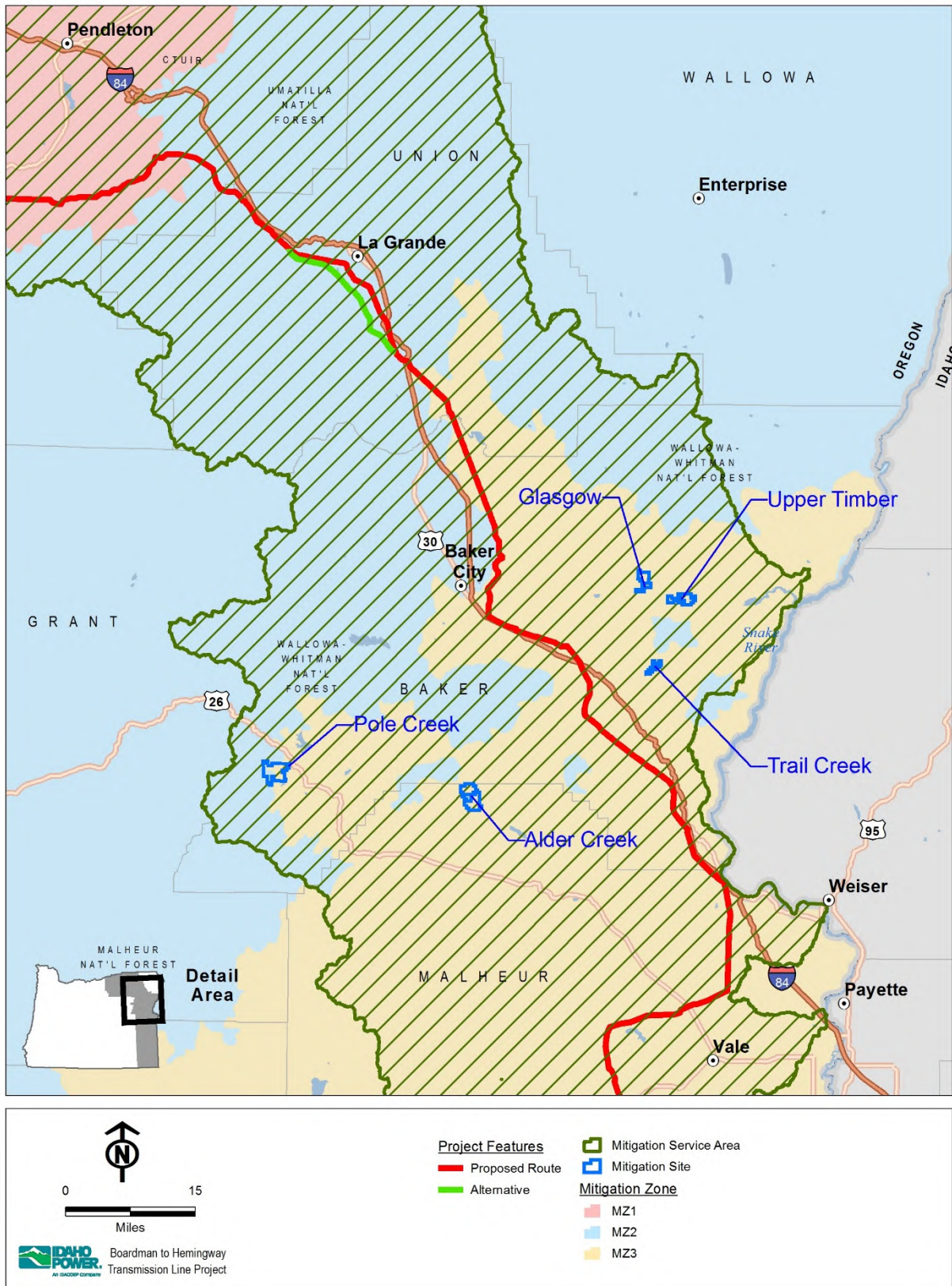


Figure 5. Mitigation Sites within MZ3

4.3 Debit and Credit Accounting for Draft Assessment

4.3.1 MZ1 Accounting

IPC has identified a mitigation debit of approximately 732 to 765 acres that will be accrued for impacts from the Proposed Route within MZ1. Mitigation sites identified within MZ1 account for approximately 6,279 available credits. Table 19 displays the debits and available credits by ODFW habitat category.

Table 19. Mitigation Accounting by Habitat Category in MZ1

ODFW Habitat Category	Impact	Acres	Mitigation Debit	Debit Subtotal by Habitat Category	Subtotal of Available Credits within MZ1 Mitigation Sites from Table 13
1	Temp	–	–	–	418.6
	Perm	–	–		
2	Temp	614.1	>614.1	>724	5,446.8
	Perm	109.9	>109.9		
3	Temp	21.5	<21.5	4.1 to 25.6	413.5
	Perm	4.1	4.1		
4	Temp	15.8	<15.8	>3.5 to 19.2	–
	Perm	3.5	3.5		
5	Temp	98.8	–	<15.0	–
	Perm	15.0	<15.0		
6	Temp	410.2	–	–	187.6
	Perm	60.0	–		
Total				>731.6 to 764.6	6,278.9

Note: – = 0

Impacts from the Proposed Route within MZ1 will also accrue species-specific mitigation debits. Table 20 identifies the debits and available credits by wildlife habitat layer. These debits are not in addition to those identified in Table 19. For instance, of the 724 acres of Category 2 debits identified, 22.4 acres originate from impacts to Category 2 WAGS habitat.

Table 20. Mitigation Accounting by Wildlife Habitat Layer in MZ1

Wildlife Habitat Layer	Impact	Acres	Mitigation Debit	Debit Subtotal by Wildlife Habitat ¹	Subtotal of Available Credits within MZ1 Mitigation Sites from Table 14
WAGS	Temp	19.7	>19.7	>22.4	1,406.4 ²
	Perm	2.7	>2.7		
Elk winter range	Temp	54.6	>54.6	>63.2	3,038.3
	Perm	8.5	>8.5		
Elk summer range	Temp	20.4	<20.4	>2.8 to 23.2	2,774.3
	Perm	2.8	2.8		
Mule deer winter range	Temp	593.8	>593.8	>700.2	2,906.1
	Perm	106.4	>106.4		
Mule deer summer range	Temp	–	–	–	1,822.2
	Perm	–	–		

¹ These subtotals should not be added together as the resulting total would be double-counting acres where wildlife habitat layers overlap. Overlap is abundant between seasonal ranges of both elk and mule deer.

² IPC is aware that not all this habitat is available for mitigation. The exact amount is currently unknown.

Note: – = 0

IPC will look at the general vegetation type (sometimes habitat type), habitat category, and wildlife habitat layer together when performing the mitigation accounting for MZ1. This accounting will be performed during final selection of habitat mitigation sites and after issuance of the site certificate and prior to construction.

4.3.2 MZ2 Accounting

IPC has identified a mitigation debit of 1,078 to 1,268 acres that will be accrued for impacts from the Proposed Route within MZ2. Mitigation sites identified within MZ2 account for approximately 32,863 available credits. Table 21 identifies the debits and available credits by ODFW habitat category.

Table 21. Mitigation Accounting by Habitat Category in MZ2

ODFW Habitat Category	Impact	Acres	Mitigation Debit	Debit Subtotal by Habitat Category	Subtotal of Available Credits within MZ2 Mitigation Sites from Table 15
2	Temp	198.5	>198.5	>602.4	21,536
	Perm	403.9 ¹	>403.9		
3	Temp	176.4	<176.4	>473.0 to 649.4	11,315
	Perm	473.0	473.0		
4	Temp	12.5	<12.5	2.9 to 15.4	-
	Perm	2.9	2.9		
5	Temp	11.6	-	<1.1	-
	Perm	1.1	<1.1		
6	Temp	59.2	-	-	12.0
	Perm	41.4	-		
Total				>1,078.3 to 1,268.3	32,863

¹ Includes 0 acres of indirect impacts on elk winter range within MZ2 (Table 6).

² Includes 6.3 acres of indirect impacts on elk summer range within MZ2

Note: - = 0

Table 22 identifies the debits and available credits by wildlife habitat layer within MZ2. These debits are not in addition to those identified in Table 21. For instance, of the 602 acres of Category 2 debits identified in Table 21, approximately 573 acres originate from impacts to Category 2 mule deer winter range habitat (Table 22).

Table 22. Mitigation Accounting by Wildlife Habitat Layer in MZ2

Wildlife Habitat Layer	Impact	Acres	Mitigation Debit	Debit Subtotal by Wildlife Habitat ¹	Subtotal of Available Credits within MZ2 Mitigation Sites from Table 16
Elk winter range	Temp	83.2	>219.1	>221.1	21,547.9
	Perm	137.9 ²	>500.4		
Elk summer range	Temp	23.0	<23.0	>92.5 to 115.6	28,179.8
	Perm	92.5 ³	92.5		
Mule deer winter range	Temp	169.8	>169.8	>573.0	10,687.4
	Perm	403.1	>403.2		
Mule deer summer range	Temp	180	<180.0	>503.4 to 683.4	30,883.4
	Perm	503.4	503.4		

¹ These subtotals will not correspond to the mitigation debits calculated by habitat category in Table 21. For instance, some elk summer range Category 3 habitat overlaps with elk winter range Category 2 habitat, these areas default to Category 2. For this reason, these subtotals should not be added together.

² Includes 0 acres of indirect impacts on elk winter range within MZ2 (Table 6).

³ Includes 6.3 acres of indirect impacts on elk summer range within MZ2 (Table 6).

Note: – = 0

IPC will look at the general vegetation type (sometimes habitat type), habitat category, and wildlife habitat layer together when performing the mitigation accounting for MZ2. This accounting will be performed during final selection of habitat mitigation sites and after issuance of the site certificate and prior to construction.

4.3.3 MZ3 Accounting

IPC has identified a mitigation debit of approximately 2,145 to 2,456 acres that will be accrued for impacts from the Proposed Route within MZ3. Mitigation sites identified within MZ3 account for approximately 9,605 available credits. Table 23 identifies the debits and available credits by ODFW habitat category.

Table 23. Mitigation Accounting by Habitat Category in MZ3

ODFW Habitat Category	Impact	Acres	Mitigation Debit	Debit Subtotal by Habitat Category	Subtotal of Available Credits within MZ3 Mitigation Sites from Table 17
2	Temp	1,310.5	>1,310.5	>2,106.7	9,605.3
	Perm	796.2 ¹	>796.2		
3	Temp	146.7	<146.7	>18.3 to <165.0	–
	Perm	18.3	18.3		
4	Temp	137.1	<137.1	>19.7 to 156.8	–
	Perm	19.7	19.7		
5	Temp	219.0	–	<27.2	–
	Perm	27.2	<27.2		
6	Temp	55.7	–	–	–
	Perm	123.4	–		
Total				>2,144.7 to 2,455.7	9,605.3

¹ Includes 427.3 acres of indirect impacts on elk winter range within MZ3 (Table 8).

Note: – = 0

Table 24 identifies the mitigation debits and available credits by wildlife habitat layer within MZ3. These debits are not in addition to those identified in Table 23. For instance, of the more than 2,106 acres of Category 2 debits identified in Table 23, approximately 1,678 acres originate from impacts to Category 2 mule deer winter range habitat.

Table 24. Mitigation Accounting by Wildlife Habitat Layer in MZ3

Wildlife Habitat Layer	Impact	Acres	Mitigation Debit	Debit Subtotal by Wildlife Habitat ¹	Subtotal of Available Credits within MZ3 Mitigation Sites from Table 18
Elk winter range	Temp	100.8	>100.8	>566	4,337.1
	Perm	459.6 ²	>459.6		
Mule deer winter range	Temp	1,309.9	>1,309.9	>1,678.6	10,408.5
	Perm	368.7	>368.7		
Mule deer summer range	Temp	108.7	<106.9	101.7 to <208.6	7,196.7
	Perm	102.5	101.7		
California Bighorn Sheep Herd Range	Temp	1.6	>1.6	>15.8	-
	Perm	14.2	>14.2		

¹ These subtotals will not correspond to the mitigation debits calculated by habitat category in Table 23 due to overlap among wildlife habitat layers. For this reason, these subtotals should not be added together.

² Includes 427.3 acres of indirect impacts to elk winter range within MZ3 (Table 8).

5.0 MITIGATION SCHEDULE

Coordination continues between IPC and the applicable land and wildlife management agencies regarding mitigation projects and options. IPC has identified preliminary scheduling milestones for mitigation that track with the EFSC process (Table 25).

Table 25. Mitigation Schedule

Date Range	EFSC Stage	Mitigation Planning
Present to July 2017	Submittal of 2017 Amended Preliminary Application for Site Certificate (ASC)	Respond to ODOE comments on the HMP included in the amended preliminary ASC.
July 2017 to July 2019	Final Order and Site Certificate	Develop and finalize mitigation sites and associated Mitigation Management Plans. Land acquisition will begin following issuance of the Site Certificate and prior to construction.
July 2019 to start of construction, 2022 or later	Monitoring Project compliance with conditions of approval as described in the Final Order.	All mitigation land acquisitions will be completed. Baseline data acquisition will occur at mitigation sites according to the Mitigation Management Plan. Initial mitigation actions will begin if timing is appropriate. Finalize HMP and submit to ODOE for its approval.

Date Range	EFSC Stage	Mitigation Planning
Start of construction in 2022 or later	Monitoring Project compliance with conditions of approval as described in the Final Order.	Initial mitigation actions (e.g., juniper removal, native seeding) will be completed or continued, and mitigation monitoring will track success.
In Service to Project decommissioning	Monitoring Project compliance with conditions of approval as described in the Final Order.	Any adaptive management techniques will be implemented if mitigation success criteria are not being met. Long-term monitoring and reporting will be performed as needed.

6.0 REFERENCES

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- USGS. 2011. Gap Analysis Program. National Land Cover, Version 2. GIS dataset. May 2011.

APPENDIX A
HABITAT MITIGATION SITES

Habitat Mitigation Areas with Mitigation Zone 1

- Government Mountain
- lone
- Olex
- Eightmile

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Government Mountain

Parcel Name: (Figure 1) _____ **Date of Assessment:** 9/15/2014 _____

Landowner: _____ **Parcel Elevation (ft):** 2,400 – 4,400 _____

Parcel Size in Acres: 3,453 _____ **Within Mitigation Service Area?:** No _____

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Umatilla County, 20 miles southeast of Walla Walla, WA. Near the OR/WA border.
T5N R38E Sections 17, 18, 19, 20
T5N R37E Sections 13, 14, 15, 22, 23, 24

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³
		Category 1		0	0
	Category 2		2,976.8	85.7	-
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	670.4	19.3	RMEWR, RMESR, MDSR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	334.8	9.6	RMEWR, MDWR, RMESR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	87.5	2.5	RMEWR, MDWR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	13.5	0.4	RMEWR, MDSR
	Native Grasslands	Shrub/Grass	428.9	12.3	RMEWR, RMESR, MDSR
	Native Grasslands	Shrub/Grass	411.0	11.8	RMEWR, MDWR, RMESR
	Native Grasslands	Shrub/Grass	244.8	7.0	RMEWR, MDWR
	Native Grasslands	Shrub/Grass	38.9	1.1	RMEWR, MDSR
	Subalpine/Montane Forest	Forest/Woodland	25.3	0.7	RMEWR, RMESR, MDSR
	Subalpine/Montane Forest	Forest/Woodland	18.8	0.5	RMEWR, MDWR, RMESR
	Subalpine/Montane Forest	Forest/Woodland	10.3	0.3	RMEWR, MDWR
	Shrub-Steppe with Big Sage	Shrub/Grass	38.9	1.1	RMEWR, RMESR, MDSR
	Shrub-Steppe with Big Sage	Shrub/Grass	72.0	2.1	RMEWR, MDWR, RMESR
	Shrub-Steppe with Big Sage	Shrub/Grass	75.4	2.2	RMEWR, MDWR
	Shrub-Steppe with Big Sage	Shrub/Grass	20.6	0.6	RMEWR, MDSR
	Introduced Upland Vegetation	Shrub/Grass	33.3	1.0	RMEWR, RMESR, MDSR
	Introduced Upland Vegetation	Shrub/Grass	62.1	1.8	RMEWR, MDWR, RMESR
	Introduced Upland Vegetation	Shrub/Grass	41.8	1.2	RMEWR, MDWR
¹ USGS Gap Analysis Project (GAP) GIS data. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1). ² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat. ³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range. ⁴ Total acres of habitat type may not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary.					

Vegetation	HMP Habitat Category ²	HMP General	Acres	% of	Wildlife Habitat ³
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**Cover Classes
cont.
(GAP¹)**

and Type	Vegetation Type		Parcel	
Category 2 cont.				-
Forested Wetland	Wetland	43.1	1.2	RMEWR, RMESR, MDSR
Forested Wetland	Wetland	79.5	2.3	RMEWR, MDWR, RMESR
Forested Wetland	Wetland	18.6	0.5	RMEWR, MDWR
Shrub-Steppe without Big Sage	Shrub/Grass	49.1	1.4	RMEWR, RMESR, MDSR
Shrub-Steppe without Big Sage	Shrub/Grass	31.2	0.9	RMEWR, MDWR, RMESR
Shrub-Steppe without Big Sage	Shrub/Grass	24.0	0.7	RMEWR, MDWR
Forested-Other	Forest/Woodland	30.9	0.9	RMEWR, RMESR, MDSR
Forested-Other	Forest/Woodland	19.8	0.6	RMEWR, MDWR, RMESR
Forested-Other	Forest/Woodland	5.4	0.2	RMEWR, MDWR
Ponderosa Pine	Forest/Woodland	11.1	0.3	RMEWR, MDWR, RMESR
Ponderosa Pine	Forest/Woodland	15.2	0.4	RMEWR, RMESR, MDSR
Remaining	-	20.2	0.6	-
Category 3		414.1	11.9	-
Mixed Grand Fir / Douglas Fir	Forest/Woodland	181.8	5.2	RMESR, MDSR
Subalpine/Montane Forest	Forest/Woodland	169.6	4.9	RMESR, MDSR
Forested-Other	Forest/Woodland	44.9	1.3	RMESR, MDSR
Native Grasslands	Shrub/Grass	10.6	0.3	RMESR, MDSR
Shrub-Steppe without Big Sage	Shrub/Grass	2.9	0.1	RMESR, MDSR
Ponderosa Pine	Forest/Woodland	1.8	0.1	RMESR, MDSR
Mixed Tamarack	Forest/Woodland	1.6	0.0	RMESR, MDSR
Shrub-Steppe with Big Sage	Shrub/Grass	0.3	0.0	RMESR, MDSR
Introduced Upland Vegetation	Shrub/Grass	0.0	0.0	RMESR, MDSR
Category 4		0	0	-
Category 5		0	0	-
Category 6		82.7	2.4	-
Agriculture	Ag/ Developed	51.1	1.5	RMEWR, MDWR
Agriculture	Ag/ Developed	17.2	0.5	RMEWR
Agriculture	Ag/ Developed	0.2	0.0	RMESR, MDSR
Developed	Ag/ Developed	12.0	0.3	RMEWR, MDWR
Developed	Ag/ Developed	1.8	0.1	RMEWR
Developed	Ag/ Developed	0.4	0.0	RMESR, MDSR
Total				-
¹ USGS Gap Analysis Project (GAP) GIS data. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1). ² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat. ³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range. ⁴ Total acres of habitat type may not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary.				

Soil types

The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (**Figure 3**):

Buckcreek-Gwin association (706 acres). Buckcreek soils consist of moderately deep, well drained soils found on uplands at elevations of 2,000 to 4,500 feet. Buckcreek soils are used for range and wildlife habitat. Native vegetation is Idaho fescue, ninebark and snowberry. Gwin soils consist of shallow, well drained soils found on mountain slopes, basalt plateaus, ridgetops, foothills, structural benches, hill shoulders, summits, backslopes, and footslopes and canyon walls at elevations of 800 to 6,210 feet in Oregon and Idaho. Gwin soils are used for grazing and as wildlife habitat. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass.

Cowsly (39 acres) and *Cowsly silt loam (51 acres)*. Cowsly soils consist of deep or very deep, moderately well drained soils found on plateaus at elevations from 2800 to 5000 feet. Cowsly soils are used primarily for timber production. Other uses are dryland small grain, pasture, wildlife habitat and water supply. Native vegetation is ponderosa pine and Douglas fir with an understory of spirea, ocean spray, snowberry, Idaho fescue, pinegrass and elksedge.

Gwin-Rock outcrop complex (704 acres). Gwin soils consist of shallow, well drained soils found on mountain slopes, basalt plateaus, ridgetops, foothills, structural benches, hill shoulders, summits, backslopes, and footslopes and canyon walls at elevations of 800 to 6,210 feet in Oregon and Idaho. Gwin soils are used for grazing and as wildlife habitat. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass.

Tolo silt loam (400 acres). Tolo soils consist of deep and very deep, well drained soils found on nearly level upland plateaus and steep north and east-facing mountain side slopes at elevations of 2,800 to 5,400 feet. Tolo soils are used for timber production and livestock grazing with small areas at lower elevations cleared for cultivation. Principal trees include Douglas fir, grand fir, larch, ponderosa pine, and lodgepole pine.

Umatilla-Kahler-Gwin association (1,546 acres). Umatilla soils consist of very deep, well drained soils found on uplands at elevations of 2,000 to 5,000 feet. Umatilla soils are used for timber production, livestock grazing and wildlife habitat. Native vegetation is Douglas-fir, grand fir and ponderosa pine. Kahler soils consist of deep and very deep, well drained soils found on back slopes of plateaus, canyons, hills, and mountains at elevations ranging from 2,000 to 6,000 feet. Kahler soils are used for timber production, limited cropland, livestock grazing, watershed, recreation, and wildlife habitat. Many areas with slopes of less than 15 percent have been cleared and produce dryland hay and grain, or irrigated crops. The native vegetation is mainly ponderosa pine, Douglas fir, pinegrass and elk sedge. Gwin soils consist of shallow, well drained soils found on mountain slopes, basalt plateaus, ridgetops, foothills, structural benches, hill shoulders, summits, backslopes, and footslopes and canyon walls at elevations of 800 to 6,210 feet in Oregon and Idaho. Gwin soils are used for grazing and as wildlife habitat. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass.

Xerofluvents (0.1 acre). A fluvent soil with a xeric moisture regime.

Hydrologic Features Present
(SteamNet, NWI, NHD)

Four perennial and three intermittent streams are within the property (NHD), including the North Fork of the Walla Walla River (three miles of river frontage per the real estate listing). Other than an impoundment, all wetland areas (NWI) appear to be associated with riparian corridors of streams identified in NHD.

Adjacent land ownership, use, and condition

Most of the adjacent lands are private; however, the eastern border of the property connects to a large tract of USFS lands. Land use is likely rangeland and timber with agricultural land use in the valley approximately 5 miles to the west.

Infrastructure Density within or Near the Parcel (Qualitative Description)	Ranch includes a historic 1920 cabin, a bunkhouse, a barn, machine shop, fencing, cross fencing, and an old miner cabin (per real estate listing). Several maintained roads access the property.
Summary	<p>The property is outside of the mitigation service area. Property is approximately 2.7 miles north of the South Fork Walla Walla River BLM ACEC, designated to protect and enhance riparian ecosystems, fisheries habitat, and scenic values and recreational use. Borders a large tract of USFS lands including areas with old growth forest and is within elk and mule deer winter range. North Fork of the Walla Walla River is bull trout and steelhead critical habitat, Little Meadow Creek and Big Meadow Creek are steelhead critical habitat.</p> <p>Property is within 2 different ODFW COAs, the Umatilla – Walla Walla area of the Blue Mountains ecoregion and the Walla Walla River area of the Columbia Plateau ecoregion. Conservation actions identified for both areas include maintenance and enhancement of in-channel watershed function, connection to riparian habitat, flow and hydrology; and maintenance or restoration of riparian habitat and ecological function and to ensure sufficient habitat complexity for wildlife. In addition, the Umatilla – Walla Walla COA adds initiation or continuation of wet meadow conservation and restoration; and promotion of early detection and suppression of invasive weeds.</p>
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function

This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 elk and mule deer winter habitat within the forest/woodland general vegetation type. This mitigation site could help meet the Project need for elk and mule deer summer habitat as well. It contains important habitat features with opportunities to provide durable ecological uplift through implementation of standard mitigation actions. Opportunities to improve the watershed would benefit bull trout and steelhead critical habitat.

The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to elk and mule deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.

Mitigation Site Manager

Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust

Mitigation Actions

The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:

- *Livestock grazing restrictions* – historic grazing practices at this property are unknown. However, the objective would be to avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.
- *Weed treatment* – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.
- *Native revegetation/restoration* – the focus would be planting forage shrubs and implementing forest management practices that would create structural diversity and enhance desirable habitat conditions.
- *Fire readiness* – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.
- *Fence removal/fence upgrade* – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.

Monitoring

A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by WAGS or any other wildlife species.

Financial Outline

Estimated Budget for the Government Mountain Mitigation Site				
Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition (from 4/10/2013 listing)	\$3,250,000	1	-	\$3,250,000
Recurring Costs (Annually)				
O&M ¹	\$53.75	3,453	50	\$9,279,938
Total		-		\$12,529,938 (\$3,628/acre) ²

¹This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The cost per acre identified in that study for the Elkhorn Wildlife Management Area (which this mitigation site will be modeled after) was \$43 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

²Cost per acre here includes cost of acquisition/easement and long-term O&M for 50 years.

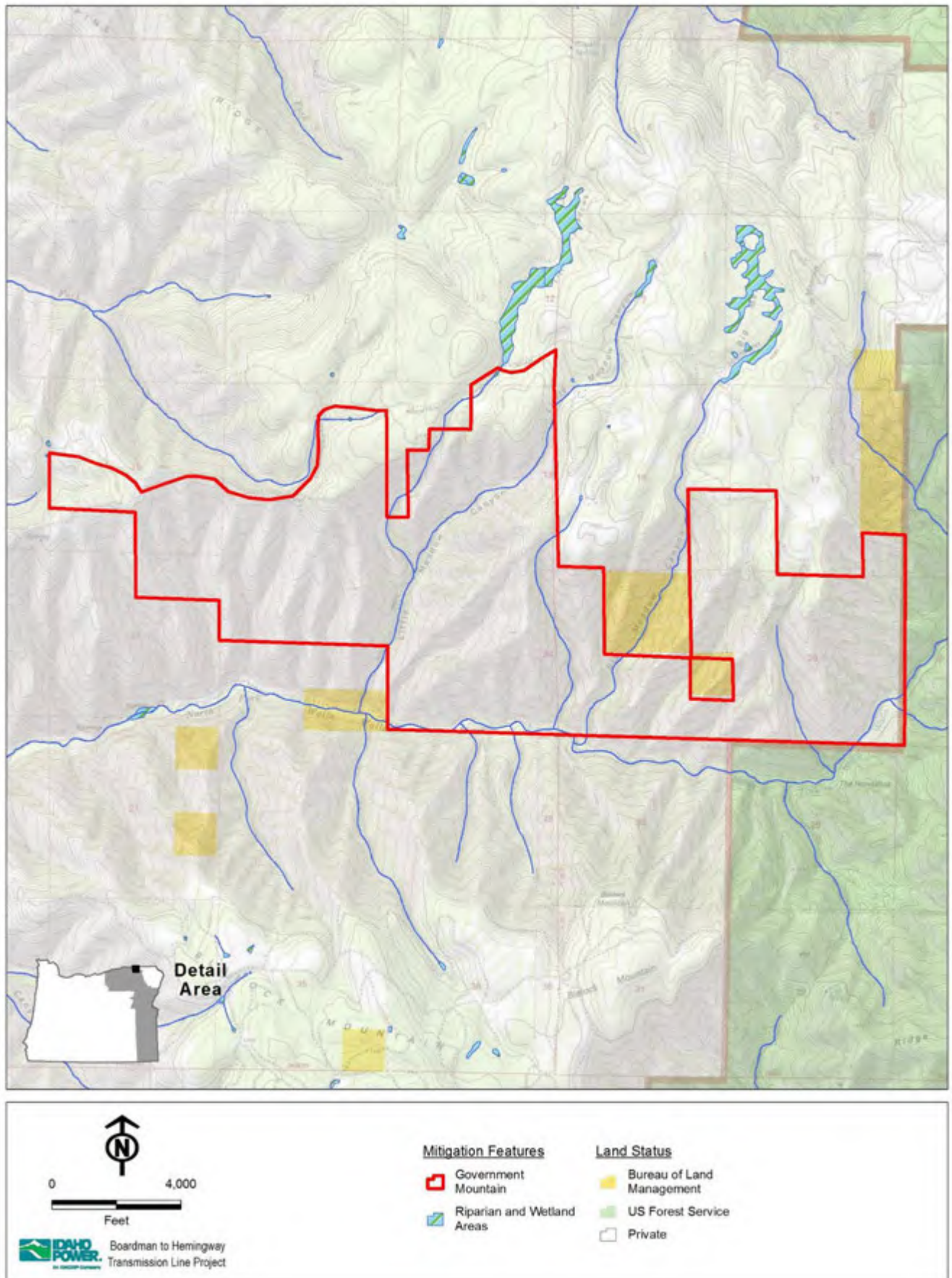


Figure 1. Government Mountain Ownership and Water

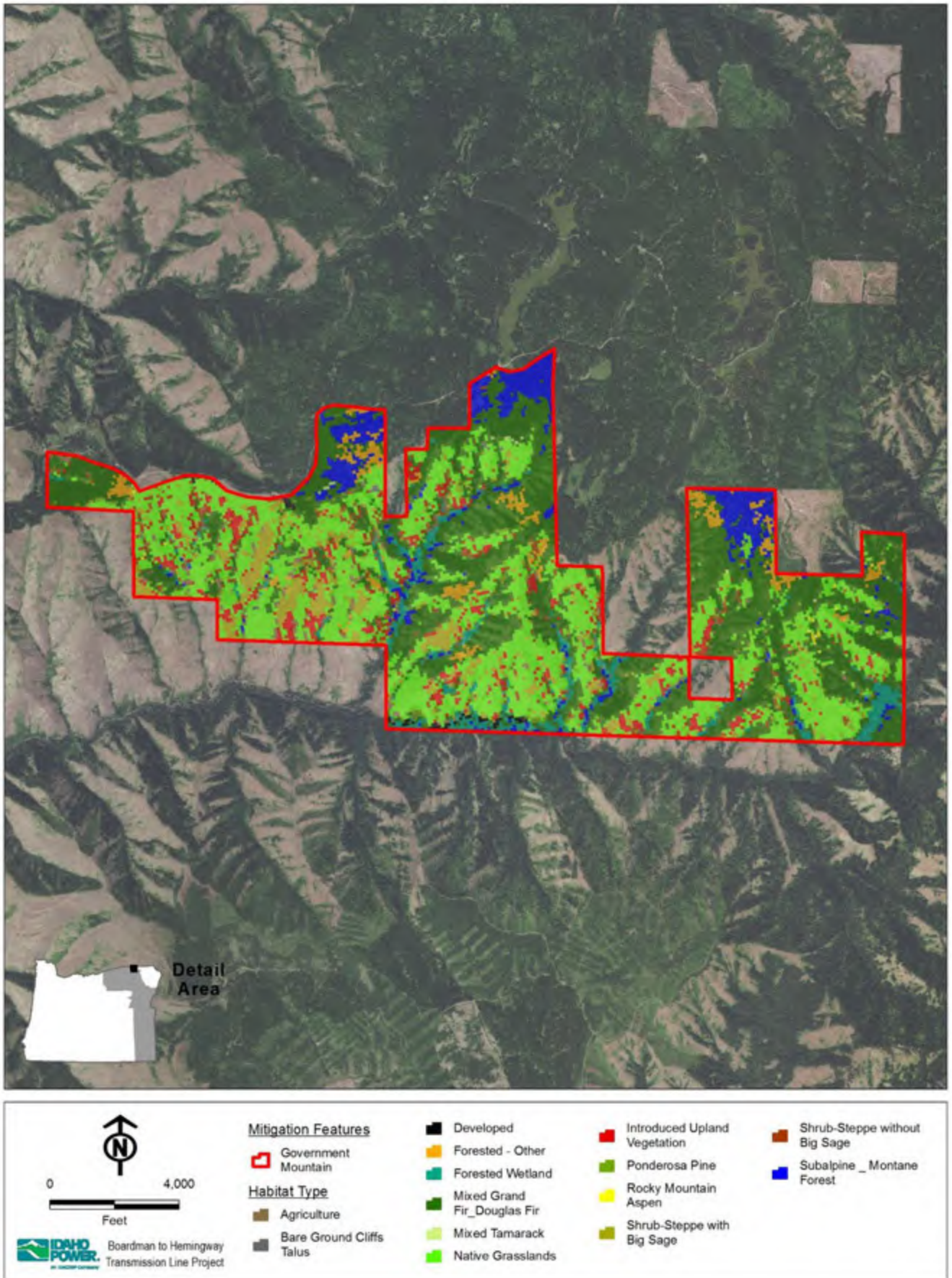


Figure 2. Government Mountain Habitat Types

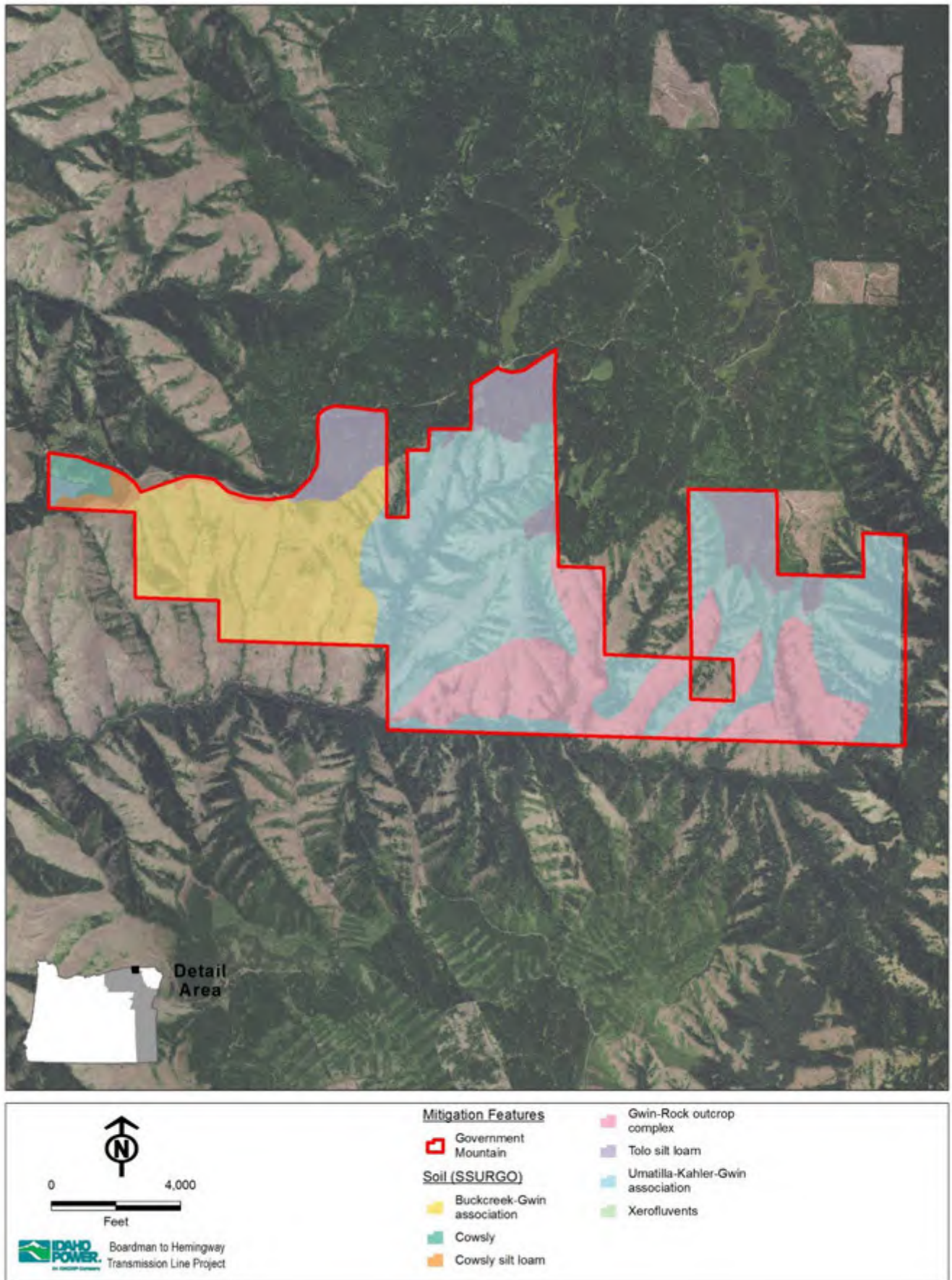


Figure 3. Government Mountain Soil Types

<p>Soil types</p>	<p>The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (Figure 3):</p> <p><i>Endersby fine sandy loam (1 acre)</i>. Endersby soils consist of deep, somewhat excessively drained soils found on nearly level bottomlands at elevations of 200 to 1,500 feet. Endersby soils are used primarily for forage crops. Other uses are dry and irrigated small grain, range, pasture, wildlife, and water supply. Vegetation consists of bunchgrasses and forbs.</p> <p><i>Lickskillet-Rock outcrop complex (42 acres)</i>. Lickskillet soils consist of shallow, well drained soils typically found on south-facing canyon and mountain side slopes at elevations of 200 to 4,500 feet. Lickskillet soils are dominantly used for livestock grazing. Other uses include watershed, recreation, and wildlife habitat. Vegetation is bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, western yarrow, and Wyoming big sagebrush.</p> <p><i>Lickskillet very stony loam (353 acres)</i>. Lickskillet soils consist of shallow, well drained soils typically found on south-facing canyon and mountain side slopes at elevations of 200 to 4,500 feet. Lickskillet soils are dominantly used for livestock grazing. Other uses include watershed, recreation, and wildlife habitat. Vegetation is bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, western yarrow, and Wyoming big sagebrush.</p> <p><i>Mikkalo silt loam (34 acres)</i>. Mikkalo soils consist of moderately deep, well drained soils found on canyons, hills, plateaus, and ridges at elevations of 300 to 2,800 feet. Mikkalo soils are used for production of small grains and for rangeland. The native vegetation is bluebunch wheatgrass, green rabbitbrush, big sagebrush, balsamroot and yarrow.</p> <p><i>Ritzville silt loam (2 acres)</i>. Ritzville soils consist of very deep and deep to duripan, well drained soils found on uplands including plateaus, benches, and canyon side slopes at elevations ranging between 700 to 3,000 feet. Ritzville soils are used for dryland wheat production and some livestock grazing. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass, Wyoming big sagebrush, and yarrow.</p>
<p>Hydrologic Features Present (SteamNet, NWI, NHD)</p>	<p>NHD does not show any water within the property. NWI identifies a temporarily flooded streambed.</p>
<p>Adjacent land ownership, use, and condition</p>	<p>All adjacent land is privately held. A majority of adjacent land use is dry land agriculture with some open rangeland.</p>
<p>Infrastructure Density within or Near the Parcel (Qualitative Description)</p>	<p>There does not appear to be any infrastructure within this property, other than boundary fencing. Infrastructure within the adjacent private lands also appears very low; other than dirt farm roads there does not appear to be any significant infrastructure. TOPO maps show a pipeline north of the property.</p>
<p>Summary</p>	<p>The property is outside of the mitigation service area. None of the wildlife habitat layers considered for this assessment overlap the property. It provides non-agriculture and native habitat adjacent to a water source in Eightmile Canyon, so likely provides undisturbed nesting and hiding cover for numerous species.</p>
<p>Pass/Fail Desktop Assessment?</p>	<p>Pass</p>

Boardman to Hemingway Transmission Line Project

Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This potential mitigation site could provide mitigation for impacts on the shrub/grass general vegetation type within the Columbia Basin. The mitigation site is outside of Washington ground squirrel modeled habitat (habitat concentration areas [WWHCWG 2012]) and only historical records of squirrel activity occur within 5 miles of the property.</p> <p>This mitigation site provides native habitat features within an agricultural-dominated landscape. Wildlife species, especially migratory birds, that utilize shrub-steppe and grassland habitats would benefit from implementation of mitigation actions that result in ecological uplift.</p>
Mitigation Site Manager	<p>The mitigation site would be established through a conservation easement held and managed by the current landowners.</p>
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – the current level of grazing on this property is unknown. Mitigation action could avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – the focus would be sagebrush and bunchgrasses on this mitigation site.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.
Monitoring	<p>A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).</p>
Success Criteria	<p>Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:</p> <ul style="list-style-type: none">• Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.• Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.• Mitigation success will not be dependent on documentation of increased use of the mitigation site by wildlife species.

Financial Outline

This financial outline provides estimated figures and data for informational purposes only. These estimates are meant to provide an overview of the potential and reasonable costs of preparing an easement and implementing mitigation on this mitigation site. The financial outline does not guarantee the final easement value and costs for the easement. This desktop assessment cannot be used to infer value (monetary or ecological) of other properties or easements in the region. Unless otherwise stated, cost assumptions come from NRCS EQIP Practice Payment Rate schedules.

- Weed treatment: \$20 - \$200 per acre
- Native Seeding:
 - Site preparation (mowing/discing) \$500 per acre
 - Broadcast/Drill seed: \$100 - \$250 per acre
- Hydroseeding: \$792 per acre

Estimated Budget for the Lone Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Easement Value	Unknown	1	-	?
Easement Transaction Costs ¹	\$20,000	1		\$20,000
Recurring Costs (Annually)				
O&M ²	\$30	433	50	649,500
Total		-		\$? (\$?/acre) ³

¹ Easement transaction cost is on the high end of the average presented in the 2009 report by Defenders of Wildlife and Trust for Public, titled *Land Conservation Spending in Oregon in Relation to the State Wildlife Conservation Strategy*.

² This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

³ Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

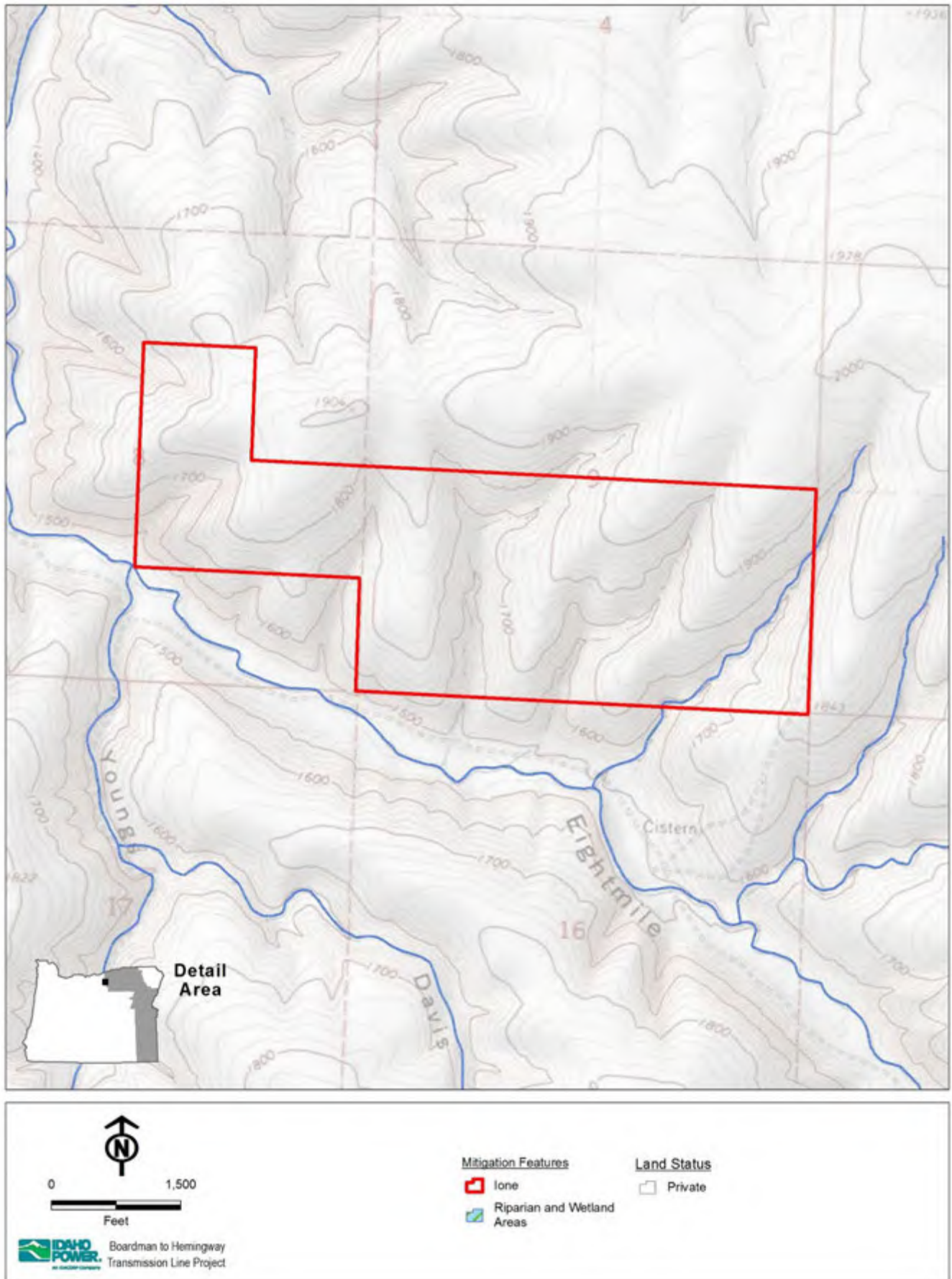


Figure 1. Ione Ownership and Water

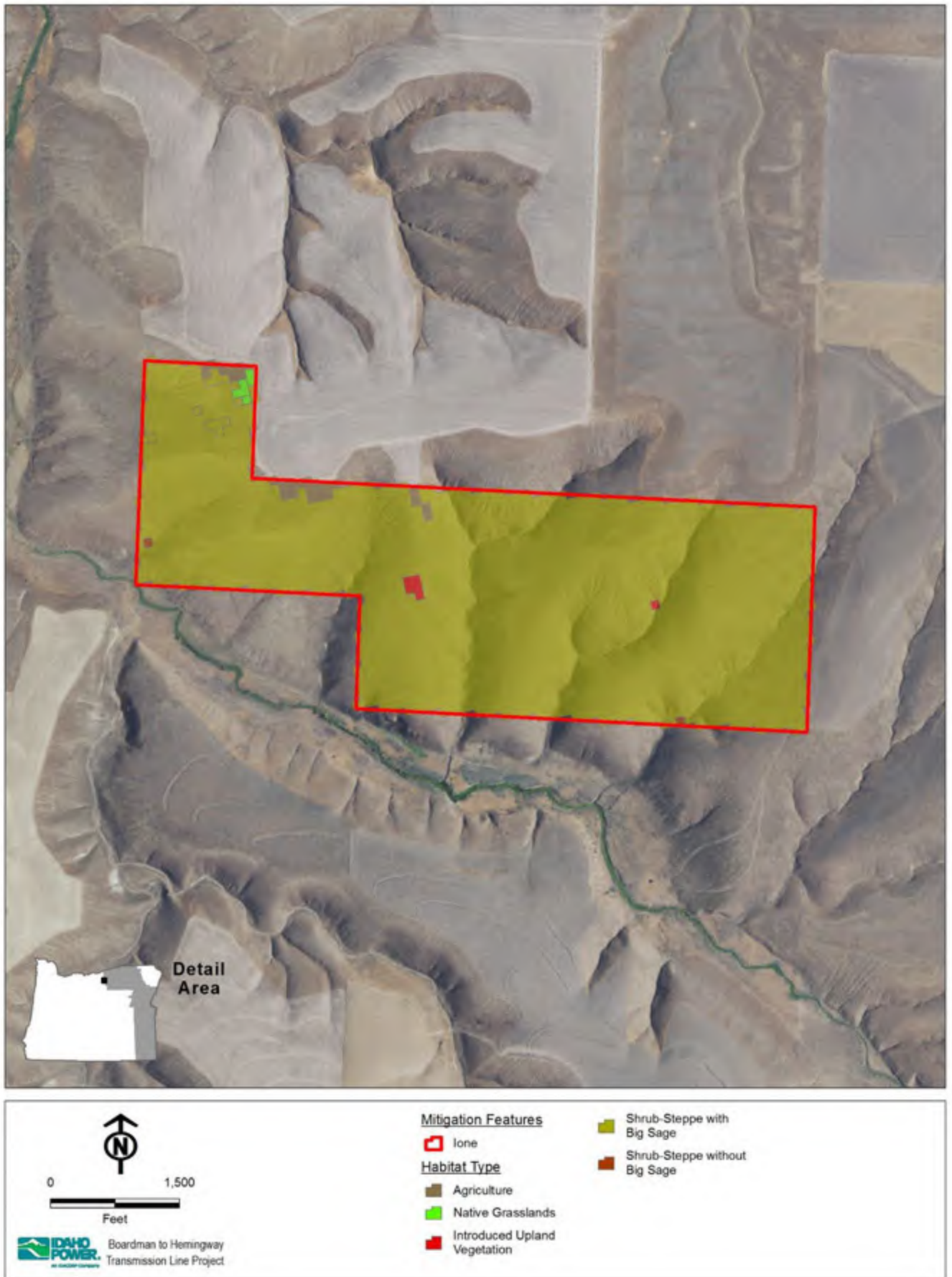


Figure 2. Ione Habitat Types

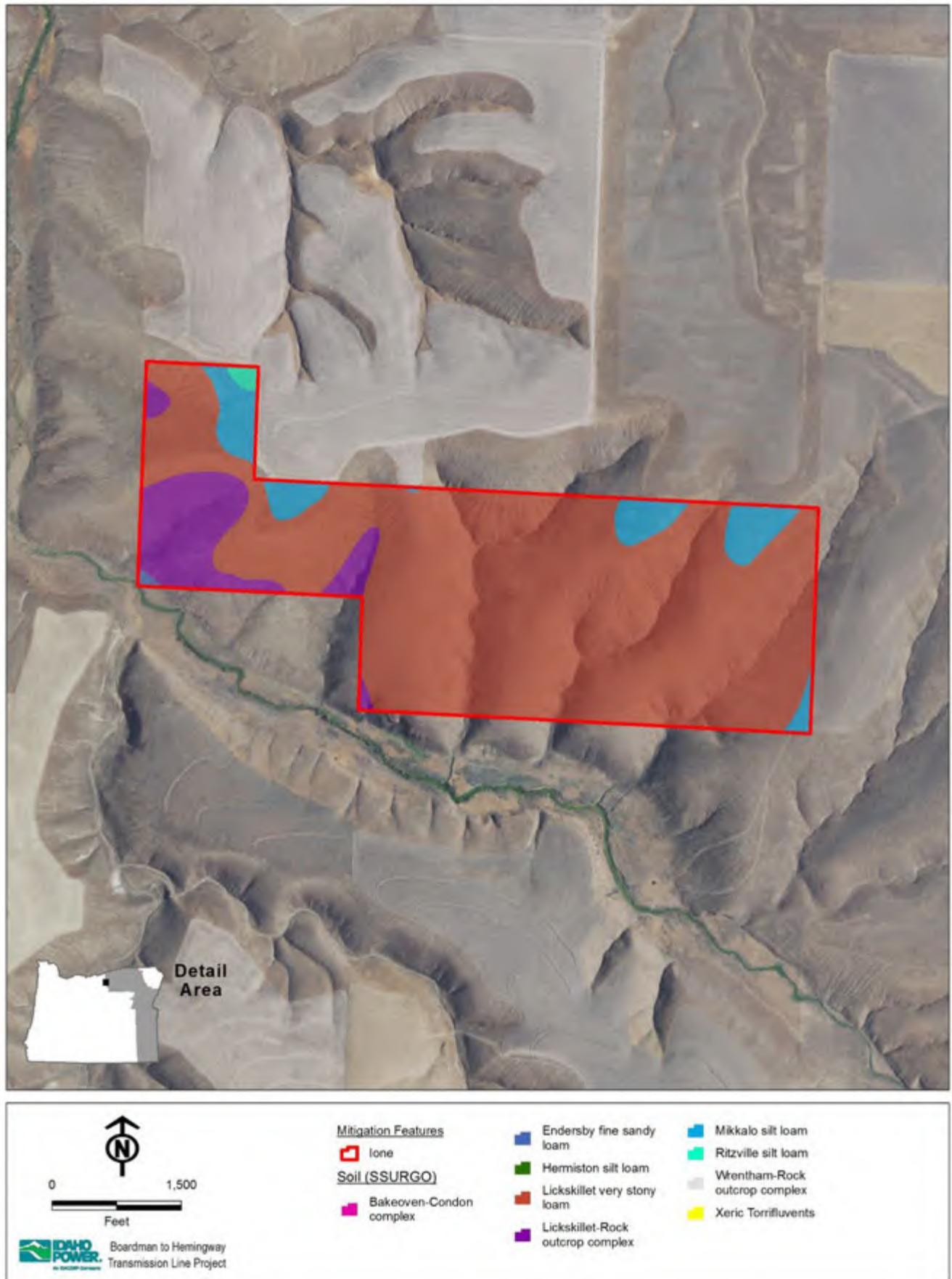


Figure 3. Ione Soil Types

Bakeoven-Condon complex, 2 to 20 percent slopes (**4 acres**). Bakeoven soils consist of very shallow, well drained soils found on mountains, ridgetops, hillslopes, mesas, and benches at elevations of 300 to 4,800 feet. Bakeoven soils are used for livestock grazing and wildlife habitat. Native vegetation is Sandberg bluegrass and stiff sagebrush. Condon soils are moderately deep, well drained soils found in uplands at elevations of 1,100 to 4,000 feet. Typical use is grain crops. Native plants are bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, and forbs such as yarrow, phlox, and buckwheat.

Hermiston Silt Loam (57.5 acres). Hermiston soils consist of deep, well drained soils found on stream bottomlands (along Rock Creek here) and low terraces. Typical use is production of dry farmed wheat or irrigated small grains, alfalfa, sugar beets, pasture and hay crops. Native vegetation was mainly giant wildrye and bluebunch wheatgrass.

Lickskillet-Rock outcrop complex, 40 to 70 percent slopes (**11 acres**) and *Lickskillet very stony loam*, 7 to 40 percent slopes (**645 acres**). The lickskillet soils consist of shallow, well drained soils typical of south-facing canyon and mountain side slopes from 200 to 4,500 feet. On this property, the rock outcrop complex makes up the south facing canyon wall along Rock Creek just north of Rock Creek Road; the very stony loam occurs along the side slopes of the drainages (Pat's Canyon and others) within the property. Typical use is livestock grazing. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, western yarrow, and Wyoming big sagebrush.

Mikkalo silt loam, 2 to 70 percent slopes (**463 acres**). Mikkalo soils consist of moderately deep, well drained soils on canyons, hills, plateaus, and ridges from 300 to 2,800 feet. These soils are found within the hilltops/plateaus that dominate the property south of Rock Creek. They make up some of the potential WAGS habitat on the property. Typical use is production of small grains and rangeland. The native vegetation is bluebunch wheatgrass, green rabbitbrush, big sagebrush, balsamroot, and yarrow.

Ritzville silt loam, 2 to 40 percent slopes (**687 acres**). Ritzville soils consist of very deep and deep to duripan, well drained soils typically found on upland plateaus and benches from 700 to 3,000 feet. They make up the majority of the hilltops/plateaus found on the property south of Rock Creek. These soils make up some of the potential WAGS habitat on the property. Typical use is dryland wheat production and livestock grazing. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass, Wyoming big sagebrush, and yarrow.

Wrentham-Rock outcrop complex, 35 to 70 percent slopes (**190 acres**). The Wrentham soils consist of moderately deep, well drained soils found on north-facing canyon slopes from 900 to 3,600 feet elevation. They occur on the property along the north facing slopes just south of Rock Creek, including bands of rock outcrops. Typical use is range; native vegetation is Idaho fescue, bluebunch wheatgrass, Sandberg bluegrass, forbs and shrubs.

Xeric torrifluvents, nearly level (**10 acres**). This is an alluvial fan type of soil and is found along a small portion of Rock Creek.

**Hydrologic
Features Present**
(SteamNet, NWI, NHD)

Property contains four intermittent streams per NHD. Rock Creek supports redband trout and ESA listed summer steelhead. Rock Creek supports migrating and spawning steelhead and provides rearing areas for fry and juveniles. NWI did not identify any wetland features outside those associated with riparian areas of NHD streams.

Adjacent land ownership, use, and condition	Adjacent land ownership is private; however, a small BLM parcel is just east of the property on the opposite side of Rock Creek. Majority of adjacent land use is dry land agriculture.
Infrastructure Density within or Near the Parcel (Qualitative Description)	Upper Rock Creek Rd. runs through the property and a couple of residential structures appear along the road in the northern portion of the property. Otherwise, a majority of the property is open habitat. Property is just east of State Route 19 (John Day Highway), Union Pacific RR has a line within 3 miles, and TOPO maps show a transmission line coming into a substation at OLEX.
Summary	Identified as a WAGS habitat concentration area by the Washington Wildlife Habitat Connectivity Working Group (Figure 1). Active WAGS colonies are present; therefore the property contains Category 1 and Category 2 WAGS habitat (Figure 4). The property is outside of the mitigation service area and is in a county not directly impacted by the project. However, the property was nominated by ODFW and would likely be acceptable mitigation. In addition to WAGS, the property contains Rock Creek which supports an ESA listed steelhead population and the entire property is within ODFW designated mule deer winter range.
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>The property owner has stated that 1,563 acres of the property are available for mitigation through an easement. Most of the potential easement area (1,515 acres) is upland habitat identified as Native Grassland and Perennial Grassland (Figure 2). These upland habitats consist of planted perennial, annual, and native bunchgrass grasslands; and patches of shrub-steppe habitat consisting of basin big sagebrush and other shrub species. The remaining 48 acres has recently been planted to native grassland (Seeded/Planted Revegetation; Figure 2) and contains approximately 1.25 miles of riparian corridor consisting of alder and willow along Rock Creek.</p> <p>This mitigation site would meet the entire Project need for WAGS habitat mitigation. It contains habitat features important to the species with ample opportunities to provide ecological uplift through implementation of standard mitigation actions.</p> <p>This mitigation site would provide mitigation credit for Project impacts on Category 1 & 2 WAGS habitat within the shrub/grass general vegetation type of the Columbia Basin. Mitigation actions and use restrictions will be consistent with the goal of no net loss of habitat and a net benefit in the quantity and quality of Category 2 habitat.</p> <p>In addition to Category 2 mitigation within the Columbia Basin, this mitigation site provides additional mitigation credit towards impacts on Category 3 and Category 4 shrub/grass habitats occurring within the Columbia Basin.</p> <p>The mitigation actions listed below, upon effective implementation, will provide a net benefit in quantity and quality of habitat available to WAGS (among other species) within the mitigation site and result in an ecological uplift (additionality) on the mitigation site.</p>
Mitigation Site Manager	<p>The mitigation site would be established through a conservation easement held by a non-profit group such as a land trust and would be managed by the current landowners.</p>
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Modification of Livestock Grazing</i> – avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action. Financial outline below assumes an initial effort to treat 75 acres.• <i>Native revegetation/restoration</i> – focus of efforts would be to promote establishment of sagebrush and bunchgrasses; opportunities exist but have not been specifically identified at this time.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.
Monitoring	<p>A specific plan for monitoring will be developed in coordination with ODFW during preparation of the conservation easement.</p>

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by WAGS or any other wildlife species.

Financial Outline

This financial outline provides estimated figures and data for informational purposes only. These estimates are meant to provide an overview of the potential and reasonable costs of preparing an easement and implementing mitigation on this mitigation site. The financial outline does not guarantee the final easement value and costs for the easement. This desktop assessment cannot be used to infer value (monetary or ecological) of other properties or easements in the region. Unless otherwise stated, cost assumptions come from NRCS EQIP Practice Payment Rate schedules.

- Weed treatment: \$20 - \$200 per acre
- Native Seeding:
 - Site preparation (mowing/discing) \$500 per acre
 - Broadcast/Drill seed: \$100 - \$250 per acre
- Hydroseeding: \$792 per acre
- Wetland/Spring/Riparian Improvement
 - Complex Restoration: \$2,400 per acre
 - Riparian Herbaceous Cover
 - Broadcast Seeding: \$687 per acre
 - Pollinator Cover: \$1,303 per acre
 - Plug Planting: \$13,730 per acre
 - Combo Seeding and Plug Planting: \$6,947 per acre
 - Riparian Forest Buffer
 - Hand Plant, bare root: \$768 per acre
 - Cuttings, small to medium: \$867 per acre
 - Seeding: \$106 per acre

Estimated Budget for the Olex Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Easement Value	Unknown	1	-	Unknown
Easement Transaction Costs ¹	\$20,000	1	-	\$20,000
Weed Treatment	\$200	75	-	\$15,000
Native Seeding	\$750	300	-	\$225,000
Recurring Costs (Annually)				
O&M ³	\$30	1,563	50	\$2,344,500
Total		-		\$? (\$/?/acre) ⁴

¹ Easement transaction cost is on the high end of the average presented in the 2009 report by Defenders of Wildlife and Trust for Public, titled *Land Conservation Spending in Oregon in Relation to the State Wildlife Conservation Strategy*.

² This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

³ Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

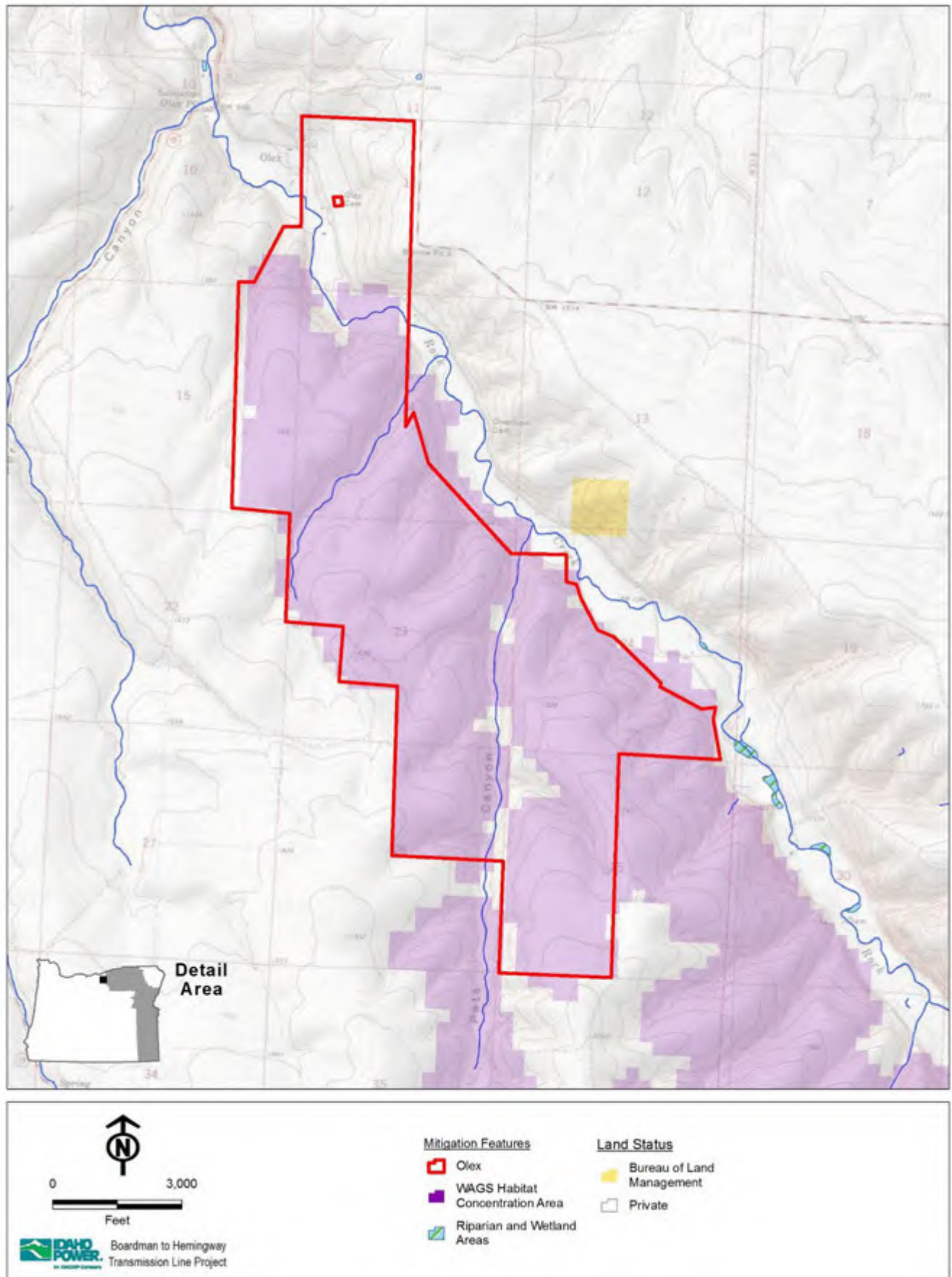


Figure 1. Olex WAGS Habitat Concentration Area, Ownership, and Water

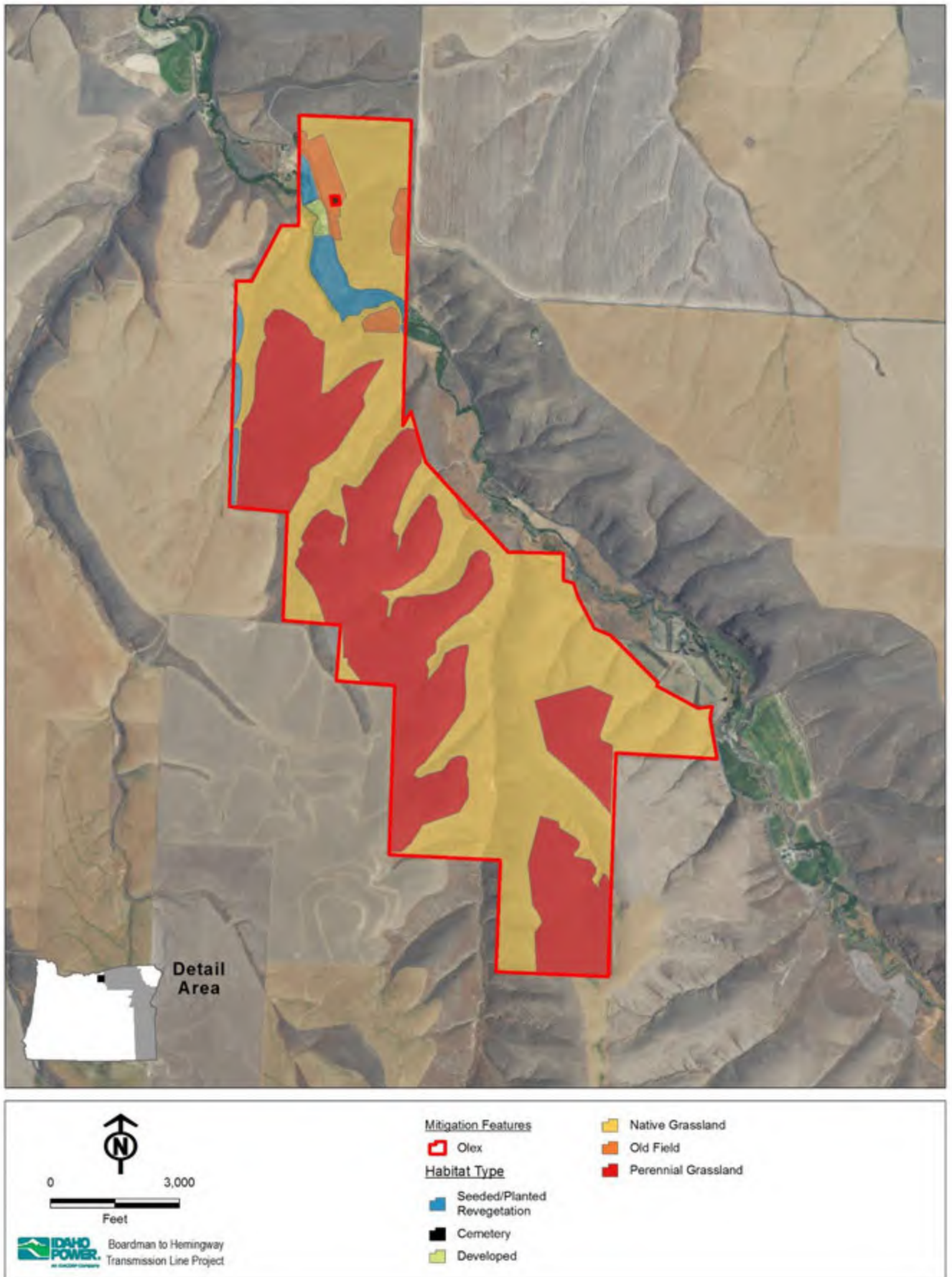


Figure 2. Olex Habitat Types

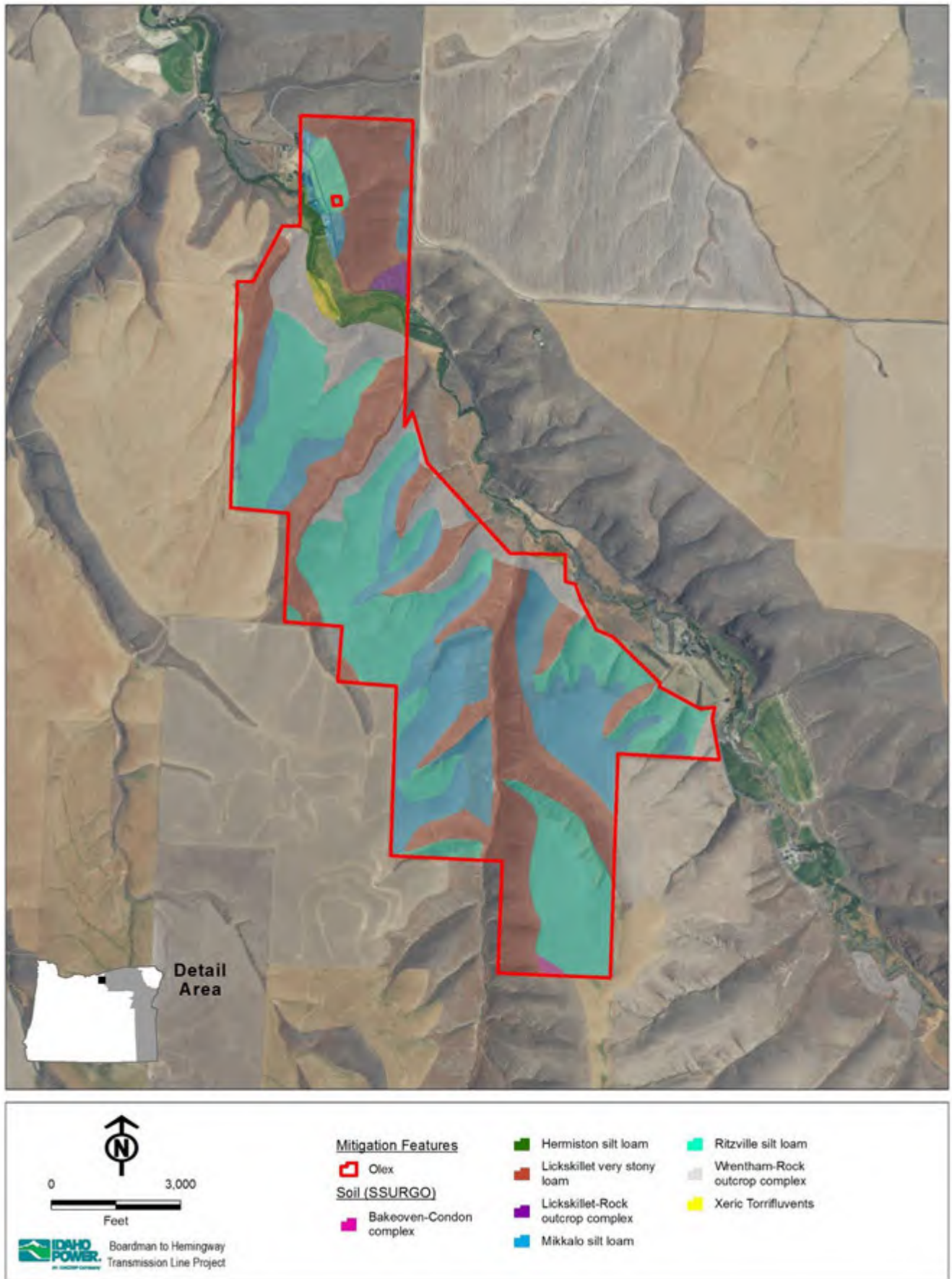


Figure 3. Olex Soil Types

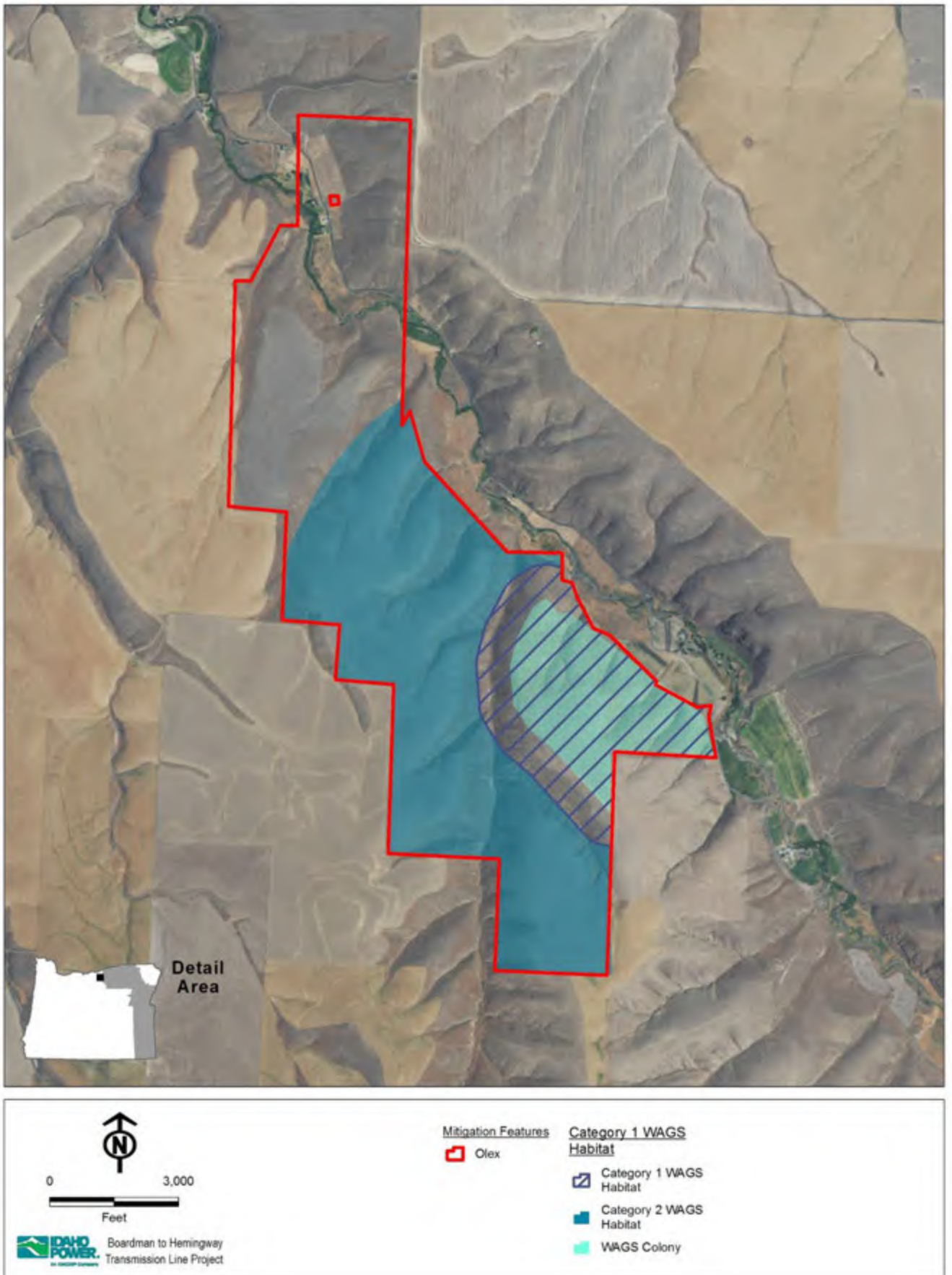


Figure 4. Olex Ground Squirrel Habitat

**Boardman to Hemingway Transmission Line Project
Desktop Habitat Mitigation Site Assessment Worksheet**

Parcel Name: Eightmile (Figure 1) **Date of Assessment:** 2/12/2016
Landowner: _____ **Parcel Elevation (ft):** 1,600 – 2,100
Parcel Size in Acres: 838 **Within Mitigation Service Area?:** No

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Morrow County, 10 miles south of Lone.
T2S R23E Sections 25, 26, 36. T2S R24E Section 31.

Vegetation Cover Classes (GAP¹, Figure 2)	HMP Habitat Category² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat³
	Category 1				
	Category 2		799.4	95.6	
	CRP	Agriculture / Developed	429.9	51.4	MDWR
	Shrub-Steppe with Big Sage	Shrub / Grass	357.8	42.8	MDWR
	Native Grasslands	Shrub / Grass	6.2	0.7	MDWR
	Shrub-Steppe without Big Sage	Shrub / Grass	3.3	0.4	MDWR
	Introduced Upland Vegetation	Shrub / Grass	2.2	0.3	MDWR
	Category 3				-
	Category 4				-
	Category 5				-
	Category 6		36.7	4.4	-
	Developed	Agriculture / Developed	4.2	0.5	MDWR
	Agriculture	Agriculture / Developed	32.5	3.9	MDWR
	Total		836.1	100	-
<p>¹USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P-2 of Exhibit P). ²Represents the highest category that the habitat type can be attributed based only on vegetation metrics. Field review of this site would likely warrant modification of categorization. ³MDWR = Category 2 ODFW mule deer winter range.</p>					

<p>Soil types</p>	<p>The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (Figure 3):</p> <p><i>Lickskillet very stony loam (219 acres)</i>. Lickskillet soils consist of shallow, well drained soils typically found on south-facing canyon and mountain side slopes at elevations of 200 to 4,500 feet. Lickskillet soils are dominantly used for livestock grazing. Other uses include watershed, recreation, and wildlife habitat. Vegetation is bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, western yarrow, and Wyoming big sagebrush.</p> <p><i>Rhea silt loam (22 acres)</i>. Rhea soils consist of deep, well drained soils found on upland slopes at elevations of 1,600 to 3,200 feet. Rhea soils are cultivated or used as rangeland. Small grains, hay and pasture are the principal crops. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass and forbs such as yarrow, phlox and buckwheat.</p> <p><i>Ritzville silt loam (6.6 acres)</i>. Ritzville soils consist of very deep and deep to duripan, well drained soils found on uplands including plateaus, benches, and canyon side slopes at elevations ranging between 700 to 3,000 feet. Ritzville soils are used for dryland wheat production and some livestock grazing. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass, Wyoming big sagebrush, and yarrow.</p> <p><i>Valby silt loam (590 acres)</i>. Valby soils consist of moderately deep, well drained soils on upland slopes at elevations of 1,600 to 3,000 feet. Valby soils are used for dryfarm small grains, hay, pasture and range. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass and forbs such as yarrow, phlox and buckwheat.</p>
<p>Hydrologic Features Present (SteamNet, NWI, NHD)</p>	<p>One intermittent water feature crosses the property, in Lundell Canyon. The property borders Eightmile Canyon for approximately 0.75 mile, which contains an intermittent water feature. The property also borders an intermittent water feature associated with Gooseberry and Lundell Canyon for 1 mile. Wetland features are along the intermittent water features; otherwise the property is dry.</p>
<p>Adjacent land ownership, use, and condition</p>	<p>All adjacent land is privately held. A majority of adjacent land use is dry land agriculture with some open rangeland.</p>
<p>Infrastructure Density within or Near the Parcel (Qualitative Description)</p>	<p>The property contains a 2,400 square foot residence, a feeder barn, shop, additional barn, and four metal grain bins. The Lone-Gooseberry Road borders the northern portion of the property. Rural area is relatively devoid of major infrastructure.</p>
<p>Summary</p>	<p>The property is outside of the mitigation service area. Mule deer winter range completely overlaps the property. It provides non-agriculture and native habitat adjacent to a couple of canyon features, so likely provides relatively undisturbed nesting and hiding cover for numerous species. Aerial photo review shows livestock trailing and congregation areas on the property. The CRP contract expires in September of 2017 (per real estate listing). The property overlaps with a historic WAGS occurrence from ORBIC. The property is outside of modeled habitat, but is within 2.5 miles of a habitat concentration area.</p>
<p>Pass/Fail Desktop Assessment?</p>	<p>Pass</p>

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This potential mitigation site could provide mitigation for impacts on Category 2 mule deer winter range within the shrub/grass general vegetation type of the Columbia Basin. The mitigation site is outside of Washington ground squirrel modeled habitat (habitat concentration areas [WWHCWG 2012]) and only historical records of squirrel activity occur within the property.</p> <p>This mitigation site provides CRP and native habitat features within an agricultural-dominated landscape. Wildlife species including mule deer and especially migratory birds that utilize shrub-steppe and grassland habitats would benefit from implementation of mitigation actions that result in ecological uplift.</p>
Mitigation Site Manager	<p>Fee title acquisition with transfer of ownership to, State of Oregon, Federal Land Management Agency, approved NPO or Land Trust.</p>
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – the current level of grazing on this property is unknown. Mitigation action could avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – the focus would be sagebrush and bunchgrasses on this mitigation site.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.
Monitoring	<p>A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).</p>
Success Criteria	<p>Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:</p> <ul style="list-style-type: none">• Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.• Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.• Mitigation success will not be dependent on documentation of increased use of the mitigation site by wildlife species.

Financial Outline

Estimated Budget for the Eightmile Mitigation Site				
Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	700,000	1		700,000
Recurring Costs (Annually)				
O&M ¹	30	838	50	1,257,000
Total		-		\$1,957,000 (\$2,335/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

² Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

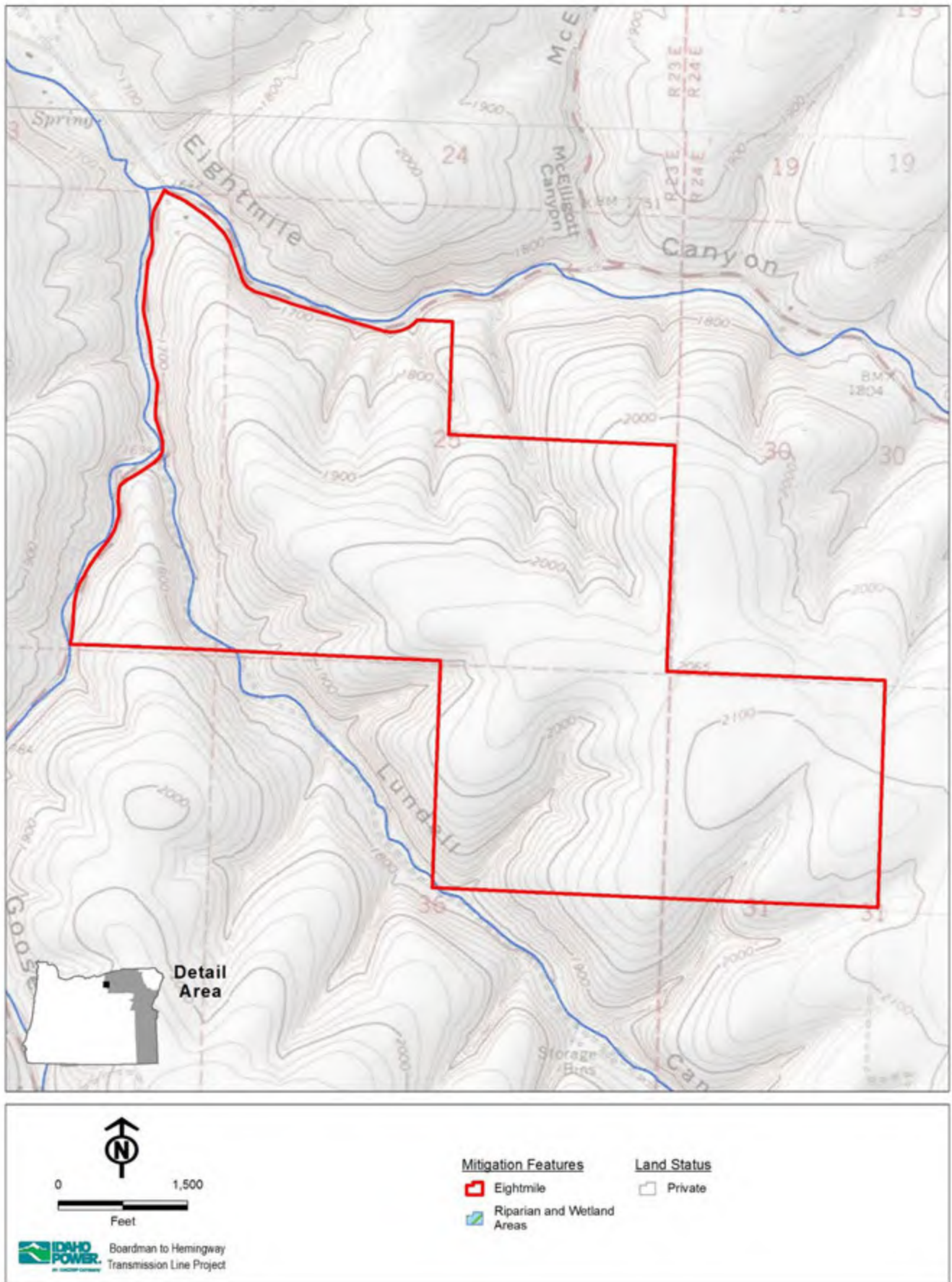


Figure 1. Eightmile Ownership and Water

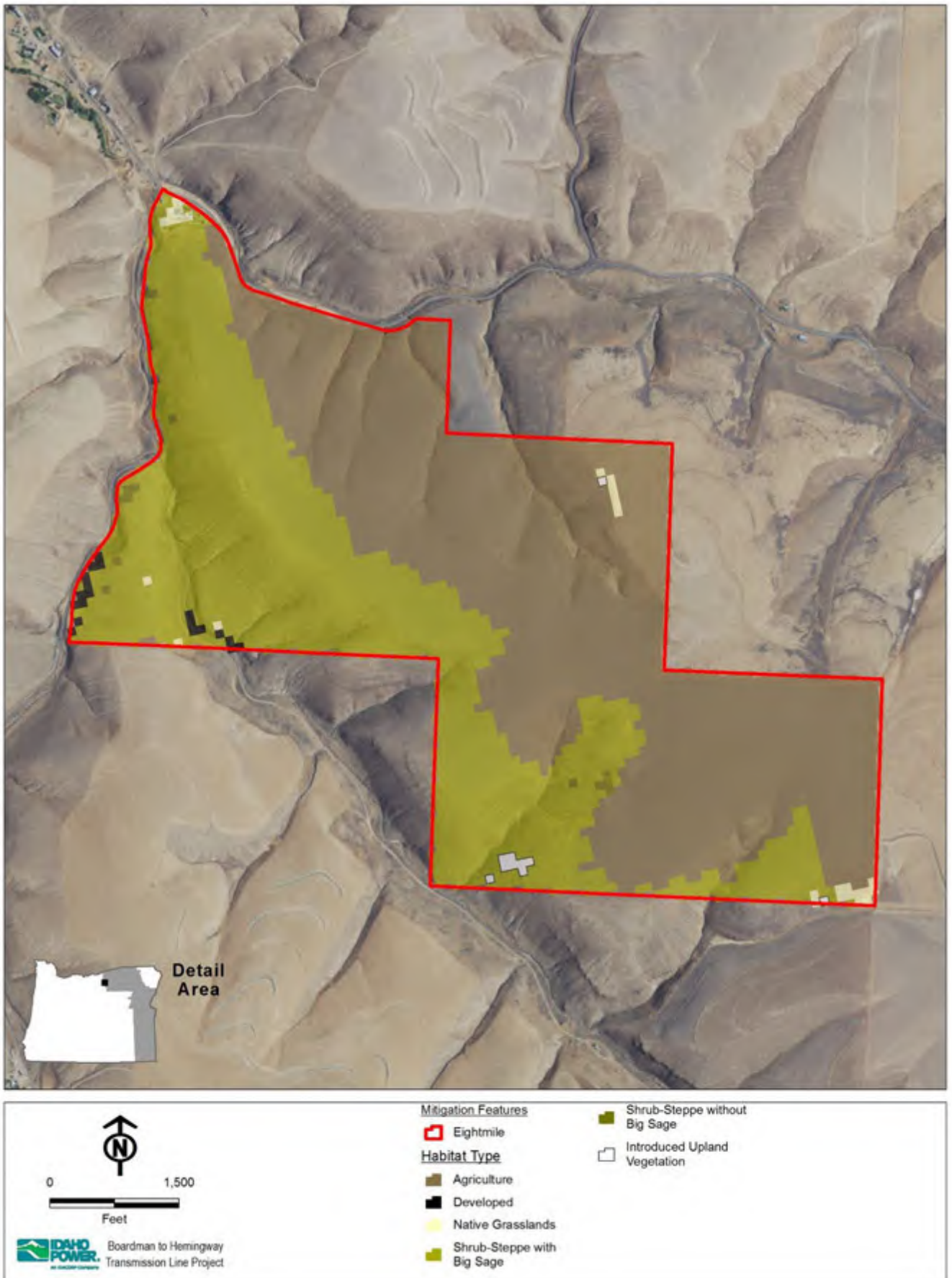


Figure 2. Eightmile Habitat Types



Figure 3. Eightmile Soil Types

Habitat Mitigation Areas with Mitigation Zone 2

- Antelope Mountain
- County Line
- Glass Hill
- High Valley

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Antelope Mountain

Parcel Name: (Figure 1) **Date of Assessment:** 8/11/2014
Landowner: _____ **Parcel Elevation (ft):** 3,690 – 5,128
Parcel Size in Acres: 1,623 **Within Mitigation Service Area?:** Yes

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker County, T7S R38E S4, 7 miles southwest of North Powder, OR.
T7S R38E Sections 3, 4, 5, 8, 9, 16, 17

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³
	Category 1, 3, 4, 5, & 6		0	0	
	Category 2⁴		1,623.4	100	-
	Ponderosa Pine	Forest/Woodland	448.3	27.6	RMEWR, MDWR, RMESR
	Ponderosa Pine	Forest/Woodland	57.5	3.5	RMEWR, MDWR
	Mixed Grand Fir / Douglas Fir	Forest/Woodland	388.7	23.9	RMEWR, MDWR, RMESR
	Mixed Grand Fir / Douglas Fir	Forest/Woodland	183.8	11.3	RMEWR, MDWR
	Shrub-Steppe without Big Sage	Shrub/Grassland	70.7	4.4	RMEWR, MDWR, RMESR
	Shrub-Steppe without Big Sage	Shrub/Grassland	144.6	8.9	RMEWR, MDWR
	Rocky Mountain Aspen	Forest/Woodland	58.6	3.6	RMEWR, MDWR, RMESR
	Rocky Mountain Aspen	Forest/Woodland	5.1	0.3	RMEWR, MDWR
	Western Juniper / Mountain Mahogany Woodland	Forest/Woodland	46.6	2.9	RMEWR, MDWR, RMESR
	Western Juniper / Mountain Mahogany Woodland	Forest/Woodland	12.3	0.8	RMEWR, MDWR
	Forested Wetland	Open Water/ Wetland	28.7	1.8	RMEWR, MDWR, RMESR
	Forested Wetland	Open Water/ Wetland	4.4	0.3	RMEWR, MDWR
	Subalpine/Montane Forest	Forest/Woodland	22.2	1.4	RMEWR, MDWR
	Shrub-Steppe with Big Sage	Shrub/Grassland	19.9	1.2	RMEWR, MDWR, RMESR
	Shrub-Steppe with Big Sage	Shrub/Grassland	90.2	5.6	RMEWR, MDWR
	Lodgepole Pine	Forest/Woodland	7.6	0.5	RMEWR, MDWR, RMESR
	Lodgepole Pine	Forest/Woodland	2.9	2.9	RMEWR, MDWR
	Mixed Tamarack	Forest/Woodland	6.2	0.4	RMEWR, MDWR, RMESR
	Scrub-Shrub Wetland	Open Water/ Wetland	4.2	0.3	RMEWR, MDWR, RMESR
	Remaining	-			
¹ USGS Gap Analysis Project (GAP) GIS data. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1). ² Represents the habitat category based on overlap with wildlife habitat layers. ³ MDWR = ODFW mule deer winter range; RMEWR = ODFW Rocky Mountain elk winter range; RMESR = Rocky Mountain Elk Foundation Rocky Mountain elk summer range. ⁴ Total acres of habitat type will not match actual parcel size due to resolution of the GAP raster dataset.					

Soil types The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the

following soils were identified on the property (**Figure 3**):

Bouldrock-Kilmerque complex (25 acres). Bouldrock soils consist of moderately deep, well drained soils found on south-facing side slopes of mountainous areas at elevations ranging from 4,000 to 6,200 feet. Bouldrock soils are used for rangeland. The native vegetation is bluebunch wheatgrass, mountain big sagebrush, arrowleaf balsamroot and gray rabbitbrush. Kilmerque soils consist of moderately deep, well drained soils on gently rolling bench tops to moderately steep south aspect side slopes in forested mountains at elevations ranging from 3,500 to 6,000 feet. Kilmerque soils are used for woodland. The native vegetation is ponderosa pine, Douglas fir and pinegrass.

Brownlee-Shangland loams (0.2). Brownlee soils consist of deep and very deep, well drained soils that are found on nearly level to steep inclines on hill summits, backslopes and footslopes, and fan remnants at elevations of 2,500 to 5,800 feet. Brownlee soils are used mainly for rangeland and wildlife habitat. Native vegetation is bluebunch wheatgrass, Idaho fescue, xeric big sagebrush and antelope bitterbrush. Some areas are used for irrigated or nonirrigated cropland (small grains) and hayland/pasture. Shangland soils consist of moderately deep, well drained soils on hills with slopes of 2 to 35 percent and elevation ranging from 3,600 to 4,000 feet. Shangland soils are used mainly for rangeland. Some small areas are used for nonirrigated small grain, hay and pasture. The native vegetation is mainly mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, needlegrass, buckwheat, antelope bitterbrush, and squaw apple.

Crackler-Rouen gravelly silt loams (275). Crackler soils consist of deep, well drained soils found on north-facing side slopes of forested mountains at elevations ranging from 3,800 to 6,200 feet. Crackler soils are used for woodland, watershed and wildlife habitat. The native vegetation is Douglas fir, ponderosa pine, grand fir and western larch with an understory of pinegrass, elk sedge, huckleberry and snowberry. Rouen soils consist of moderately deep, well drained soils on north side slopes of forested areas at elevations of 3,800 to 6,200 feet. Rouen soils are used mainly for timber production. The vegetation is mainly Douglas fir, grand fir, western larch, minor amounts of ponderosa pine and lodgepole pine, common snowberry, princes pine, low Oregon grape, myrtle pachystima, elk sedge, pinegrass, big huckleberry, western rattlesnake plantain, twinflower, and heartleaf arnica.

Dogtown complex (340). Dogtown soils consist of deep and very deep, well drained soils on moderately steep and steep metastable and active north-facing side slopes of forested mountains at elevations ranging from 3,800 to 6,200 feet. Dogtown soils are used for woodland, watershed and wildlife habitat. The native vegetation is Douglas fir, grand fir, ponderosa pine and western larch with an understory of pinegrass, elk sedge, huckleberry and snowberry.

Greenscombe loam (129). Greenscombe soils consist of moderately deep, well drained soils on low hills at elevations 3,200 to 3,800 feet. Greenscombe soils are Rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, and big sagebrush.

Hibbard silt loam (117). Hibbard soils consist of moderately deep to a duripan, well drained soils found on fan terraces at elevations of 3,000 to 3,700 feet. Hibbard soils are used for rangeland. The native vegetation is bluebunch wheatgrass, Idaho fescue and big sagebrush.

Soil types (cont.)

Highhorn-Huntrock very gravelly silt loams (282). Highhorn soils consist of deep, well drained soils on moderately steep to steep south-facing side slopes of mountains at elevations from 3,800 to 7,200 feet. Highhorn soils are used for timber production, watershed and wildlife habitat. The native vegetation is ponderosa pine, Douglas fir

	<p>and grand fir with an understory of pinegrass and elk sedge. Huntrock soils consist of moderately deep, well drained soils on moderately steep to steep south side slopes of mountains at elevations from 3,800 to 7,200 feet. Huntrock soils are used for woodland, watershed and wildlife habitat. The native vegetation is ponderosa pine, Douglas fir and grand fir with an understory of pinegrass and elk sedge.</p> <p><i>Kilmerque loam (272)</i>. Kilmerque soils consist of moderately deep, well drained soils on gently rolling bench tops to moderately steep south aspect side slopes in forested mountains at elevations ranging from 3,500 to 6,000 feet. Kilmerque soils are used for woodland. The native vegetation is ponderosa pine, Douglas fir and pinegrass.</p> <p><i>Ladd loam (24)</i>. Ladd soils consist of deep, well drained soils on alluvial fans, terraces, and colluvial footslopes at elevations ranging from 2,700 to 5,050 feet. Ladd soils are mostly used in irrigated crops of alfalfa, grass and small grain or dryland pasture and hay or range. Vegetation is mainly Idaho fescue, associated forbs, a few ponderosa pine or western juniper, big sagebrush, rabbitbrush, bluebunch wheatgrass, and cheatgrass.</p> <p><i>Tolo-Dogtown complex (159)</i>. Tolo soils consist of deep and very deep, well drained soils found on nearly level upland plateaus and steep north and east-facing mountain side slopes at elevations of 2,800 to 5,400 feet. Tolo soils used for timber production and livestock grazing with small areas at lower elevations cleared for cultivation. Principal trees include Douglas fir, grand fir, larch, ponderosa pine, and lodgepole pine. Dogtown soils consist of deep and very deep, well drained soils on moderately steep and steep metastable and active north-facing side slopes of forested mountains at elevations ranging from 3,800 to 6,200 feet. Dogtown soils are used for woodland, watershed and wildlife habitat. The native vegetation is Douglas fir, grand fir, ponderosa pine and western larch with an understory of pinegrass, elk sedge, huckleberry and snowberry.</p>
<p>Hydrologic Features Present (SteamNet, NWI, NHD)</p>	<p>A couple of intermittent drainages are identified through NHD, as well as a couple of canal/ditch features. According to the real estate listing, numerous springs occur on site. The North Powder River runs within 0.10 mile along the western border of the parcel.</p>
<p>Adjacent land ownership, use, and condition</p>	<p>One small BLM parcel borders the property; otherwise the entire property is bordered by private landowners. Immediate adjacent land use includes some pasture/ag lands, otherwise a majority appears to be rangeland and wildlife. Large tracts of USFS occur approximately 1.5 miles to the west and the ODFW North Powder Elkhorn Wildlife Management Area is within 0.5 mile, located to the northwest of the parcel. The Rocky Ford campground is located along the North Powder River within 0.25 mile to the west of the parcel.</p>
<p>Infrastructure Density within or Near the Parcel (Qualitative Description)</p>	<p>I-84 is 6.5 miles to the east of the property. Anthony Lakes Hwy is just outside of the parcel to the east, and a few rural homes and rural access roads border the parcel. The parcel itself contains a couple of dirt/gravel access roads. Infrastructure is nearly absent within the parcel and is at minimal densities in the immediate vicinity.</p>
<p>Summary</p>	<p>Parcel is dominated by conifer forest type habitat with secondary habitat of shrub-steppe habitat both with and without big sage species. USFS land and an ODFW WMA are in close proximity; however, there are no shared borders with those lands.</p> <p>The parcel overlaps with the Elkhorn Mountains area of the TNC Portfolio. The parcel</p>

also overlaps an ODFW Conservation Opportunity Area within the Blue Mountains ecoregion, the Baker Valley. Most of the recommended conservation actions in this area include watershed, riparian, and wetland improvements, along with the protection or enhancement of habitat for ESA listed plants (Howell's spectacular thelopody, Oregon semaphore grass).

The parcel is completely with ODFW elk and mule deer winter range and is also identified as summer elk range. The parcel is within an ODFW linkage buffer for elk, which were identified to show areas important to animal movement that cross paved roads.

**Pass/Fail Desktop
Assessment?**

Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 elk and mule deer winter habitat within the forest/woodland general vegetation group. This mitigation site could also help meet the Project need for elk summer habitat. It contains important habitat features with opportunities to provide durable ecological uplift through implementation of standard mitigation actions. Opportunities to improve the watershed would be in line with the recommendations of the Oregon Conservation Strategy for the Baker Valley Conservation Opportunity Area.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to elk and mule deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – the focus would be planting forage shrubs and implementing forest management practices that would create structural diversity and enhance desirable habitat conditions.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.
Monitoring	<p>A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).</p>

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by WAGS or any other wildlife species.

Financial Outline

Estimated Budget for the Antelope Mountain Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition (from listing)	\$3,000,000	1	-	\$3,000,000
Recurring Costs (Annually)				
O&M ¹	\$53.75	1,623	50	\$4,361,813
Total		-		\$7,361,813 (\$4,536/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The cost per acre identified in that study for the Elkhorn Wildlife Management Area (which this mitigation site will be modeled after) was \$43 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

² Cost per acre here includes cost of acquisition/easement and long-term O&M for 50 years.

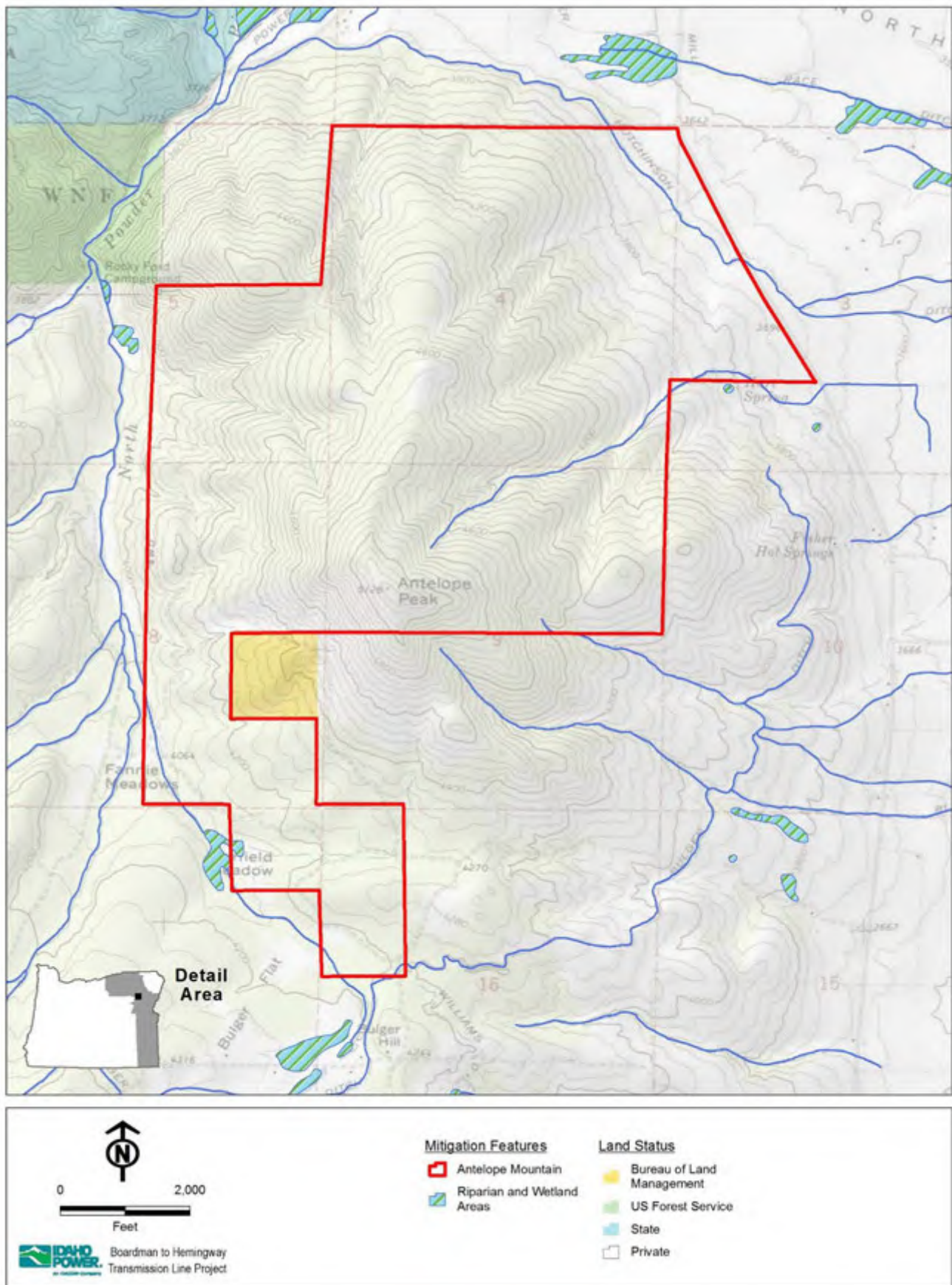


Figure 1. Antelope Mountain Ownership and Water

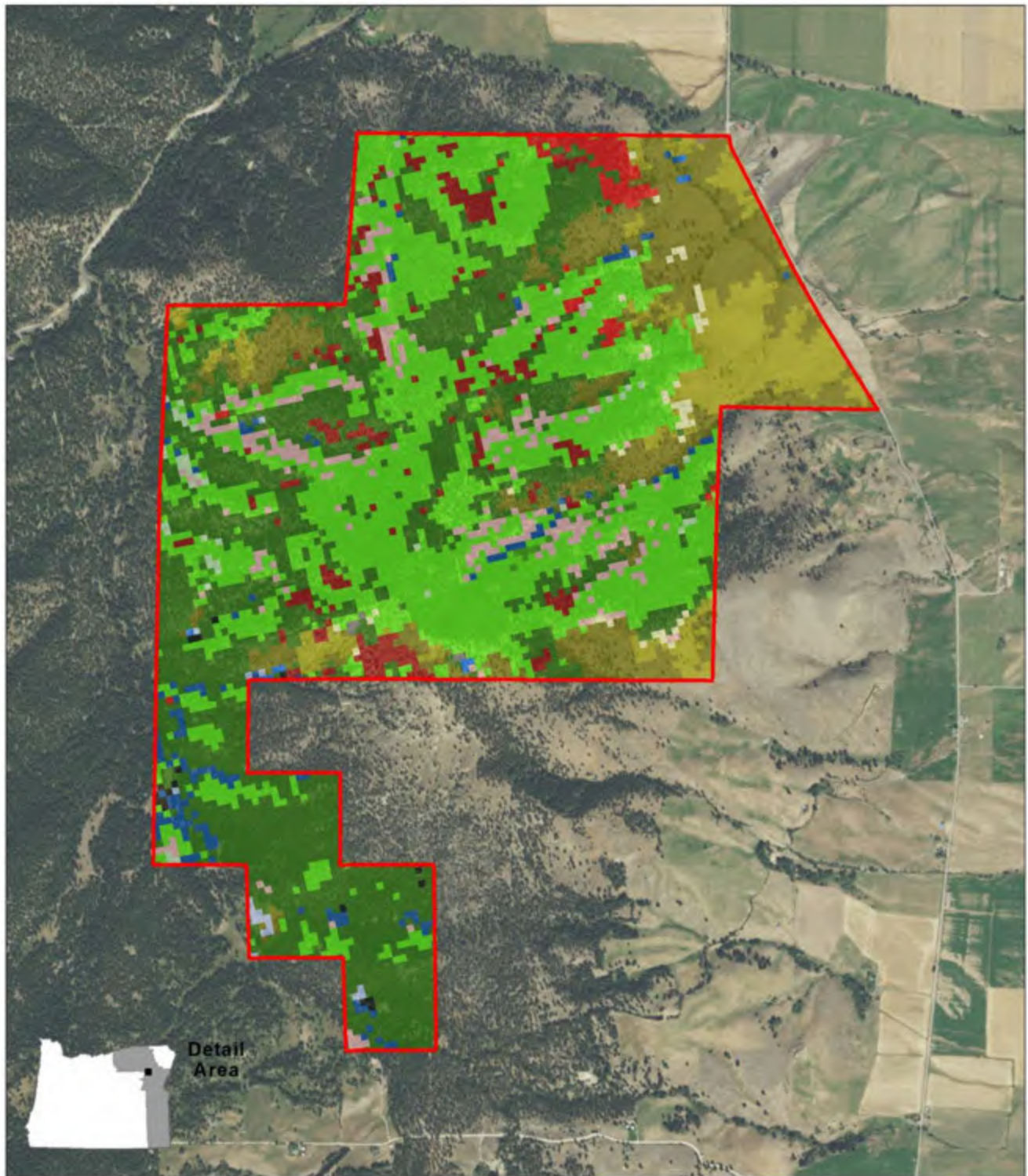


Figure 2. Antelope Mountain Habitat Types

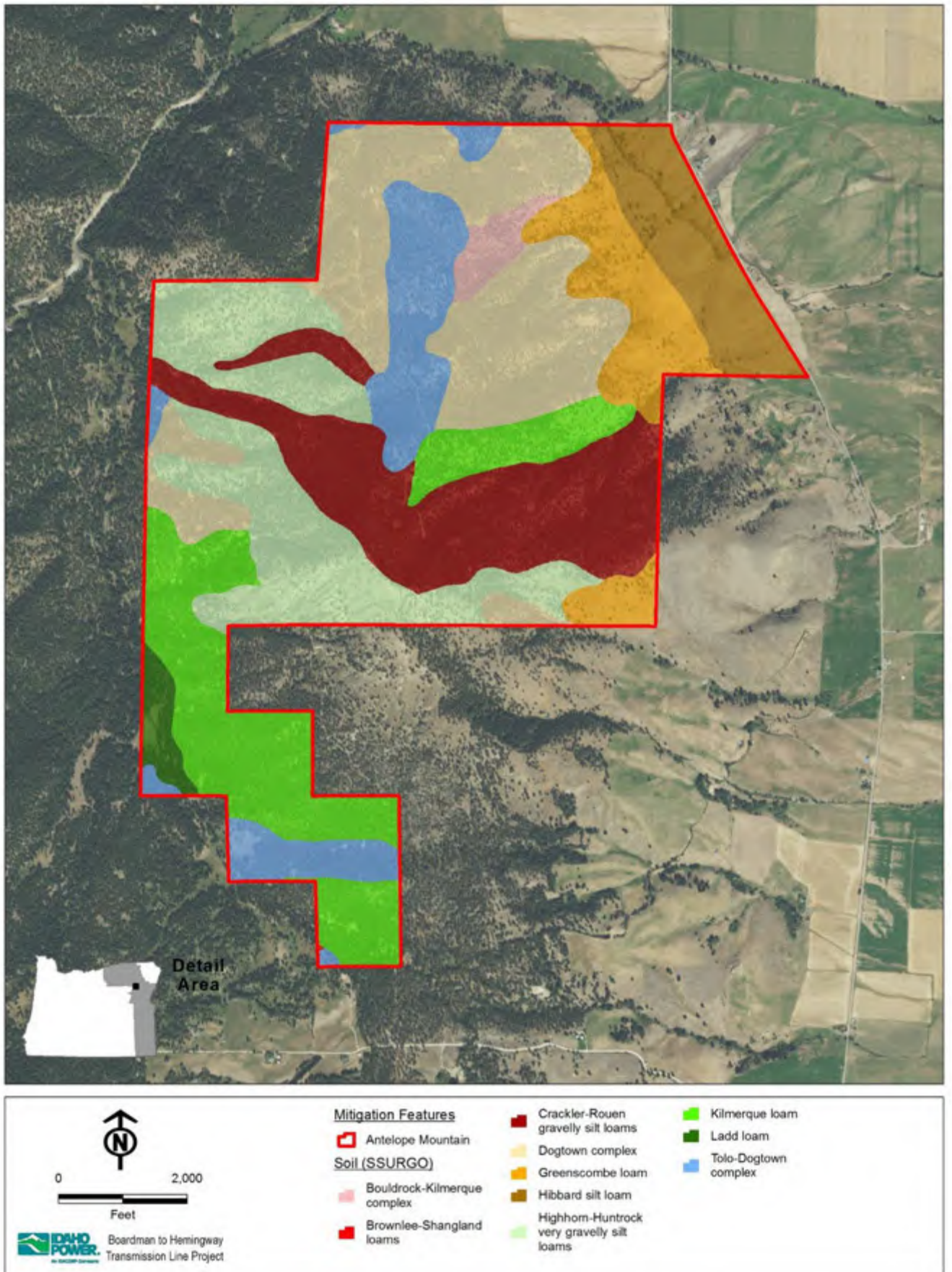


Figure 3. Antelope Mountain Soil Types

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: County Line (Figure 1) **Date of Assessment:** 10/15/2014
Landowner: _____ **Parcel Elevation (ft):** 4,000 – 4,800
Parcel Size in Acres: 792 **Within Mitigation Service Area?:** Yes

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker and Union County, 9 miles west of North Powder.
T6S R38E Sections 7, 18, 19.

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³	
	Category 1		-	-	-	
	Category 2		775.5	100	-	
	Mixed Grand Fir / Douglas Fir	Forest/Woodland	305.4	39.4	RMEWR, RMESR, MDWR, MDSR	
	Ponderosa Pine	Forest/Woodland	244.7	31.6		
	Rocky Mountain Aspen	Forest/Woodland	97.8	12.6		
	Shrub-Steppe without Big Sage	Shrub/Grass	31.3	4.0		
	Lodgepole Pine	Forest/Woodland	30.7	4.0		
	Forested Wetland	Wetland	24.9	3.2		
	Mixed Tamarack	Forest/Woodland	13.1	1.7		
	Western Juniper / Mountain Mahogany Woodland	Forest/Woodland	11.3	1.5		
	Shrub-Steppe with Big Sage	Shrub/Grass	6.0	0.8		
	Subalpine / Montane Forest	Forest/Woodland	4.0	0.5		
	Native Grasslands	Shrub/Grass	2.7	0.3		
	Remaining (Figure 2)	-	3.6	0.5		
	Category 3		-	-		-
	Category 4		-	-		-
	Category 5		-	-	-	
	Category 6		-	-	-	
	Total		775.5	100	-	
<p>¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1).</p> <p>² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.</p> <p>³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range.</p> <p>⁴ Total acres of habitat type may not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary.</p>						

Soil types The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the

following soils were identified on the property (**Figure 3**):

Hudspeth very stony clay loam (9 acres). Hudspeth soils consist of moderately deep, well drained soils found on side slopes of forested areas at elevations ranging from 4,000 to 5,700 feet. Hudspeth soils are used mainly for rangeland and wildlife habitat. The vegetation is mainly curlleaf mountainmahogany, western juniper, scattered ponderosa pine, mountain big sagebrush, bitterbrush, squaw apple, wax currant, bluebunch wheatgrass, Sandberg bluegrass, along with minor amounts of elk sedge, pinegrass, Idaho fescue and arrowleaf balsamroot.

Klicker-Anatone complex (45 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose. Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curlleaf mountain mahogany and stiff sagebrush.

Klicker stony silt loam (269 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose.

Lookingglass silt loam (4 acres) and *Lookingglass very stony silt loam (2 acres)*. Lookingglass soils consist of very deep, moderately well drained soils found on uplands at elevations of 1,800 to 4,000 feet. Lookingglass soils are used mainly for timber production. Cleared areas are cropped to small grains, hay, pasture, and peas. The native vegetation is ponderosa pine and Douglas fir with an understory of spirea, oceanspray, Idaho fescue, pinegrass and elksedge.

Tolo silt loam (47 acres). Top soils consist of deep and very deep, well drained soils found on mountains at elevations ranging from 3,000 to 5,400 feet. Top soils are used mainly for timber production and cropland. Most areas with slopes of less than 15 percent have been cleared and are used for production for dryland grain and hay. Native vegetation is ponderosa pine, Douglas fir, white fir, pinegrass and elksedge. This series is in what is called the Douglas-fir forest plant community.

Top-McGarr complex (238 acres). Top soils consist of deep and very deep, well drained soils found on mountains at elevations ranging from 3,000 to 5,400 feet. Top soils are used mainly for timber production and cropland. Most areas with slopes of less than 15 percent have been cleared and are used for production for dryland grain and hay. Native vegetation is ponderosa pine, Douglas fir, white fir, pinegrass and elksedge. This series is in what is called the Douglas-fir forest plant community. McGarr soils consist of moderately deep, well drained soils found on mountains and hills at elevations of 3,000 to 5,800 feet. McGarr soils are used for timber production with some grazing. Vegetation is mainly Douglas fir and ponderosa pine with an understory of pinegrass and elk sedge.

Top silt loam (160 acres). Top soils consist of deep and very deep, well drained soils found on mountains at elevations ranging from 3,000 to 5,400 feet. Top soils are used mainly for timber production and cropland. Most areas with slopes of less than 15 percent have been cleared and are used for production for dryland grain and hay. Native vegetation is ponderosa pine, Douglas fir, white fir, pinegrass and elksedge. This series is in what is called the Douglas-fir forest plant community.

Hydrologic Features Present (SteamNet, NWI, NHD)	Property contains one intermittent stream, one perennial stream, and two canals/ditches (NHD). The perennial stream is Anthony Creek, which is designated critical habitat for bull trout. NWI identifies an emergent wetland not associated with the NHD streams.
Adjacent land ownership, use, and condition	Property is located between USFS land and the ODFW Elkhorn WMA. Some private parcels are located around the northern portion of the property. The property has been logged recently, as well as adjacent private parcels. Land use in the area is timber production, wildlife conservation, and rangelands.
Infrastructure Density within or Near the Parcel (Qualitative Description)	Property contains canals/ditches, logging roads throughout, and a small shack, otherwise devoid of development. Some WMA buildings, a gravel pit, Pilcher Creek reservoir, and well-maintained Tucker Flat Rd are within 0.5 mile of the property.
Summary	This property borders another property considered during desktop assessments (Cantrell). Property is within The Nature Conservancy's Elkhorn Mountains priority conservation area. It is immediately adjacent to ODFW's Elkhorn WMA. Contains critical habitat for bull trout and is completely within Rocky Mountain elk winter and summer range and mule deer winter and summer range. Property was recommended by ODFW.
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 elk and mule deer winter range within the forest/woodland general vegetation type. This mitigation site could help meet the Project need for elk and mule deer summer habitat as well. It contains important habitat features with opportunities to provide durable ecological uplift through implementation of standard mitigation actions. Opportunities to improve the watershed would benefit bull trout and their designated critical habitat.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to elk and mule deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – historic grazing practices at this property are unknown. However, the objective would be to avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – forest management practices would be implemented to create structural diversity and enhance desirable habitat conditions.• <i>Road closure</i> – restrict motor vehicle use to just those roads that are necessary; seasonally close access based on use by elk and mule deer.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.
Monitoring	A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by wildlife species.

Financial Outline

Estimated Budget for the County Line Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition (from 2009 listing attached to ODFW nomination form)	\$1,200,000	1		\$1,200,000
50-year Operation and Management Costs				
O&M ¹	\$53.75	792	50	\$2,128,500
Total		-		\$3,328,500 (\$4,202/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The cost per acre identified in that study for the Elkhorn Wildlife Management Area (which this mitigation site will be modeled after) was \$43 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

² Cost per acre here includes cost of acquisition/easement and long-term O&M for 50 years.

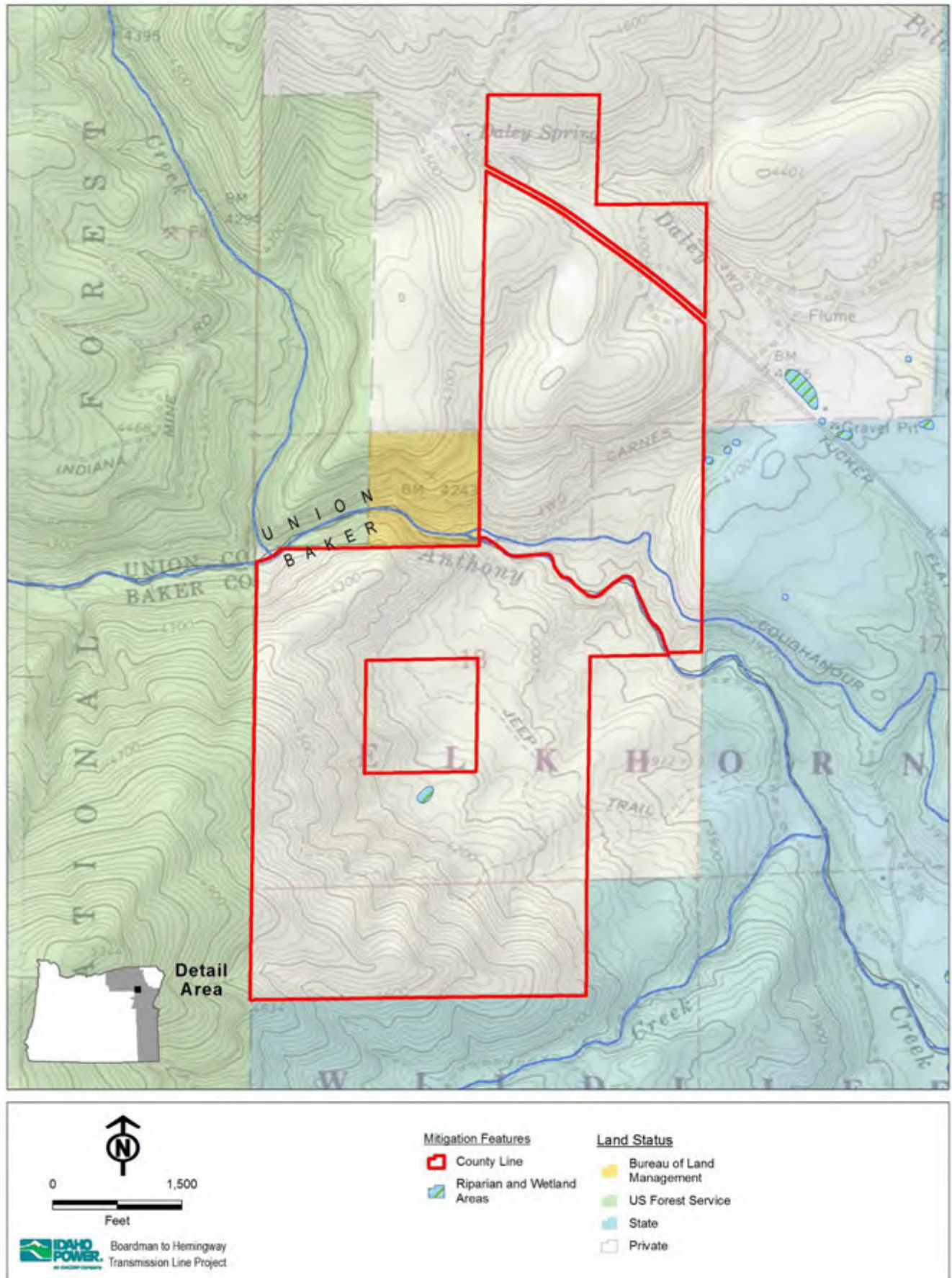


Figure 1. County Line Ownership and Water

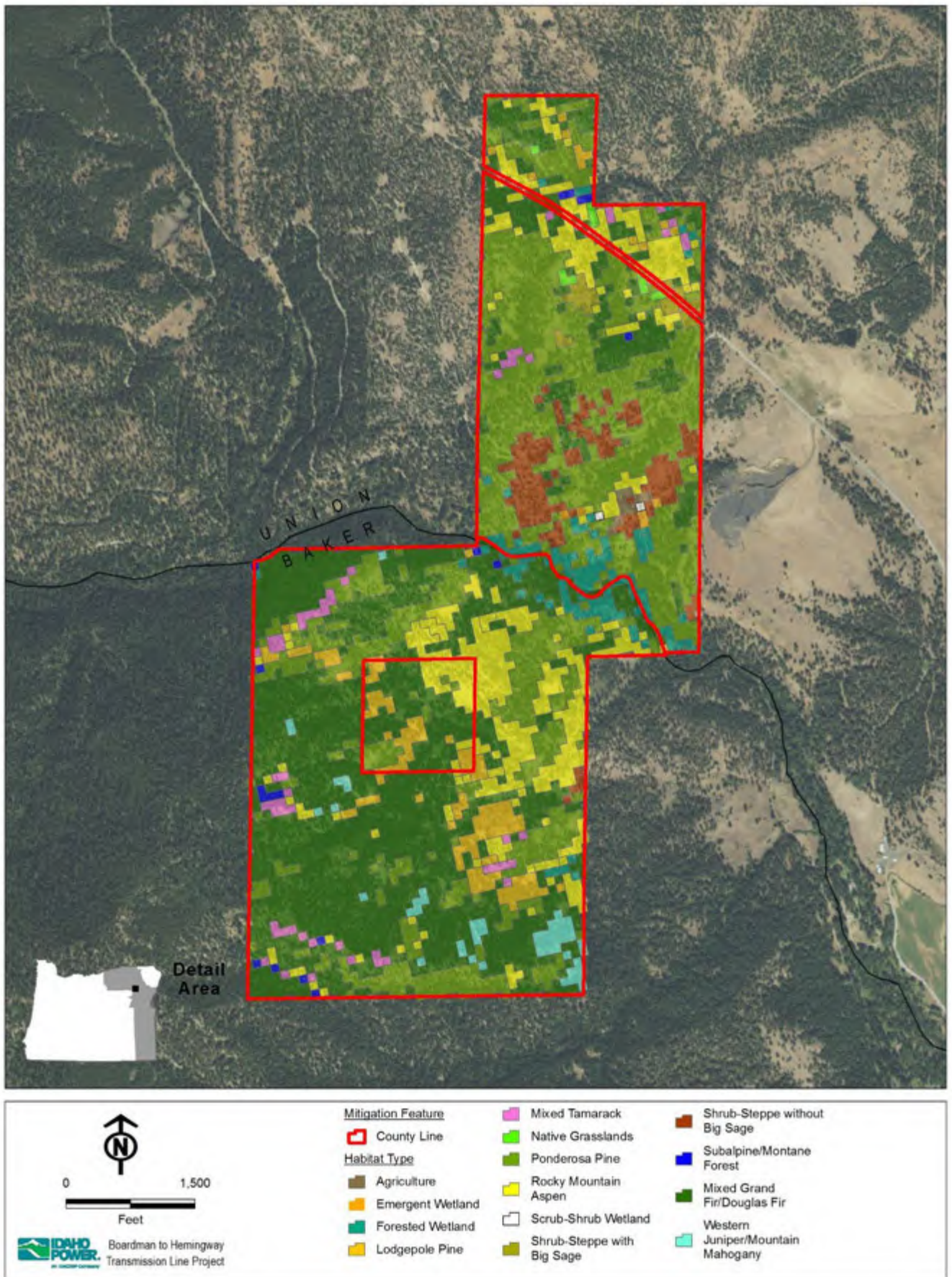


Figure 2. County Line Habitat Types

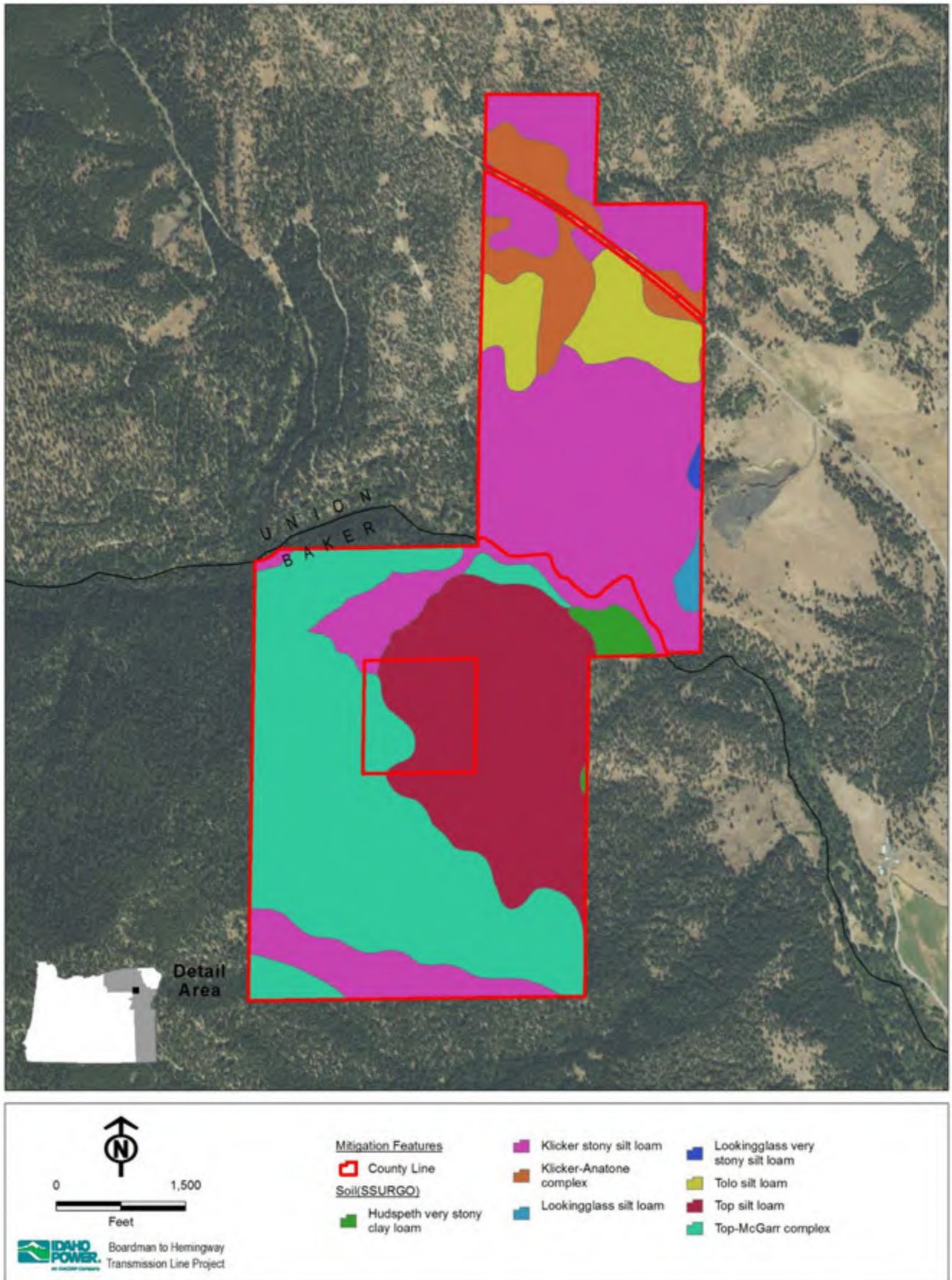


Figure 3. County Line Soil Types

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: High Valley (Figure 1) Date of Assessment: 10/21/2015
 Landowner: _____ Parcel Elevation (ft): _____
 Within Mitigation _____
 Parcel Size in Acres: Approx. 14,886 acres Service Area?: Yes

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Union County, just west of I-84 at Ladd Canyon.
 T4S R38E Sections 4, 5, 8, 9, 10, 14, 15, 16, 17, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36
 T5S R38E Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 30, 34, 35

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Total	Wildlife Habitat ³
	Category 1		0	0	-
	Category 2		7,455	50.1	-
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	3,158	21.2	RMEWR, RMESR, MDSR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	58	0.4	RMEWR, MDWR, MDSR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	111	0.7	RMEWR, MDWR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	474	3.2	RMEWR, MDSR
	Ponderosa Pine	Forest/Woodland	671	4.5	RMEWR, RMESR, MDSR
	Ponderosa Pine	Forest/Woodland	256	1.7	RMEWR, MDWR, MDSR
	Ponderosa Pine	Forest/Woodland	119	0.8	RMEWR, MDWR
	Ponderosa Pine	Forest/Woodland	823	5.5	RMEWR, MDSR
	Subalpine/Montane Forest	Forest/Woodland	445	3.0	RMEWR, RMESR, MDSR
	Subalpine/Montane Forest	Forest/Woodland	14	0.1	RMEWR, MDSR
	Mixed Tamarack	Forest/Woodland	424	2.9	RMEWR, RMESR, MDSR
	Mixed Tamarack	Forest/Woodland	8	0.1	RMEWR, MDWR
	Mixed Tamarack	Forest/Woodland	60	0.4	RMEWR, MDSR
	Forested Wetland	Wetland	151	1.0	RMEWR, RMESR, MDSR
	Forested Wetland	Wetland	21	0.1	RMEWR, MDWR, MDSR
	Forested Wetland	Wetland	9	0.1	RMEWR, MDWR
	Forested Wetland	Wetland	87	0.6	RMEWR, MDSR
	Lodgepole Pine	Forest/Woodland	175	1.2	RMEWR, RMESR, MDSR
	Lodgepole Pine	Forest/Woodland	10	0.1	RMEWR, MDSR
	Native Grasslands	Shrub/Grass	34	0.2	RMEWR, RMESR, MDSR
	Native Grasslands	Shrub/Grass	45	0.3	RMEWR, MDWR
	Native Grasslands	Shrub/Grass	9	0.1	RMEWR, MDSR
	Rocky Mountain Aspen	Forest/Woodland	47	0.3	RMEWR, RMESR, MDSR
	Rocky Mountain Aspen	Forest/Woodland	68	0.5	RMEWR, MDWR, MDSR
	Rocky Mountain Aspen	Forest/Woodland	13	0.1	RMEWR, MDSR
¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1--1 of Exhibit P1). ² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat. ³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range. ⁴ Total acres of habitat type will not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the dataset were not simplified or smoothed to match the exact shape of the parcel boundary.					

**Vegetation
Cover Classes
cont.**

HMP Habitat Category² and Type	HMP General Vegetation Type	Acres	% of Total	Wildlife Habitat³
Category 2 cont				
Mixed Tamarack	Forest/Woodland	338	2.4	RMEWR, RMESR, MDSR
Mixed Tamarack	Forest/Woodland	233	1.7	RMEWR, RMESR, MDWR, MDSR
Mixed Tamarack	Forest/Woodland	12	0.1	RMEWR, MDWR, MDSR
Subalpine/Montane Forest	Forest/Woodland	502	3.6	RMEWR, RMESR, MDSR
Subalpine/Montane Forest	Forest/Woodland	240	1.7	RMEWR, RMESR, MDWR, MDSR
Western Juniper/Mountain Mahogany Woodland	Forest/Woodland	207	1.5	RMEWR, RMESR, MDSR
Western Juniper/Mountain Mahogany Woodland	Forest/Woodland	175	1.3	RMEWR, RMESR, MDWR, MDSR
Forested Wetland	Wetland	81	0.6	RMEWR, RMESR, MDSR
Forested Wetland	Wetland	125	0.9	RMEWR, RMESR, MDWR, MDSR
Native Grasslands	Shrub/Grass	17	0.1	RMEWR, RMESR, MDSR
Native Grasslands	Shrub/Grass	63	0.5	RMEWR, RMESR, MDWR, MDSR
Native Grasslands	Shrub/Grass	6	0.0	RMEWR, MDWR, MDSR
Lodgepole Pine	Forest/Woodland	151	1.1	RMEWR, RMESR, MDSR
Lodgepole Pine	Forest/Woodland	59	0.4	RMEWR, RMESR, MDWR, MDSR
Rocky Mountain Aspen	Forest/Woodland	22	0.2	RMEWR, RMESR, MDSR
Rocky Mountain Aspen	Forest/Woodland	26	0.2	RMEWR, RMESR, MDWR, MDSR
Emergent Wetland	Wetland	5	0.0	RMEWR, RMESR, MDWR, MDSR
Remaining	-	63	0.5	-
Category 3		3,913	28	-
Mixed Grand Fir/Douglas Fir	Forest/Woodland	1,826	13.1	RMESR, MDSR
Subalpine/Montane Forest	Forest/Woodland	658	4.7	RMESR, MDSR
Ponderosa Pine	Forest/Woodland	467	3.3	RMESR, MDSR
Mixed Tamarack	Forest/Woodland	364	2.6	RMESR, MDSR
Lodgepole Pine	Forest/Woodland	266	1.9	RMESR, MDSR
Western Juniper/Mountain Mahogany Woodland	Forest/Woodland	119	0.9	RMESR, MDSR
Forested Wetland	Wetland	70	0.5	RMESR, MDSR
Shrub-Steppe without Big Sage	Shrub/Grass	51	0.4	RMESR, MDSR
Rocky Mountain Aspen	Forest/Woodland	34	0.2	RMESR, MDSR
Shrub-Steppe with Big Sage	Shrub/Grass	27	0.2	RMESR, MDSR
Native Grasslands	Shrub/Grass	18	0.1	RMESR, MDSR
Emergent Wetland	Wetland	10	0.1	RMESR, MDSR
Remaining	-	3	0.0	-
Total		13,952	100	-
¹ USGS Regional Gap Analysis Project (GAP) GIS data. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1--1 of Exhibit P1). ² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat. ³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range. ⁴ Total acres of habitat type will not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the dataset were not simplified or smoothed to match the exact shape of the parcel boundary.				

Soil Types

The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (**Figure 3**):

Anatone-Bocker complex (34 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush. Bocker soils consist of very shallow, well drained soils found on hills, plateaus and mountains at elevations of 2,800 to 6,600 feet. Bocker soils are used for livestock grazing and recreation. The native vegetation is buckwheat, Sandberg bluegrass, Idaho fescue, bluebunch wheatgrass, bottlebrush squirreltail, stiff sagebrush and low sagebrush.

Anatone-Klicker complex (991 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush. Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose.

Anatone extremely stony loam (665 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush.

Cowsly silt loam (81 acres) and *Cowsly very stony silt loam (164 acres)*. Cowsly soils consist of deep or very deep, moderately well drained soils found on plateaus at elevations from 2800 to 5000 feet. Cowsly soils are used primarily for timber production. Other uses are dryland small grain, pasture, wildlife habitat and water supply. Native vegetation is ponderosa pine and Douglas fir with an understory of spirea, ocean spray, snowberry, Idaho fescue, pinegrass and elksedge.

Gwinly-Rockly (429 acres). The Gwinly soils consist of shallow, well drained soils found on hills, plateaus, structural benches, mountains, and canyons at elevations from 1,400 to 4,600 feet. Used for livestock grazing and wildlife habitat. Potential native vegetation is dominantly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass and low sagebrush. Rockly soils consist of shallow and very shallow, well drained soils found on mesas, ridges, plateaus, structural benches, canyon walls, and nearly level to very steep south and west slopes on uplands at elevations of 300 to 5,000 feet. Rockly soils are used for livestock grazing, wildlife habitat, and water supply purposes. Native vegetation is mostly stiff sagebrush, lomatium, bluebunch wheatgrass, and Sandberg bluegrass.

Gwinly very cobbly silt loam (202 acres). The Gwinly soils consist of shallow, well drained soils found on hills, plateaus, structural benches, mountains, and canyons at elevations from 1,400 to 4,600 feet. Used for livestock grazing and wildlife habitat. Potential native vegetation is dominantly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass and low sagebrush.

Kamela very stony silt loam (2,379 acres). Kamela soils consist of moderately deep, well drained soils found on ridgetops and side slopes of mountains at elevations of 3,000 to 6,200 feet. Kamela soils are used primarily for timber production. They are used also for wildlife habitat. Native vegetation dominantly is grand fir, Douglas fir,

ponderosa pine and some western larch. Understory vegetation is willow, oceanspray, rocky mountain maple, ninebark, false Solomons seal, snowberry, elk sedge, pinegrass, heartleaf arnica and princes pine.

Klicker-Anatone complex (1,447 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose. Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curlleaf mountain mahogany and stiff sagebrush.

Klicker stony silt loam (3,213 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose.

Loneridge stony silt loam (337 acres). Loneridge soils consist of very deep, well drained soils found on mountain side slopes, plateaus and benches at elevations of 2,400 to 5,400 feet. Loneridge soils are used for timber production, livestock grazing, recreation, wildlife habitat, and watershed. Native vegetation is mainly Douglas-fir, ponderosa pine, grand fir, and western larch, with an understory of pinegrass, elk sedge, Oregon-grape, ceanothus, creambush oceanspray, lupine, common snowberry and pinemat manzanita.

Lookingglass silt loam (108 acres) and *Lookingglass very stony silt loam (0.1 acres)*. Lookingglass soils consist of very deep, moderately well drained soils found on uplands at elevations of 1,800 to 4,000 feet. Lookingglass soils are used mainly for timber production. Cleared areas are cropped to small grains, hay, pasture, and peas. The native vegetation is ponderosa pine and Douglas fir with an understory of spirea, oceanspray, Idaho fescue, pinegrass and elksedge.

Olot silt loam (200 acres) and *Olot stony silt loam (2,001 acres)*. Olot soils consist of moderately deep, well drained soils found on plateaus, canyons, mountains and structural benches at elevations typically between 2,800 to 5,000 feet. Olot soils are used mainly for timber production. Also used for wildlife habitat. Vegetation is western larch, Douglas fir, willow, mountain alder, common snowberry, elk sedge, and pinegrass.

Pits, gravel (7 acres).

Ramo very stony silty clay loam (34 acres). Ramo soils consist of very deep, well drained soils found on concave foot slopes at elevations of 2,800 to 3,800 feet. Ramo soils are used for hay, pasture, small grain and livestock grazing. Potential native vegetation is mainly Idaho fescue and bluebunch wheatgrass.

Hydrologic Features Present
(SteamNet, NWI, NHD)

Four perennial streams flow through the property. This includes Ladd Creek and three of its tributaries. Seven intermittent streams also cross the project, all but one are tributaries to Ladd Creek. Wetland features include several emergent wetlands, springs, and at least two impoundments.

Adjacent land ownership, use, and condition	Most of adjacent landowners are private; however the property does border a large tract of USFS lands and smaller BLM holdings. The northern tip of the property borders the ODFW Ladd Marsh WMA.
Infrastructure Density within or Near the Parcel (Qualitative Description)	The property borders I84 through Ladd Canyon. The Quartz to La Grande 230kV transmission line is within 1 mile of a portion of the eastern border of the property. Access roads occur throughout the property. A different landowner maintains an inholding of approximately 1.7 acres that includes a residential structure/cabin and a couple of out buildings.
Summary	<p>The property is currently used for timber production. The property is within elk and mule deer winter range and borders some USFS and BLM lands as well as ODFW Ladd Marsh WMA. The recent (2015) removal and replacement of an impassable culvert at I84 in Ladd Canyon opens several miles of spawning and rearing habitat within the property to listed runs of Chinook salmon and steelhead.</p> <p>The proposed B2H Project (winter 2015) would cross the northern portion of the property (Figure 1).</p>
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 elk and mule deer winter range within the forest/woodland general vegetation type. This mitigation site could help meet the Project need for elk and mule deer summer habitat as well. The property has some shrub/grass general vegetation communities that could be considered for mitigation for impacts to Category 3 & 4 shrub-steppe and grassland habitat types. It contains important habitat features with opportunities to provide durable ecological uplift through implementation of standard mitigation actions. Opportunities to improve the watershed would benefit Chinook salmon and steelhead (no critical habitat on the property).</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to elk and mule deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – historic grazing practices at this property are unknown. However, the objective would be to avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – the focus would be planting forage shrubs and bunchgrasses; forest management practices would be implemented to create structural diversity and enhance desirable habitat conditions.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing, such as lay down fencing.
Monitoring	<p>A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).</p>

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by any wildlife species.

Financial Outline

Estimated Budget for the Glass Hill Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	?			?
Recurring Costs (Annually)				
O&M ¹	\$53.75	13,868	50	
Total		-		\$37,270,250 (\$/?/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The cost per acre identified in that study for the Elkhorn Wildlife Management Area (which this mitigation site will be modeled after) was \$43 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

² Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

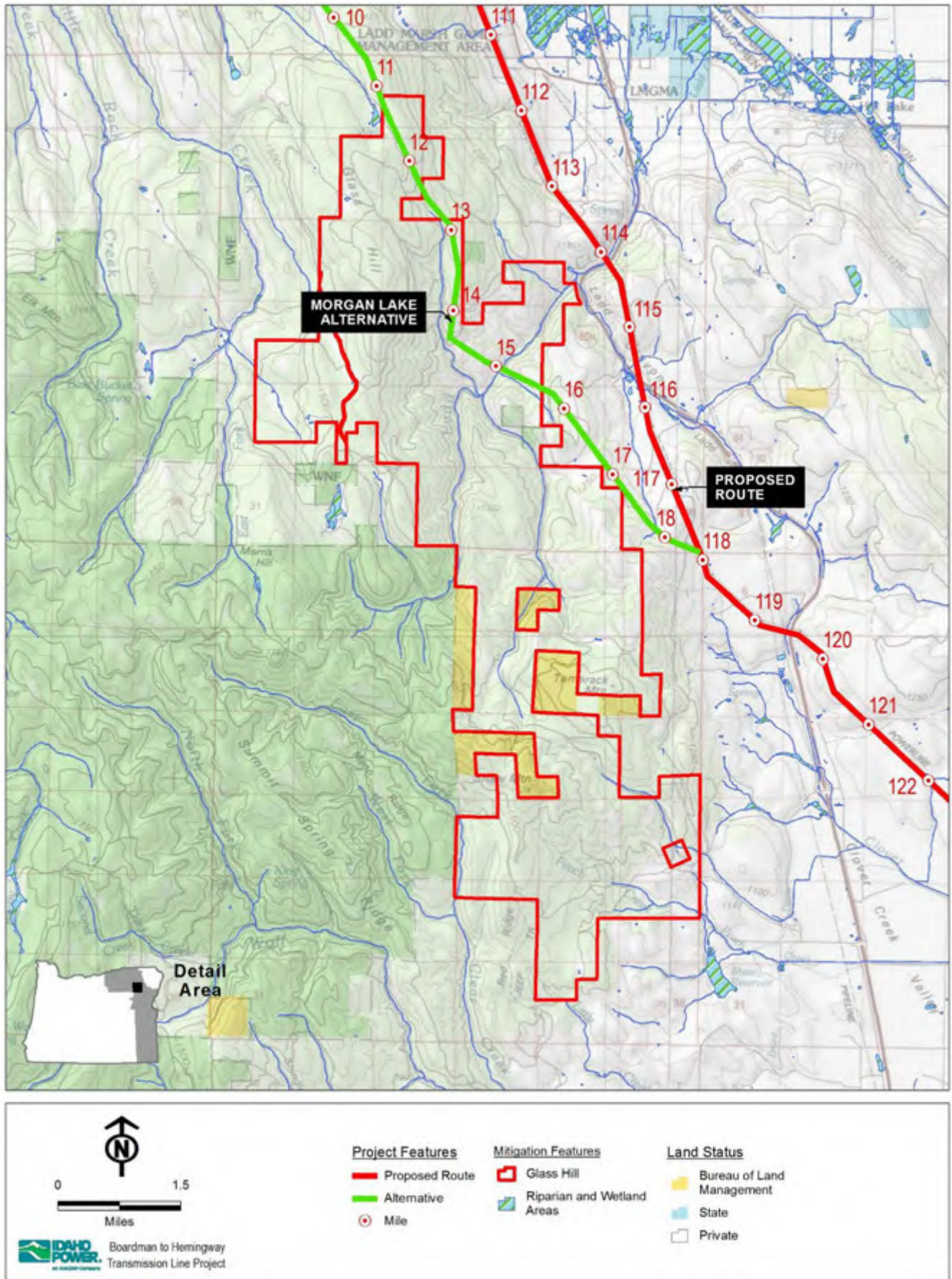


Figure 1. Glass Hill Ownership and Water

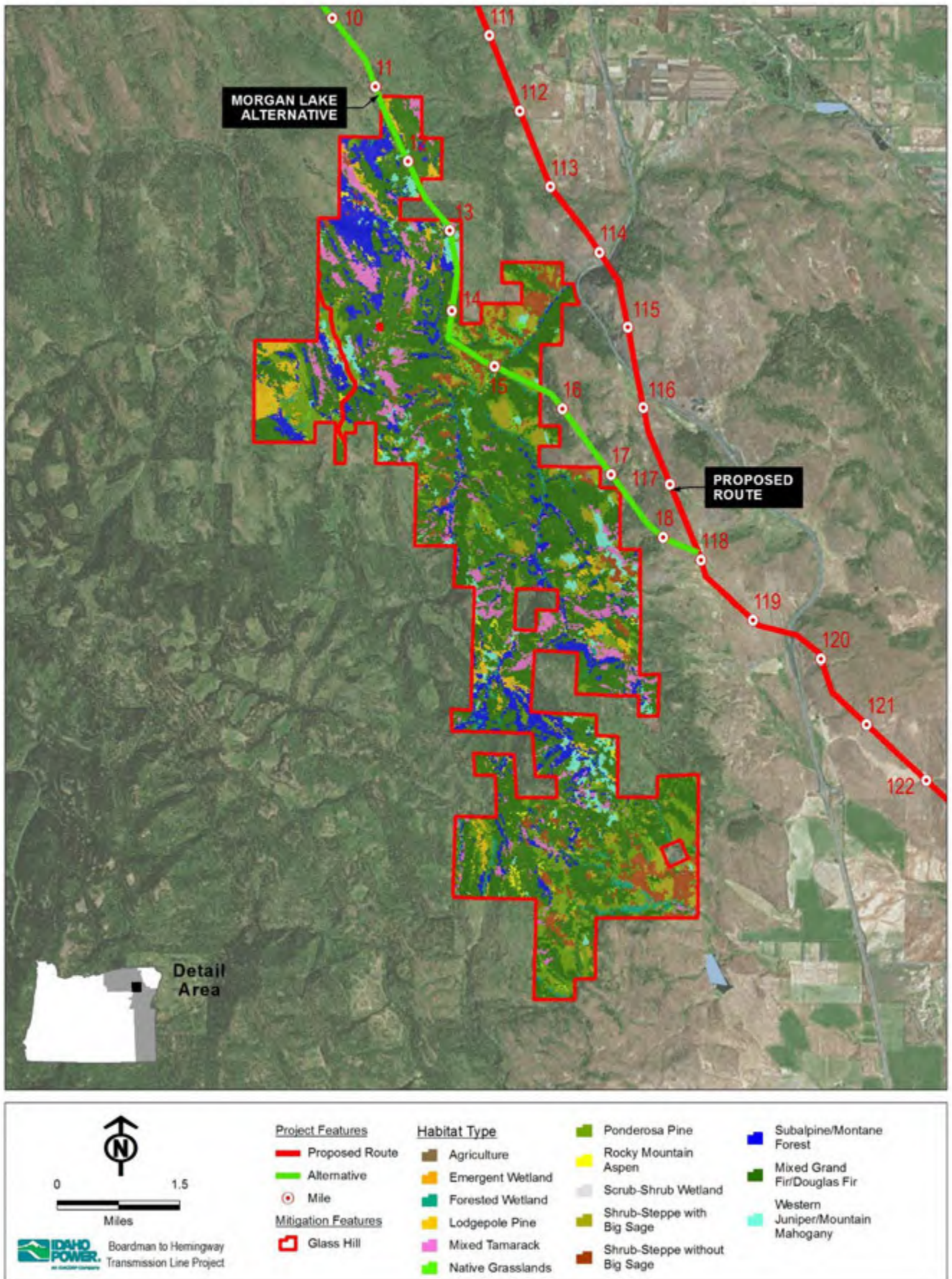


Figure 2. Glass Hill Habitat Types

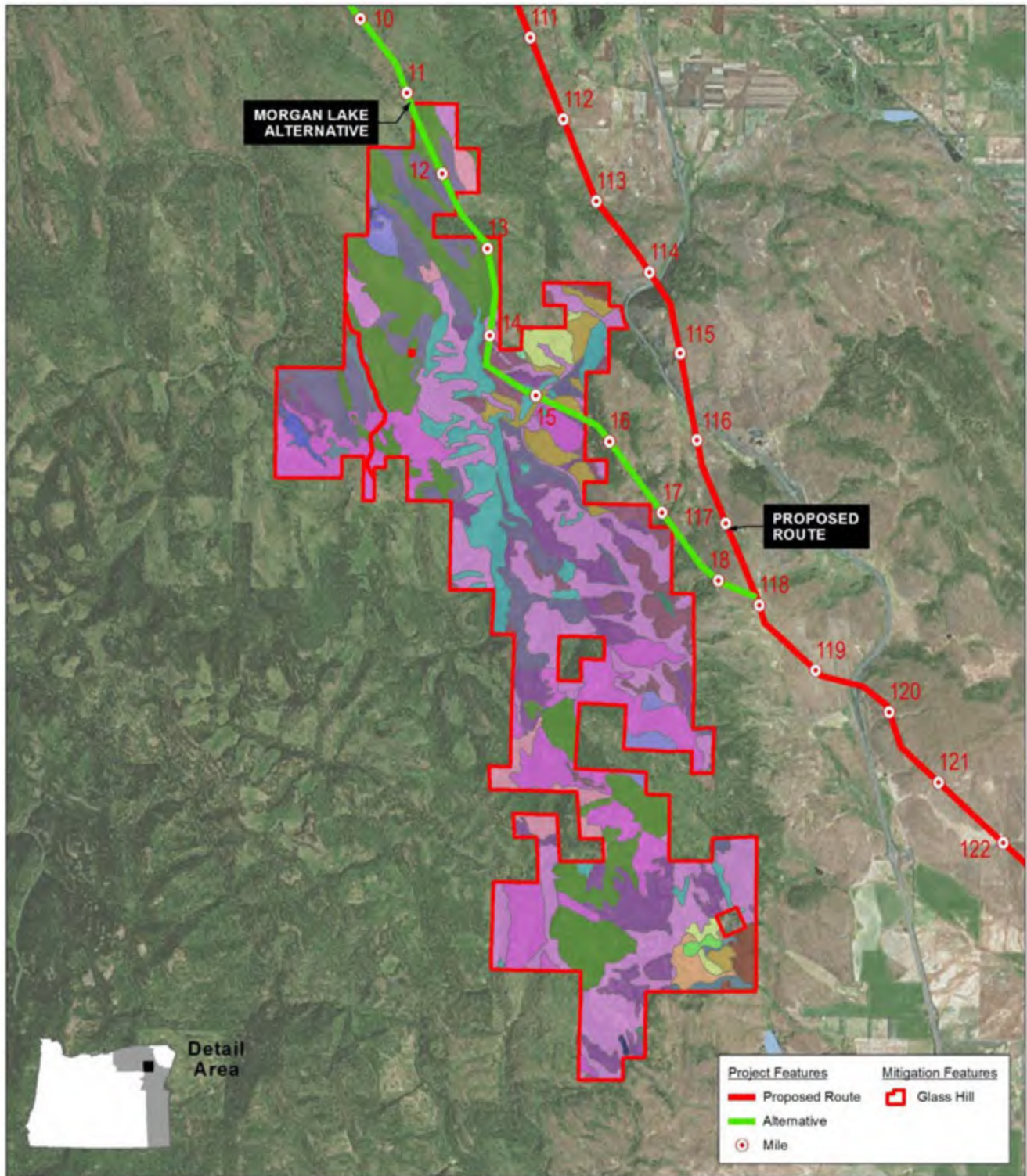


Figure 3. Glass Hill Soil Types

**Vegetation
Cover Classes
cont. (GAP¹)**

HMP Habitat Category² and Type	HMP General Vegetation Type	Acres	% of Total	Wildlife Habitat³
Category 2 cont.				
Shrub-Steppe without Big Sage	Shrub/Grass	28	0.2	RMEWR, MDWR, MDSR
Shrub-Steppe without Big Sage	Shrub/Grass	52	0.3	RMEWR, MDSR
Shrub-Steppe with Big Sage	Shrub/Grass	13	0.1	RMEWR, RMESR, MDSR
Shrub-Steppe with Big Sage	Shrub/Grass	11	0.1	RMEWR, MDWR
Shrub-Steppe with Big Sage	Shrub/Grass	20	0.1	RMEWR, MDSR
Remaining	-	44	0.3	-
Category 3		7,411	49.8	-
Mixed Grand Fir / Douglas Fir	Forest/Woodland	3,757	25.2	RMESR, MDSR
Mixed Grand Fir / Douglas Fir	Forest/Woodland	520	3.5	MDSR
Subalpine / Montane Forest	Forest/Woodland	1,519	10.2	RMESR, MDSR
Subalpine / Montane Forest	Forest/Woodland	16	0.1	MDSR
Mixed Tamarack	Forest/Woodland	431	2.9	RMESR, MDSR
Mixed Tamarack	Forest/Woodland	3	0.0	MDSR
Ponderosa Pine	Forest/Woodland	397	2.7	RMESR, MDSR
Ponderosa Pine	Forest/Woodland	126	0.8	MDSR
Lodgepole Pine	Forest/Woodland	252	1.7	RMESR, MDSR
Forested Wetland	Wetland	185	1.2	RMESR, MDSR
Forested Wetland	Wetland	6	0.0	MDSR
Native Grasslands	Shrub/Grass	100	0.7	RMESR, MDSR
Native Grasslands	Shrub/Grass	1	0.0	MDSR
Rocky Mountain Aspen	Forest/Woodland	38	0.3	RMESR, MDSR
Western Juniper / Mountain Mahogany Woodland	Forest/Woodland	24	0.2	RMESR, MDSR
Shrub-Steppe without Big Sage	Shrub/Grass	21	0.1	RMESR, MDSR
Emergent Wetland	Wetland	4	0.0	RMESR, MDSR
Emergent Wetland	Wetland	1	0.0	MDSR
Shrub-Steppe with Big Sage	Shrub/Grass	4	0.0	RMESR, MDSR
Remaining	-	6	0.0	RMESR, MDSR
Category 4				-
Category 5				-
Category 6				-
Developed	Agriculture / Developed	1	0.0	RMEWR
Developed	Agriculture / Developed	11	0.1	RMEWR, MDWR
Total		14,879	100	-

¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1--1 of Exhibit P1).

² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.

³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range.

⁴ Total acres of habitat type will not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the dataset were not simplified or smoothed to match the exact shape of the parcel boundary.

Soil types

The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (**Figure 3**):

Anatone-Bocker complex (122 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush. Bocker soils consist of very shallow, well drained soils found on hills, plateaus and mountains at elevations of 2,800 to 6,600 feet. Bocker soils are used for livestock grazing and recreation. The native vegetation is buckwheat, Sandberg bluegrass, Idaho fescue, bluebunch wheatgrass, bottlebrush squirreltail, stiff sagebrush and low sagebrush.

Anatone-Klicker-McCartycreek complex (3 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush. Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose. McCartycreek soils consist of moderately deep, well-drained soils found on mountain backslopes and footslopes at elevations from 3,000 to 5,500 feet. McCartycreek soils are used for watershed, wildlife habitat, livestock grazing and recreation. Native vegetation is mountain big sagebrush, western serviceberry, bitter cherry, chokecherry, creamy buckwheat, low Oregon grape, mountain snowberry, scouler's willow, common yarrow, arrowleaf balsamroot, Gray's desert parsley, mint, Brown's peony, showy aster, bluebunch wheatgrass, and mountain brome.

Anatone-Klicker complex (203 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush. Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose.

Anatone extremely stony loam (117 acres). Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany and stiff sagebrush.

Cowsly silt loam (58 acres) and Cowsly very stony silt loam (0.1 acre). Cowsly soils consist of deep or very deep, moderately well drained soils found on plateaus at elevations from 2800 to 5000 feet. Cowsly soils are used primarily for timber production. Other uses are dryland small grain, pasture, wildlife habitat and water supply. Native vegetation is ponderosa pine and Douglas fir with an understory of spirea, ocean spray, snowberry, Idaho fescue, pinegrass and elksedge.

Gwinly very cobbly silt loam (174). The Gwinly soils consist of shallow, well drained soils found on hills, plateaus, structural benches, mountains, and canyons at elevations from 1,400 to 4,600 feet. Used for livestock grazing and wildlife habitat. Potential native vegetation is dominantly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass and

low sagebrush.

Hall Ranch stony loam (6,836). Hall Ranch soils consist of moderately deep, well drained soils found on mountainous areas at elevations of 3,000 to 5,400 feet. Hall Ranch soils are used for timber production and rangeland. Native vegetation is ponderosa pine and Douglas fir with an understory of pinegrass and elk sedge.

Limberjim-Getaway-Rock Outcrop complex (7). Limberjim soils consist of deep, well drained soils on stable slopes of mountains, plateaus, canyons, and structural benches at elevations from 2,800 to 5,800 feet. Limberjim soils are used for timber production, watershed, recreation and wildlife habitat. Native vegetation is grand fir, western larch, lodgepole pine, Douglas fir, Rocky Mountain maple, twinflower, princes pine, big huckleberry, round-leaved violet, meadowrue, fragrant bedstraw, and fairybells. Getaway soils consist of deep, well drained soils found on mountain side slopes and canyon walls at elevations from 2,800 to 5,000 feet.

Olot-Cracker creek-Lowerbluff complex (4). Olot soils consist of moderately deep, well drained soils found on plateaus, canyons, mountains and structural benches at elevations typically between 2,800 to 5,000 feet. Olot soils are used mainly for timber production. Also used for wildlife habitat. Vegetation is western larch, Douglas fir, willow, mountain alder, common snowberry, elk sedge, and pinegrass. Cracker creek soils consist of deep, well drained soils on north-facing mountainsides and canyon walls at elevations from 3,200 to 4,800 feet. Cracker creek soils are used for woodland, watershed and wildlife habitat. The native vegetation is Douglas-fir, ponderosa pine, grand fir and western larch with an understory of pine grass, elk sedge, huckleberry and common snowberry. Lowerbluff soils consist of shallow, well drained soils usually found on summits of plateaus or structural benches at elevations of 2,800 to 5,700 feet. Lowerbuff soils are used for timber production, watershed, recreation, livestock grazing, and wildlife habitat. The native vegetation is Douglas fir, ponderosa pine, grand fir, common snowberry, spiraea, pinegrass, elk sedge, heartleaf arnica, strawberry, yarrow, and lupine.

Olot silt loam (350) and *Olot stony silt loam (3297)*. Olot soils consist of moderately deep, well drained soils found on plateaus, canyons, mountains and structural benches at elevations typically between 2,800 to 5,000 feet. Olot soils are used mainly for timber production. Also used for wildlife habitat. Vegetation is western larch, Douglas fir, willow, mountain alder, common snowberry, elk sedge, and pinegrass.

Tolo silt loam (1555). Top soils consist of deep and very deep, well drained soils found on mountains at elevations ranging from 3,000 to 5,400 feet. Top soils are used mainly for timber production and cropland. Most areas with slopes of less than 15 percent have been cleared and are used for production for dryland grain and hay. Native vegetation is ponderosa pine, Douglas fir, white fir, pinegrass and elksedge. This series is in what is called the Douglas-fir forest plant community.

Veazie-Voats complex (1). Veazie soils consist of very deep, well drained soils found on flood plains broken by old stream channels at elevations of 750 to 4,000 feet. Veazie soils are used mainly for irrigated hay and pasture. Other uses are livestock grazing and wildlife. Native vegetation is bluebunch wheatgrass, basin wildrye, sedges, rushes and willows. Voats soils consist of very deep, well drained soils found on flood plains broken by old stream channels and occur at elevations of 1,600 to 4,000 feet. Voats soils are used mainly for pasture. Other uses are livestock grazing and wildlife habitat. Potential native vegetation is bluebunch wheatgrass, basin wildrye, timothy, Kentucky bluegrass, sedges, rushes, and scattered willow, alder, hawthorne, and rose.

Ramo silty clay loam (3). Ramo soils consist of very deep, well drained soils found on concave foot slopes at elevations of 2,800 to 3,800 feet. Ramo soils are used for hay, pasture, small grain and livestock grazing. Potential native vegetation is mainly Idaho fescue and bluebunch wheatgrass.

Hydrologic Features Present (SteamNet, NWI, NHD)	Property contains four intermittent streams per NHD. Rock Creek supports redband trout and ESA listed summer steelhead. Rock Creek supports migrating and spawning steelhead and provides rearing areas for fry and juveniles. NWI did not identify any wetland features outside those associated with riparian areas of NHD streams.
Adjacent land ownership, use, and condition	The entire eastern boundary of the property borders USFS lands and ranges from 1-3 miles from the Eagle Cap Wilderness. To the west are foothills dominated by dryland farming and open rangeland. The towns of Union and Cove are approximately 2 to 5 miles west of the property.
Infrastructure Density within or Near the Parcel (Qualitative Description)	The property contains roads that provide access throughout. The towns of Union and Cove are nearby to the west, with rural infrastructure development. The property and most lands to the north, south, and east are forested with no development other than access roads.
Summary	The property contains winter range for both elk and mule deer, as well as summer range for both species. The property is immediately north of Catherine Creek State Park. Little Catherine Creek crosses the property and is identified as critical habitat for Chinook salmon. Little Creek (critical habitat for steelhead downstream from the property) and its tributaries originate on or cross through the property. Timber harvest is the main use of the property today.
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>Given the size of the property, mitigation opportunities would likely be considered for smaller portions of the property.</p> <p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 elk and mule deer winter range within the forest/woodland general vegetation type. This mitigation site could help meet the Project need for elk and mule deer summer habitat as well. It contains important habitat features with opportunities to provide durable ecological uplift through implementation of standard mitigation actions. Opportunities to improve the watershed would benefit Chinook salmon and steelhead (Chinook salmon critical habitat occurs on the property).</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to elk and mule deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – historic grazing practices at this property are unknown. However, the objective would be to avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – the focus would be planting forage shrubs and bunchgrasses; forest management practices would be implemented to create structural diversity and enhance desirable habitat conditions.• <i>Road closure</i> – restrict motor vehicle use to just those roads that are necessary; seasonally close access based on use by elk and mule deer.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Fence removal/fence upgrade</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing, such as lay down fencing.
Monitoring	A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation.

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by any wildlife species.

Financial Outline

Estimated Budget for the Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	?	1		?
50-year Operation and Management Costs				
O&M ¹	\$53.75	14,886	50	\$40,006,125
Total		-		\$? (?/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The cost per acre identified in that study for the Elkhorn Wildlife Management Area (which this mitigation site will be modeled after) was \$43 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

² Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

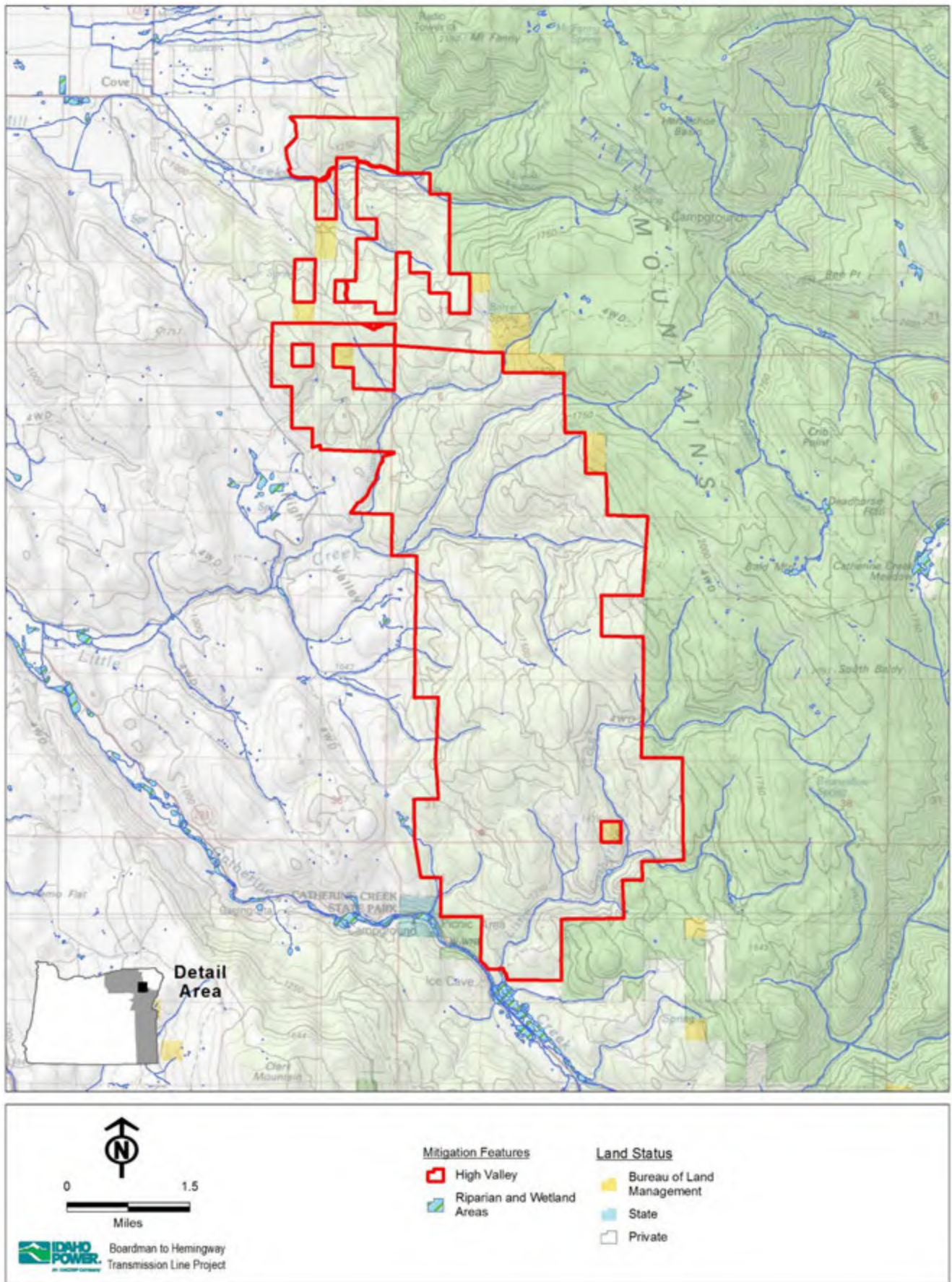


Figure 1. High Valley Ownership and Water

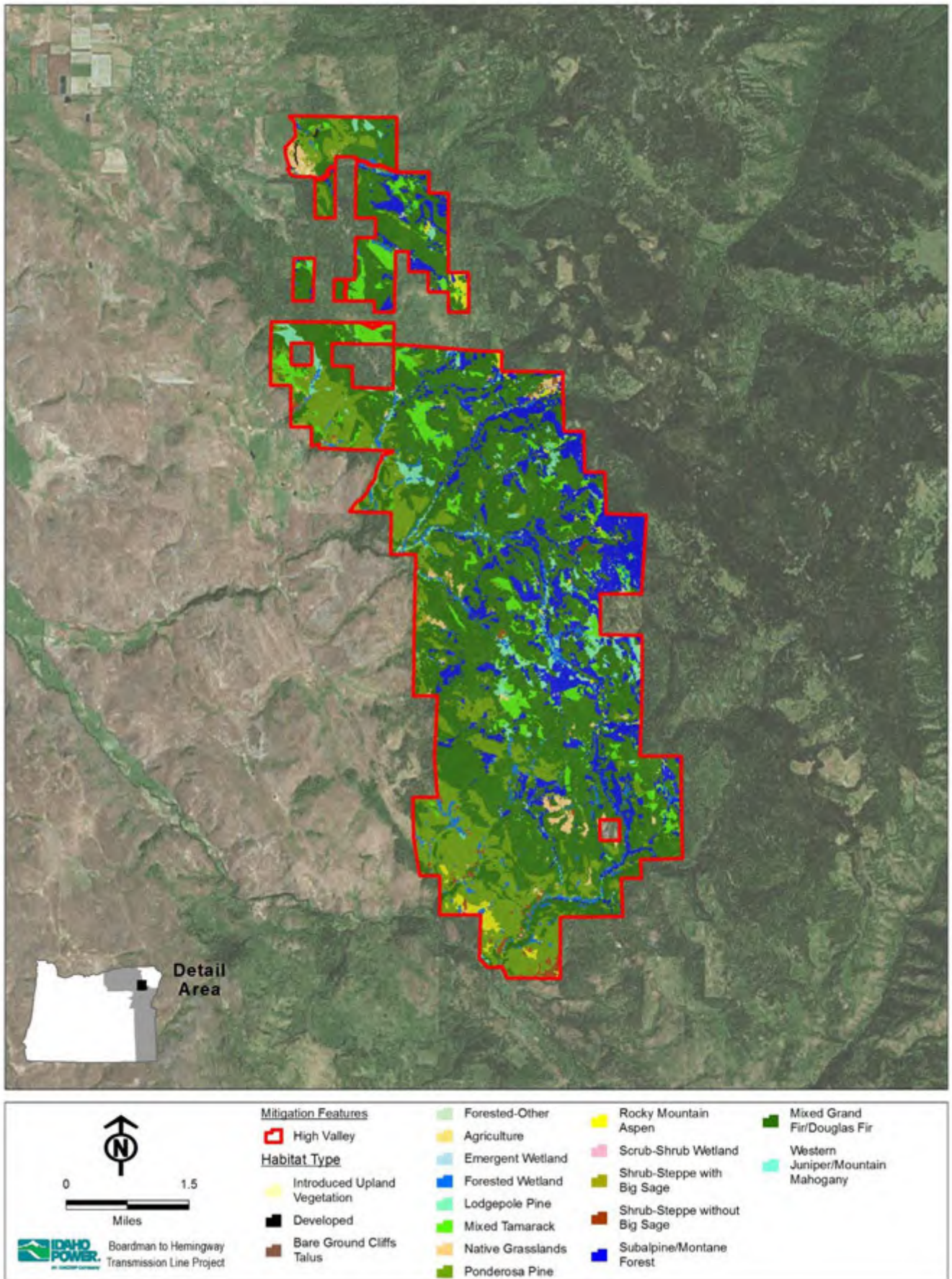


Figure 2. High Valley Habitat Types

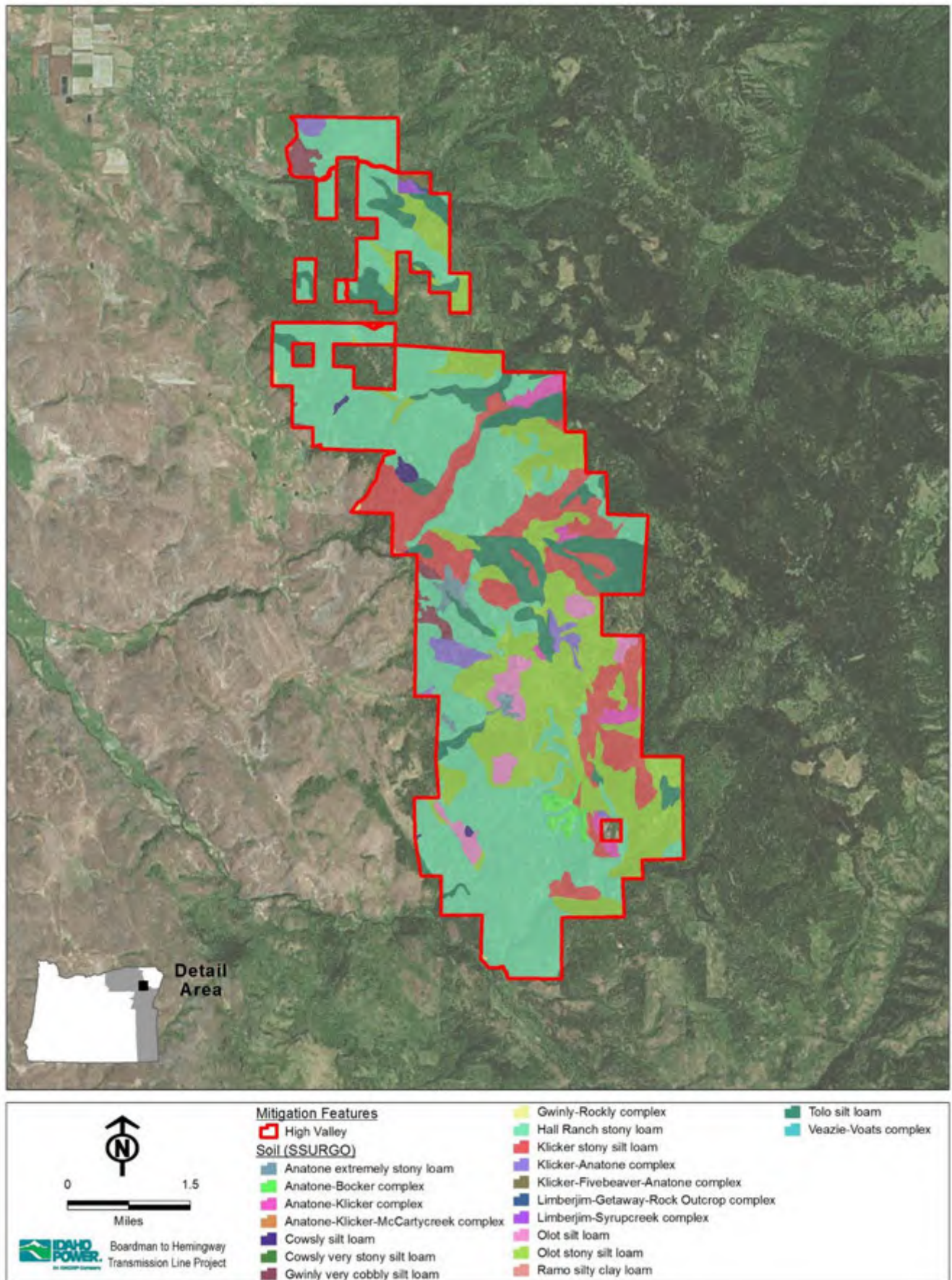


Figure 3. High Valley Soil Types

Habitat Mitigation Areas with Mitigation Zone 3

- Pole Creek
- Alder Creek
- Glasgow
- Trail Creek
- Upper Timber

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: Pole Creek (Figure 1)
Landowner: _____

Date of Assessment: 2/10/2016
Parcel Elevation (ft): 4,100 – 5,100

Parcel Size in Acres: 3,233

Within Mitigation Service Area?: Yes

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker County, 3 miles west of Unity, OR.
T12S R36E Section 34, T13S R36E Sections 1, 2, 3, 10, 11, 12, & 15.

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³
	Category 1				
	Category 2		3,233.2	100	-
	Shrub-Steppe with Big Sage	Shrub/Grassland	644.4	19.9	MDWR, MDSR, RMESR
	Shrub-Steppe with Big Sage	Shrub/Grassland	685.7	21.2	MDWR, MDSR
	Shrub-Steppe with Big Sage	Shrub/Grassland	43.3	1.3	MDWR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	488.8	15.1	MDWR, MDSR, RMESR
	Western Juniper/Mountain Mahogany Woodland	Forest/Woodland	432.0	13.4	MDWR, MDSR, RMESR
	Western Juniper/Mountain Mahogany Woodland	Forest/Woodland	117.9	3.6	MDWR, MDSR
	Ponderosa Pine	Forest/Woodland	380.7	11.8	MDWR, MDSR, RMESR
	Ponderosa Pine	Forest/Woodland	3.4	0.1	MDWR, MDSR
	Shrub-Steppe without Big Sage	Shrub/Grassland	172.8	5.3	MDWR, MDSR, RMESR
	Shrub-Steppe without Big Sage	Shrub/Grassland	15.2	0.5	MDWR, MDSR
	Shrub-Steppe without Big Sage	Shrub/Grassland	5.6	0.2	MDWR
	Rocky Mountain Aspen	Forest/Woodland	89.8	2.8	MDWR, MDSR, RMESR
	Rocky Mountain Aspen	Forest/Woodland	3.6	0.1	MDWR, MDSR
	Forested Wetland	Open Water/Wetland	27.6	0.9	MDWR, MDSR, RMESR
	Introduced Upland Vegetation	Shrub/Grassland	10.2	0.3	MDWR, MDSR, RMESR
	Introduced Upland Vegetation	Shrub/Grassland	20.4	0.6	MDWR, MDSR

¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P-2 of Exhibit P).

² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.

³ WAGS1 = Category 1 habitat consisting of the active ground squirrel colony which is defined as single or cluster of holes as well as the required habitat for squirrel survival (785 feet from the edge of the extent of active holes). WAGS2 = Category 2 habitat consisting of the area of potential Washington ground squirrel use (1.5km from the edge of the WAGS1 area in similar habitat type and quality). MDWR = Category 2 habitat for ODFW mule deer winter range.

⁴ Total acres of habitat type will not match actual parcel size due to resolution of the GAP raster dataset.

Vegetation Cover Classes cont. (GAP ¹)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³
	Category 2 cont.				
	Emergent Wetland	Open Water/Wetland	10.0	0.3	MDWR, MDSR, RMESR
	Native Grasslands	Shrub/Grassland	9.9	0.3	MDWR, MDSR, RMESR
	Native Grasslands	Shrub/Grassland	44.6	1.4	MDWR, MDSR
	Scrub-Shrub Wetland	Open Water/Wetland	9.8	0.3	MDWR, MDSR, RMESR
	Lodgepole Pine	Forest/Woodland	7.3	0.2	MDWR, MDSR, RMESR
	Subalpine/Montane Forest	Forest/Woodland	4.4	0.1	MDWR, MDSR, RMESR
	Remaining	-	5.8	0.2	-
	Category 3				
Category 4					
Category 5					
Category 6					
Total			3,233.2	100	-
¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P-2 of Exhibit P). ² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat. ³ MDWR = Category 2 habitat for ODFW mule deer winter range; RMESR = Category 3 habitat for Rocky Mountain Elk Foundation Rocky Mountain elk summer range; MDSR = Category 3 habitat for WAFWA mule deer summer range.					

Soil types	<p>The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (Figure 3):</p> <p><i>Ateron-Roostercomb extremely gravelly clay loams (718 acres).</i> Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations of 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass. Roostercomb soils consist of moderately deep, well drained soils found on stable to meta-stable side slopes of hills with elevations ranging from 3,800 to 5,700 feet. Roostercomb soils are used for rangeland and wildlife habitat. The native vegetation is mainly mountain big sagebrush, threetip sagebrush, squaw apple, antelope bitterbrush, Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass.</p> <p><i>Ateron very stony loam (505 acres).</i> Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations of 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.</p> <p><i>Damore-Silvies silt loams (0.1 acre).</i> Damore soils consist of deep, somewhat poorly drained soils found on flood plains with elevations ranging from 3,700 to 5,000 feet. Damore soils are mostly used for meadow hay production and pasture. The native vegetation is mainly tufted hairgrass, sedge, and Baltic rush. Silvies soils consist of very deep, poorly drained soils found on flood plains and in basins at elevations of 3,300 to 5,000 feet. Silvies soils are mostly used for meadow hay production and pasture. The native vegetation is sedges and rushes.</p>
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Soil types (cont.)	<p><i>Hall Ranch stony loam (151 acres).</i> Hall Ranch soils consist of moderately deep, well drained soils found in mountainous areas at elevations of 3,000 to 5,400 feet. Hall</p>
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Ranch soils are used as timber production and rangeland. Native vegetation is ponderosa pine and Douglas fir with an understory of pinegrass and elk sedge.

Klicker-Fivebit complex (473 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose. Fivebit soils consist of shallow, well drained soils found on ridgetops and side slopes of mountains, plateaus, canyons, and structural benches at elevations from 2,800 to 6,200 feet. Fivebit soils are used for livestock grazing, recreation, water supply, and wildlife habitat. The vegetation is mainly curlleaf mountain mahogany, western juniper, scattered ponderosa pine, mountain big sagebrush, bitterbrush, squaw apple, wax currant, bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, some elk sedge and pinegrass, and arrowleaf balsamroot.

Marack-Badland complex (58 acres). Marack soils consist of deep, well drained soils found on old terraces at elevations ranging from 3,800 to 4,400 feet. Marack soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Mountain big sagebrush, basin big sagebrush, and prairie junegrass. Badlands are a type of dry terrain where softer sedimentary rocks and clay-rich soils have been extensively eroded by wind and water. They are characterized by steep slopes, minimal vegetation, lack of a substantial regolith, and high drainage density. They can resemble malpaís, a terrain of volcanic rock. Canyons, ravines, gullies, buttes, mesas, hoodoos and other such geological forms are common in badlands.

Marack gravelly silty clay loam (186 acres). Marack soils consist of deep, well drained soils found on old terraces at elevations ranging from 3,800 to 4,400 feet. Marack soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Mountain big sagebrush, basin big sagebrush, and prairie junegrass.

Marack silt loam (51 acres). Marack soils consist of deep, well drained soils found on old terraces at elevations ranging from 3,800 to 4,400 feet. Marack soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Mountain big sagebrush, basin big sagebrush, and prairie junegrass.

Marack very gravelly silty clay loam (25 acres). Marack soils consist of deep, well drained soils found on old terraces at elevations ranging from 3,800 to 4,400 feet. Marack soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Mountain big sagebrush, basin big sagebrush, and prairie junegrass.

McGarr-Kahler complex (497 acres). Marack soils consist of deep, well drained soils found on old terraces at elevations ranging from 3,800 to 4,400 feet. Marack soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Mountain big sagebrush, basin big sagebrush, and prairie junegrass. Kahler soils consist of deep and very deep, well drained soils found on back slopes of plateaus, canyons, hills, and mountains at elevations ranging from 2,000 to 6,000 feet. Kahler soils are used for timber production, limited cropland, livestock grazing, watershed, recreation, and wildlife habitat. Many areas with slopes of less than 15 percent have been cleared and produce dryland hay and grain, or irrigated crops. The native vegetation is mainly ponderosa pine, Douglas fir, pinegrass and elk sedge.

<p>Soil types (cont.)</p>	<p><i>Roostercomb-Longbranch complex (492 acres)</i>. Roostercomb soils consist of moderately deep, well drained soils found on stable to meta-stable side slopes of hills with elevations ranging from 3,800 to 5,700 feet. Roostercomb soils are used for rangeland and wildlife habitat. The native vegetation is mainly mountain big sagebrush, threetip sagebrush, squaw apple, antelope bitterbrush, Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass. Longbranch soils consist of deep, well drained soils found on stable to meta-stable north-facing side slopes of hills with elevations ranging from 3,800 to 5,700 feet. Longbranch soils are used for rangeland and wildlife habitat. The native vegetation is mainly mountain big sagebrush, wax currant, Idaho fescue and basin wildrye with minor amounts of prairie junegrass and green rabbitbrush.</p> <p><i>Snell-Ateron complex (74 acres)</i>. Snell soils consists of moderately deep, well drained soils on hills, plateaus, mountains and on canyon walls at elevations of 2,000 to 6,800 feet, mainly on north and east exposures and on south exposures at higher elevations. Snell soils are used for livestock grazing and wildlife habitat. Potential native vegetation is bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass. Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations of 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.</p> <p><i>Xeric Torriorthents (2 acres)</i>. Torriorthents are the dry Orthents of cool to hot, arid regions. They have an aridic (or torric) moisture regime. Orthents are primarily Entisols on recent erosional surfaces. The erosion may be geologic or may have been induced by cultivation, mining, or other factors. Any former soil that was on the landscape has been completely removed or so truncated that the diagnostic horizons for all other orders do not occur.</p>
<p>Hydrologic Features Present (SteamNet, NWI, NHD)</p>	<p>Property contains a perennial stream, Pole Creek, and an unnamed intermittent tributary. Powell Gulch also contains an intermittent stream feature. The southeast corner of the property crosses over the South Fork Burnt River just below Whited Reservoir. Wetland features exist along the streams, including some man made impoundments.</p>
<p>Adjacent land ownership, use, and condition</p>	<p>The property borders USFS lands to the west, with a small BLM in holding also sharing a boundary. The remainder of the property borders private lands, which appear to be mostly open rangeland in the foothills west of Unity, OR. Agriculture and pastures also occur west of the property around Unity.</p>
<p>Infrastructure Density within or Near the Parcel (Qualitative Description)</p>	<p>Property has a 4,000 square foot log home and a large 5,000 square foot shop. A transmission line is located just west of the property and a substation is less than 2 miles west of the property. A well maintained county road, Cemetery Road, runs along the western border and HWY 26 is within 1 mile of the property.</p>
<p>Summary</p>	<p>Property is within The Nature Conservancy Ecoregional Assessment (Monument Rock Area). An ODFW Conservation Opportunity Area (North Fork Malheur-Monument Rock area) overlaps a very small portion of the property near Buck Mountain. This conservation actions listed in the Oregon Conservation Strategy for this area include: 1) Initiate or continue wet meadow conservation and restoration efforts; 2) Maintain and enhance aspen stands; 3) Maintain or restore riparian habitat and ecological function; 4) Ensure sufficient habitat complexity for wildlife; 5) Restore and maintain complex, continuous sage habitat; 6) Restore and maintain grassland habitat; and 7) Restore and maintain ponderosa pine habitats.</p> <p>Property contains mule deer winter and summer range and elk summer range.</p>
<p>Pass/Fail Desktop Assessment?</p>	<p>Pass</p>

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 mule deer winter range within the shrub/grass general vegetation type. It also provides opportunity for shrub/grass and forest/woodland mitigation of Category 3, 4, & 5 habitats. It contains important habitat features that could be preserved and has some uplift opportunities that could be achieved through implementation of standard mitigation actions.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to sage-grouse, elk, and deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to, State of Oregon, Federal Land Management Agency, approved NPO or Land Trust.
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Livestock grazing restrictions</i> – avoid grazing practices that would compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Fence Removal/Marking</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action.• <i>Native revegetation/restoration</i> – focus of efforts would be to promote establishment of forage shrubs and bunchgrasses; opportunities exist but have not been specifically identified at this time.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Juniper removal</i> – review of aerial photography shows juniper/conifer encroachment into sagebrush habitat, some opportunity may exist for long-term maintenance of encroachment.
Monitoring	A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by WAGS or any other wildlife species.

Financial Outline

Estimated Budget for the Pole Creek Mitigation Site				
Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	1,400,000	1		1,400,000
Recurring Costs (Annually)				
O&M ¹	30	3,233	50	4,849,500
Total		-		\$6,249,500 (\$1,933/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars.

² Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

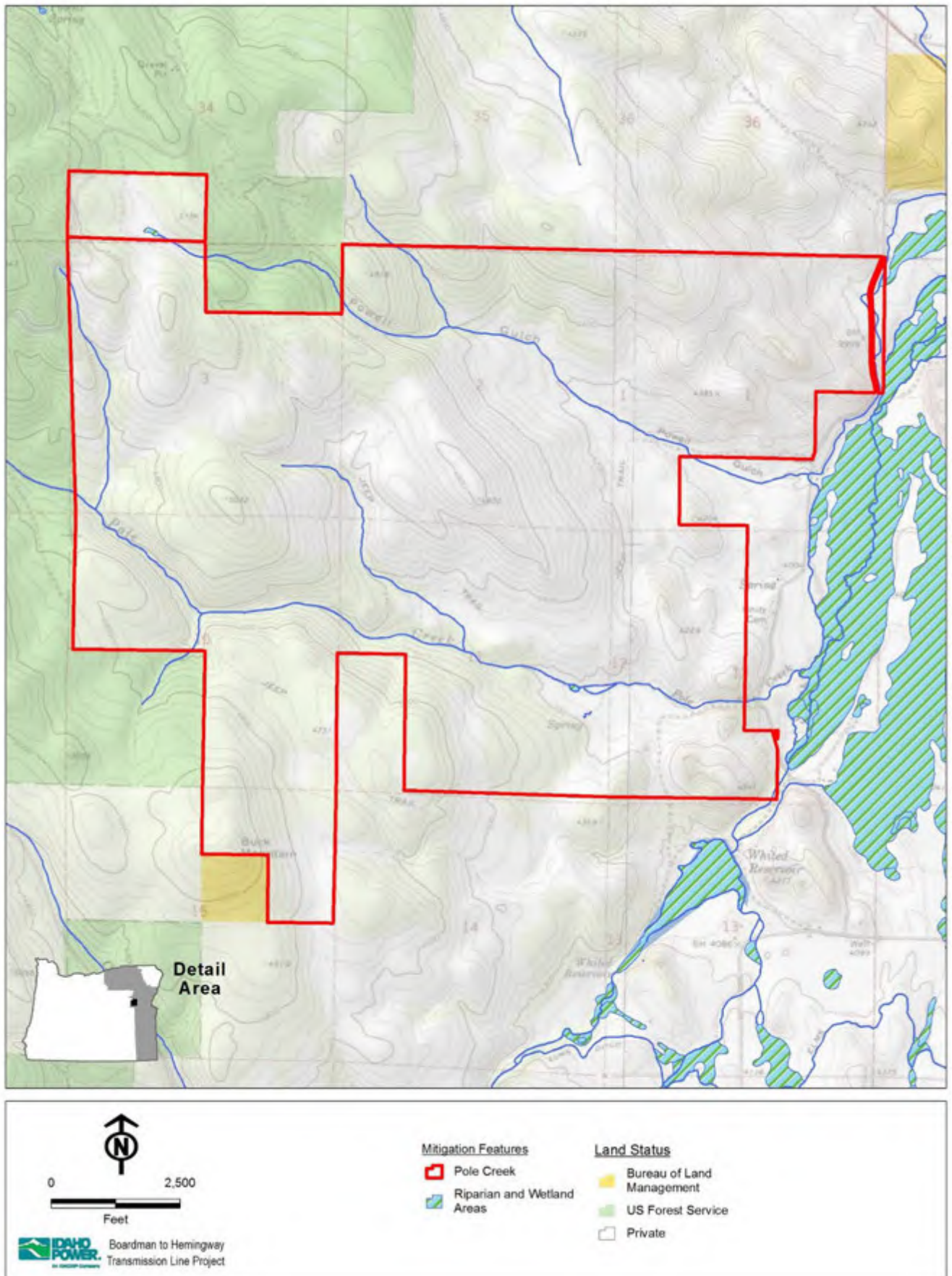


Figure 1. Pole Creek Ownership and Water

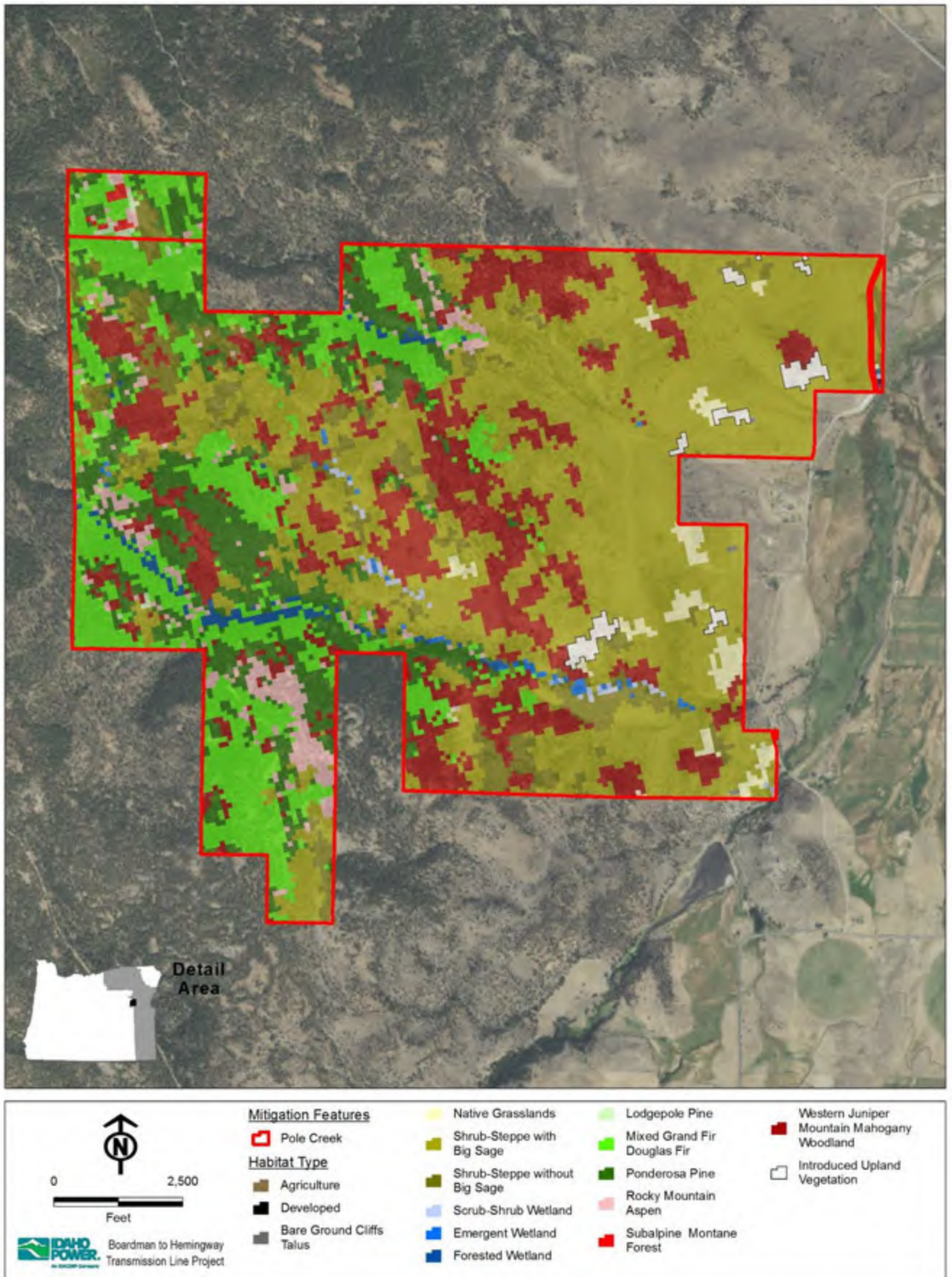


Figure 2. Pole Creek Habitat Types

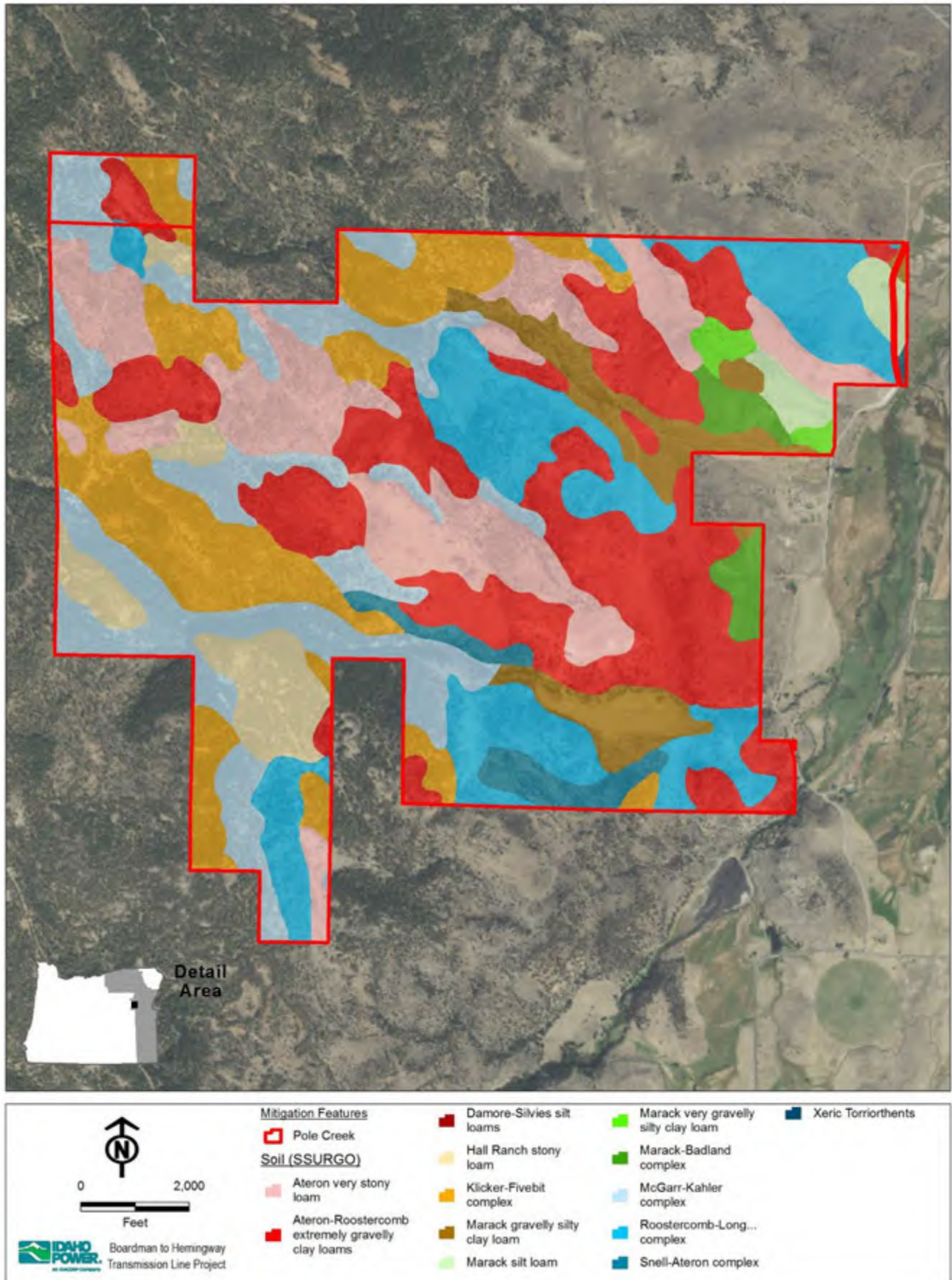


Figure 3. Pole Creek Soil Types

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: Alder Creek
Landowner: _____

Date of Assessment: 9/11/2014
Parcel Elevation (ft): 3,700 – 4,450

Parcel Size in Acres: 3,081

Within Mitigation
Service Area?: Yes

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker County, approximately 20 miles northwest of Brogan, 20 miles southwest of Durkee.
T13S R40E Sections 14, 15, 16, 21, 22, 23, 26, 27, 28 (**Figure 1**)

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³
	Category 1		0	0	
	Category 2		0	0	-
	Shrub-Steppe with Big Sage	Shrub/Grass	1,452.3	49.3	RMEWR
	Shrub-Steppe with Big Sage	Shrub/Grass	294.1	10.0	RMEWR, MDWR
	Introduced Upland Vegetation	Shrub/Grass	258.1	8.8	RMEWR
	Introduced Upland Vegetation	Shrub/Grass	233.7	7.9	RMEWR, MDWR
	Shrub-Steppe without Big Sage	Shrub/Grass	213.7	7.3	RMEWR
	Shrub-Steppe without Big Sage	Shrub/Grass	171.6	5.8	RMEWR, MDWR
	Native Grasslands	Shrub/Grass	41.2	1.4	RMEWR
	Native Grasslands	Shrub/Grass	27.0	0.9	RMEWR, MDWR
	Bare Ground Cliffs Talus	Bare Ground	5.6	0.2	RMEWR
	Bare Ground Cliffs Talus	Bare Ground	1.3	0.0	RMEWR, MDWR
	Emergent Wetland	Wetland	3.4	0.1	RMEWR
	Emergent Wetland	Wetland	13.5	0.5	RMEWR, MDWR
	Desert Shrub	Shrub/Grass	0.4	0.0	RMEWR
	Desert Shrub	Shrub/Grass	12.2	0.4	RMEWR, MDWR
	Forested Wetland	Wetland	0.2	0.0	RMEWR
	Forested Wetland	Wetland	0.7	0.0	RMEWR, MDWR
	Western Juniper	Forest/Woodland	13.8	0.5	RMEWR, MDWR
	Ponderosa Pine	Forest/Woodland	4.4	0.2	RMEWR, MDWR
	Scrub-Shrub Wetland	Wetland	1.1	0.0	RMEWR, MDWR
	Rocky Mountain Aspen	Forest/Woodland	0.2	0.0	RMEWR, MDWR
	Mixed Grand Fir / Douglas Fir	Forest/Woodland	0.2	0.0	RMEWR, MDWR
	Category 3		0	0	-
	Category 4		0	0	-
	Category 5		0	0	-
	Category 6		198.3	6.7	
	Agriculture	Agriculture/ Developed	194.5	6.6	RMEWR
	Developed	Agriculture/ Developed	3.8	0.1	RMEWR
	Total⁴	NA	2,947.1	100	-

¹ USGS Gap Analysis Project (GAP) GIS data for ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in Exhibit P1, Attachment P1-1 Habitat Categorization Matrix.

² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.

³ RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range. MDWR = Category 2 habitat for ODFW mule deer winter range.

⁴ Total acres of habitat type may not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary.

<p>Hydrologic Features Present (SteamNet, NWI, NHD)</p>	<p>One perennial (Alder Creek) and four intermittent streams (NHD). Some spring and emergent wetlands not associated with the NHD streams are identified in the NWI dataset.</p>
<p>Adjacent land ownership, use, and condition</p>	<p>Property is bordered by both BLM and private lands. Land use is mostly rangeland with some agricultural developments. A majority of the adjacent landscape is classified as intermountain basins big sagebrush-steppe by GAP.</p>
<p>Infrastructure Density within or Near the Parcel (Qualitative Description)</p>	<p>Per the real estate listing, the property contains dwellings, shop, multiple large hay sheds, center pivot irrigation, and a livestock processing facility. HWY 26 and an existing transmission line are 5 miles to the south; state route 245 is approximately 4 miles to the north. Otherwise, the landscape is open rangeland.</p>
<p>Soil type, soil temperature and moisture regime (NRCS 2014)</p>	<p>Detailed SSURGO data is not available for this portion of Malheur County. STATSGO2 identifies the property is within the Ruclick-Ruckles-Lookout mapunit. Ruckles soils are shallow. They have a surface layer of very dark grayish brown very stony clay loam and a subsoil of dark brown very stony clay. These soils are on south- and west-facing slopes of 2 to 70 percent. Ruclick soils are moderately deep. They have a surface layer of very dark grayish brown very cobbly silt loam and a subsoil of dark brown very cobbly and extremely cobbly clay. These soils are on all aspects of the terrain at a slope of 2 to 70 percent. Lookout soils are moderately deep to a duripan. They have a surface layer mainly of very dark grayish brown very cobbly silt loam and a subsoil of dark yellowish brown clay over a duripan. In some areas the surface layer is silt loam. These soils are on hilltops and benches with slopes of 2 to 12 percent.</p> <p>The soils in this unit are used mainly for livestock grazing. The unit also provides habitat for many kinds of wildlife. In the areas used for livestock grazing, the main limitations are the very cobbly or very stony surface layer and the slope of the Ruckles and Ruclick soils.</p> <p>The temperature regime is Mesic and the moisture regime is Aridic bordering on Xeric (Warm/Dry bordering on Moist). This area is identified as having low relative resilience and resistance to disturbances (drought, fire, invasive species).</p>
<p>NRCS. 2014. Sage Grouse Management Zones Soil Taxonomic Temperature and Moisture Regimes. GIS Dataset.</p>	
<p>Summary</p>	<p>The property is in sage-grouse core area within the Cow Valley PAC. According to Alternative D of the Oregon Sub-Region SAGR FEIS (Chapter 2, Figure 2-4), this property is located within or immediately adjacent to three proposed Sage-Grouse Strategic Areas: Climate Change Consideration Area – identified as higher elevation areas of high quality habitat likely to provide habitat over the long-term; Restoration Opportunity Area – within existing habitat where restoration would increase habitat quality and connectivity; and High-density Breeding Area – high quality habitat with a high density of active lek sites.</p> <p>The property is also completely within elk winter range and elk summer range and the northern 1/3 of the property is within mule deer winter range. Year-round springs, perennial stream (Alder Creek), and emergent wetlands increase the value of the property to wildlife in the arid landscape as well as provide potential for watershed improvement projects. GAP data indicates that introduced upland vegetation is present on site and could provide upland habitat restoration opportunities.</p> <p>Weed treatment and revegetation opportunities are available across the entire property but are abundant in areas currently in agricultural production and where livestock congregate. Opportunity areas generally coincide with habitat identified as Agriculture and/or Introduced Upland Vegetation by the GAP dataset (Figure 2). Western juniper woodlands are encroaching into sagebrush habitats on the parcel.</p>
<p>Pass/Fail Assessment?</p>	<p>Pass</p>

Boardman to Hemingway Transmission Line Project

Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on both Category 1 and category 2 sage-grouse core area habitat and Category 2 elk and mule deer winter range within the shrub/grass general vegetation type. Areas where sage-grouse habitat and big game winter range overlap are typically shrub-steppe and native grassland types with a continuous or mosaic big sagebrush component.</p> <p>The mitigation site contains important habitat features with ample opportunities to provide durable ecological uplift through implementation of standard mitigation actions.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to sage-grouse and big game (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust
Mitigation Actions	<p>The following are mitigation actions that IPC may consider implementing at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods and be conducted as necessary to maintain desired habitat conditions throughout the life of the Project impacts. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Juniper/Conifer Removal</i> – There are approximately 300-450 acres of shrub-steppe and introduced upland vegetation where juniper encroachment is occurring (Figure 3). The juniper stands appear to be Phase I consisting of early successional young trees at very low density. Opportunity for spot-treating single trees occurs throughout the property.• <i>Modification of Livestock Grazing</i> – this would benefit a majority of the mitigation site as grazing has reduced native plant cover and has likely been a contributor to dispersal of non-native/invasive plant species across the site. In addition, livestock grazing may be incompatible with the short-term success of some of the mitigation actions identified, such as seeding of native plant species. Long-term maintenance of the mitigation site may consider domestic livestock grazing as a management tool.• <i>Fence Removal/Marking/Upgrade</i> – the mitigation site has approximately 60,000 feet of cross fencing (Figure 3) that can be removed. Fence removal would reduce the potential for wildlife injuries/mortalities from collisions. Fencing acts as a source of weed establishment through accumulation of windblown weeds. Fences provide perching opportunity for raptors and corvids. Marking of perimeter fencing in areas of concern would allow sage-grouse and other wildlife to more effectively visualize the fence and avoid collisions. Fences maintained on the mitigation site can be upgraded to a more wildlife friendly design that reduces the likelihood of significant injury during crossing events.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action. Opportunities likely exist in areas identified for native seeding (Figure 3), along fence lines, within livestock handling facilities, near the residence, and other outbuildings/haysheds etc.

**Mitigation Actions
(cont.)**

- *Native seeding/revegetation* – opportunity exists to seed native plant species in areas currently in agriculture and lowland areas adjacent to drainages where cattle have congregated. These areas cover approximately 300 acres of the mitigation site (**Figure 3**). Other seeding opportunities are available throughout the mitigation site.
- *Wetland/Spring/Riparian Improvement* – drainages and riparian/wetland areas on the mitigation site are currently lacking native vegetation components. Opportunities exist to modify/improve water resources (channel modification, erosion control, vegetation treatment/plantings) on the mitigation site to reflect a more natural state and to provide water to mitigation action areas as needed to ensure success. There is approximately 3-8 miles of riparian corridor within the mitigation site and several acres of wetlands.

Monitoring

A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of weed reduction.
- Natural recruitment of sagebrush into areas currently in Agriculture or Introduced Upland Vegetation that were seeded to native plant species.
- Successful juniper removal and continued control of encroachment onto the mitigation site for the life of the project.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by sage-grouse or any other wildlife species.

Financial Outline

This financial outline provides estimated figures and data for informational purposes only. These estimates are meant to provide an overview of the potential and commercially reasonable costs of acquiring and implementing mitigation on this mitigation site. The financial outline does not guarantee the final sales price and costs for the acquisition, and the price offering is subject to prior sale, price change, correction, amendment or withdrawal.

- Initial purchase of the mitigation site: \$2,750,000
- Juniper removal: \$80 - \$200 per acre
- Fence removal: \$1.88 per foot
- Fence marking: \$0.11 per foot of fence (\$581 per mile)
- Weed treatment: \$20 - \$200 per acre
- Native Seeding:
 - Site preparation (mowing/discing) \$500 per acre
 - Broadcast/Drill seed: \$100 - \$250 per acre
- Hydroseeding: \$792 per acre

Financial Outline (cont.)

- Wetland/Spring/Riparian Improvement
 - Complex Restoration: \$2,400 per acre
 - Riparian Herbaceous Cover
 - Broadcast Seeding: \$687 per acre
 - Pollinator Cover: \$1,303 per acre
 - Plug Planting: \$13,730 per acre
 - Combo Seeding and Plug Planting: \$6,947 per acre
 - Riparian Forest Buffer
 - Hand Plant, bare root: \$768 per acre
 - Cuttings, small to medium: \$867 per acre
 - Seeding: \$106 per acre

Estimated Budget for the Alder Creek Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition of mitigation site	\$2,750,000	1	-	\$2,750,000
Juniper Removal	\$100	450	-	\$45,000
Grazing Modification	-	-	-	-
Removal of cross fencing	\$2	60,000	-	\$120,000
Marking of perimeter fence	-	-	-	-
Weed Treatment	\$20-\$200	75	-	\$15,000
Native Seeding	\$750	300	-	\$225,000
50-year Operation and Management Costs				
O&M ¹	\$30	3,081	50	\$4,621,500
Total		-		\$7,776,500 (\$2,524/acre) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars. In addition, one of the projects presented in the document was the 10,000 acre Sagebrush Flat Wildlife Mitigation area in Washington state which is within a similar habitat type and has a FY2015 budget of approximately \$300,000 (or \$30/acre).

² Cost per acre here includes cost of acquisition and initial mitigation actions and long-term O&M for 50 years.

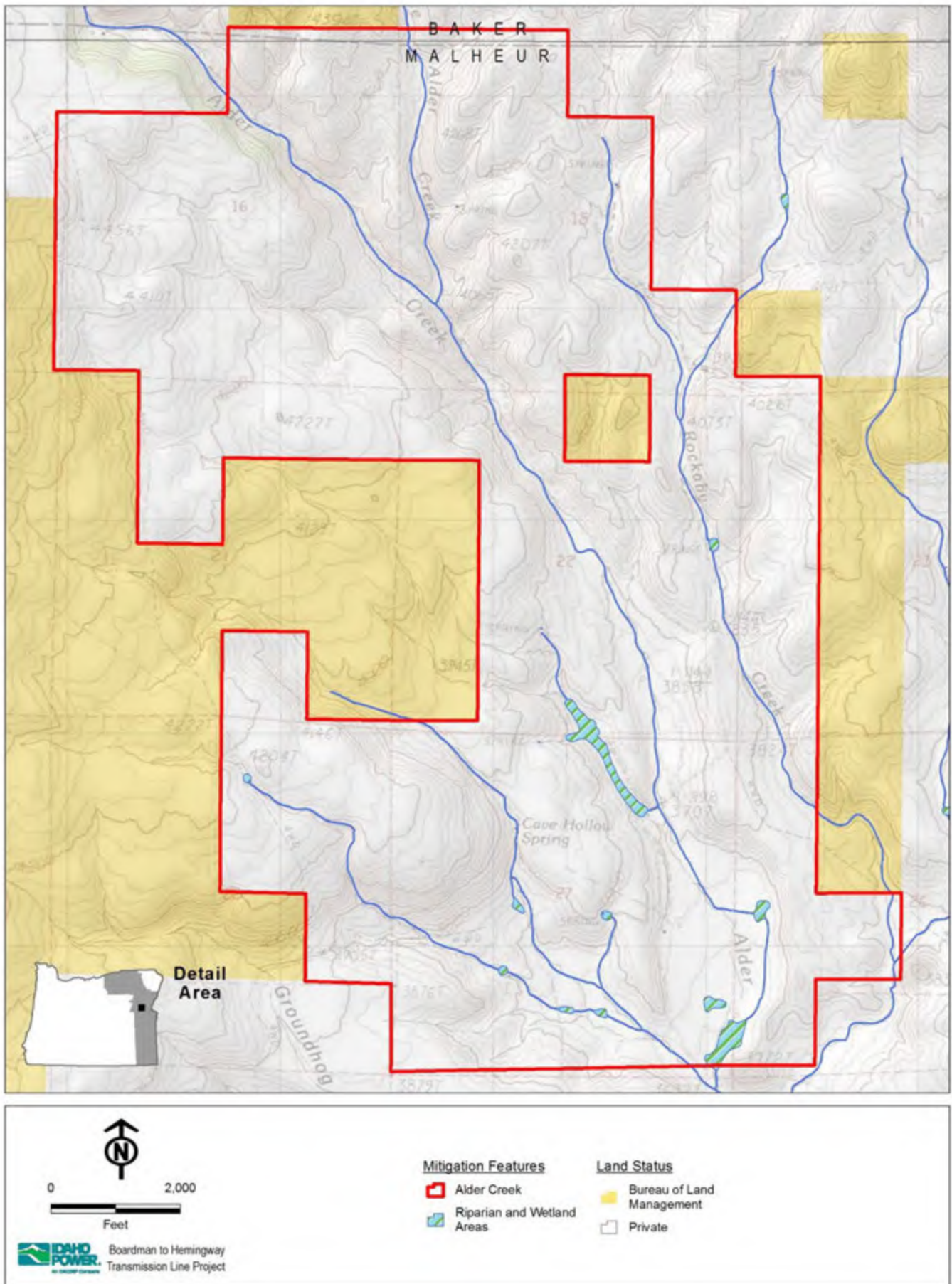


Figure 1. Alder Creek Ownership and Water

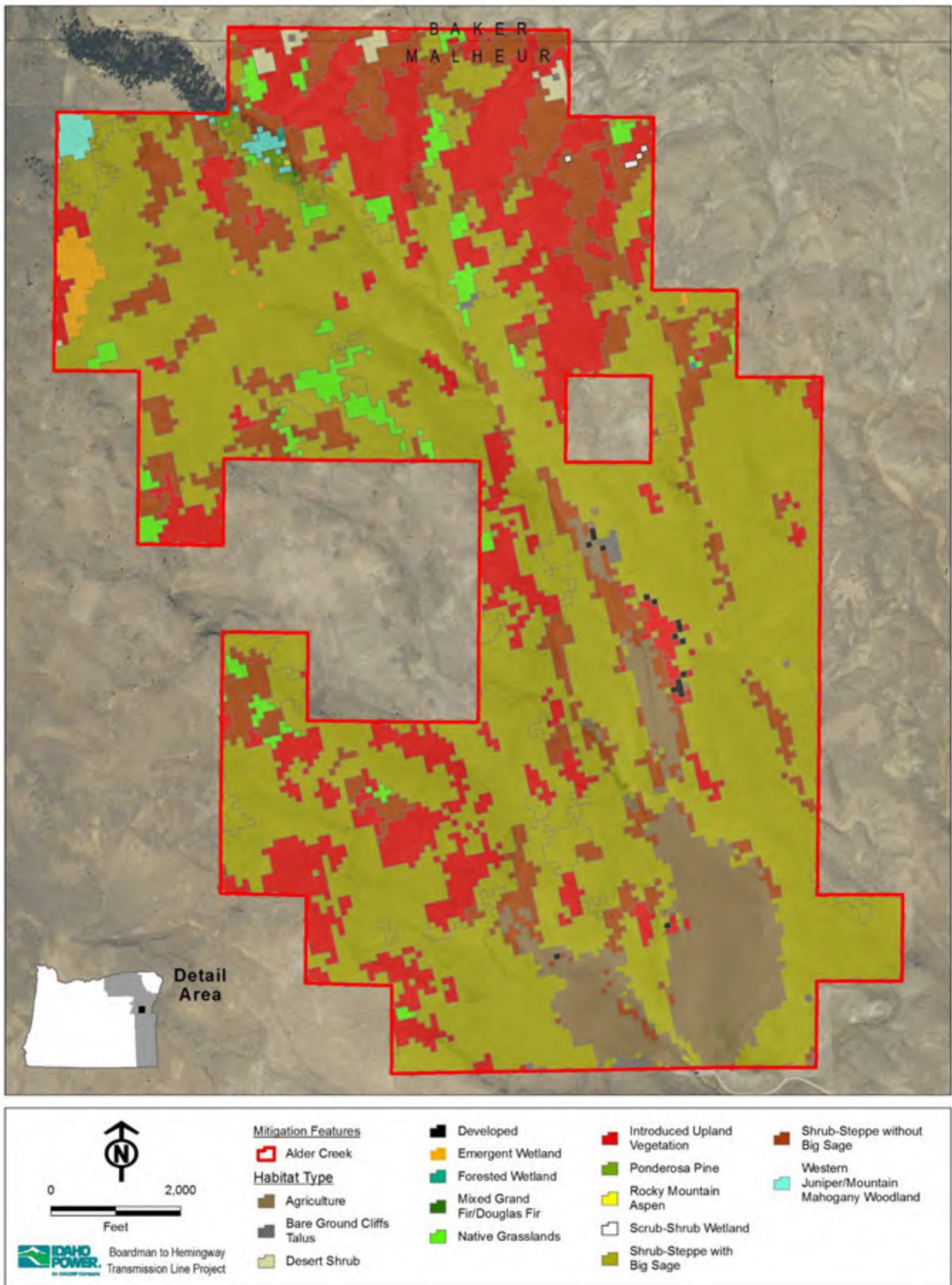


Figure 2. Alder Creek Ranch Habitat Types

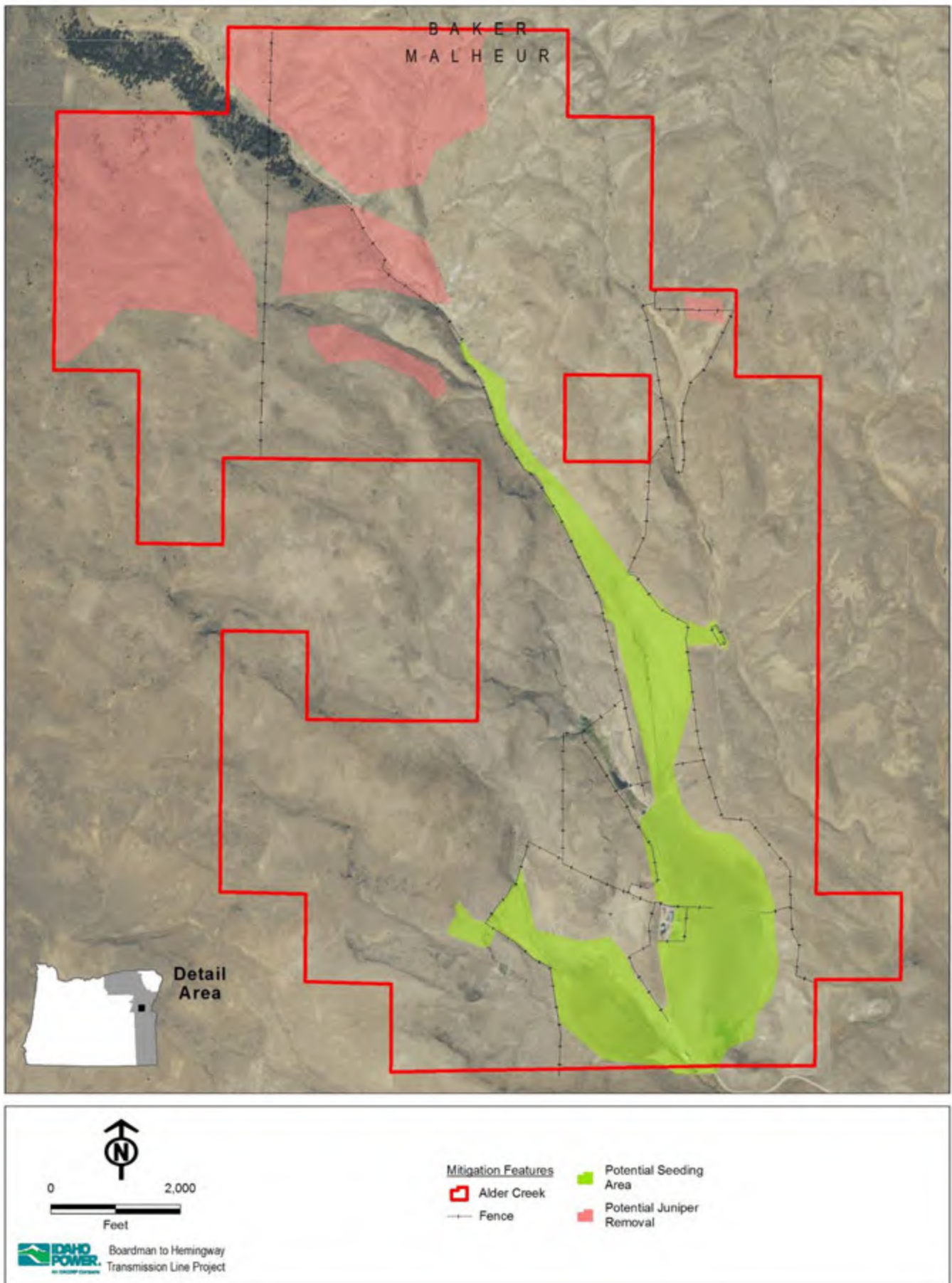


Figure 3. Alder Creek Potential Mitigation Action Areas

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: Glasgow (Figure 1) Date of Assessment: 10/13/2014
 Landowner: _____ Parcel Elevation (ft): 3,000 – 4,600
 Within Mitigation Service Area?: Yes
 Parcel Size in Acres: 1,438

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker County, 10 miles southeast of Keating.
T9S R43E Sections 11, 12, 13, 14, 23, 24

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Total	Wildlife Habitat ³
	Category 1		0	0	
	Category 2				-
	Shrub-Steppe with Big Sage	Shrub/Grass	675.9	47.0	MDWR
	Shrub-Steppe with Big Sage	Shrub/Grass	364.9	25.4	MDWR, RMEWR, RMESR
	Shrub-Steppe with Big Sage	Shrub/Grass	25.9	1.8	MDWR, RMESR
	Shrub-Steppe with Big Sage	Shrub/Grass	6.2	0.4	RMEWR, MDWR
	Shrub-Steppe without Big Sage	Shrub/Grass	76.0	5.3	MDWR
	Shrub-Steppe without Big Sage	Shrub/Grass	159.9	11.1	MDWR, RMEWR, RMESR
	Shrub-Steppe without Big Sage	Shrub/Grass	10.5	0.7	MDWR, RMEWR
	Native Grasslands	Shrub/Grass	39.6	2.7	MDWR, RMEWR, RMESR
	Native Grasslands	Shrub/Grass	35.6	2.5	MDWR
	Native Grasslands	Shrub/Grass	1.7	0.1	MDWR, RMESR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	23.8	1.7	MDWR, RMEWR, RMESR
	Western Juniper/Mountain Mahogany Woodland	Forest/Woodland	4.4	0.3	MDWR, RMEWR, RMESR
	Rocky Mountain Aspen	Forest/Woodland	1.6	0.1	MDWR, RMEWR, RMESR
	Introduced Upland Vegetation	Shrub/Grass	8.0	0.6	MDWR
	Ponderosa Pine	Forest/Woodland	0.9	0.1	MDWR, RMEWR, RMESR
	Forested Wetland	Wetland	1.1	0.1	MDWR
	Emergent Wetland	Wetland	0.7	0.0	MDWR
	Remaining	-	2.2	0.2	-
	Category 3		0	0	-
	Category 4		0	0	-
	Category 5		0	0	-
	Category 6		0	0	-
	Total		1,438.9	100	-

¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1).

² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.

³ RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range. MDWR = Category 2 habitat for ODFW mule deer winter range.

⁴ Total acres of habitat type may not match actual parcel size due to the resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary.

Soil types

The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (**Figure 3**):

Ateron very stony loam (84 acres). Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations from 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.

Brownscombe silt loam (389 acres). Brownscombe soils consist of moderately deep, well drained soils found on hills at elevations of 2,400 to 3,600 feet. Brownscombe soils are used for range, dryland winter wheat, and wildlife habitat. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass and arrowleaf balsamroot.

Hibbard gravelly silty clay loam (143 acres). Hibbard soils consist of moderately deep to a duripan, well drained soils found on fan terraces at elevations of 3,000 to 3,700 feet. Hibbard soils are used for rangeland. The native vegetation is bluebunch wheatgrass, Idaho fescue and big sagebrush.

Lookout very cobbly silt loam (85 acres). Lookout soils consist of moderately deep to a duripan, well drained soils found on hills at elevations of 2,800 to 3,600 feet. Lookout soils are mainly rangeland. Small acreage is irrigated for alfalfa, hay, pasture and small grain. Native vegetation dominantly is bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, buckwheat, and big sagebrush.

Ruckles-Ruclick complex (20 acres). Ruckles soils consist of shallow, well drained soils found on hill and canyon side slopes at elevations ranging from 1,200 to 3,800 feet in Oregon. Ruckles soils are used for livestock grazing. Native vegetation dominantly is bluebunch wheatgrass, Idaho fescue on north slopes, Sandberg bluegrass and Wyoming big sagebrush. Ruclick soils consist of moderately deep, well drained soils found on summits, dipslopes, and sideslopes of foothills and tablelands at elevations of 4,000 to 6,500 feet in Idaho, and as low as 1,200 feet in Oregon. Ruclick soils are used mainly for rangeland and wildlife habitat. The dominant natural vegetation is Wyoming big sagebrush, bluebunch wheatgrass, and Sandberg bluegrass.

Skullgulch silty clay loam (196 acres). Skullgulch soils consist of very deep, well drained soils in concave positions on north-facing side slopes on terraces and on fans with elevations ranging from 4,000 to 5,400 feet. Skullgulch soils are used for rangeland. The native vegetation in MLRA 10 is Idaho fescue, bluebunch wheatgrass, prairie junegrass, mountain big sagebrush, and green rabbitbrush. The native vegetation in MLRA 9 is Idaho fescue, bluebunch wheatgrass and prairie junegrass.

Snell-Ateron complex (468 acres). Snell series consists of moderately deep, well drained soils found on hills, plateaus, mountains and on canyon walls at elevations of 2,000 to 6,800 feet. Snell soils are used for livestock grazing and wildlife habitat. Potential native vegetation is bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass. Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations from 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.

Virtue very gravelly silt loam (53 acres). Virtue soils consist of moderately deep to a duripan well drained soils found on fans and terraces at elevations of 2,300 to 4,000 feet. Virtue soils are used for rangeland, irrigated small grain, hay and pasture. The native vegetation is bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, Thurber needlegrass and Wyoming big sagebrush.

**Hydrologic
Features Present**

Two perennial streams and one intermittent stream within the property boundary (NHD). NWI identifies a couple of emergent wetlands, a scrub-shrub wetland, and three cold water springs in addition to riparian areas associated with NHD data.

(SteamNet, NWI, NHD)	
Adjacent land ownership, use, and condition	The northern boundary of the property connects to a very large tract of BLM land that connects many of the uplands above the Lower Powder Valley; including Spring Creek and Goose Creek areas to the north of State Route 86; Love Creek, Ritter Creek and Ruckles Creek south of State Route 86; and areas extending into the upper Lower Powder Valley including Crews Creek and portions of the Powder River north of State Route 203 to the Union/Baker County line. However, a majority of the property is immediately adjacent to private properties. Adjacent land use is rangeland that appears to be heavily grazed.
Infrastructure Density within or Near the Parcel (Qualitative Description)	Property is approximately 1 mile south of State Route 86 and contains some fencing and two-track trails; otherwise, the property is open rangeland absent of development.
Summary	The entire property is within a sage-grouse Core Area that is well-studied by ODFW. Nesting sage-grouse have been documented on the property. The property contains both elk and mule deer winter ranges and is heavily utilized by pronghorn in the spring. The property is grazed every other year, and has been managed in this manner for the last 10 years. Landowner explained that since this grazing rotation was implemented, he has seen an upward trend in desirable vegetation (Idaho fescue especially). The property is mostly Wyoming big sagebrush with islands of invasive species (Japanese brome was mentioned) that would need treatment. Landowner believes that ten years of rest from grazing and some treatments would get the property to a state where, barring fire or some other unexpected event, habitat would contain enough native desirable vegetation that few management actions would be needed to maintain the quality of habitat.
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 Rocky Mountain elk winter range and mule deer winter range within the shrub/grass general vegetation type. This mitigation site could also help meet the Project need for sage-grouse habitat mitigation. It also provides opportunity for shrub/grass mitigation of Category 3, 4, & 5 habitats. It contains important habitat features that could be preserved and has some uplift opportunities that could be achieved through implementation of standard mitigation actions.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to sage-grouse, elk, and deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust.
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Modification of Livestock Grazing</i> – this property has been grazed every other year for the past ten years, allowing for re-establishment of native vegetation. Future management would focus primarily on grazing practices that would not compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Fence Removal/Marking</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action. Some areas of introduced upland vegetation (specifically Japanese brome) were noted on the property in cattle congregation areas.• <i>Native revegetation/restoration</i> – focus of efforts would be to promote establishment of sagebrush and bunchgrasses; opportunities exist but have not been specifically identified at this time.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.
Monitoring	A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).
Success Criteria	Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success

criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by sage-grouse or any other wildlife species.

Financial Outline

Estimated Budget for the Glasgow Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	?	1		?
50-year Operation and Management Costs				
O&M ¹	\$30.00	1,438	50	\$2,157,000
Total		-		\$? (\$?) ²

¹This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars. In addition, one of the projects presented in the document was the 10,000 acre Sagebrush Flat Wildlife Mitigation area in Washington state which is within a similar habitat type and has a FY2015 budget of approximately \$300,000 (or \$30/acre).

²Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

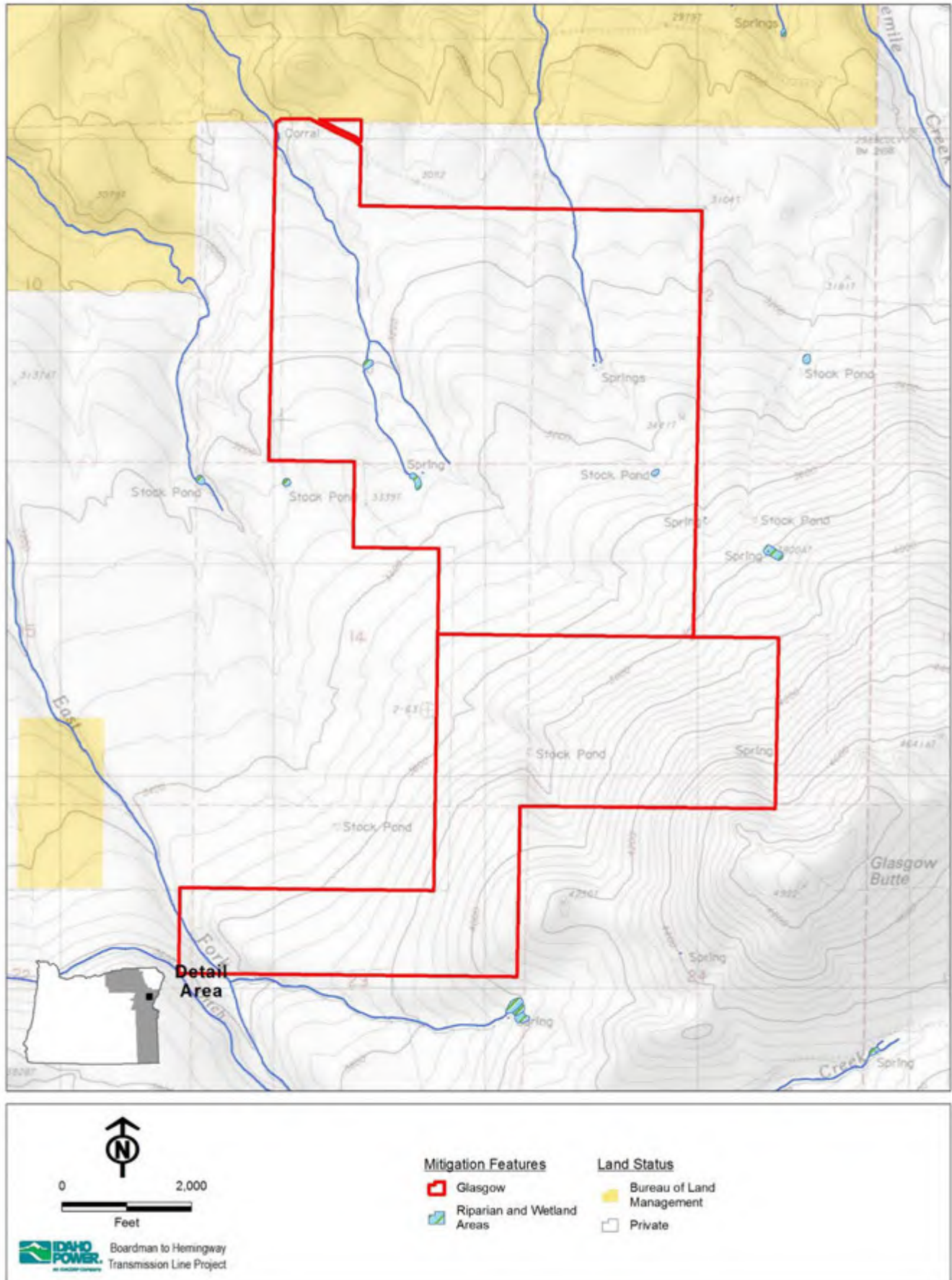


Figure 1. Glasgow Ownership and Water

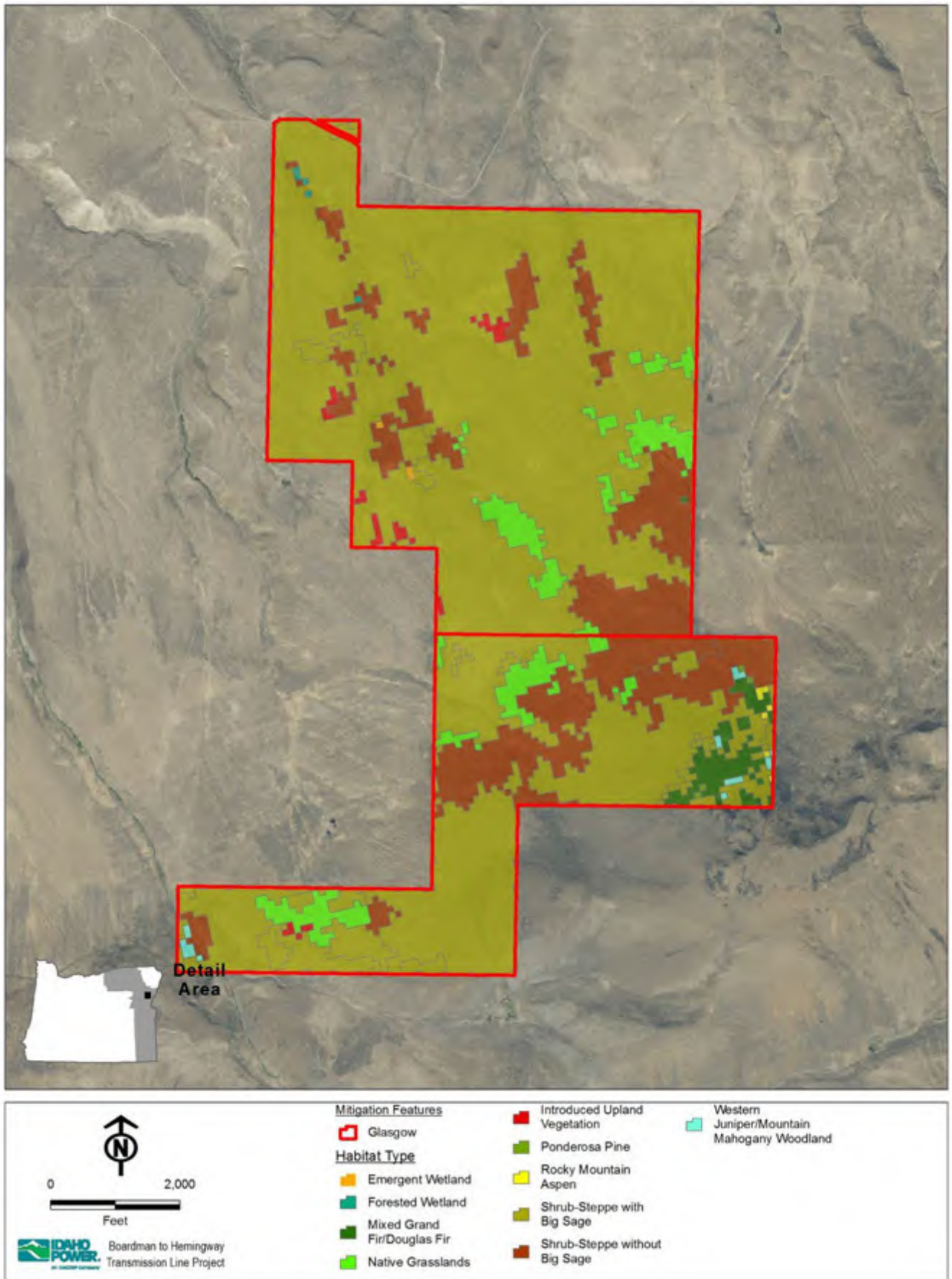


Figure 2. Glasgow Habitat Types

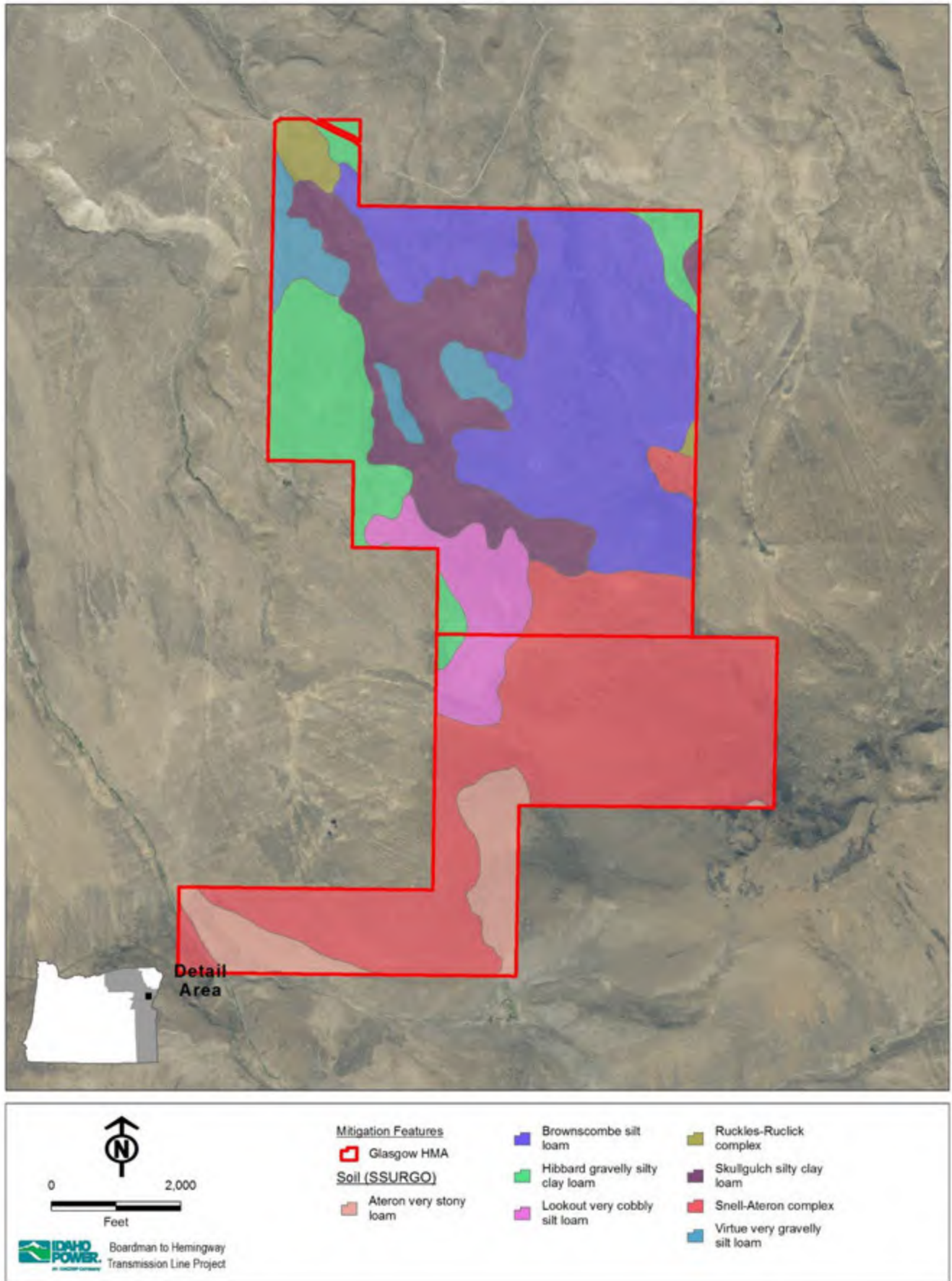


Figure 3. Glasgow Soil Types

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: Trail Creek Date of Assessment: 10/13/2014
 Landowner: _____ Parcel Elevation (ft): 3,600 – 4,580
 Within Mitigation Service Area?: Yes
 Parcel Size in Acres: 624

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker County, approximately 5 miles northeast of Durkee.
 T10S R43E Section 36, T10S R44E Section 31, T11S R43E Section 1, T11S R44E Section 6 (**Figure 1**)

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Parcel	Wildlife Habitat ³
		Category 1		0	0
	Category 2		624.5	100	-
	Shrub-Steppe with Big Sage	Shrub/Grass	490.0	78.5	RMEWR, RMESR, MDSR
	Shrub-Steppe without Big Sage	Shrub/Grass	75.6	12.1	RMEWR, RMESR, MDSR
	Native Grasslands	Shrub/Grass	27.1	4.3	RMEWR, RMESR, MDSR
	Introduced Upland Vegetation	Shrub/Grass	8.2	1.3	RMEWR, RMESR, MDSR
	Western Juniper /Mountain Mahogany Woodland	Forest/Woodland	7.6	1.2	RMEWR, RMESR, MDSR
	Ponderosa Pine	Forest/Woodland	7.1	1.1	RMEWR, RMESR, MDSR
	Mixed Grand Fir / Douglas Fir	Forest/Woodland	3.1	0.5	RMEWR, RMESR, MDSR
	Rocky Mountain Aspen	Forest/Woodland	3.1	0.5	RMEWR, RMESR, MDSR
	Bare Ground Cliffs Talus	Bare Ground	2.0	0.3	RMEWR, RMESR, MDSR
	Emergent Wetland	Wetland	0.7	0.1	RMEWR, RMESR, MDSR
	Category 3		0	0	-
	Category 4		0	0	-
	Category 5		0	0	-
	Category 6		0	0	-
	Total	NA	624.5⁴	100	-

¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in Exhibit P1, Attachment P1-1 Habitat Categorization Matrix.
² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.
³ RMEWR = Rocky Mountain Elk Winter Range.
⁴ Total acres of habitat type may not match actual parcel size due to resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary. This is apparent in **Figure 2**.

Soil type

The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soil was identified on the property (**Figure 3**):

Durkee gravelly silt loam (623). Durkee soils consist of moderately deep, well drained soils on smooth rolling hills at elevation ranges from 3,600 to 6,100 feet.

Hydrologic Features Present (SteamNet, NWI, NHD)	Two intermittent streams are on the property (NHD). NWI does not indicate any additional wetland features beyond those associated with the streams identified by NHD.
Adjacent land ownership, use, and condition (if possible)	A majority of this property shares a border with a BLM parcel that is approximately 4,000 acres in size. Also adjacent to private land ownership. Dominant land use in the area is rangeland. Adjacent private lands appear to be more degraded as a result of heavier grazing practices (per 2013 site visit).
Infrastructure Density within or Near the Parcel (Qualitative Description)	The property contains some fencing and gates and some two track roads; otherwise open rangeland.
Summary	<p>The property is completely within a sage-grouse Core Area and the Lookout Mountain Rocky Mountain elk herd's winter range. The property is completely within elk summer range and mule deer summer range as well.</p> <p>The property is close to the Nodine sage-grouse lek. The property provides sage-grouse breeding habitat, adequate sagebrush cover and height ensures adequate winter forage, and an abundance of forbs in the understory and a source of water in Trail Creek provides quality brood-rearing habitat. The property is able to support sage-grouse year-round and therefore provides habitat for many other sagebrush obligate species.</p>
Pass/Fail Desktop Assessment?	Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 Rocky Mountain elk winter range within the shrub/grass general vegetation type. This mitigation site could also help meet the Project need for sage-grouse habitat mitigation. It also provides opportunity for shrub/grass mitigation of Category 3, 4, & 5 habitats. It contains important habitat features that could be preserved and has some uplift opportunities that could be achieved through implementation of standard mitigation actions.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to sage-grouse and elk (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust.
Mitigation Actions	<p>The following are mitigation actions that IPC may consider implementing at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Juniper/Conifer Removal</i> – Opportunity for spot-treating single trees occurs throughout the property to prevent future encroachment.• <i>Modification of Livestock Grazing</i> – grazing on this property appears to have been managed in a manner that allows native vegetation to remain established and provide cover and forage for wildlife species. Future management would focus primarily on grazing practices that would not compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Fence Removal/Marking</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action. Some areas of introduced upland vegetation were noted along Trail Creek where cattle congregate.• <i>Native revegetation/restoration</i> – focus of efforts would be to promote establishment of sagebrush and bunchgrasses; opportunities exist but have not been specifically identified at this time.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Wetland/Spring/Riparian Improvement</i> – opportunity exists along Trail Creek to perform riparian/watershed improvements.
Monitoring	A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).

Success Criteria

Specific success criteria will be developed once mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of weed reduction.
- Successful juniper removal and continued control of encroachment onto the mitigation site for the life of the project.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by sage-grouse or any other wildlife species.

Financial Outline

Estimated Budget for the Trail Creek Mitigation Site

Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	?	1		?
50-year Operation and Management Costs				
O&M ¹	\$30.00	624	50	\$936,000
Total		-		\$? (\$?) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars. In addition, one of the projects presented in the document was the 10,000 acre Sagebrush Flat Wildlife Mitigation area in Washington state which is within a similar habitat type and has a FY2015 budget of approximately \$300,000 (or \$30/acre).

² Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

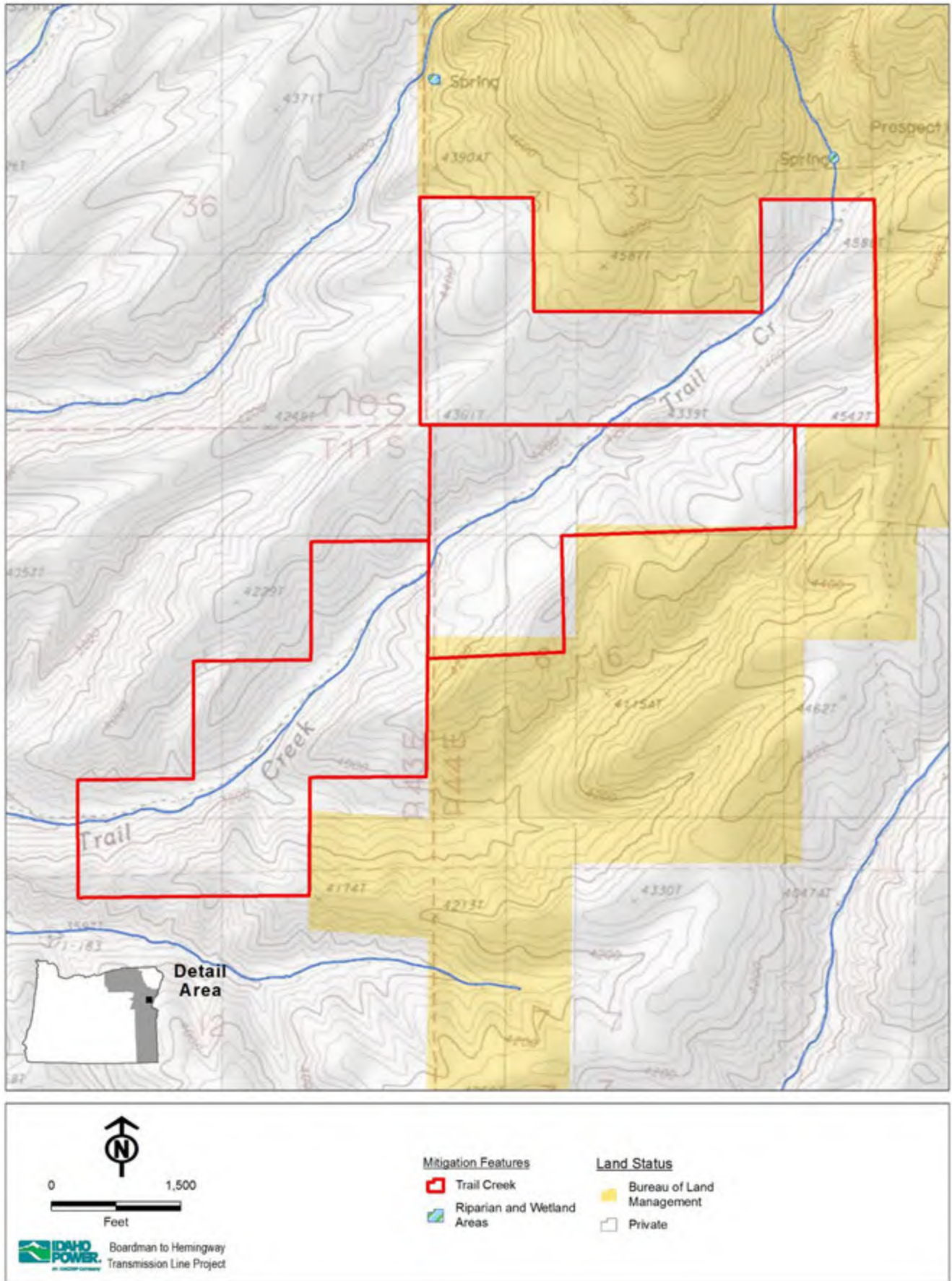


Figure 1. Trail Creek Ownership and Water

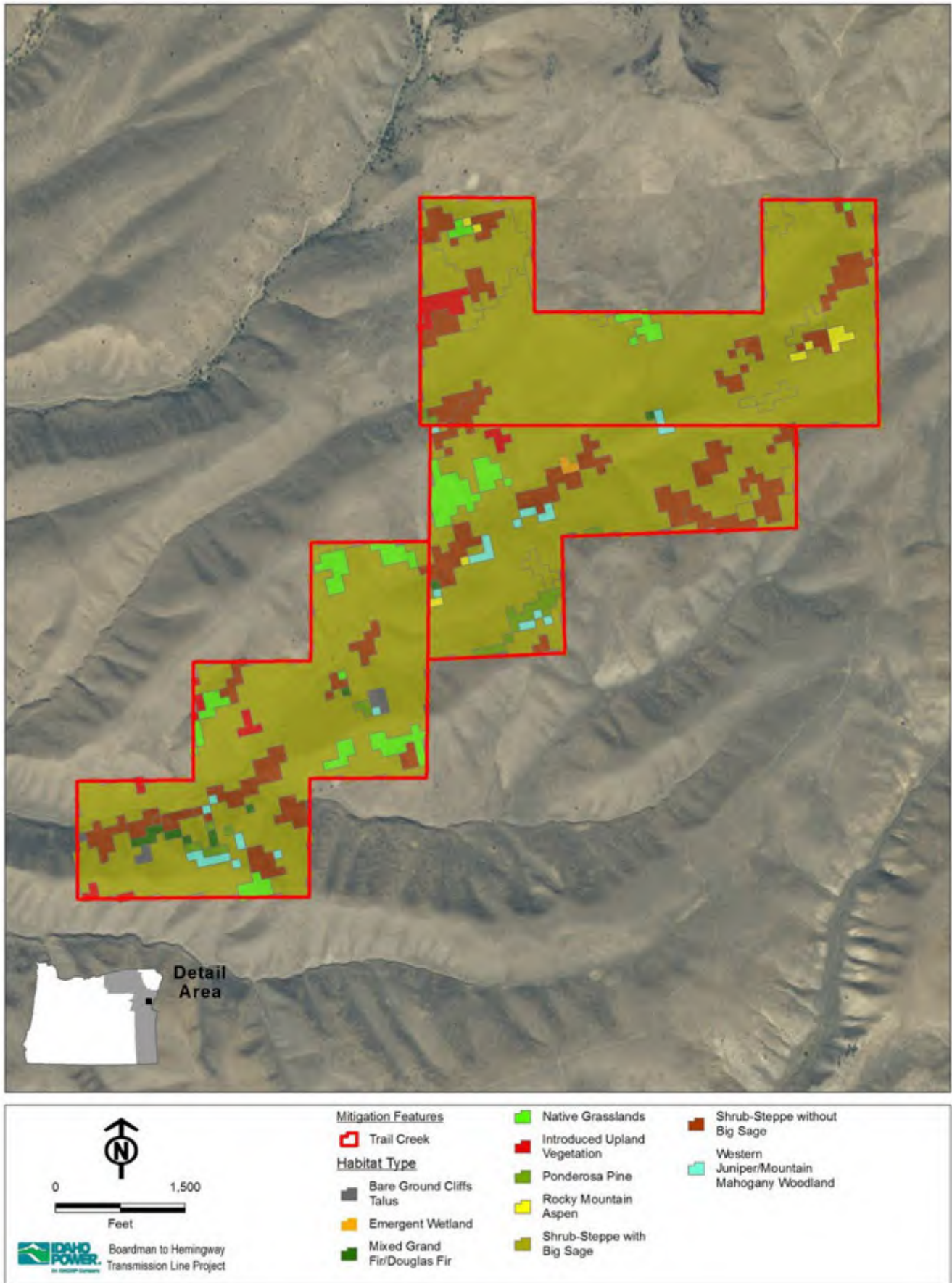


Figure 2. Trail Creek Habitat Types

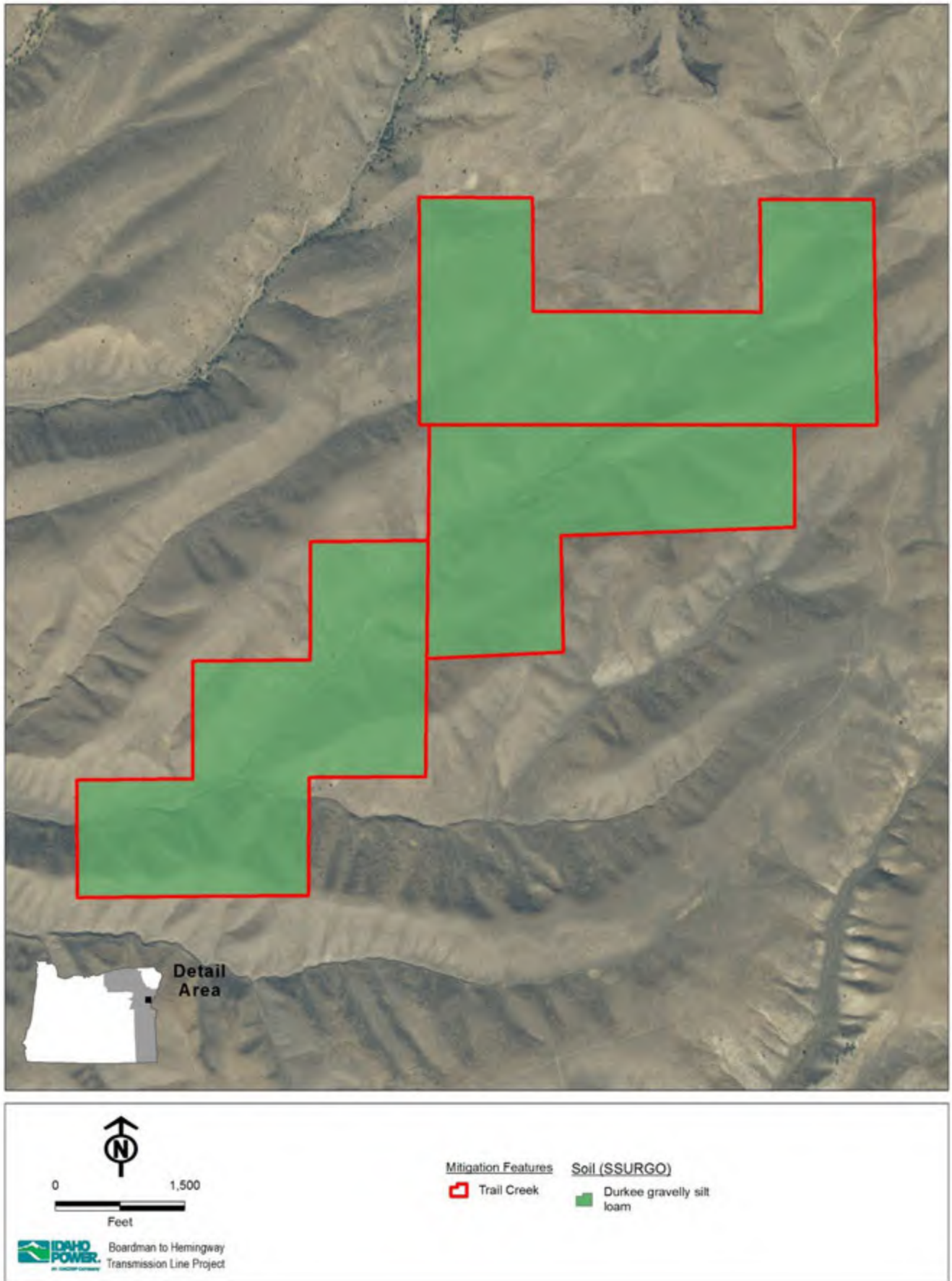


Figure 3. Trail Creek Soil Types

Boardman to Hemingway Transmission Line Project Desktop Habitat Mitigation Site Assessment Worksheet

Parcel Name: Upper Timber (Figure 1) Date of Assessment: 10/13/2014
 Landowner: _____ Parcel Elevation (ft): 3,000 – 4,800
 Parcel Size in Acres: 1,577 Within Mitigation Service Area?: Yes

Location Description

(County, miles and direction from known location, TRS, UTM, other):

Baker County, 5 miles west of Richland.
T9S R44E Sections 22, 23, 26, 27, 28, 29

Vegetation Cover Classes (GAP ¹ , Figure 2)	HMP Habitat Category ² and Type	HMP General Vegetation Type	Acres	% of Total	Wildlife Habitat ³
	Category 1		0	0	
	Category 2				-
	Shrub-Steppe with Big Sage	Shrub/Grass	538.1	34.2	MDWR
	Shrub-Steppe with Big Sage	Shrub/Grass	407.6	25.8	MDWR, RMESR
	Shrub-Steppe with Big Sage	Shrub/Grass	104.1	6.6	RMEWR, RMESR, MDWR
	Shrub-Steppe without Big Sage	Shrub/Grass	79.3	5.1	MDWR
	Shrub-Steppe without Big Sage	Shrub/Grass	189.7	12.0	MDWR, RMESR
	Shrub-Steppe without Big Sage	Shrub/Grass	32.1	2.0	RMEWR, RMESR, MDWR
	Native Grasslands	Shrub/Grass	19.5	1.2	MDWR
	Native Grasslands	Shrub/Grass	80.0	5.1	MDWR, RMESR
	Native Grasslands	Shrub/Grass	11.2	0.7	RMEWR, RMESR, MDWR
	Introduced Upland Vegetation	Shrub/Grass	36.2	2.3	MDWR
	Introduced Upland Vegetation	Shrub/Grass	52.2	3.3	MDWR, RMESR
	Introduced Upland Vegetation	Shrub/Grass	6.4	0.4	RMEWR, RMESR, MDWR
	Forested Wetland	Wetland	7.4	0.5	MDWR
	Forested Wetland	Wetland	1.5	0.1	MDWR, RMESR
	Agriculture ⁴	Ag/Developed	3.3	0.3	MDWR
	Agriculture ⁴	Ag/Developed	3.8	0.2	MDWR, RMESR
	Mixed Grand Fir/Douglas Fir	Forest/Woodland	1.8	0.1	MDWR
	Ponderosa Pine	Forest/Woodland	1.6	0.1	MDWR
	Rocky Mountain Aspen	Forest/Woodland	1.1	0.1	MDWR
	Category 3		0	0	-
	Category 4		0	0	-
	Category 5		0	0	-
	Category 6		0	0	-
	Total⁵		1,576.9	100	-

¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP Habitat Type as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1).
² Represents the habitat category based on overlap with wildlife habitat layers. Agriculture and Developed habitat types' categories are not modified by overlap with wildlife habitat.
³ RMEWR = Category 2 habitat for ODFW Rocky Mountain elk winter range. MDWR = Category 2 habitat for ODFW mule deer winter range.
⁴ A brief review of aerial imagery indicated that ReGAP is misclassifying areas as Agriculture. In this instance, the Agriculture appears likely to be wetlands. Therefore, Agriculture is remaining as a Category 2 habitat in this case. Reviewing of ReGAP data via aerial photo interpretation is not performed for the vast majority of habitat classifications on potential mitigation properties. On the ground knowledge of this property prompted a review of the Agriculture habitat classification.
⁵ Total acres of habitat type may not match actual parcel size due to the resolution of the GAP raster dataset. Pixels of the raster dataset were not simplified or smoothed to match the exact shape of the parcel boundary.

Soil types

The NRCS Soil Survey Geographic Database (SSURGO) data was reviewed and the following soils were identified on the property (**Figure 3**):

Ateron very stony loam (123 acres). Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations from 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.

Bakeoven-Ruckles complex (101 acres). Bakeoven soils consist of very shallow, well drained soils found on mountains, ridgetops, hillslopes, mesas, and benches at elevations of 300 to 4,800 feet. Bakeoven soils are used for livestock grazing and wildlife habitat. Native vegetation is Sandberg bluegrass and stiff sagebrush. Ruckles soils consist of shallow, well drained soils found on hill and canyon side slopes at elevations ranging from 1,200 to 3,800 feet in Oregon. Ruckles soils are used for livestock grazing. Native vegetation dominantly is bluebunch wheatgrass, Idaho fescue on north slopes, Sandberg bluegrass and Wyoming big sagebrush.

Bouldrock complex (129 acres) and Bouldrock loam (118 acres). Bouldrock soils consist of moderately deep, well drained soils found on south-facing side slopes of mountainous areas at elevations ranging from 4,000 to 6,200 feet. Bouldrock soils are used for rangeland. The native vegetation is bluebunch wheatgrass, mountain big sagebrush, arrowleaf balsamroot and gray rabbitbrush.

Greenscombe loam (280 acres). Greenscombe soils consist of moderately deep, well drained soils on low hills at elevations 3,200 to 3,800 feet. Greenscombe soils are Rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, and big sagebrush.

Hyll-Simas association (91 acres). Hyll soils consist of moderately deep to consolidated old alluvium (densic material), well drained soils on side slopes of dissected terraces at elevations of 2,700 to 3,500 feet. Hyll soils are used for range, watershed and wildlife habitat. Native vegetation is bluebunch wheatgrass, Idaho fescue and arrowleaf balsamroot. Simas soils consist of very deep, well drained soils found on hills at elevations of 1,200 to 4,000 feet. Simas soils are used for livestock grazing. Native plants are bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, and Wyoming and basin big sagebrush.

Kilmerque loam (25 acres). Kilmerque soils consist of moderately deep, well drained soils on gently rolling bench tops to moderately steep south aspect side slopes in forested mountains at elevations ranging from 3,500 to 6,000 feet. Kilmerque soils are used for woodland. The native vegetation is ponderosa pine, Douglas fir and pinegrass.

Ruckles-Rucllick-Snellby complex (50 acres). Ruckles soils consist of shallow, well drained soils found on hill and canyon side slopes at elevations ranging from 1,200 to 3,800 feet in Oregon. Ruckles soils are used for livestock grazing. Native vegetation dominantly is bluebunch wheatgrass, Idaho fescue on north slopes, Sandberg bluegrass and Wyoming big sagebrush. Rucllick soils consist of moderately deep, well drained soils found on summits, dipslopes, and sideslopes of foothills and tablelands at elevations of 4,000 to 6,500 feet in Idaho, and as low as 1,200 feet in Oregon. Rucllick soils are used mainly for rangeland and wildlife habitat. The dominant natural vegetation is Wyoming big sagebrush, bluebunch wheatgrass, and Sandberg bluegrass. Snellby soils consist of moderately deep, well drained soils on hills at elevations of 3,400 to 3,800 feet. Snellby soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, and big sagebrush.

<p>Soil types (cont.)</p>	<p><i>Ruckles-Ruclick complex (336 acres)</i>. Ruckles soils consist of shallow, well drained soils found on hill and canyon side slopes at elevations ranging from 1,200 to 3,800 feet in Oregon. Ruckles soils are used for livestock grazing. Native vegetation dominantly is bluebunch wheatgrass, Idaho fescue on north slopes, Sandberg bluegrass and Wyoming big sagebrush. Ruclick soils consist of moderately deep, well drained soils found on summits, dipslopes, and sideslopes of foothills and tablelands at elevations of 4,000 to 6,500 feet in Idaho, and as low as 1,200 feet in Oregon. Ruclick soils are used mainly for rangeland and wildlife habitat. The dominant natural vegetation is Wyoming big sagebrush, bluebunch wheatgrass, and Sandberg bluegrass.</p> <p><i>Ruclick very cobbly silt loam (135 acres)</i>. Ruclick soils consist of moderately deep, well drained soils found on summits, dipslopes, and sideslopes of foothills and tablelands at elevations of 4,000 to 6,500 feet in Idaho, and as low as 1,200 feet in Oregon. Ruclick soils are used mainly for rangeland and wildlife habitat. The dominant natural vegetation is Wyoming big sagebrush, bluebunch wheatgrass, and Sandberg bluegrass.</p> <p><i>Snell-Ateron complex (32 acres)</i>. Snell series consists of moderately deep, well drained soils found on hills, plateaus, mountains and on canyon walls at elevations of 2,000 to 6,800 feet. Snell soils are used for livestock grazing and wildlife habitat. Potential native vegetation is bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass. Ateron soils consist of shallow, well drained soils found on ridge tops and side slopes of hills and mountains at elevations from 3,600 to 5,800 feet. Ateron soils are used for livestock grazing. The native vegetation is mountain big sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.</p> <p><i>Snellby stony silt loam (79 acres)</i>. Snellby soils consist of moderately deep, well drained soils on hills at elevations of 3,400 to 3,800 feet. Snellby soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, and big sagebrush.</p> <p><i>Taterpa loam (77 acres)</i>. Taterpa soils consist of deep, well drained soils on north-facing side slopes of mountains at elevations ranging from 4,000 to 6,200 feet. Taterpa soils are used for rangeland. The native vegetation is Idaho fescue, bluebunch wheatgrass, mountain big sagebrush and green rabbitbrush.</p>
<p>Hydrologic Features Present (SteamNet, NWI, NHD)</p>	<p>The property contains four perennial streams. NWI identifies several (14) emergent wetlands, a couple of impounded ponds, and three cold springs.</p>
<p>Adjacent land ownership, use, and condition</p>	<p>A majority of the immediately adjacent lands are private ownership; however, a few small BLM parcels border the property and larger tracts of BLM land are within 1 mile of the property. Livestock rangeland is the primary land use in the area, with irrigated agriculture in the valley surrounding Richland, approximately 2 miles to the east of the property.</p>
<p>Infrastructure Density within or Near the Parcel (Qualitative Description)</p>	<p>State Route 86 is 1 mile north of the property. The property itself contains some fencing and two track trails; otherwise, the property is open range.</p>

Summary

The property contains some high quality shrub-steppe and native grassland habitat, but is interspersed with invasive vegetation such as medusahead wildrye. The property contains numerous water sources and riparian habitat. The property is completely within a sage-grouse Core Area and mule deer winter range and also contains some elk winter range. The highest density of wintering mule deer in Baker County occurs just north of the property. Pronghorn are common in the area. The property is adjacent to multiple sage-grouse leks and is situated between known lek sites and Sheep Mountain where radio-collared birds have been located, indicating the property is likely used during seasonal migrations and/or for nesting and brood rearing. The Pevine Flat area to the east is important for both sage-grouse and wintering big game.

**Pass/Fail Desktop
Assessment?**

Pass

Boardman to Hemingway Transmission Line Project Consideration of Property as a Potential Mitigation Site

Mitigation Function	<p>This mitigation site has been identified as in-kind and in-proximity mitigation for impacts on Category 2 mule deer winter range and Rocky Mountain elk winter range within the shrub/grass general vegetation type. This mitigation site could also help meet the Project need for sage-grouse habitat mitigation. It also provides opportunity for shrub/grass mitigation of Category 3, 4, & 5 habitats. It contains important habitat features that could be preserved and has some uplift opportunities that could be achieved through implementation of standard mitigation actions.</p> <p>The mitigation actions listed below, upon successful implementation, will increase the quality of habitat available to sage-grouse, elk, and deer (among other species) within the mitigation site and result in an ecological uplift to the mitigation site above what is provided under the current management.</p>
Mitigation Site Manager	Fee title acquisition with transfer of ownership to State of Oregon, Federal Land Management Agency, approved NPO or Land Trust.
Mitigation Actions	<p>The following are mitigation actions that may be implemented at this mitigation site in order to satisfy the mitigation policies/guidelines of the permitting agencies. All mitigation actions will follow reliable methods. The mitigation actions presented here are not comprehensive. Implementation will likely be some combination of one or more of the following:</p> <ul style="list-style-type: none">• <i>Modification of Livestock Grazing</i> – Future management would focus primarily on grazing practices that would not compete with native wildlife life history needs. Targeted grazing may be considered for habitat enhancement/treatment actions.• <i>Fence Removal/Marking</i> – opportunities are unknown at this time, but it is anticipated that some unnecessary fencing may be removed or necessary fencing can be upgraded to more wildlife friendly fencing.• <i>Weed treatment</i> – the extent of noxious weed invasion on the mitigation site is unknown at this time but it is anticipated that opportunities exist to implement this mitigation action. Some areas of introduced upland vegetation (specifically medusahead wildrye) were noted on the property.• <i>Native revegetation/restoration</i> – focus of efforts would be to promote establishment of sagebrush and bunchgrasses; opportunities exist but have not been specifically identified at this time.• <i>Fire readiness</i> – efforts made to make the property more resistant to catastrophic fire and a fire response plan could be developed.• <i>Wetland/Spring/Riparian Improvement</i> – opportunity exists along Canyon Creek, Upper Timber Gulch, and other areas to perform riparian/watershed improvements.
Monitoring	A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through vegetation plot monitoring and establishment of photo locations. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. During the annual monitoring phase, a longer-term monitoring plan will be developed using similar protocols and methods to monitor the mitigation actions at larger time intervals (i.e., 5 years, 10 years).

Success Criteria

Specific success criteria will be developed once baseline conditions have been determined and potential mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:

- Vegetation plots show an increase in native vegetation cover and general trend toward increased habitat quality representing an ecological uplift.
- Successful weed control through documentation of a reduction in weeds and non-native invasive plant species.
- Mitigation success will not be dependent on documentation of increased use of the mitigation site by sage-grouse or any other wildlife species.

Financial Outline

Estimated Budget for the Upper Timber Mitigation Site				
Action	Cost per Unit	Units	Years	Expense
One-time Costs				
Acquisition	?	1		?
50-year Operation and Management Costs				
O&M ¹	\$30.00	1,577	50	\$2,365,500
Total		-		\$? (\$?) ²

¹ This O&M cost is an estimate of the cost per acre per year (not including acquisition/easement costs) based on the research presented in the Independent Economic Analysis Board's 2007 *Investigation of Wildlife O&M Costs*. The average cost per acre presented in that document was \$24 in 2004 dollars, this has been adjusted to reflect 2015 dollars. In addition, one of the projects presented in the document was the 10,000 acre Sagebrush Flat Wildlife Mitigation area in Washington state which is within a similar habitat type and has a FY2015 budget of approximately \$300,000 (or \$30/acre).

² Cost per acre here includes cost of acquisition/easement and initial mitigation actions and long-term O&M for 50 years.

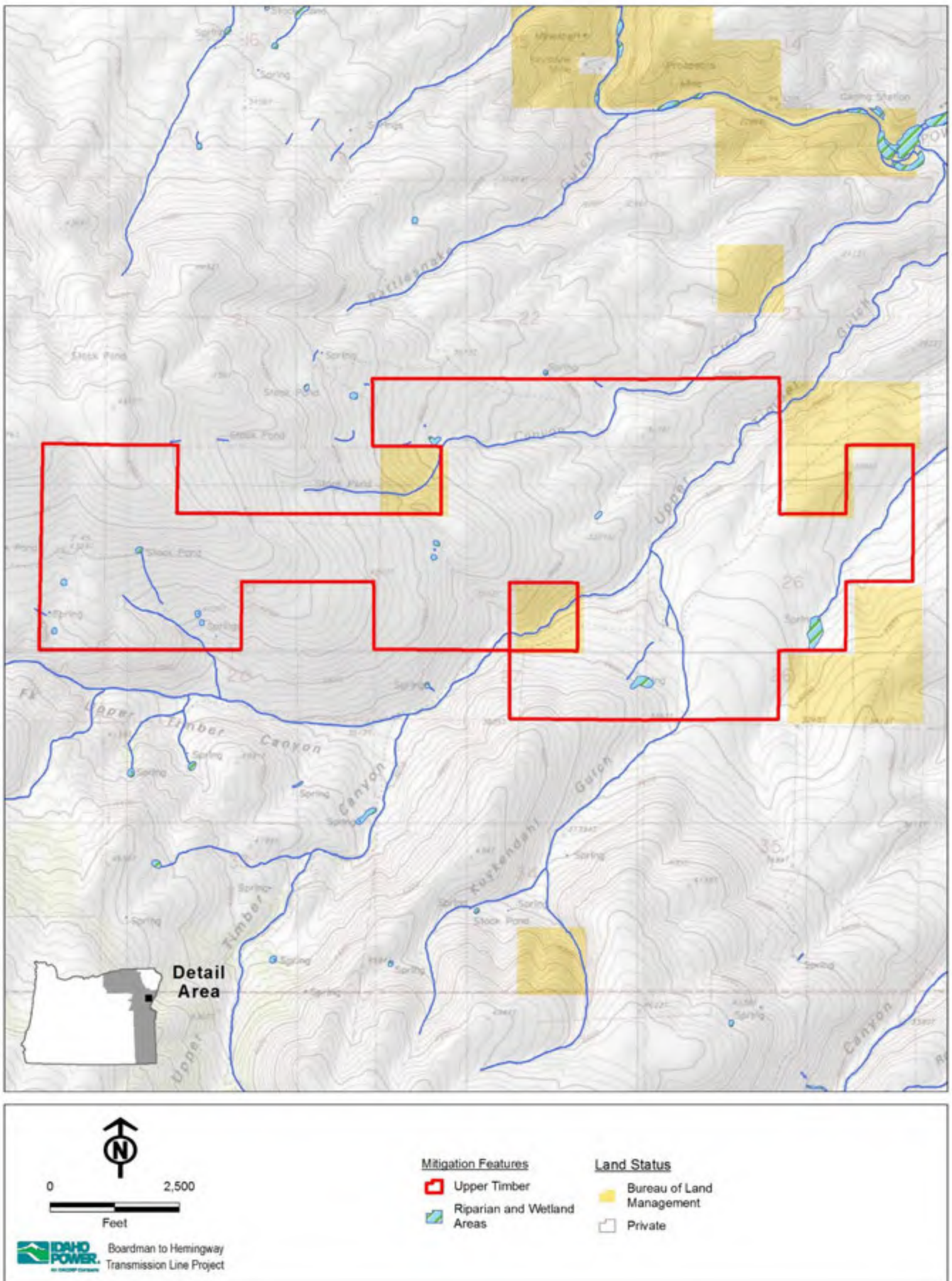


Figure 1. Upper Timber Ownership and Water



Figure 2. Upper Timber Habitat Types

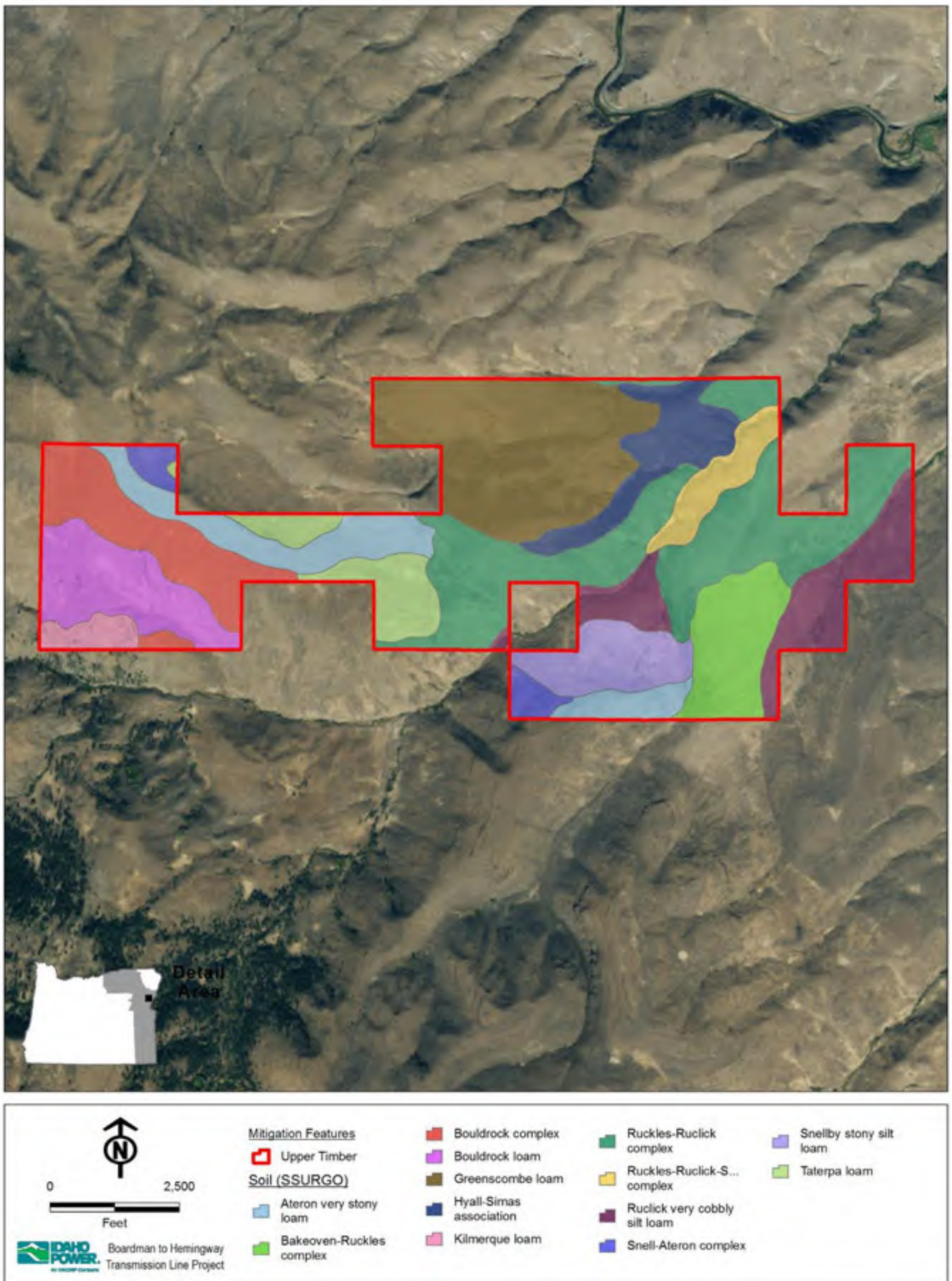


Figure 3. Upper Timber Soil Types

APPENDIX B
WOLF CREEK MITIGATION SITE EXPANDED ASSESSMENT

Boardman to Hemingway Transmission Line Project Wolf Creek Mitigation Site

Mitigation Site Name: Wolf Creek (Figure 1)
Mitigation Credit: 1,775.8 acres

Parcel Elevation (ft): 3,750 – 4,650
Within Mitigation Service Area: Yes

Summary

Background

Idaho Power's Boardman to Hemingway Transmission Line Project will impact fish and wildlife habitat in Oregon. Idaho Power assigned a habitat category to each area impacted by the Project (Habitat Category 1 through 6) and identified the vegetation types within each habitat category area. Idaho Power also quantified the acres of the following species-specific habitats affected by the Project: Washington ground squirrel habitat, raptor nests, elk winter and summer range, mule deer winter and summer range, and sage-grouse habitat.

Idaho Power is required to secure compensatory mitigation sites to offset impacts to Habitat Category 1 through 5, and to offset impacts to the relevant species-specific habitats. Compensatory mitigation credits may be "stacked." That is, to the extent habitat within a mitigation site comprises Habitat Category 1 through 5 and provides relevant species-specific habitat, the relevant portion of the habitat site will be credited against both the habitat-category and species-specific mitigation requirements. For example, a mitigation site with 20 acres of Habitat Category 2 forest/woodland habitat, all of which occurs within elk winter range and half of which occurs within mule deer winter range, may be used to offset impacts to 20 acres of Habitat Category 2 forest/woodland habitat, 20 acres of elk winter range, and 10 acres of mule deer winter range.

Mitigation Site Description

The Wolf Creek Mitigation Site comprises approximately 1,781 acres and is located adjacent to Wolf Creek Reservoir and Forest Service-administered lands. The site is mostly timberland, providing winter and summer range for elk and mule deer. Wolf Creek runs through the site and is considered bull trout designated critical habitat. The site is very close to Oregon Department of Wildlife's (ODFW) Elkhorn–North Powder Wildlife Management Area. The site is partially within the Baker Valley Conservation Opportunity Area identified in the Oregon Conservation Strategy.

Mitigation Actions

Idaho Power would secure control over this mitigation site by obtaining a conservation easement or through acquisition for the life of the Project. Idaho Power would conduct the following mitigation actions on the site, which would benefit the entirety of the mitigation site and the fish and wildlife that use the mitigation site:

- Install or repair wildlife-friendly fence along the entirety of mitigation site boundary.
- Redistribute, burn, or otherwise dispose of approximately 200 slash piles, and revegetate and provide weed control at the slash pile sites.
- Decommission up to 12 miles of unnecessary roads, and close or limit access to other roads as directed by ODFW.

Mitigation Site Credits

This mitigation site has been identified by Idaho Power as a potential site for in-kind compensatory mitigation to offset the following Habitat Category and species-specific habitat impacts related to the Project:

Habitat Category and Vegetation Types	Mitigation Credit Acres
Category 2	1,775.8
Forest/Woodland	1,361.3
Shrub/Grass	344.3
Open Water/Wetlands	70.2

Species-Specific Habitat	Mitigation Credit Acres
Elk Winter Range	1,775.8
Mule Deer Winter Range	1,266.0
Elk Summer Range	1,775.8
Mule Deer Summer Range	1,775.8

Location Description
(County, miles and direction from known location, TRS)

Union County, 5 miles northwest of North Powder.
T5S R38E Sections 27, 33, 34; T6S R38E Sections 3, 4, 10, 11.

Hydrologic Features Present
(StreamNet, NWI, NHD)

Property contains two intermittent streams and two perennial streams (Clear Creek and Wolf Creek) per the NHD. Wetland features outside of those associated with the riparian corridors of the NHD streams includes an emergent wetland and an impoundment. The property borders the west side of Wolf Creek Reservoir.

Adjacent Ownership and Land Use	Majority of adjacent land ownership is private; however, the property does border a large tract of USFS lands and is within 0.5 mile of ODFW's Elkhorn WMA. Adjacent land use is open range, timbered range, timber harvest, and agricultural development.
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Infrastructure Density within or Near the Parcel	Parcel has some residential buildings/shops in the southeast corner and some dirt/gravel roads; otherwise, the property is open timber/recently harvested timber. Wolf Creek Reservoir is adjacent to the property; the valley floor 1 mile to the east contains developed agricultural areas and associated infrastructure. I84 is over 4 miles away.
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Table 1. Mitigation Credits by ODFW Habitat Category and General Vegetation Type ¹	Habitat Category and General Vegetation Type	Mitigation Credits
	Category 2	1,775.8
	Forest/Woodland	1,361.3
	Shrub/Grass	344.3
	Open Water/Wetlands	70.2
¹ USGS Gap Analysis Project (GAP) GIS data using ecological systems. Ecological systems were cross-walked to HMP General Vegetation Type (Figure 2) as shown in the Habitat Categorization Matrix (Attachment P1-1 of Exhibit P1).		

Table 2. Mitigation Credits by Wildlife Habitat Layers ¹	Species-Specific Habitat	Mitigation Credits
	Category 2 Elk Winter Range ²	1,775.8
	Category 3 Elk Summer Range ³	1,266.0
	Category 2 Mule Deer Winter Range ²	1,775.8
	Category 3 Mule Deer Summer Range ⁴	1,775.8
¹ Wildlife habitat layers are not spatially discreet; there is abundant spatial overlap between the layers. In this mitigation site, the entire property is within elk winter range, mule deer summer range, and mule deer winter range. Elk summer range covers over half of the property. ² ODFW. 2013. ODFW Winter Range for Eastern Oregon. GIS data files (2). Available online at: https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=885.xml ³ Rocky Mountain Elk Foundation. 1999. M.A.P. Elk Habitat Project. GIS data. ⁴ WAFWA (Western Association of Fish and Wildlife Agencies). 2002. Mule Deer Habitat of the Western United States. GIS Dataset. Remote Sensing/Geographic Information Systems Laboratory, Utah State University. Logan, UT.		

Soil types	<p>The NRCS Soil Survey Geographic Database (SSURGO) data were reviewed and the following soils were identified on the property (Figure 3):</p> <p><i>Anatone-Klicker complex (168 acres)</i>. Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curlleaf mountain mahogany and stiff sagebrush. Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark, and wild rose.</p>
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Soil types (cont.)

Encina silt loam (57 acres). Encina silt loam soils consist of deep, well drained soils found on dissected slopes of terrace fronts, usually with southern aspects, at elevations from 2,000 to 4,000 feet. Used for rangeland, small grains, hay pasture, wildlife habitat, and water supply. Native vegetation dominantly is bluebunch wheatgrass, Sandberg bluegrass, Idaho fescue, rabbitbrush, big sagebrush, and squaw apple.

Gwinly-Rockly complex (20 acres). The Gwinly soils consist of shallow, well drained soils found on hills, plateaus, structural benches, mountains, and canyons at elevations from 1,400 to 4,600 feet. Used for livestock grazing and wildlife habitat. Potential native vegetation is dominantly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass and low sagebrush. The Rockly soils consist of shallow and very shallow, well drained soils on mesas, ridges, plateaus, structural benches, canyon walls, and nearly level to very steep south and west slopes on uplands at elevations of 300 to 5,000 feet. These soils are used for livestock grazing, wildlife habitat, and water supply purposes. Native vegetation is mostly stiff sagebrush, lomatium, bluebunch wheatgrass, and Sandberg bluegrass.

Gwinly very cobbly silt loam (67 acres). The Gwinly soils consist of shallow, well drained soils found on hills, plateaus, structural benches, mountains, and canyons at elevations from 1,400 to 4,600 feet. Used for livestock grazing and wildlife habitat. Potential native vegetation is dominantly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, and low sagebrush.

Klicker-Anatone complex (157 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark, and wild rose. Anatone soils consist of shallow, well drained soils found on mountain side slopes, ridgetops, hills, and plateaus at elevations of 2,000 to 6,200 feet. Anatone soils are mostly used for livestock grazing, wildlife habitat, and recreation. Native vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, mossy stonecrop, curleaf mountain mahogany, and stiff sagebrush.

Klicker stony silt loam (765 acres). Klicker soils consist of moderately deep, well drained soils on mountains, plateaus, and benches at elevations from 2,500 to 6,200 feet. Klicker soils are used mainly for timber production and wildlife habitat. Native vegetation is an open stand of ponderosa pine and Douglas-fir with an understory of bluebunch wheatgrass, slender wheatgrass, brome grass, elk sedge, Oregon-grape, common snowberry, Saskatoon serviceberry, creambush oceanspray, mallow ninebark and wild rose.

Lookingglass very stony silt loam (45 acres). Lookingglass soils consist of very deep, moderately well drained soils found on uplands at elevations of 1,800 to 4,000 feet. Lookingglass soils are used mainly for timber production. Cleared areas are cropped to small grains, hay, pasture, and peas. The native vegetation is ponderosa pine and Douglas-fir with an understory of spirea, oceanspray, Idaho fescue, pinegrass, and elksedge.

Soil types (cont.)

Olot stony silt loam (4 acres). Olot soils consist of moderately deep, well drained soils found on plateaus, canyons, mountains and structural benches at elevations typically between 2,800 to 5,000 feet. Olot soils are used mainly for timber production. Also used for wildlife habitat. Vegetation is western larch, Douglas fir, willow, mountain alder, common snowberry, elk sedge, and pinegrass.

Starkey very stony silt loam (2 acres). Starkey soils consist of shallow, well drained soils found on mountains and hills at elevations of 2,400 to 4,000 feet. Starkey soils used for rangeland. Native vegetation is mainly Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass.

Tolo silt loam (289 acres). Tolo soils consist of deep and very deep, well drained soils found on nearly level upland plateaus and steep north and east-facing mountain side slopes at elevations of 2,800 to 5,400 feet. Tolo soils used for timber production and livestock grazing with small areas at lower elevations cleared for cultivation. Principal trees include Douglas fir, grand fir, larch, ponderosa pine, and lodgepole pine.

Ukiah-Starkey complex (166 acres). Ukiah soils consist of moderately deep, well drained soils found on hills with an elevation of 2,400 to 4,600 feet. Ukiah soils are mainly used for range. Some areas are cultivated for dryland hay and small grains. Native vegetation is mainly Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass. Starkey soils consist of shallow, well drained soils found on mountains and hills at elevations of 2,400 to 4,000 feet. Starkey soils used for rangeland. Native vegetation is mainly Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass.

Ukiah silty clay loam (8 acres). Ukiah soils consist of moderately deep, well drained soils found on hills with an elevation of 2,400 to 4,600 feet. Ukiah soils are mainly used for range. Some areas are cultivated for dryland hay and small grains. Native vegetation is mainly Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass.

Veazie-Voats complex (32 acres). Veazie soils consist of very deep, well drained soils found on flood plains broken by old stream channels at elevations of 750 to 4,000 feet. Veazie soils are used mainly for irrigated hay and pasture. Other uses are livestock grazing and wildlife. Native vegetation is bluebunch wheatgrass, basin wildrye, sedges, rushes and willows. Voats soils consist of very deep, well drained soils found on flood plains broken by old stream channels and occur at elevations of 1,600 to 4,000 feet. Voats soils are used mainly for pasture. Other uses are livestock grazing and wildlife habitat. Potential native vegetation is bluebunch wheatgrass, basin wildrye, timothy, Kentucky bluegrass, sedges, rushes, and scattered willow, alder, hawthorne, and rose.

**Mitigation Site
Manager**

Fee title acquisition with transfer of ownership to the State of Oregon to be managed as part of ODFW's Elkhorn WMA.

Mitigation Actions	<p>The following mitigation actions are proposed in order to earn 1, 75.8 acres of mitigation credit at this mitigation site.</p> <ul style="list-style-type: none">• <i>Fence Installation/Repair</i> – Boundary fencing will be installed and/or repaired/replaced on approximately 15 miles. This will include the use of wildlife friendly fence designs.• <i>Slash Pile Treatment (Figure 4)</i> – Extensive logging has taken place on the property resulting in nearly 200 slash piles that are visible on satellite imagery. Slash piles will be treated (re-distribution, burning, or other method) and revegetation and weed control will occur at the slash pile scars.• <i>Road Closure and/or Decommissioning (Figure 4)</i> – Several miles of logging roads, landing areas, and skid trails exist within the mitigation site. Mitigation actions will include any activity that results in the stabilization and restoration of unneeded roads to a more natural state. Actions may include scarifying and spreading slash at landing areas and skid trails, denying access (eliminate traffic), and ripping, waterbarring, and seeding of roads. IPC has preliminarily identified roads to maintain and roads to decommission. Roads that are proposed for decommissioning are symbolized by a black line in Figure 4, and roads that will be maintained on the property are symbolized by a white line. Existing easements for other parties are unknown at this time, but will not be affected. Access to maintained roads will be limited to ODFW use. Up to 12 miles of roads and trails will be closed or decommissioned.
Monitoring	<p>A specific plan for monitoring will be developed, but in general, mitigation progress will be monitored through establishment of photo locations and vegetation monitoring. Monitoring will occur annually for the first 3-5 years and an annual report will be produced. Long-term monitoring will be developed with reporting that will occur at larger time intervals (i.e., 5 years, 10 years).</p>
Success Criteria	<p>Specific success criteria will be developed once mitigation actions have been confirmed for the site. Success criteria may include but are not limited to:</p> <ul style="list-style-type: none">• Completion of fence improvement and/or removal projects.• Completion of slash pile treatments.• Completion of road closure and/or decommissioning.

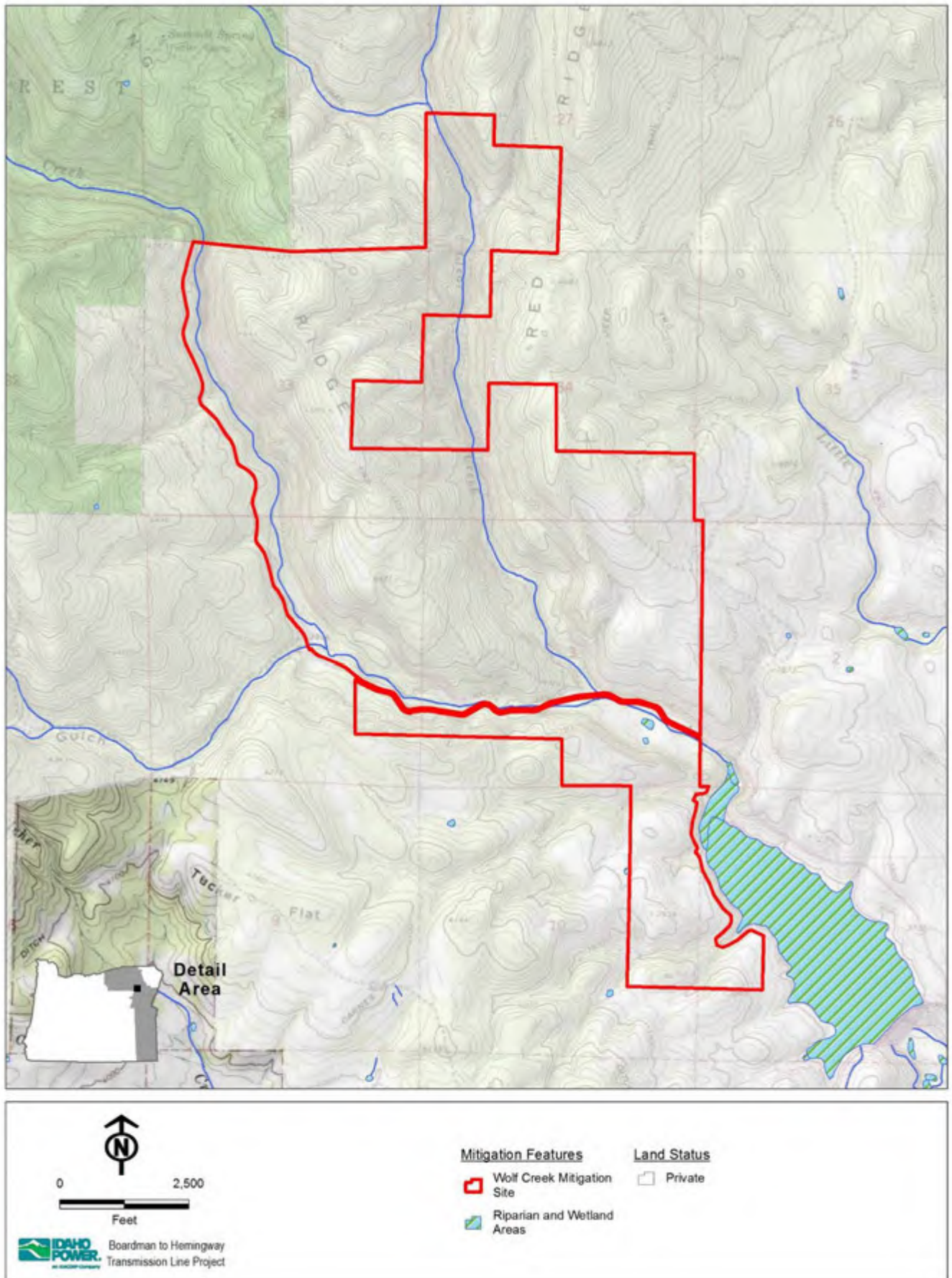


Figure 1. Wolf Creek Mitigation Site Ownership and Water

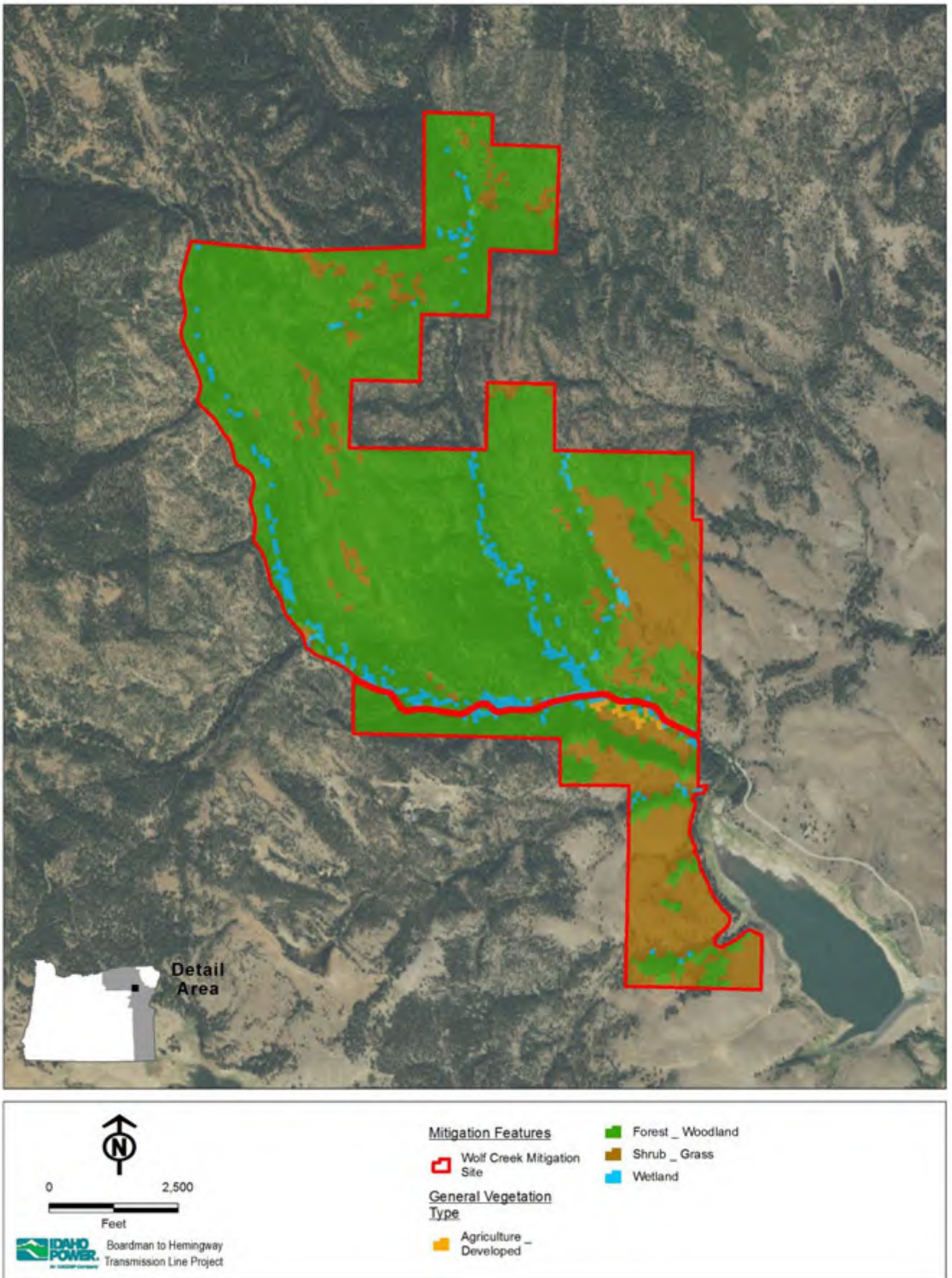


Figure 2. Wolf Creek Mitigation Site General Vegetation Types

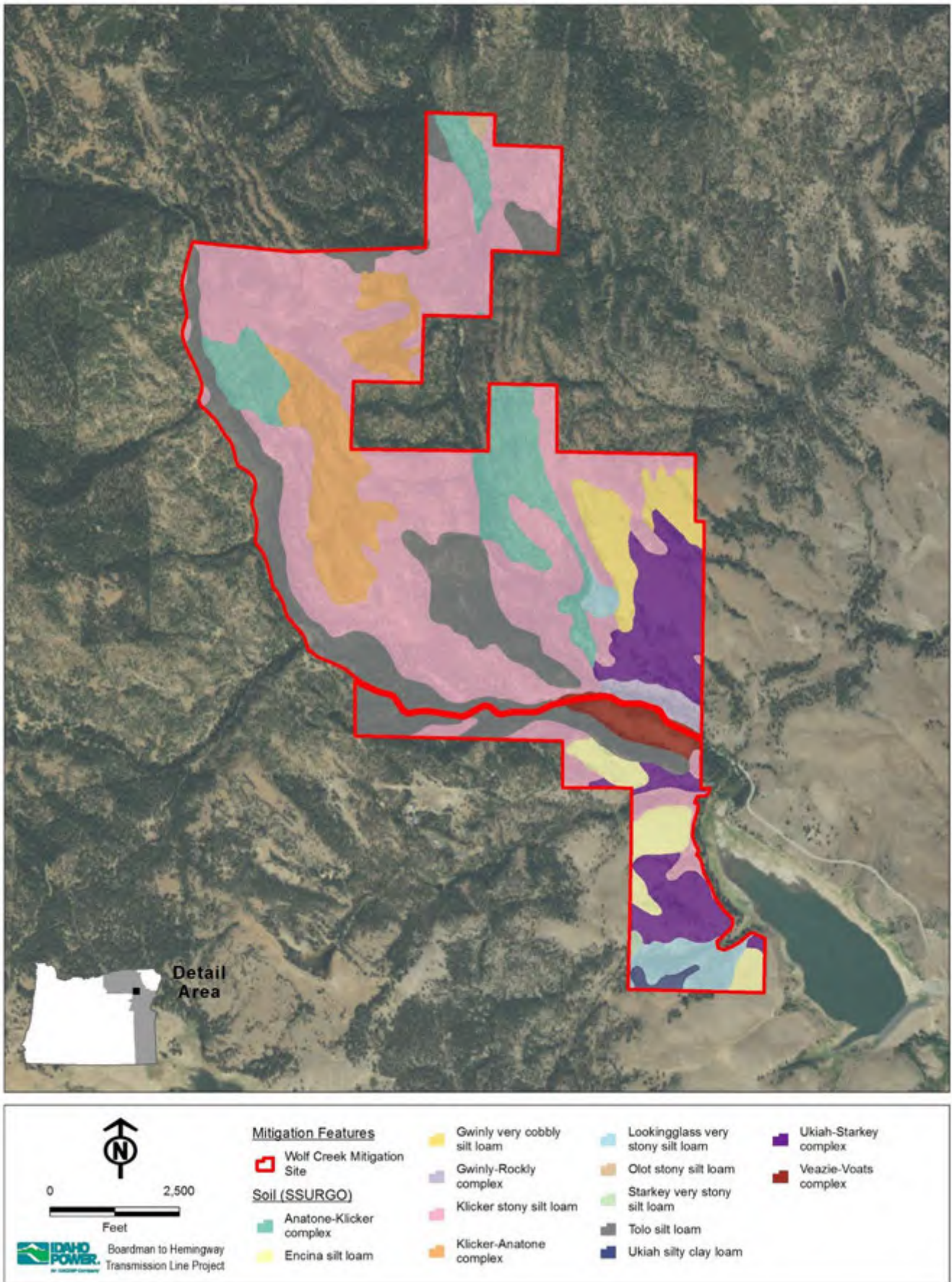


Figure 3. Wolf Creek Mitigation Site Soil Types

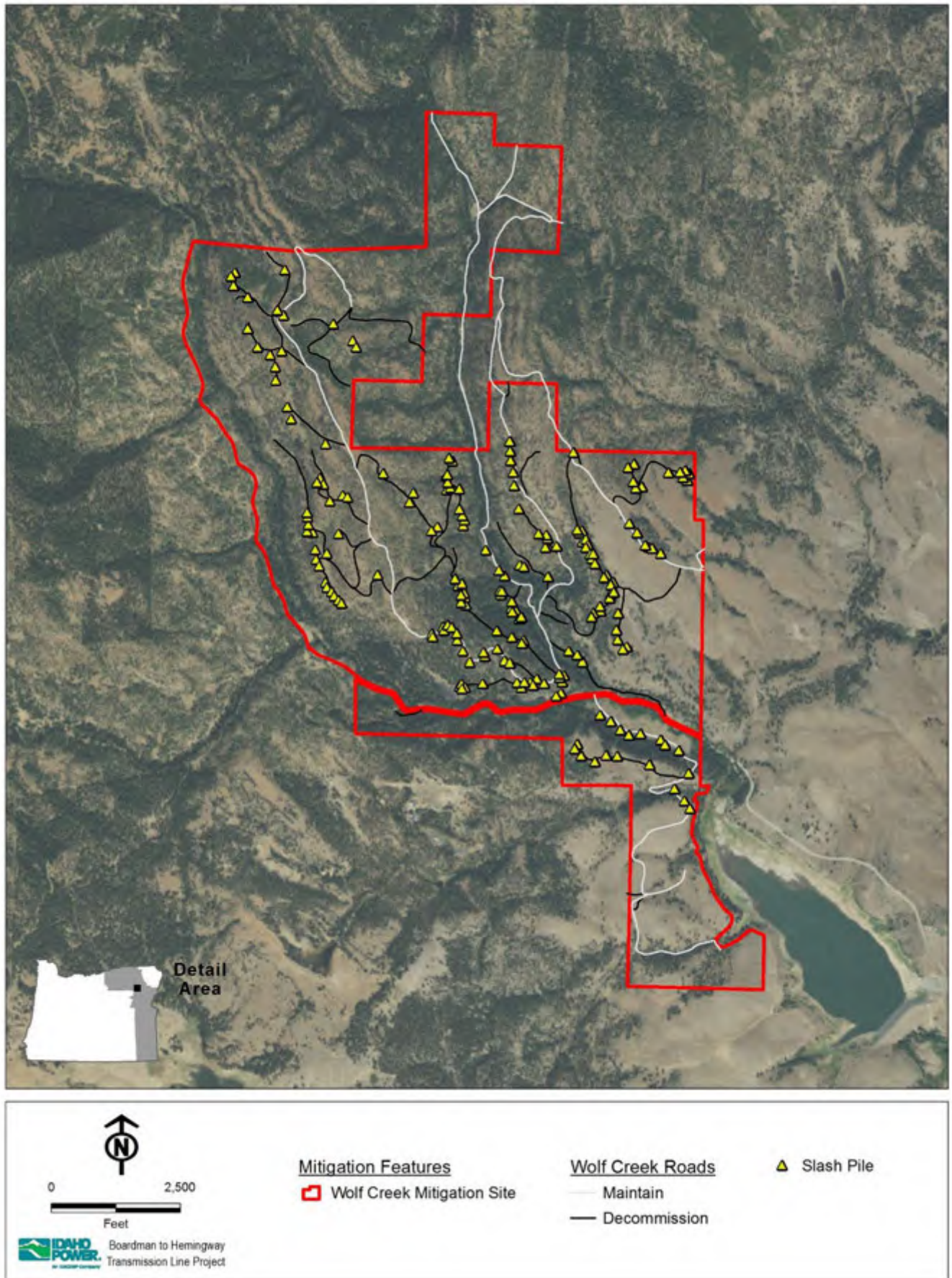


Figure 4. Wolf Creek Mitigation Site Slash Piles and Roads